

COURSE OBJECTIVES AND PROGRAM OBJECTIVES

DEPARTMENT OF SANTALI

PANDIT RAGHUNATH MURMU SMRITI
MAHAVIDYALAYA

PRMS MAHAVIDYALAYA

COURSE OBJECTIVES

AND PROGRAM OBJECTIVES

B.A. (Honours) in Santali

Programme Objectives (POs):

This programme aims at training students in Santali Literary studies in a way so that they can pursue further research in the field. There are papers on the basic concepts of literary studies and trends in literary theory to provide an understanding of the conceptual points of departure in literary studies. One paper on socio-political background of Santali literature and Units on socio-political background of Santali literature and Units on such background in individual papers are expected to provide knowledge on how to situate literary production in the larger context of socio-political history. Papers on texts from various phases and genres of Santali literature will introduce the student to the salient features of respective phases, features of respective genres and contribution of individual authors. Further, these courses will help in understanding various ways of reading literary texts. Understanding of the idea of research will be nurtured through the course on Research Methodology and guided dissertation writing. Elective and Open Elective courses will initiate the student in a selected area providing in depth and comprehensive understanding of that area forming the base for formulating research questions and pursuing research in that area.

Programme Specific Outcomes (PSOs):

This programme will enable to have a comprehensive understanding of the history of Santali literature, its socio-political background, important movements, genres and authors, concepts and practices of literary studies, and basic skill for research writing. It is expected that the course will form the knowledge and skill-base for the students to take up various teaching assignments and pursue further research in the field.

Programme Career Opportunities (PCOs) :

This programme Career Opportunities are Teaching Position in Universities, Colleges Schools. And Professional Writing positions in government Organization. Position in profession requiring creative/ analytical/ linguistic skill and also Pursue M.A/ M.phil/ Ph.D. Programmes

CODES

SNT= Santali (Subject Code) CC= Core Course, AECC= Ability Enhancement Compulsory Course, SEC= Skill Enhancement Course, GE= Generic Elective, DSE= Discipline Specific Elective IA= Internal Assessment, ESE= End-Semester Examination, Lec.=Lecture, Tu.= Tutorial, and Prc.=Practical

SEMESTER – I

AHSNT-101C

Course Objectives:

The main objective of this course is that the students know about Origin of Santali language and other tribal language. The course introduces the students to the language origin Santal, Ho, Munda, Birhor, Mahali, Bhumij, , Mainly Austric Group.

Course learning outcomes:

The course will enable to know the students about different culture and social activity of Santal, Ho, Munda, Birhor, Mahali, Bhumij, Mainly Austric Group. Further it helps to understand their different kinds of life style and economical status.

AHSNT-102C

Course Objective :

Basic knowledge of the Grammar features of a language is essential for understanding the literature of that language. This course aims to introduce students with the basic concept of Grammar with special reference to the Grammar features of the Santali language.

Course learning outcomes :

The course will help the students to understand feature of Santali language in Grammatical terms.

AHSNT-103GE

Course Objective :

Basic knowledge of the Grammar features of a language is essential for understanding the literature of that language. This course aims to introduce students with the basic concept of Grammar with special reference to the Grammar features of the Santali language.

Course learning outcomes :

The course will help the students to understand feature of Santali language in Grammatical terms.

SEMESTER –II

AHSNT-201C

Course Objectives:

This course aims at giving general understanding of the History of Santali Literature. Detail analysis of various History of literature, features of lite, the concept of Historical Knowledge, methods of Literature research, and the history of Santali Literature in India will be taught in this course.

Course learning outcomes:

This course will enable students to understand various theoretical aspects of Santali Literature studies and will introduce them to the history of Santali Literature.

AHSNT-202C

Course Objective:

The course has been designed for an in-depth study of eastern and western literary criticism including Greek, English Sanskrit, Bengali, Santali aesthetics and poetics as well as western theories of criticism.

Learning Outcomes:

The students will be able to have a broad overview of the development of critical theories and their impact on Santali literature.

AHSNT-203GE

Course Objectives:

This course aims at giving general understanding of the theories of Literature. Detail analysis of various definitions of Language and tribal culture and literature, features of Santali-language, the concept of Santali-aesthetics, methods of folk Literature research, and the history of Santali Literature in India will be taught in this course.

Course learning outcomes:

This course will enable students to understand various theoretical aspects Santali Literature studies and will introduce them to the History of Santali Literature.

ACSHP-204AECC

Course Objective:

This course has been designed for Programme & Honours students to have basic groundings in Santali language and its Literature. Along with it to enable them to translate simple sentences.

Course Learning Outcomes:

At the end of the course the students will be able to have a basic knowledge of Santali Language and Literature.

SEMESTER –III**AHSNT-301C****Course Objectives:**

This course aims at giving general understanding of the theories of folk Literature. Detail analysis of various definitions of folk and tribal culture and literature, features of folk-language, the concept of folk-aesthetics, methods of folk Literature research, and the history of Folk Literature in India will be taught in this course.

Course learning outcomes:

This course will enable students to understand various theoretical aspects of folk Literature studies and will introduce them to the history of folk Literature.

AHSNT-302C**Course Objective:**

Detailed study of different genres of Santali literature, movements and trends from Pre-Independence Santali Literature and literary works of representative writers and poets of the same period.

Learning Outcomes:

At the completion of the course, the student will be able to have in- depth knowledge of the major movements, trends of Post Independence Santali Literature and different genres of their representative writers of the same period.

AHSNT-303C

Course Objectives: The course has been designed for detailed study of Santali Magazine or his History with reference of representative Santali Magazine.

