NISTARINI COLLEGE, PURULIA

DEPARTMENT OF BOTANY

Action taken report in connection with POS, COS & PSO

ACADEMIC YEAR 2017-18

1. After the departmental meeting with all the faculty members, it has been observed that the number of the registered students of the department has been decreasing. The effective measures for more input were taken to address the issues.
2. Out of 14 students appeared in the examination, 11 students passed with a % of 78.57. Out of the passed out students, 6 became First class with the highest percentage of 67.75%. The percentage of the 1st class student was satisfactory.
3. It has analyzed that the students did well in theory than practical. House recommended having more attention in the practical classes like the theory classes.
4. More time will be allotted for project work and innovation practices for total outcome of the programmes.
5. The course outcome was satisfactory but there was no room for satisfaction
6. More attention to be given for poor and meritorious students for better outputs.
7. The special care should be taken for the backward students for overall benefits of the department.
8. It was unanimously decided to start remedial classes for addressing the growing issues.

ACADEMIC YEAR 2018-19

1. After the departmental meeting with all the faculty members, it has been observed that the number of the registered students of the department has been increasing.
2. Out of 19 students appeared in the examination, 15 students passed with a % of 78.94. Out of the passed out students, 6 became First class with the highest percentage of 78.0 %. The percentage of the 1st class student was satisfactory. And one student has ranked in the university.

3. It has analyzed that the students did well in theory than practical

4. More time will be allotted for project work and innovation practices for total outcome of the programmes.

5. The course outcome was satisfactory but there was no room for satisfaction

6. More attention to be given for poor and meritorious students for better outputs.
7. The special care should be taken for the backward students for overall benefits of the department.
8. It was unanimously decided to start remedial classes for addressing the growing issues.

ACADEMIC YEAR 2019-20

1. After the departmental meeting with all the faculty members, it has been observed that the number of the registered students of the department has been increasing. The effective measures for more input were taken to address the issues.
2. Out of 12 students appeared in the examination, 12 students passed with a % of 100. Out of the passed out students, 1 became flying color with the highest CGPA. The percentage of 9-9 CGPA was encouraging. The batch has done satisfactory.
3. It has analyzed that the students did well in practical internal assessment. House recommended having more attention in the theory classes like the practical classes. The house also observed the pandemic situation and the effect of the teaching learning process was hampered. But the department tried their level best to maintain the teaching learning process in the online mode.
4. More time was allotted for project work and innovation practices staying within home.
5. The course outcome was satisfactory but there was no room for satisfaction due to ongoing challenges due to COVID19 problem of pandemic.
6. More attention to be given for poor and meritorious students for better outputs by providing all sorts of study content who did not attend the class regularly in online mode due to pandemic.
7. The special care should be taken for the backward students for overall benefits of the department by providing all sorts of possible help in the online mode.
8. It was unanimously decided to start remedial classes for addressing the growing issues to be done on the online mode.
9. More attention was given to add value added learning during the pandemic situation.

ACADEMIC YEAR 2020-21

1. After the departmental meeting with all the faculty members, it has been observed that the number of the registered students of the department has been increasing. The effective measures for more input were taken to address the issues.

2. Out of 20 students appeared in the examination, 19 students passed with a % of 95. Out of the passed out students, 3 placed within 9 CGPA and more, 5 students within 8-9 CGPA. The percentage of the rest student was satisfactory.

3. It has analyzed that the students did well in theory than practical. House recommended having more attention in the practical classes like the theory classes. The entire pandemic situation was troublesome to address the situation.

4. More time will be allotted for project work and innovation practices for total outcome of the programmes due to COVID 9 for doing well in the lock down by providing the suitable measures.

5. The course outcome was satisfactory but there was no room for satisfaction although the pandemic was very important issue.
6. More attention to be given for poor and meritorious students for better outputs.
7. The special care should be taken for the backward students for overall benefits of the department by giving all sorts of academic help to address the programme outcome of the department.
8. It was unanimously decided to start remedial classes for addressing the growing issues arise due to covid.

ACADEMIC YEAR 2021-22

1. After the departmental meeting with all the faculty members, it has been observed that the number of the registered students of the department has been increasing. The effective measures for more input were taken to address the issues.
2. Out of 15 students appeared in the examination, 15 students passed with a % of 100. Out of the passed out students, 7 became with the flying colors highest CGPA of 9 and more. The percentage of the student was satisfactory.
3. It has analyzed that the students did well in both theory and practical. House recommended keeping up the attention in the practical classes as well as theory classes.
4. More time will be allotted for project work and innovation practices for total outcome of the programmes due to lock down issues.
5. The course outcome was satisfactory but there was no room for satisfaction
6. More attention to be given for poor and meritorious students for better outputs and special care to be given after the lock down condition.
7. The special care should be taken for the backward students for overall benefits of the department as the pandemic causes negative effect in the past two years unfortunate COVID19 problems.
8. It was unanimously decided to start remedial classes for addressing the growing issues and the add on classes top be given much attention in this regard.
9. Value added courses and life style education will be provided for the same.

NISTARINI COLLEGE, PURULIA

ATTAINMENT OF CO, PO & PSO

DEPARTMENT OF CHEMISTRY

PROGRAMME NAME: CHEMISTRY (H)

Course	Outcome	Attainment
Semester-I		
BCEMCCHC-101 **ORGANIC CHEMISTRY**	CO-1. Understanding the Valence Bond Theory and MO Theory. CO-2. Understanding of the Stereochemistry of organic molecules. CO-3.Mechanistic approach of different organic reactions and reaction Intermediates.	The Course Outcomes of CO-1, CO-2 and CO-3 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time.
BCEMCCHC-102 **PHYSICAL CHEMISTRY**	CO-1. Understand the basic principles of Kinetic Theory of Gases. CO-2. Understand the Macroscopic Thermodynamics at equilibrium, Zeroth Law, 1st Law of Thermodynamics. CO-3. Adiabatic and Isothermal processes. CO-4. Work Done in isothermal and adiabatic processes. CO-5. Specific Heat and Kirchoff's Equation. CO-6. Joule-Thomson's Experiment. CO-7. Basic Principles of Kinetics of a reaction, rate of a equation, Molecularity and order of a reaction, rate determining step. CO-8. Arrhenius equation and temperature dependence, Collision	The Course Outcomes of CO:-1 -8 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-8 have been covered in due time.

	Theory.	
SEMESTER - II		
BCEMCCHC-201 **INORGANIC CHEMISTRY**	CO-1. Define organic acids and bases and various theories of acid-bases. CO-2. Gather an in-depth knowledge about atomic structure. CO-3. Understand the periodicity of the elements. CO-4. Understand the concepts of a redox reaction. CO-5. Explain various phenomenon of redox reactions using Nernst Equation.	The Course Outcomes of CO:-1 -5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
BCEMCCHC-202 **ORGANIC CHEMISTRY**	CO-1. Understand the basics of Stereochemistry. CO-2. Understand the reaction mechanisms like SN1, SN2, E1, E2. CO-3. Basic idea reaction Thermodynamics and Kinetics.	The Course Outcomes of CO:-1 -3 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time through offline and online mode.
SEMESTER - III		
CEMCCHC-301 **PHYSICAL CHEMISTRY**	CO-1. Understanding of the concepts of viscosity. CO-2. Understanding the principles of electrochemistry. CO-3. Understanding the requirement of 2nd Law of Thermodynamics. CO-4. Understanding the concepts of Free Energy (G & A). CO-5. Spontaneity and directional sense of a process from Thermodynamic point of view. CO-6. Understanding the concepts of Chemical Equilibrium. CO-7. Preliminary idea and foundations of Quantum Mechanics.	The Course Outcomes of CO:-1 -7 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-7 have been covered in due time through offline and online mode.
BCEMCCHC-302	CO-1. Thorough understanding of Chemical Bonding with special Emphasis on Ionic, Covalent bonding.	The Course Outcomes of CO:-1 -5 have been taught to the students by

INORGANIC CHEMISTRY	CO-2. Concepts of weak bonds like Hydrogen Bond, van der Waals bond. CO-3. Understanding the concepts of Molecular Orbital Theory. CO-4. Metallic bonding and concepts of semi-conductors. CO-5. Understanding of Radioactivity.	the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
BCEMCCHC-303 **ORGANIC CHEMISTRY**	CO-1. Understanding of the chemistry of unsaturated compounds. CO-2. Aromatic substitution reaction mechanisms. CO-3. Understanding of various reactions of the Carbonyl Group. CO-4. Elementary idea of Green Chemistry. CO-5. Understanding of Organometallic chemistry.	The Course Outcomes of CO:-1 -5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
BCEMSEHC-304 (SEC-1) **ANALYTICAL CHEMISTRY**	CO-1. Understanding of the Fundamentals of Analytical Chemistry. CO-2. To carry out the analysis of a soil sample. CO-3. To carry out the analysis of a water sample. CO-4. To carry out the analysis of various food products. CO-5. Understanding of Chromatography.	The Course Outcomes of CO:-1 -5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
SEMESTER - IV		
CEMCCHC-401 **PHYSICAL CHEMISTRY**	CO-1.Understanding of applications of the Laws of Thermodynamics. CO-2.Concepts of Ionic Equilibrium. CO-3 Understanding of EMF and Electrochemical Cell. CO-4. Understanding of surface phenomena like surface tension, Adsorption, Colloids. CO-5. Basic principles of Nano Science.	The Course Outcomes of CO:-1 -5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
BCEMCCHC-402 **INORGANIC CHEMISTRY**	CO-1 Understanding of the basic principles of Metallurgy. CO-2. Detailed knowledge of s- and p- block elements. CO-3. Detailed study of the Noble gases. CO-4. Elementary idea of Inorganic polymers. CO-5. Thorough understanding of Co-ordination Chemistry.	The Course Outcomes of CO:-1 -7 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.

	CO-6. Isomerism of Inorganic Compounds. CO-7. IUPAC nomenclature of Inorganic compounds.	
BCEMCCHC-403 **ORGANIC CHEMISTRY**	CO-1.Detailed study of organic nitrogenous compounds. CO-2. Rearrangement reactions and their mechanism. CO-3. Development of Logic of Organic Synthesis. CO-4.Understanding of asymmetric synthesis. CO-5. Understanding of Organic spectroscopy with special emphasis To UV-Vis, IR, NMR spectroscopy and their applications.	The Course Outcomes of CO:-1 -5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
BCEMSEHC-404 (SEC-2) **BIO-CHEMISTRY**	CO-1. Understanding of the concepts of Carbohydrates, amino acids. CO-2. Understanding the formation of proteins and enzymes. CO-3. Basic principle of the Watson-Creek model of DNA. CO-4. To develop a preliminary idea about Biochemistry of Disease.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
SEMESTER - V		
BCEMCCHC-501 **INORGANIC CHEMISTRY**	CO-1. Thorough understanding of Co-ordination chemistry in the light Of VBT, CFT, LFT. CO-2. Understanding of the colour and spectra of co-ordination Compounds and their magnetic properties. CO-3. Detailed study of d- and f-transition elements. CO-4. Detailed study of Lanthanides and Actinides.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BCEMCCHC-502 **ORGANIC CHEMISTRY**	CO-1. Detailed study of Carbocycles and Heterocyles. CO-2. Understanding of the stereochemistry of cyclic compounds. CO-3. Understanding of Pericyclic reactions. CO-4. Thorough study of Carbohydrates.	The Course Outcomes of CO:-1 -5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and

	CO-5. Study of amino acids, peptides and nucleic acids.	online mode.
BCEMDSHC-503 **(DSE-1)** **ADVANCED PHYSICAL CHEMISTRY**	CO-1. Detailed study of crystal structure. CO-2. Understanding the concepts of Statistical Thermodynamics. CO-3. Understanding of the 3rd Law of Thermodynamics. CO-4. Deeper insight of Quantum Mechanics.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BCEMDSHC-504 **(DSE-2)** **INORGANIC MATERIALS OF INDUSTRIAL IMPORTANCE**	CO-1. Understanding of preparation of glass, ceramics and silicates. CO-2. Elementary idea of Fertilizers. CO-3. A study of batteries. CO-4. Elementary idea of alloys. CO-5. Developing the idea and concepts of catalysis. CO-6. Developing the idea of preparation of chemical explosives.	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BCEMCCHC-501 **INORGANIC CHEMISTRY**	CO-1. Thorough understanding of Co-ordination chemistry in the light Of VBT, CFT, LFT. CO-2. Understanding of the colour and spectra of co-ordination Compounds and their magnetic properties. CO-3. Detailed study of d- and f-transition elements. CO-4. Detailed study of Lanthanides and Actinides.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
SEMESTER - VI		
BCEMCCHC-601 **INORGANIC CHEMISTRY**	CO-1. Developing the idea and concepts of Bio-inorganic chemistry. CO-2. Understanding of Organometallic chemistry from Inorganic Point of view. CO-3. Study of catalysis by organometallic compounds. CO-4. Understanding inorganic reaction mechanism and kinetics.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BCEMCCHC-602	CO-1. Understanding of molecular spectroscopy using Born-Oppenheimer approximation.	The Course Outcomes of CO:-1 -4 have been taught to the students by