Course Learning Outcomes: At the completion of the course the students will be able to have an in-depth knowledge of the history and development of Santali Magazine.

AHSNT-304GE**Course Objectives:**

The course has been designed for detailed study of Santali Magazine or his History with reference of representative Santali Magazine and there are some important works literary essay by poets.

Course Learning Outcomes:

At the completion of the course the students will be able to have an in-depth knowledge of the history and development of Santali Magazine And Students are taught basics essay withing method in later life.

AHSNT-305SEC

Course Objectives:

The objective of this course thought this subject students will be able to match their thoughts and feelings in different ways and present their words and opinions.

Course Learning Outcomes:

At the completion of this course this will help student develop the ability to speak, the ability to discuss and the ability to present themselves

SEMESTER – IV

AHSNT-401C

Course Objectives:

The objective of this course to make students aware of various literary schools and trends in Whole Santali Poetry.

Course Learning Outcomes:

It makes students acquainted with various schools and trends prevailing in the period. And it makes them familiar with new genres of Santali poetry.

AHSNT-402C

Course Objectives:

The objective of the course is to make students acquainted with modern trends in Santali Short Stories writings and its salient features.

Course Learning Outcomes:

It makes the students aware of different trends in Short Story writings development in the Whole period. Further it helps to understand salient features of Santali writings in Whole period.

AHSNT-403C

Course Objective:

The purpose of this course is to provide the Literature concept study of her development of Novel through major writers and their Novel.

Course Learning Outcomes:

At the completion of this course the students will be able to have in-depth knowledge of the history and major text of Santali Novel.

AHSNT-404GE

Course Objectives:

The objective of the course is to make students acquainted with trends in Santali Poetry and Fiction Literature writings and its salient features.

Course Learning Outcomes:

It makes the students aware of different trends in Santali Poetry & Fiction writings development in whole period. Further it helps to understand salient features of Santali writings in whole period.

AHSNT-405SEC

Course Objectives:

The objective of this course thought this subject students will be able to match their thoughts and feelings in different ways and present their words and opinions.

Course Learning Outcomes:

At the completion of this course this will help student develop the ability to speak, the ability to Writing skills and the ability to present & future plan in own life.

SEMESTER-V

AHSNT-501C

Course Objectives:

The objective of the course is to make students acquainted with Whole trends in Santali One Act Play writings and its salient features.

Course Learning Outcomes:

It makes the students aware of different trends in Prose writings development in the Whole period. Further it helps to understand salient features of Santali Ona act play writings.

AHSNT-502C

Course Objective:

The purpose of this course is to provide the Literature concept study of her development of Essay through major writers and their Essay.

Course Learning Outcomes:

At the completion of this course the students will be able to have in-depth knowledge of the history and major text of Santali Essay.

AHSNT-503DSE-1 SPECIAL PAPER (P-I)

Course Objective:

The purpose of this course is to provide the highly specialized study of the development of Folk Literature, Linguistic & Philosophy, through major writers and their Folk Literature, Linguistic & Philosophy,

Course Learning Outcomes:

At the completion of this course the students will be able to have in-depth knowledge of the history and major text of Folk Literature, Linguistic & Philosophy.

AHSNT-504DSE-2 SPECIAL PAPER (P-I)

Course Objective:

The purpose of this course is to provide the highly specialized study of the development of Poetry, Prose, & Drama through major writers and their Poetry, Prose, & Drama.

Course Learning Outcomes:

At the completion of this course the students will be able to have in-depth knowledge of the history and major text of Santali Poetry, Prose, & Drama.

SEMESTER-VI

AHSNT -601C

Course Objectives:

The objective of the course is to make students acquainted with Whole trends in Santali Drama writings and its salient features.

Course Learning Outcomes:

It makes the students aware of different trends in Prose writings development in the Whole period. Further it helps to understand salient features of Santali Drama writings.

AHSNT-602C

Course Objective:

The purpose of this course is to provide the Literature concept study of the development of Santali Child & Tourisim Literature through major writers and their Santali Child & Tourisim Literature.

Course Learning Outcomes:

At the completion of this course the students will be able to have in-depth knowledge of the history and major text of Santali Child & Toursim Literature.

AHSNT-603DSE-3

Course Objective:

The purpose of this course is to provide the highly specialized study of the development of Folk Literature, Linguistic, & Philosophy. through major writers and their Folk Literature, Linguistic, & Philosophy

Course Learning Outcomes:

At the completion of this course the students will be able to have in-depth knowledge of the history and major text of Folk Literature, Linguistic, & Philosophy.

AHSNT-604DSE-4 SPECIAL PAPER (P-II)


Course Objective:

The purpose of this course is to provide the highly specialized study of the development of Poetry, Prose Literature, & Drama. through major writers and their Poetry, Prose Literature, & Drama


Course Learning Outcomes:

At the completion of this course the students will be able to have in-depth knowledge of the history and major text of Poetry, Prose Literature, & Drama.

Head of the Department
Pandit Raghunath Murmu Smriti Mahavidyalaya


Principal
Pandit Raghunath Murmu Smriti Mahavidyalaya
PRINCIPAL
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BARAGARI, JAMBOINI, BANKURA





COURSE OBJECTIVES AND PROGRAM OBJECTIVES

THE DEPARTMENT OF COMPUTER
SCIENCE

PANDIT RAGHUNATH MURMU SMRITI
MAHAVIDYALAYA

PRMS MAHAVIDYALAYA

COURSE OBJECTIVES AND PROGRAM

OBJECTIVES

Department of Computer Science

Programme outcome

Computer Science graduates will be able to acquire sufficient knowledge, professional skills, and understanding of the subject so that they can find themselves suitable for employment and developing careers in a wide range of government and private sectors as well as for higher studies and research in computer science and information technology. Computer science careers offer opportunities to the students in every walk of life.