PHYSICAL CHEMISTRY	CO-2. Developing the concepts of Photochemistry. CO-3. Various kinds of resonance spectroscopy like NMR, ESR. CO-4. Understanding of Catalysis with a deeper insight.	the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BCEMDSHC-603 **(DSE-3)** **ANALYTICAL METHODS IN CHEMISTRY**	CO-1. Understanding and application of Lambert-Beer's Law. CO-2. Understanding the basic principles of UV-Vis & IR spectroscopy. CO-3. Understanding of thermal methods like TG, DSC. CO-4. Understanding of Electroanalytical methods like conductometry, potentiometry. CO-5. Understanding of separation techniques like GC, HPLC, TLC.	The Course Outcomes of CO:-1 -5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
BCEMDSHC-604 **(DSE-4)** **GREEN CHEMISTRY**	CO-1. Understanding of the concepts of Green Chemistry. CO-2. Understanding the basic principles of Green Synthesis. CO-3. Requirements of Green Chemistry. CO-4. Understanding the Future Trends of Green Chemistry.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.

ATTAINMENT OF PO & PSO

The course curricula of the Programme: Chemistry (H) as laid down in the syllabus of Sidho-Kanho-Birsha University has been duly taught by the teachers of this department. After the completion of the entire 3 year undergraduate course, the students have learnt the fundamentals of Physical, Organic, Inorganic & Analytical Chemistry and as per the results 100% of the students have passed out with high CGPA, which implies that the students have learnt. Apart from this, the students have also learnt the use of various instruments for chemical analysis and they have also experienced the hands-on use of some of them like Conductometry, Potentiometry, pH-metre etc. In our assessment, the department has achieved 100% of the Program Outcome and hopes that the students will be able to use their knowledge in their higher studies.

NISTARINI COLLEGE PURULIA

DEPARTMENT OF COMPUTER SCIENCE

B.Sc. Computer Science

Honours

PROGRAM OUTCOMES (PO)

After the completion of the course the students were able to:

PO1: Analyse the problem thoroughly in such a way that leads to unambiguous algorithm for the given problem.

PO2: Apply the basic principles of hardware logic, operating system and programming language in the field of computation.

PO3: Solve the problems effectively, which includes a systematic approach that can break down the complex problems into individual manageable components.

PO4: Design the necessary components that are specific for the application by integrating the appropriate business logics with it.

PO5: Develop the conceptualisation skill that is suitable for the computer science research & development initiatives.

PO6: Demonstrate the domain realization to the technical experts in any professional forum.

PO7: Adaptability and capacity building to the ever-changing needs of the industry and employment opportunities.

PO8: Prepare students to be aware of excellence, leadership, written ethical codes and guidelines and lifelong learning needed for successful professional career by providing them with an excellent academic environment.

PROGRAMME SPECIFIC OUTCOMES

The Department of Computer Science, Nistarini college,purulia, offers Three Year (comprising 6 semesters) Undergraduate Program in Computer Science with objective of empowering students to acquire all-inclusive understanding of Computer Knowledge both theoretical and practical as an academic discipline. Upon completion of B. Sc. Computer Science Degree Program successfully, the students shall acquire the following skills and competencies.

PSO1: Identify right data structure, algorithm that is suitable for the real world problems.

PSO2: Create, select, and apply appropriate techniques, resources, and modern IT tools including prediction and modelling to complex activities with an understanding of the limitations.

PSO3: Explain the domain related topics and pursue professional growth in the computing field.

PSO4: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

COURSE OUTCOMES

First Semester

H1A. Course Code: BCOSCCHC101
Course Name: Problem solving in C

CO1: Write the pseudo code for the given program.
CO2: Design the logical structure of a programming language.
CO3: Identify the input, output functions and format specifiers in C.
CO4: Implement built-in and user defined functions in C Programming.
CO5: Proficient enough to implement the derived and the user defined data types.
CO6: Describe the pointer and file data structures concepts with its operations.
CO7: Proficient enough to debug and test code.
CO8: Implement the concept of function, recursion and pointer.

H1B. Course Code: BCOSCCHC102
Course Name: Computer System Architecture

CO1: Describe the discrete computer circuit components.
CO2: Design complex circuits with Boolean equations.
CO3: Implement a hardware circuit to accomplish the encoder and decoder functionality.
CO4: knowledge about number systems and conversion among bases
CO5: Describing memory units

Second Semester

H2A. Course Code: BCOSCCHT201
Course Name: Discrete Structures

CO1: Explain basic concepts in graph theory.
CO2: Define how graphs serve as models for many standard problems.
CO3: Account for the theory of paths and degree of connectedness of graph.
CO4: Learn the use of spanning tree.
CO5: Discuss the concept of graph, tree, and Euler graph.

H2B. Course Code: BCOSCCHC202
Course Name: Data Structures

CO1: Understand data structures for data storage and processing.
CO2: Understand data structures Stack, Queue, Linked list, Trees and Graph and their applications.
CO3: Develop knowledge /coding skill to implement different sorting and search methods.
CO4: Implement the applications of algorithms for sorting, pattern matching etc.

Third Semester

H3A. Course Code: BCOSCCHC301
Course Name: Operating Systems

CO1: Create the basic structure and the functionalities of the operating system.
CO2: Analyse the basics of process management and scheduling algorithms.
CO3: Assess the process synchronization and deadlock.
CO4: Apply memory management techniques in operating systems.
CO5: Design the virtual memory and other file management concepts.
CO6: Describe an I/O system, security and privacy issues.

H3B. Course Code: BCOSCCHC302
Course Name: Design and Analysis of Algorithms

CO1: Describe a given problem using an effective algorithm.
CO2: Analyse the asymptotic performance of the given algorithm.
CO3: Select an appropriate data structure specific for the computational problem.
CO4: Apply various algorithm design techniques to solve the problem.
CO5: Demonstrate problems like: sorting, knapsack, 8-queens and travelling salesman.
CO6: Categorize the nature of the problem NP hard or NP complete.

H3C. Course Code: BCOSCCHC303
Course Name: Programming in Java

CO1: Demonstrate Java Application programs using OOPS concepts.
CO2: Develop various methods in the Java Program.
CO3: Assess various access controls, packages, inheritance and interfaces.
CO4: Discuss Thread concepts and vector classes.
CO5: Built java programs to implement error handling techniques and I/O console.