Programme specific outcome

A graduate with a B.Sc. in Computer Science will have the ability to

PSO1. Demonstrate mastery of Computer Science in the following core knowledge areas
Data Structures and Programming Languages Databases, Software Engineering and
Development Computer Hardware and Architecture

PSO2. Apply problem-solving skills and the knowledge of computer science to solve real world problems.

PSO3. Develop technical project reports and present them orally among the users

Course outcome

Course wise outcomes are

1. Course Problem solving using computers:

After completing this course, students will be able to (i) learn about computer fundamentals (ii) apply language features including strings, lists, tuples, dictionaries, regular expressions. (iii) Create and call functions.

2. Database management System:

Upon successful completion of this course, students should be able to: (i) Describe the fundamental elements of relational database management systems. (ii) Explain the basic concepts of relational data model, entity- relationship model, relational database design, relational algebra and SQL. All these are useful in different software project.

3. Operating System:

In this course Students will be able to

- learn how Operating System is Important for Computer System.
- aware of different types of Operating System and their services.
- learn different process scheduling algorithms and synchronization techniques to achieve better performance of a computer system.
- know virtual memory concepts.
- learn secondary memory management.

4. **Office Automation tools :**

By learning the course, the students will be able to Perform documentation, accounting operations, presentation skills.

5. **Computer System Architecture:**

In this course students will be able to understand the structure, function and characteristics of computer systems.

- understand the design of the various functional units and components of computers.
- identify the elements of modern instructions sets and their impact on processor design.
- explain the function of each element of a memory hierarchy,
- identify and compare different methods for computer I/O.

6. **HTML programming:**

In this course students learn to design webpages as well as websites.

7. **Programming in Java:**

- On completion of the course the student should be able to:
- Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs.
- Read and make elementary modifications to Java programs that solve real- world problems.
- Validate input in a Java program.
- Identify and fix defects and common security issues in code.

8. **Programming in Visual Basic :** This course provides the skills and knowledge required to use essential features and capabilities of Visual BASIC, a programming system used to produce Graphical User Interfaces and applications in a Windows environment. It includes basic programming concepts, problem solving, programming logic, and the design of event-driven programming.

9. **Computer network:** After successfully completing this course, students should be able to: Describe the general principles of data communication. Describe how computer networks are organized with the concept of layered approach. Describe how signals are used to transfer data between nodes. Implement a simple LAN

with hubs, bridges and switches.

10. **Project work :** After studying this course, students should be able to:
- develop plans with relevant people to achieve the project's goals
 - break work down into tasks and determine handover procedures
 - identify links and dependencies, and schedule to achieve deliverables
 - estimate and cost the human and physical resources required, and make plans to obtain the necessary resources
 - allocate roles with clear lines of responsibility and accountability.

Head of the Department
Pandit Raghunath Murmu Smriti Mahavidyalaya

Pandit Raghunath Murmu Smriti Mahavidyalaya



Principal

PRINCIPAL
PRMS MAHAVIDYALAYA,
BARAGARI, JAMBONI, BANKURA





COURSE OBJECTIVES AND PROGRAM OBJECTIVES

THE DEPARTMENT OF GEOGRAPHY

PANDIT RAGHUNATH MURMU SMRITI
MAHAVIDYALAYA

THE DEPARTMENT OF GEOGRAPHY

Geography is one of the most emerging subjects that are gaining popularity among the students due to its versatility. Students from both Arts and Science stream are able to take Geography as their choice of study in the Under Graduate courses. The Department of Geography of PANDIT RAGHUNATH MURMU SMRITI MAHAVIDYALAYA presently follows the syllabus of Bankura University for all the semesters. The syllabus is more or less similar with some specific additions and alterations. Geography basically deals with space. The spatial aspects of the earth, their guiding laws and theories, nature and evolution are recorded and represented through a number of instrumental and mechanical ways. A holistic view of the Earth as an entity and the features within the earth are taught to students. The evolution of natural landscape to cultural landscape is illustrated. The mapping techniques are guides to represent all the physical, social, cultural features through proper scaling and elaborative description. The project based studies and analysis are very helpful in building up a research outlook among the students. They learn about the sample drawing procedures and detailed idea about the important issues around them. The course is sub divided into several small sections and put under expert faculties of that field to provide the students the desired benefit of the course.

DEPARTMENT OF GEOGRAPHY

Table 1: Bankura University Course outcome

Course Code	Course Title	Course Outcome
UG (Semester I)		
S H G E O/ 10 1/ C- 1	Geotectonics and Geomorphology	<ol style="list-style-type: none"> 1. Understanding origin and evolution of Earth with special reference to cross-cutting approach like Big Bang Model 2. Peep into and scan Earth's Lithospheric Slab/Plate by Plate Tectonic Theories 3. Student Seminars have been organized on different issues like 'Wegener and his Pangaea' by Semester-I students through power point.
S H G E O / 1 0	Cartographic Techniques& Cartographic TechniquesLab	<ol style="list-style-type: none"> 1. Students got into the Practical Environment where they learnt about Making Maps with proper Cartographic technique and Sense. 2. Students also acted as Surveyor and plotted LULC (Land use & Land cover) Maps, Contour generation and Traverses by Dumpy Level and Prismatic Compass respectively. 3. Skyline Generation survey has been done by Transit Theodolite for

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understanding urban

development at Ward 24, Bankura
Municipality

UG
(Semester II)

SHGE
O/201/
C-3

Human
Geography

1. Understanding Dichotomy of Geographical analysis with the introduction of Human Geography.
2. Explanation of Space, Society and Culture, Ethnicity.
3. Human adaptation to environment especially Eskimos and Santhals.
4. Students have got information about Social Morphology, Pattern of Settlements in Rural areas etc.

SHGEO/
202/C-4T

&

SHGE
O/
202/C-
4P

Cartograms and
Thematic
Mapping

1. Cartographic representation of Geographical Data
2. Learning Mapping techniques and Topographical Maps (OSM)
3. Preparation of Laboratory Note Book

UG Semester III

SHGEO/
301/C-5

Climatology

1. Understanding structure and composition of Atmosphere.
2. It's also a cross cutting issue through which students learnt about Mechanism of Condensation, Atmospheric Circulation with special reference to Monsoon, Jet Stream etc.
3. West Bengal is situated in a vulnerable location of Tropical Cyclone. In this concern it is very pertinent to study about Origin of Tropical Cyclone. Besides Students also will learn about

Temperate Cyclone.

SHGEO/
301/C-6

Geography of
India

1. Discussion about Physical environment of both India and West Bengal is the base of this part of study.
- 2.
3. Learning and evaluation of Classified Physical, Economical, Social Regions of India and West Bengal.

<p>SHGEO/ 301/C-7T</p> <p>&</p> <p>SHGE O/ 301/C- 7P</p>	<p>Statistical Methods in Geography</p>	<ol style="list-style-type: none"> 1. Students will learn about methods of statistics in the name of quantitative analysis. This will help students in analyzing research areas in near future. 2. Students will use Computer application in Statistics to analyze geographical problems through algorithms in Computer environment
<p>UG Semester IV</p>		
<p>SHGEO/40 1/C-8</p>	<p>Regional planning & Development</p>	<ol style="list-style-type: none"> 1. Develop Knowledge on Regionalization, regionalism and different types of regional planning adopted in India and application in regional scale.
<p>402/C-9</p>	<p>Geography of Economic Activities</p>	<ol style="list-style-type: none"> 1. Familiarity with different economic theories and models and develop skills in applying the theories in planning and development in primary, secondary and tertiary sectors of the economy.

403/C-

10T &

C-10P

Geogra
phy
Environm
ental

1. Understanding of the processes of the environmental problem with particular reference to man-environmental conflict in Junglemahal area .Also develop skills for environmental perception survey, field survey using soil kit & air quality assessment.

UG Semester V

501/C-11

Geograp
hical
Thoug
ht

1. Develop an understanding of the basic philosophy of geography and its development since ancient age in and around the world with particular reference to various concept & issues.

502/c-
12T

& C-
12p

Remote Sensing

1. Capable of developing knowledge and skills in remote sensing technique its theories and application in the analysis of spatial data.

UG Semester VI

601/C-13T

Disaster
Management

1. Will develop knowledge various kinds of Environmental hazards management techniques particularly earthquake, landslide, cyclone, forest fire etc.

602/C-

14T

&C-

14P

**Research
Methodology**

1. Geography is basically a field based science. Students can enhance their understanding level of field observation and interpretation skill along with report writing and presentation skill in front of experts.

PROGRAMME OUTCOME

Table 3: Programme Outcome

YEA R	LEARNING OUTCOME
First Year	<ol style="list-style-type: none">1. Students will develop a general understanding of physical geographic processes, the global distribution of tectonic plates and landforms, origin and evolution of earth and its structural forms.2. They will also be able to find out the relation between geography and human society.
Second Year	<ol style="list-style-type: none">1. Students will also develop clear understanding of various atmospheric processes which influence our day to day weather patterns.2. At the end of the course, students will learn to prepare their own maps on the basis of statistical data and will be able to analyze spatial data.3. Students will understand through the lectures the interconnection between people and places in different regions, the distribution of economic activities, man-environment interrelations in local and regional perspective.
Third Year	<ol style="list-style-type: none">1. During this year, students will be able to trace out the exact philosophy of geography, its evolution and its makers as well as various schools and approaches of study in geography.2. Above all, the students will be able to clear the prevailing misconceptions about geography that it is nothing but a 'science of place names' but a modern regional science with deep focus into the environmental and resource management policies.

PROGRAMME SPECIFIC OUTCOMES

Table 4: Programme Specific Outcomes

YEAR	LEARNING OUTCOME
First Year	<ol style="list-style-type: none">1. Students will acquire an understanding of the various tectonic processes that made our earth.2. At the end of the course, students will learn to prepare their own maps on the basis of statistical data and will be able to analyze spatial data.3. They will also be able to find out the relation between geography and human society.
Second Year	<ol style="list-style-type: none">1. Students will have a clear understanding of the regional geographical approaches at the backdrop of India in general and West Bengal in particular.2. Students will also develop clear understanding of various atmospheric processes which influence our day to day weather patterns.3. They will also develop statistical data analysis in manual as well as automated mode.4. Students will understand through the lectures the interconnection between people and places in different regions, the distribution of economic activities, man-environment interrelations in local and regional perspective.

Third Year

1. During this year, students will be able to trace out the exact philosophy of geography, its evolution and its makers as well as various schools and approaches of study in geography.
2. Students will develop a solid understanding of the concepts of 'space', 'place' and 'region' and their importance in explaining world affairs.
3. Students will be able to synthesize geographic knowledge and apply geographic research techniques in resource management practices.
4. Above all, the students will be able to clear the prevailing misconceptions about geography that it is nothing but a 'science of place names' but a modern regional science with deep focus into the environmental and resource management policies.
5. Finally, the students will become true geographers with a keen interest in areal differentiation of things and phenomena over space, equipped with spatial analysis tools and techniques, expert in land and socioeconomic surveys with great geographic intellect.