H3D. Course Code: BCOSSEHC305
Course Name: Programming in Python

CO1: Discuss the fundamentals of Python programming.
CO2: List the computational problem-solving techniques in Python.
CO3: Some basic data structures of python

Fourth Semester

H4A. Course Code: BCOSCCHC401
Course Name: Database Management Systems

CO1: Analyse the basic requirements of DBMS.
CO2: Discuss the components of DBMS.
CO3: Categorise the SQL queries.
CO4: Design the user interface forms, reports, graphical objects and error handling.
CO5: Create an application with table operation and data storage methods.
CO6: Evaluate the database administration and its types.

H4B. Course Code: BCOSCCHT402
Course Name: Software Engineering

CO1: Create a life cycle for a software engineering process.
CO2: Design and deliver high-quality software.
CO3: Analyse the common threats in each domain.
CO4: Identify the role of project management.
CO5: Predict modularity and coding standards state issues.
CO6: Develop working relationships with various stakeholders of the project.

H4C. Course Code: BCOSCCHC403
Course Name: Computer Graphics

CO1: Implement various algorithms to scan and convert the basic geometrical primitives.
CO2: Describe the importance of viewing and projections.
CO3: Define the fundamentals of animation, virtual reality and its technologies.
CO4: Classify the typical graphical pipeline.

H4D. Course Code: BCOSSEHC405
Course Name: Web Technologies

CO1: Discuss the fundamentals of web technologies.
CO2: List the steps to creating web pages.
CO4: Build some sample web pages in HTML.

Fifth Semester

H5A. Course Code: BCOSCCHT501
Course Name: Theory of Computation

CO1: Understand the fundamental mathematical, regular languages and finite automata
CO2: Able to describe and transform regular expressions and grammars.
CO3: Able to design different types of Finite Automata and Machine as Acceptor, verifier and translators.
CO4: Able to understand the concept and design of push-down automata.
CO5: Able to understand the design and different types of Turing machine.
CO6: Understand the relation between context free languages, PDA and TM.

H5B. Course Code: BCOSCCHT502
Course Name: Computer Networks

CO1: Discuss the fundamental concepts of data communication networking.
CO2: Identify various protocol layer functions and features in data networks.
CO3: Differentiate connectionless and connection oriented computer networks.
CO4: Describe conflicting issues and resolution techniques in data transmission.
CO5: Interpret the different internet devices and their functions.
CO6: Contrast World Wide Web concepts related to data communication and networking.

H5C. Course Code: BCOSDSHT1
Course Name: Numerical Methods

CO1: Demonstrate understanding of common numerical methods and how they are used to obtain approximate solutions to otherwise intractable mathematical problems.
CO2: Apply numerical methods to obtain approximate solutions to mathematical problems.
CO3: Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.
CO4: Analyse and evaluate the accuracy of common numerical methods.

H5D. Course Code: BCOSDSHC2
Course Name: Microprocessor

CO1: Determine the 8085 instruction set's categories.
CO2: Recognize the types of interrupts, counters, and memory mapping concepts.
CO3: Show off your 8085 counter and time delay programs.
CO4: Implement the assembly language program in an 8085 microprocessor.
CO5: Summarize the programming logic in various aspects.

H5E. Course Code: BCOSDSHT3
Course Name: Cloud Computing

CO1: Illustrate levels of services of Cloud.
CO2: Discuss the fundamental principles of distributed computing.
CO3: Express the relationship between the grid and cloud distributed environment.
CO4: Identify security studies, deployment and backup in the context of cloud infrastructure.
CO5: Analyse the performance of Cloud Computing.
CO6: Associate the concept of Cloud Security and Cloud Infrastructure Model.

Sixth Semester

H6A. Course Code: BCOSCCHC601
Course Name: Internet Technologies

CO1: Basics of java scripts
CO2: explaining JDBC system.
CO3: Formulate a solution to complex problems in Web Services Content Management.
CO4: Develop tools that assist in automating data transfer over the Internet.
CO5: Demonstrate tasks that are accomplished in internet programming.
CO6: Create Database Connectivity in MySQL

H6B. Course Code: BCOSCCHS602
Course Name: Project Work

CO1: *W*ill know the process of *Identification of problems from real world.*
CO2: Can formalize a problem to a computational problem
CO3: Able to think about a process of solving from scratch.
CO5: can build a total solution**.**

H6C. Course Code: BCOSDSHT4
Course Name: Information Security

CO1: Describe different types of network security applications.
CO2: Examine the security attacks in information security.
CO3: Interpret the fundamental techniques of computer security.
CO4: Determine the potential security issues.
CO5: Enumerate the authentication and access control methods.
CO6: Demonstrate the objectives of the security policy.

H6D. Course Code: BCOSDSHT5
Course Name: Artificial Intelligence

CO1: Analyse the workings of modern applications in artificial intelligence.
CO2: Identify problems that are amenable to resolution by AI methods.
CO3: Formalize a given problem in the language or framework of different AI methods.
CO4: Apply AI techniques to real-world problems for intelligent systems.
CO5: Create an empirical evaluation algorithm based on a formalized problem.
CO6: Demonstrate the various applications of AI.

H6E. Course Code: BCOSDSHT6
Course Name: Operation Research (O.R.)

CO1: Construct linear integer programming models and discuss the solution techniques.
CO2: Set up decision models and use some solution methods for nonlinear optimization problems.
CO3: Propose the best strategy using decision making methods under uncertainty and game theory.
CO4: Solve multi-level decision problems using dynamic programming method.
CO5: Formulate pure, mixed, and binary integer programming models.
CO6: Formulate the nonlinear programming models.

Program course

PROGRAM OUTCOMES (PO)

After the completion of the course the students were able to:

PO1: Can handle the system and manage software.

PO2: Analyse the problem thoroughly in such a way that leads to unambiguous algorithm for the given problem.

PO3: Apply the basic principles of operating system and programming language in the field of computation.

PO4: Solve the problems effectively, which includes a systematic approach that can break down the complex problems into individual manageable components.

PO5: Will be able to deal with data through DBMS.

PROGRAMME SPECIFIC OUTCOMES

The Department of Computer Science, Nistarini college,purulia, offers Program course alongside honours course.

PSO1: Identify right data structure, algorithm that is suitable for the real world problems.

PSO2: Create, select, and apply appropriate techniques, resources, and modern digital computers.

PSO3: Explain the domain related topics and pursue professional growth in the computing field.

OURSE OUTCOMES

First Semester

P1A. Course Code: BCOSCCRC101
Course Name: Problem Solving using Computers

CO1: Will have the knowledge of computer system.
CO2: Will able know about understand problems and make a solution through algorithms.
CO3: have understanding of basic python syntax to represent algorithms.