(Dr Jaidul Islam)

Assistant Professor and Head

Pandit Raghunath Murmu Smriti Mahavidyalaya



(Dr. Neelanshu Ghosh)

Principal

Pandit Raghunath Murmu Smriti Mahavidyalaya

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COURSE OBJECTIVES AND PROGRAM OBJECTIVES

THE DEPARTMENT OF FORESTRY

PANDIT RAGHUNATH MURMU SMRITI
MAHAVIDYALAYA

PRMS MAHAVIDYALAYA

COURSE OBJECTIVES

AND PROGRAM OBJECTIVES

The Department of Forestry (Honours)

CBCS w.e.f 2022-23

A. Program Outcomes:

1. To impart students with practical knowledge and to assist them in becoming well-known forestry professionals.
2. To impart students with awareness for conserving and managing forest resources, as well as protecting wildlife.
3. To develop both quantitative and qualitative methods to analyse resources and solve problems.
4. To develop the design to provide students with the most up-to-date equipment and technology used in the field of forestry.
5. To develop consciousness among students for managing forest resources, incorporate knowledge of fundamental biology, physical science, forest and wildlife ecology, and social science.
6. To develop consciousness among students for information and methods from the fields of geomatics, silviculture, economics, operations, bioproducts, and policy to design and assess alternative approaches for managing forest resources.
7. To develop appropriate concepts, models, and efficient approaches to create and assess forest resource plans that take into account numerous conflicting objectives, from woodlots to landscapes
8. It will help to establish bonding with forest - dependent community. Thus it will help in community development.

B. Program Specific Outcomes:

1. To impart knowledge about forestry techniques from antiquity to the present.
2. To disseminate comprehensive practical knowledge of technique of growing forest trees.
3. To provide thorough knowledge about agricultural related industries.
4. To develop knowledge consciousness for geomatics, silviculture, economics, bioproducts, and policy to design and assess alternative approaches for managing forest resources.
5. Detailed knowledge about forest policies and management of forests.

COURSE OBJECTIVES AND OUTCOMES

SEMESTER - I

1. SH/FST/SA 1101- Introduction to Forestry (2+0)

Objective

To impart knowledge about the basic concepts of Forestry and familiarize the students about developments in the field of forestry and world forestry.

Outcome

The student will gain knowledge about the various concepts and developments in the field of Forestry.

2. SH/FST/SA 1102 Principles of Agroforestry (2+1)

Objective

To impart knowledge about the basic concepts of Agriculture and agroforestry, the students familiarize about developments in the field of basic agriculture and agroforestry.

Outcome

The student will gain knowledge about the various concepts, types, and developments in the field of agroforestry.

3. SH/FST/NR 1101- Introduction to Agronomy and Horticulture (2+1)

Objective

To impart knowledge about the basic concepts of Agronomy, agricultural and forest weeds.

Horticultural crops and their management, the students familiarize about developments in the field of basic agronomy and horticulture practice.

Outcome

- The student will gain knowledge about the various types of agriculture and horticulture crops.
- The student also will gain knowledge about weeds and their control measurements.

4. SH/FST/FB 1101- Geology and Soil (2+1)

Objective

To impart knowledge about the Geology, rocks and soil formation, the students familiarize how to soil is formed and their physicochemical property play important role in forest and their conservation.

Outcome

Student will gain knowledge about the geology, pedology and soil formation process. This paper also gain knowledge about physicochemical property of soil and its importance for tree and forest.

5. SH/FST/BS 1101- Information and Communication Technology (1+1)

Objective

- To encourage the learners to become critical and reflective users of ICT.
- To understand the building blocks of computer system (hardware and software) and its functions, networking basics, internet and web utilities and acquire the skill of audio visual aids.

Outcome

- After completing this course the student must demonstrate the knowledge and ability to:
- Become competent and confident users of ICT who can make efficient, effective and creative use of basic application software in their everyday activities
- Understand and identify the integral components of a computer system
- Understand the basics of computer networks and gain applied knowledge of internet, email and web access utilization.
- Student can gain knowledge about computer and its application in forestry field.

6. SH/FST/BS 1102- Communication Skills and Personality Development (1+1)

Objective

To improve knowledge about the English grammar, writing and communication skills.

Outcome

Student will gain knowledge about the English grammar, writing and communication skills. This paper also improves the writing skill for the student which is helpful for forestry students.

7. SH/FST/BS 1103- Seed Technology & Nursery Management (2+1)

Objective

- To impart knowledge on production, collection, processing, quality control and storage of tree seeds and its application in production and conservation of forests.
- To impart knowledge on nursery preparation and management.

Outcome

- Student will gain knowledge on seed production, collection, processing and its importance for tree and forest.
- Students would acquire adequate knowledge and skill on production of nursery and clonal seedlings in trees. They will also gain knowledge on commercial tree nursery and clonal production.

8. SH/FST/BS 1104- Forest Botany (1+1) or SH/FST/BS 1104- Basic Mathematics (2+0)

SH/FST/BS 1104- Forest Botany (1+1)

Objective

To inculcate the fundamentals of botany and taxonomy of gymnosperms and angiosperms.

Outcome

Student will gain knowledge on plants and its morphology of root, stem and leaves and flower, processing and its importance for tree and forest, also gain knowledge on tissue organization for monocot and dicot plants.

SH/FST/BS 1104- Basic Mathematics (2+0)

Objective

To understand and apply fundamental concepts of mathematics applicable in biology and to acquire about theoretical concepts of Algebra, Geometry, Calculus and Mathematical Modeling.