2nd Semester

P2A. Course Code: BCOSCCRC201
Course Name: Database Management Systems

CO1: Analyse the basic requirements of DBMS.
CO2: Discuss the components of DBMS.
CO3: Categorise the SQL queries.
CO4: Create an application with table operation and data storage methods

3rd Semester

P3A. Course Code: BCOSCCRC301
Course Name: Operating Systems

CO1: Create the basic structure and the functionalities of the operating system.
CO2: Analyse the basics of process management and scheduling algorithms.
CO3: Assess the process synchronization and deadlock.
CO4: Apply memory management techniques in operating systems.

P3B. Course Code: BCOSSERT304
Course Name: Office Automation Tools

CO1: Able to know about Formatting Text, Pages, Lists, Tables, Data.
CO2: Will know about Creating Charts and Graphs, Using Formulas and Functions, Macros, Pivot Table.

4th Semester

P4A. Course Code: BBCOSCCRT401
Course Name: Computer System Architecture

CO1: Describe the discrete computer circuit components.
CO2: Design complex circuits with Boolean equations.
CO3: knowledge about number systems and conversion among bases
CO4: Describing memory units

P4B. Course Code: BCOSSERT404
Course Name: HTML Programming

CO1: Able to understand web page mechanism
CO2: Can know about different attributes of a page.
CO3: Will able create pages including images, background design and CSS styling.
CO4: They will be able to link pages.

5th Semester

P5A. Course Code: BCOSDSRT1
Course Name: Computer Networks

CO1: Discuss the fundamental concepts of data communication networking.
CO2: Identify various protocol layer functions and features in data networks.
CO3: Differentiate connectionless and connection oriented computer networks.
CO4: Describe conflicting issues and resolution techniques in data transmission.
CO5: Interpret the different internet devices and their functions.
CO6: Contrast World Wide Web concepts related to data communication and networking.

P5B. Course Code: BCOSDSRT2
Course Name: Software Engineering

CO1: Create a life cycle for a software engineering process.
CO2: Design and deliver high-quality software.
CO3: Analyse the common threats in each domain.
CO4: Identify the role of project management.
CO5: Predict modularity and coding standards state issues.
CO6: Develop working relationships with various stakeholders of the project.

P5C. Course Code: BCOSSERT504
Course Name: PHP Programming

CO1: Will be able to understand how PHP works and writing procedure.
CO2: Can think about server and how client fed with pages in internet.
CO3: Understand about methods of data passing.
CO4: Will have knowledge about functions, RE and arrays.

6th Semester

P6A. Course Code: BCOSDSRC3
Course Name: Programming in Java

CO1: Demonstrate Java Application programs using OOPS concepts.
CO2: Develop various methods in the Java Program.
CO3: Assess various access controls, packages, inheritance and interfaces.
CO4: Discuss Thread concepts and vector classes.
CO5: Built java programs to implement error handling techniques and I/O console.

P6B. Course Code: BCOSDSRC4
Course Name: Data Structures

CO1: Understand data structures for data storage and processing.
CO2: Understand data structures Stack, Queue, Linked list, Trees and Graph and their applications.
CO3: Develop knowledge /coding skill to implement different sorting and search methods.
CO4: Implement the applications of algorithms for sorting, pattern matching etc.

P6C. Course Code: BCOSSERT604
Course Name: System Administration and Maintenance

CO1: Will know about Linux and Unix and their differences.
CO2: Can do Installation and configuration, maintenance of Unix.
CO3: Have knowledge about advantage s and disadvantages of Unix and Linux**.**
CO4: Will know PC hardware, BIOS, devices and drivers, Kernel configuration and building of windows Os

Generic

G3A. Course Code: BCOSGERC20
Course Name: Computer Fundamentals

CO1: Will have knowledge about different part of a system.
CO2: have a basic understanding of different kinds of S/Ws
CO3: Can understand different base of number system and their conversions.

G4A.Course Code: BCOSGERC20A
Course Name: Introduction to Programming(using C)

CO1: Write the pseudo code for the given program.
CO2: Design the logical structure of a programming language.
CO3: Identify the input, output functions and format specifies in C.
CO4: Implement built-in and user defined functions in C Programming.
CO5: Proficient enough to implement the derived and the user defined data types.
CO6: Describe the pointer and file data structures concepts with its operations.
CO7: Proficient enough to debug and test code.
CO8: Implement the concept of function, pointer.

NISTARINI COLLEGE, PURULIA
ATTAINMENT OF CO, PO & PSO
DEPARTMENT OF ENGLISH
PROGRAMME NAME: ENGLISH (H)

Course	Outcome	Attainment
Semester-I		
BENGCCHT 101 **INDIAN CLASSICAL LITERATURE**	CO-1: *"AbhijnanaShakuntalam": Kalidasa*(18 class hours) This text is a key to enter into the treasure of Indian Classical literature. It is a play in 7 acts that accentuates eternal human endeavour to unite earth and heaven. A reading of *Shakuntalam*is meant for exposure to and understanding of pure literature. CO-2: *"The Dicing" and "The Sequel to Dicing" from The Mahabharata: Vyasa*(7+5=12 class hours) It makes an introduction to Indian Epic tradition. Translinguistic in nature, this text is meant for mature understanding of life through the challenging characters like Duryodhana and Shakuni. Students can form a new perception about the binary nature of moral and cultural ethos of India in those days. CO-3: *"Mricchakatika": Sudraka*(17 class hours) Another Indian play in translation IN 10 acts. It is a play that deals with the ground realities of medieval India. It is a 'Prakarana' play that gives exposure to life in all its vagaries. The kaleidoscopic vision of the play will attract the young minds to the multi-layered social setup of the then times, and thus, may drawthem to deeper studies on Indian history, culture, and class systems. CO-4: *"The Book of Vanci" from "Cilappatikaram": IlankoAtikal*(15 class	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and the major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.

	hours) It is a Tamil epic which marks a distinct departure from the Aryan epic tradition. Lyrical and melodious, this epic is romantic in nature, and it suggests transcendence from the mundane world to the ethereal heaven. It tells the tale of universal human saga of Love, Revenge, War and Power, although from a Dravidian angle.	
BENGCCHT 102 **EUROPEAN CLASSICAL LITERATURE**	CO-1: *"The Iliad" (Book I and Book IX): Homer* (17 class hours) A key to enter into the European Classical literature, "The Iliad", even in excerpts, is worth reading. It presents the heroic life of the Indo-European forefathers. Ennobling and exotic, this text makes an interesting parallel with the Indian epics. Students may avail themselves of the opportunity of probing into a comparative study of the different structure and texture of the Oriental and the Occidental epics. CO-2*: "Oedipus the King": Sophocles* (17 class hours) One of the greatest tragedies of all time, "Oedipus Rex" presents the irony of human existence and ego-centric megalomania through the metaphor of vision. Deeply philosophical in nature, this play, through the tale ofpromiscuity of generations, tells the eternal saga of the sad music of humanity. Hence the enduring popularity of this text. CO-3. *"Poetics": Aristotle* (18 class hours) It makes a theoretical attempt to analyse literature primarily through the metaphor of tragedy. It is a must read for all students interested in literature, as it is the primal and seminal text on Aesthetics and Poetry in the West. CO-4. *Selections from "Metamorphoses": Ovid* (14 class hours)	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.

	Ovid's "Metamorphoses" is another marvel of world literature. The selections are made keeping in mind the capacity of the students to understand them and their areas of interest. Apart from the interest that the stories generate, they also point to the universal interrelationship between the Mythical characters and the Human mind.	
SEMESTER - II		
BENGCCHT 201 **INDIAN WRITING IN ENGLISH**	CO-1."*The Guide": R.K. Narayan* (17 class hours) The Guide is an immensely popular modern Indian English fiction that addresses intricate issues of Indianthrough a well-told story. Reading of such a text is worth its while as it introduces students adequately to the concept of Indian English literature. CO-2: *"In Custody": Anita Desai* (17 class hours) A novel short-listed for Booker "In Custody" experiments boldly with a crisis that always demands carefulhandling: the conflict between Hindi and Urdu after the independence of India. Students will surely find it worthreading. CO-3: *Indian English Poetry* (16 class hours) Indian students studying literature in British India were first enamored by English poetry, and they startedimitating them slavishly at first, with some character and purpose. Modern Indian English poetry is worth reading, and students will definitely be benefited by this exposure. CO-4: *Indian English Short Stories and Essays* (18 class hours) Indian English shows its optimum maturity in fictional works, and short stories comprise a good slice of it. It is always advisable that students should be encouraged to read Indian English short	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time..

	stories by R.K.Narayan, Mulk Raj Anand and Khuswant Singh, and essays by Salman Rushdie and AmitavaGhosh are also worth reading.	
BENGCCHT 202 **BRITISH POETRY AND DRAMA: 14TH TO 17TH CENTURY**	CO-1: *"The Wife of Bath's Prologue": Geoffrey Chaucer (7 class hours)* *Poetry from Spenser to Marvell* (8 class hours) The students are introduced to English literature with the best poems from Chaucer to the Metaphysicals. This exposure makes them ready to face other challenges in the semesters to come. With Chaucer, modern English begins, and he is justly called the Father of English Literature. Students are encouraged to go through the development of English language and poetry from Chaucer to Marvell. CO-2: *"Edward II": Christopher Marlowe* (20 class hours) This tragedy is the first of the English plays that students face. This intricate text with historical background prepares them to come across "Macbeth", "Hamlet" and "Henry IV" in future. The political dimension of power clash is also important for young minds. This play is of triple benefit for the students because it accommodates three major components of Elizabethan theatre: Tragedy, History play, and Chronicle play. CO-3: *"Macbeth": William Shakespeare* (20 class hours) "Macbeth" is the shortest of the Shakespearean tragedies and the swiftest. So it is almost an automatic choice, and students are immensely benefitted by reading this thrilling tragedy. It is at once a gripping moral and political play and a cascade of silvery poetry. It is one of the earliest examples of the Theatre of Power. CO-4: *"As You Like It": William Shakespeare* (20 class hours) This romantic comedy is the first one of the genre that students take up. It is a pleasant	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.

	drama that presents a vision of life quite opposite to that of Edward II and Macbeth. Through the form of Romantic Comedy of geniality, humour and fun, Shakespeare projects the deeper theme of social cleansing and purification, whichis of utmost importance to the moral make of the learners' minds.	
SEMESTER - III		
BENGCCHT 301 **AMERICAN LITERATURE**	CO-1: *"The Hairy Ape": Eugene O'Neill* (18 class hours) This impressionistic text is the first of the modern American plays that is offered to the students considering thefact that they are now maturer to accept intellectual challenges. The play makes the students aware about theprimitive violence and political power clash inherent in the history of humanity. CO-2: *"The Old Man and the Sea": Earnest Hemingway* (18 class hours) A fictional presentation of Americanism, this work is a must read for anybody interested in literature or life. Thetragic adventurism of the old man is a lesson for young students to understand the ultimate philosophical realitythat every human enterprise has its own worth beyond the human calculation of profit or loss. The element of'struggle for existence' is powerfully portrayed through the central character, which every man should learn inorder to make a mark in life. CO-3: *American Short Stories*: (16 class hours) No reading of American literature is complete without short stories by Poe or Faulkner. The concept of America as a "melting pot" and the American dream finds expression mostly through the essays and shortstories. So the component is very interesting. CO-4: *American Poetry* (18 class hours) American poetry starting from Anne Bradstreet to Robert Frost creates a sense of historical continuity anddevelopment. Poetry	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.

	is the essence of literature and reading of these poems alongside British and Indianwill definitely help students to perceive the underlying philosophy.	
BENGCCHT 302 **POPULAR LITERATURE**	CO-1: *"Through the Looking Glass": Lewis Carrol*(18 class hours) Lewis Carrol creates a world of non-sense that draws attention of readers from 8 to 80. This popular appeal,now recognized in literature, is part of making a student ready to face any challenge in the field of literature. This unparallel piece projects one of the central tensions of life: the polar tension between Logic and Imagination. CO-2: *"The Murder of Roger Ackroyd": Agatha Christie* (18 lectures) Detective fiction as a popular genre finds place to initiate the students to a world of murder, mystery andmathematics. It is important for all-round development of literary sensibility of the students. CO-3: *Three men in a Boat: Jerome K. Jerome* (17 class hours) This very handy and hilarious story is a good dose of laughter medicine for students. It is hoped that suchfiction will go well with a modern student surrounded by internet, website, cartoon network and cloud. CO-4: *"Bhimayana: Experiences of Untouchability" :Vyam and Vyam*(17 class lectures) It is a graphic novel and a biography of BhimraoRamjiAmbedkar. It serves the dual purpose of education andentertainment through a now- popular genre of fiction.	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.
BENGCCHT-303 **British Poetry and Drama: 17th and 18th Centuries**	CO-1. The students will learn how to read epic which is the longest text belonging to the genre poetry. CO-2. Oliver Goldsmith: *She Stoops to Conquer* [18 class hours] CO-3. AphraBehn: *The Rover* [18 class hours]	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the