Outcome

Student will gain knowledge on basic mathematics which is help in forestry study.

9. SH/FST/PE-1101- Physical education-I (0+1*)

Practical

10. SH/FST/NP-1101- NCC-I/ NSS-I (0+1*)

Practical

SEMESTER – II

1. SH/FST/FB 1202- Plant Physiology (2+1)

Objective

To provide the fundamentals of botany and taxonomy of gymnosperms and angiosperms.

Outcome

The student will gain knowledge about the various concepts of tree physiology, Photosynthesis. tree structure, Growth and development etc.

2. SH/FST/FP 1201- Ethnobotany, Medicinal and Aromatic plants (2+1)

Objective

The course aims to inculcate the knowledge of the Tribal societies and their role in ethnobotanical importance.

Outcome

Students would acquire adequate knowledge on ethnobotany, medicinal and aromatic plants and its production. They will also gain knowledge on inter-relation between plant and people.

3. SH/FST/SA 1203- Theory and Practice of Silviculture (2+1)

Objective

- To develop basic understanding on forest and factors influencing forest growth and development.
- To impart knowledge on tending operations followed in forest with preliminary information on succession in forest.

Outcome

- The student will gain knowledge on basic of forestry and factors influencing forest growth and development with practical training on tending operations in forest.
- The students also gain practical and field knowledge on regeneration of forest and raising plantation with proper information on different silvicultural systems followed in Indian forest.

4. SH/FST/FP 1202- Wood Anatomy (2+1)

Objective

To develop basic understanding on Wood and plant kingdom (Gymnosperms and Angiosperms) influencing forest growth and development also impart knowledge on Tree growth and its mechanism.

Outcome

The students will gain knowledge on wood anatomy, Tree growth and its mechanism of wood formation. Also gain knowledge of anatomical differences on gymnosperms and angiosperms.

5. SH/FST/WL 1201- Wildlife Biology (2+1)**Objective**

To develop basic understanding on Wildlife and their habitat this is influencing forest ecosystem.

Outcome

The students will gain knowledge on wildlife, Indian Mammals, Wildlife Ecology and Basic requirements of wildlife.

6. SH/FST/NR 1202- Forest Protection (2+1)**Objective**

- Develop the understanding of forest disturbances.
- Enlighten the management of biotic and a biotic disturbances to forest.

Outcome

At the end of the course, the students are expected to gain knowledge on forest fire, weeds, and basic concepts of forest pathology such as causal agents, symptoms, host parasite relationship of trees and logs and gain knowledge on management practices.

7. SH/FST/BS 1205- Statistical Methods & Experimental Designs (2+1)**Objective**

To understand and apply fundamental concept of statistical applications in forestry and to acquire about the theoretical concepts of data collection, graphical and diagrammatical representation of data, descriptive statistics, sampling methods, testing of hypothesis, correlation, regression, ANOVA and basic design of experiments.

Outcome

At the end of the course, the students are expected to gain knowledge on statistical applications in forestry and agricultural science, also to acquire knowledge about the theoretical and practical concepts of data collection, analysis and their representation.

8. SH/FST/PE 1202- Physical Education-II (0+1*)

Practical

9. SH/FST/NP 1202- NCC-II/NSS-II (0+1*)

Practical

SEMESTER – III

1. SH/FST/NR 2103-Environmental Studies and Disaster Management (2+1)

Objective

Develop the understanding the environment and conservation of nature and natural resources. To impart knowledge on different environmental and ecological Acts are help for conservation of nature and natural resources.

Outcome

Student acquires knowledge on multidisciplinary nature of environmental and Natural Resources and their management.

2. SH/FST/NR 2104- Forest Survey & Engineering (2+1)

Objective

Develop the understanding the tool and technique used for area evolution and construction.

Outcome

The theoretical and practical knowledge gained in this course will help in adaptation of surveying techniques in forest areas. The studies on roads will give a clear vision of laying out roads, its alignment and also on the various types of crossings as bridges and culverts in forest areas for its adoptability. The course will help on the practical applicability on different materials used for construction.

3. SH/FST/NR 2105-Soil Biology & Fertility (2+1)

Objective

To impart knowledge about the soil, and its importance in plant growth and development. The students familiarize how soil physicochemical and biological property play important role in forest and their conservation.

Outcome

Student acquires knowledge on physicochemical and biological property of forest and cultivated soil. Student also gains knowledge on different type of fertilizer and their use.

4. SH/FST/NR 2106-Forest Ecology & Biodiversity (2+1)

Objective

- ☐ Develop a balanced and broad understanding on forest ecology, biodiversity and conservation.
- ☐ Develop a working knowledge on forest ecosystem, productivity and interaction of forest with environment to solve forest based environmental issues.
- ☐ Be able to apply this knowledge base to unknown situations related to forest ecology.

Outcome

The student will gain knowledge to solve problems related to forest and their ecology, student also develop skills to conserve the ecology and biodiversity.

5. SH/FST/FB 2103-Tree Improvement (2+1)

Objective

- Develop a balanced and broad understanding of concepts and techniques related to tree breeding.

- Develop a working knowledge on tree breeding strategies.

Outcome

The students will gain theoretical and practical knowledge on seed orchard, seed production area, tree selection, hybridization and other tree improvement techniques.

6. SH/FST/SA 2104-Dendrology (2+1)**Objective**

To inculcate the fundamentals of botany and taxonomy of gymnosperms and angiosperms.

Outcome

The students will gain theoretical and practical skill in identification of plant species using morphological identification keys and knowledge in economical values of the plant species.

7. SH/FST/SA 2105-Forest Mensuration (2+1)**Objective**

- To impart various methods of measurements on standing, felled trees, crops and determining the volume of trees.
- To inculcate knowledge on volume table preparation for trees

Outcome

The students will gain knowledge on tree measurements for assessing the outturn of individual as well as group of trees.

8. SH/FST/PE-2103--Physical Education-III (0+1*)

Practical

9. SH/FST/NP-2103—NCC-III/NSS-III (0+1*)

Practical

SEMESTER – IV**1. SH/FST/SA 2206-Forest Management (2+1)****Objective**

- To understand the principles and concepts of forest management
- To impart knowledge on normal forest and sustainable forest management
- To know the methodology of working plan preparation

Outcome

The students will gain knowledge on forest management, working plan preparation and sustainable forest management concepts.

2. SH/FST/SA 2207-Silviculture of Indian Trees (2+1)

Objective

To impart basic knowledge on silviculture and regeneration of broad leaved and conifer tree species

Outcome

The students would acquire basic knowledge on Silviculture and silviculture system of some broad leaved and conifer tree species of India

3. SH/FST/FP 2203-Wood Products & Utilization (2+1)

Objective

To provide basic knowledge about the various wood products and non-wood products

Outcome

The student will gain knowledge about the various wood products, non-wood forest products its utility, value and their marketing.

4. SH/FST/FP 2204-Non Timber Forest Products (2+1)

Objective

To acquire knowledge on different NTFP's and their role in rural and tribal development

Outcome

The student will gain knowledge about the various wood products, non-wood forest products its utility and marketing

5. SH/FST/WL 2202-Ornithology & Herpetology (2+1)

Objective

The course aims to inculcate the knowledge of the Ornithology & Herpetology and their ecological importance.

Outcome:

The student will gain knowledge about the various types of birds herpeto-fauna, non-wood forest products its utility and marketing

6. SH/FST/FB 2204- Plant Biochemistry(1+1)

Objective

The course aims to inculcate the knowledge of the Carbohydrate, lipid etc and different plant hormones and their importance.

Outcome

The student will gain knowledge about the various types of Carbohydrate, lipid, fat etc and also gain knowledge on different plant hormones and their importance

7. SH/FST/NR 2207-Rangeland and Livestock Management (1+1)

Objective

The course aims to improve the knowledge of the Grass, grassland and grazing behavior of animals and their management.

Outcome

The student will gain knowledge about the various types of livestock and their livestock management.

8. SH/FST/BS 2206-Forest Tribology & Anthropology (2+0)

Objective

The course aims to inculcate the knowledge of the Tribal societies and their role and importance in conservation.

Outcome

The student will gain knowledge about the various types of tribal and characteristics. Student also gains knowledge on relationship between tribal and forest.

9. SH/FST/ST 2201-Study Tour of State Forest (0+1*)

Practical

Semester V (23 Credit Hours)

1. SH/FST/SA 3108-Forest Hydrology and Watershed Management (2+1)

Objective

To teach the students on different aspects of hydrology and watershed management and to impart basic knowledge on various measures of soil and water conservation.

Outcome

The knowledge gained in this course will help the students on the various aspects of watershed management and help them in framing and implementation of new projects in watershed development and treatment in forest areas. Also the studies on various measures of soil and water conservation measurement for sustainable utilization of the natural resources.

2. SH/FST/NR 3108- Agrometrology and Climate Science (2+1)

Objective

To teach the students on different aspects of Climate and Agrometeorology to impart basic knowledge on various measures of climatic parameters.

Outcome:-

The knowledge gained in this course will help the students on the various aspects of Climate which is help in agroforestry development also helping for treatment in degraded land, Westland etc . student also gain basis understanding on climate change and its consequences.

3. SH/FST/FP 3105-Wood Science and Technology (2+1)

Objective

To teach the students on different kinds of wood and preservation procedure.

Outcome:-

The knowledge gained in this course will help the students on the various types of wood and their mechanisms. The course also helps to gain knowledge on treatment of timber and there management which is improving the market value.

4. SH/FST/FP 3106-Logging and Ergonomics (1+1)

Objective

To teach the students on different kinds of logging, transportation of timber and Ergonomics.

Outcome

Students gain their knowledge on the various types of logging instrument and their mechanisms. The course also helps to gain knowledge on felling and logging procedure which is directly or indirectly improving the physical and mental problems of forestry workers

5. SH/FST/BS 3107-Plant Cytology and Genetics (1+1)

Objective

- Develop a balanced and broad understanding of concepts and techniques related to tree breeding
- Develop a working knowledge on tree breeding strategies.

Outcome:-

Basic principles of inheritance and modern concepts of genetics will be exposed to student.

6. SH/FST/BS 3108-Entrepreneurship Development & Business Management (1+1)

Objective

- To assess the entrepreneurial traits and promote entrepreneurial skills
- To provide an exposure to the entrepreneurship opportunities available
- To understand the skills required for management of enterprises

Outcome

Students gain their knowledge on the various types of economic system and their implementation for decision making by individual entrepreneurs. The course also helps to gain knowledge on different types of government schemes which help making individual entrepreneurs in different forestry sector.

7. SH/FST/BS 3109-Forest Economics and Marketing (2+1)

Objective

This course aims to introduce the basic principles of economics including the problem of economic decision – making and laws of economics relevant to farm and forest management.