	CO-4. Alexander Pope: *The Rape of the Lock (Canto 1 & 2)* [14 class hours]	syllabus which comes under CO:- 1-4 have been covered in due time.
SEC-I **English Language Teaching**	CO-1. The Learner will learn to enhance skill CO-2. The Learner will understand the Structures of English Language CO-3. The learner will apply the Methods of teaching English Language and Literature CO-4. The Learner will know the Materials for Language Teaching CO-5. The Learner will be able to assess Language Skills CO-6. The Learner will learn to use Technology in Language Teaching	The Course Outcomes of CO-1, CO-2 and CO-3, CO-4, CO-5, and CO-6 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-6 have been covered in due time.
SEMESTER – IV		
BENGCCHT-401 **BRITISH LITERATURE: 18TH CENTURY**	CO-1: *English Essays: (14 class hours)* Essays are an important part of modern English literature, and reading of 18th century essays by Steele and Addison is helpful in understanding 18th century life and society better. CO-2: *"Gulliver's Travels" (Book I and Book II): Jonathan Swift* (22 class hours) This fictional work is now considered a classic because of the inherent allegorical message. Reading of thiswork will definitely inspire students to contemplate boldly and independently on the issues of their ownworld, and to distinguish between the 'Apparent' and the 'Real'. CO-3: *Poetry of Gray and Collins* (12 class hours) The Pre-Romantic English poetry paves the ground for the famous Romantic tradition. The poems prescribedare lucid and enjoyable. Students will be surely benefited by this component, and will be exposed to the worldof imagination to which the 18th and 19th century paid their high tributes. CO-4: *"The Castle of Otranto": Horace Walpole* (22 class hours) It is the first specimen of Gothic fiction, and	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.

	this work will definitely help the students read other fictions ofthis genre and be inspired to see the film versions that will expand their imagination and help them to relateliterature of terror with the sensations of day to day life.	
BENGCCHT-402 **ROMANTIC LITERATURE**	CO-1: *Poems of Blake and Scott (11 class hours)* It is a continuation of the Romantic tradition, and the poems of Blake and Scott are very important to understandthe basic nuances of Romanticism. Students, already reading Gray and Collins, will definitely be interested in thissegment. The students will also be made aware of the pivotal role of Music and Painting in poetry. CO-2: *Poems of Wordsworth and Coleridge (15 class hours)* High Romanticism is explored through this segment. Students are introduced to the poems they have beenhearing of from parents and teachers in their school days. CO-3: *Poems of Shelley and Keats (15 class hours)* High Romanticism continues. Students are supposed to be immensely benefitted by the inspired imagination andrecreation of truth as epitomized by the great Romantics. CO-4: *Essays of Charles Lamb: (18 class hours)* Charles Lamb is called the prince of English essays. Reading an essay by him is an experience itself. Students willgain knowledge about facing all problems with a smile if they perceive the philosophy of Lamb.	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.
BENGCCHT-403 **BRITISH LITERATURE: 19TH CENTURY**	CO-1: *Pride and Prejudice": Jane Austen (18 class hours)* The first great woman novelist in English, Jane Austen presents her simple, rural vision of life in all her novels. "Pride and Prejudice" is a great novel that presents the late 18th century English society in a very sketchy way. Reading of this novel will definitely help	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the

	students relate the realities of Indian society. CO-2: *"Hard Times": Charles Dickens (18 class hours)* The novel presents in typical Dickensian way the socio-economic realities of mid-19th century England. The students will get the taste of Dickens, and they can relate the realities of post-globalization with what Dickens presents in Hard Times: the stark materialism and the curses of Industrialisation in 19th century England inparticular, and Europe as a whole. CO-3: *"The Return of the Native": Thomas Hardy (18 class hours)* Another great novel of 19th century that presents provincial realities in a well-told story of love and loss. Hardy'sphilosophy has a universal appeal, and students will find his world fascinating. They will also learn to look atNature and Society with a different eye. CO-4: *Poems by Tennyson, Browning and Arnold (16 class hours)* Victorian poetry is expressive of the disturbing realities of the age. So there is an inherent complexity within thesurface look of simplicity. Students will find the difference between Romantic poetry and Victorian ones veryinteresting. Victorian poetry being both a continuation of Romanticism (which germinated from a failed French Revolution), and an anticipation of the 20th century War crisis, it focuses on the central theme of Loss of Faith and Love in a war-sickened wasteland.	syllabus which comes under CO:- 1-4 have been covered in due time.
BENGSEHT-404 (SEC-2) **Business Communication**	CO-1. The learner will be introduced to the essentials of Business Communication: Theory and practice CO-2. The learner will be able to Cite references, and using bibliographical and research tools CO-3. The learner will be able to Write a project report CO-4. The learner will be able to Write reports on field work/visits to industries, business concerns	The Course Outcomes of CO-1, CO-2 and CO-3, CO-4, CO-5, CO-6, and CO-7 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-7 have

	etc. /business negotiations. CO-5. The learner will be efficient in Summarizing annual report of companies CO-6. The learner will be applying their learning in writing minutes of meetings CO-7. The learner will be to access E-correspondence	been covered in due time.
SEMESTER – V		
BENGCCHT 501 **WOMEN'S WRITINGS**	CO-1: *Poems of Dickinson, Plath & D'Souza (12 class hours)* The poems are representative of how conscious, modern women address their inner feelings and Women'sissues as a part of human dichotomy. Reading of their poems will enhance the level of perception of the 3rd year students already exposed to World Literature, and will be exposed to the critical arena of Feminism. CO-2: *"Uncle Tom's Cabin": Harriet Beecher Stowe (18 class hours)* The world famous fiction that exposes the realities of the American attitude to the Blacks is worth readingfor any lover of literature. The students will definitely be enriched by the humanitarian approach of Stowe,and be able to identify the curses of Apartheidism. CO-3: *Short Stories by Mansfield, JhumpaLahiri&Mahasweta Devi (21 class hours)* The unit will give a good exposure to the students through short stories of sensibilities as different as Kiwi, Netizen and Indian. It is hoped that students are by now ready to accept such challenges. The multiple facetsof existence, viz., 'Struggle for existence', 'Diasporic dislocation', and 'Tribal resistance' will lead the studentsto an all-round perception of life's fights. CO-4: *Essays by Virginia Woolf and Memoirs by Rassundari Devi (16 class hours)*	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.