To market concepts, marketing of agricultural/forest commodities, intermediaries involved, risks in agricultural marketing as well as forestry marketing, marketing institutions involved, price dynamics and the role of Government in regulation of markets Impart knowledge on principles of finance, banking, farm financial analyses and different crop insurance products implemented in India

Outcome

Students gain their knowledge on the various types of economics, marketing process in forestry sector. The course also helps to gain knowledge on different type's analytical process which is useful Forest planning, forest policy and development.

8. SH/FST/EL-I -Experiential Learning (0+5)

Practical

Outcome

Students gain their knowledge on the process of project formulation, data analysis, project report writing and presentation.

Semester VI (22 Credit Hours)

1. SH/FST/SA 3209-Plantation Forestry (2+1)

Objective

This course aims to on intensive silvicultural practices for different forest plantations for obtaining higher utilizable biomass

Outcome

Students acquire hands on knowledge on the plantation techniques for important forestry operations and plantation techniques.

2. SH/FST/NR 3209-Forest Laws, Legislation and Policies (0+2)

Objective

To impart knowledge on various policies and acts related to forests

Outcome

The students will gain knowledge on policies, acts and criminal procedures related to forests and its conservation

3. SH/FST/NR 3210-Geomatics (1+2)

Objective

This course aims to clear the concept of remortsensing & GIS and their application in forestry and natural resource management.

Outcome

The students acquiring knowledge on remotesensing & GIS tools and technique, and their application related to forests and its conservation

4. SH/FST/NR 3211-Recreation & Urban Forestry (1+1) Objective

- To acquire knowledge on Recreation & Urban Forestry and their role in landscaping.
- To acquire knowledge on recreation & Urban Forestry plant species and their role in environmental reclamation.

Outcome

Students gain their knowledge on various types plantation designing and their management which is related to Recreation & Urban Forestry.

5. SH/FST/NR 3212-Restoration Ecology (1+1)

Objective

- To impart practical understanding about rejuvenation of forest with tree vegetation
- To Develop skills on tacking different problem soils with suitable vegetation

Outcomes

The student will gain theoretical and field knowledge on rejuvenation of difficult site and problem soils with suitable tree vegetation

6. SH/FST/NR 3213-Forest Extension and Community Forestry (2+1)

Objective

To impart knowledge about the extension education and community forestry, the students familiarize how to extension education and community forestry management play important role in forestry education.

Outcome

Student acquiring knowledge on the process of extension education and community forestry programs which is play important role in sustainable forest management

7. SH/FST/FP 3207-Certification of Forest Products (2+0) Objective

- To impart practical understanding about process of forest products certification
- To Develop skills on tackling different problem of certification and trading of forest products.

8. SH/FST/EL- II - Experiential Learning (0+5)

Outcome

Students gain their knowledge on the process of project formulation, data analysis, project report writing and presentation.

Semester VII (23 Credit Hours including 3 Non-Credit)

1. SH/FST/FOWE- Forestry Work Experience (0+20) Objective

- An appropriate exposure to applied aspects of forestry
- An insight into the various factors which the forests and on which the forester react
- To equip the students with adequate knowledge on range administration, forest resources, forest and wildlife management, forest economics, tribal welfare, agroforestry, social forestry, forest protection, etc.
- To understand socio-economic and institutional aspects of a village ecosystem
- To develop communication skills in "Transfer of Technology" and
- To understand agroforestry technologies adopted by local farmers and forestry related organizations, Non-Governmental Organization, etc.

2. SH/FST/ST-4102-All India Study Tour (0+3*)

Practical

Semester VIII (23 Credit Hours)

1. SH/FST/NR 4214-Forest Inventory and Yield Prediction (1+1)

Objective •

To impart various methods of Tree assessment techniques. • To inculcate knowledge on different sampling procedures used in ecological and forest assessment

Outcome

Student gain theoretical and practical knowledge on different forest & tree assessment techniques.

2. SH/FST/FB 4205-Forest Biotechnology (2+1)

Objective

To impart the art of biotechnology and their applications in forestry for higher productivity and conservation.

Outcome

The forestry students will gain biotechnological skills for mass multiplication, utilization and conservation of forest genetic resources.

3. SH/FST/SA 4210-Agroforestry Systems and Management (2+1)

Objective

To impart broad knowledge about the agroforestry system and practice, and their role in rural development.

Outcome

The students will gain theoretical and practical knowledge on existing agroforestry systems and their management practice.

4. SH/FST/WL 4203-Wildlife Management (1+1)

Objective

- To develop knowledge on Wildlife and their habitat which is influencing forest ecosystem.
- To develop knowledge on wildlife census methods, Healthcare, Disease Management

Outcome:

The students will gain knowledge on wildlife management and conservation in India. The student also gains practical knowledge on different wildlife population estimation techniques.

5. SH/FST/BS 4210-Agricultural Informatics (2+1)

Objective

- To encourage the learners to become critical and reflective users of Computer for data management.
- To understand the building blocks of analytical soft ware, its functions and application in Forestry and agriculture science

Outcome

Student gain theoretical as well as practical knowledge and confident users of ICT who can make efficient, effective and creative use of basic application software in their everyday activities. Familiarize the working environment of office automation software and gain applied knowledge of working with Microsoft Office. Gain applied knowledge of audio visual aids.

6. SH/FST/PW- Project Work & Dissertation (0+10) Practical

Outcome

Student gain and improve the knowledge on research project development, data collection, analysis, scientific writing skills and presentation.

[Signature]

Head of the Department

Pandit Raghunath Murmu Smriti Mahavidyalaya

[Signature]

Principal

Pandit Raghunath Murmu Smriti Mahavidyalaya



PRINCIPAL,
PRMS MAHAVIDYALAYA,
BARAGARI, JAMBONI, BANKURA

THE DEPARTMENT OF FORESTRY

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