	The two essays by Virginia Woolf directly address feminine issues and the Memoirs of Rassundari Devipresents the development of feminine sensibility in India during the second half of the 19th century in India. So, the East-West combine of Feminine crises and complexities, presented in the package of literature, willbring to the fore the universal problems of the so-called 'weaker sex' so far suppressed by the patriarchalsociety.	
BENGCCHT 502 **BRITISH LITERATURE: EARLY 20TH CENTURY**	CO-1: *"Arms and the Man": G.B. Shaw (18 class hours)* A pleasant comedy by G.B. Shaw, "Arms and the Man" incorporates strong anti-war message within the feel ofanti-romanticism. It is a must-read for the students of English literature for its anti-war stance, conviction andpopularity. CO-2: *Short stories by Lawrence and Maugham (14 class hours)* The students will be immensely benefitted by reading the two masters of English literature. The complexities ofmodernist literature, when raveled, will lead to aesthetic realization. CO-3: *"A Portrait of the Artist as a Young Man": James Joyce (20 class hours)* The celebrated quasi-autobiographical novel by Joyce poses an intellectual challenge to the readers of anystandard. It is a good exposure for the mature 3rd year students to cope up with the bitter realities of themodernist world and a successful transcendence through it. CO-4: *Poems of W.B. Yeats & T.S. Eliot (18 class hours)* No less challenging and daunting is to face the poetry of Yeats and Eliot, but the readings will definitely besurprisingly revealing and pleasant. It is hoped that the students will gain in maturity by such readings to facethe challenges beyond the college successfully.	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.
BENGDSHT-503 **History of English Literature (OE to 1798)**	CO-1. The learners will know the history of Old English Literature CO- 2. The learners will know the history of Middle English	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this

	CO-3. The learners will know the history of literature and political environment of the period 1625 to 1700 CO-4. The learners will conceptualize the literary phenomenon of 1700 to 1798 British Literature.	department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.
BENGDSHT-504 **Literary Criticism**	CO-1. Sir Philip Sidny: *An Apology for Poetry* CO-2. Wordsworth: Preface to *Lyrical Ballads* (1802) [8 class hours] Coleridge: *BiographiaLiteraria* (Chapters XIII & XIV) [9 class hours] CO-3. Virginia Woolf: 'Modern Fiction' [9 class hours] T.S. Eliot: 'Tradition and Individual Talent' (1919) [9 class hours] CO-4. I.A. Richards: *Principles of Literary Criticism* (Chapters 1 & 2). [17 class hours]	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time..
SEMESTER - VI		
BENGCCHT 601 **MODERN EUROPEAN DRAMA**	CO-1: *"Ghosts": Henrik Ibsen (17 class hours)* Ibsen's "great play" *Ghosts* is an important illustration of the *Avant-Garde* movement in this sense that whileregular tragedy deals mainly with the unhappy consequences of breaking the normal code, it deals with theconsequences of not breaking it. It can be described as a scathing commentary on 19th century morality,illustrating religion, venereal disease, incest and euthanasia, some of the burning problems of the modernworld. Students will be definitely benefitted by the reading of the play. CO-2: *"Mother Courage and Her Children": Bertolt Brecht (18 class hours)* This text of Brecht is immensely popular and	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time..

	frequently adapted. It is considered as the greatest anti-war play of all times, the reading of which will surely be enjoyable and beneficial to the students, as they will be exposed to the worldwide cry against War and for Peace. CO-3: *"Cherry Orchard": Anton Chekov (17 class hours)* A representative Russian play, Cherry Orchard shows a new dimension of social class structure. The playpresents themes of cultural futility as the aristocracy makes vain efforts to maintain status and the bourgeoisto find meaning in its new-found materialism. Students will be exposed to the Russian socio-political changesfrom the mid-nineteenth century to the first half of the 20th. CO-4:*"Rhinoceros": Eugene Ionesco (18 class hours)* A highly experimental absurd play, "Rhinoceros" created a new wave in *Avant-Garde* theatre movement. Theplay is often read as a response and criticism to the sudden upsurge of Fascism and Nazism, and explores thethemes of conformity, culture, responsibility, mass movements, philosophy and morality. A bit tricky andsubtle though it is, the play is worth reading on the part of the advanced learners of literature.	
BENGCCHT 602 **POSTCOLONIAL LITERATURES**	CO-1: *"Things Fall Apart": Chinua Achebe (18 class hours)* This novel has been very self-conscious undertakings by an artist-historian who finds it to be hisoutstanding duty, at the historical moment of Nigeria emerging from a ninety-year long colonial rule, to 'decolonise' the minds of its people by letting them know that their ancestral past was not one long nightof oblivion and after that prepare them for assessing the present situation scientifically and withequipoise. Our students should know such postcolonial discourses as our country also suffered from thesame kind of repressive designs of the colonial masters during the British rule.	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.

	CO-2: *"Mystic Masseurs": V.S. Naipaul (18 class hours)* Set in the West Indian island of Trinidad, "Mystic Masseurs" reflects the general disillusionment that beset thepost-war generations and the deep spiritual isolation felt by a frustrated writer of Indian descent.in a universein which he felt himself to be inconsequential and a stranger among men, companionless. It has a directrelevance to the decline of political ethos across the globe, and the students must find it worth reading. CO-3: *Poems by African Women Writers (18 class hours)* African female poets almost always have taken to her pen as a conscious teacher and guide for her postcolonial society that has been mired in the ills of racism, apartheid, inter-ethnic feuds, civil wars, andnumerous other social, political, and cultural blights as a fall-out largely of colonial imposition anddisruption. The development of African feminine sensibility in the last fifty years is amazingly fast, andthe poems of Bessie Head, Ama Ata Aidoo and Grace Ogot will definitely inspire the students to explorethem more and more. CO-4: *Postcolonial Poetry (16 class hours)* Postcolonial literature is an amazingly thriving field as hundreds of writers are addressing thecolonised realities in newer veins. Neruda speaks of Latin American realities, Derek Walcott Caribbean, David MaloufAustralian, and Mamang Dai North-East Indian. Reading of literature will not be completewithout some bit of knowledge of these masters of postcolonialism.	
BENGDSHT-603 **History of English Literature (1798 to present)**	CO-1. The learners will be able to understand the literature of the Romantic age CO-2. The learners will be able to understand the literature, society and dilemma of the Victorian Period. CO-3. The learners will be able to analyze the literature of the Modern Period.	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the

	C.O-4. The learners will be able to analyze the literature of the Post 1950s	syllabus which comes under CO:- 1-4 have been covered in due time.
BENGDSHT-604 **English Language and Literary Types**	CO-1. The learners will be able to learn Philology CO-2. The learners will be able to understand Phonetics and Prosody CO-3. The learners will be able to analyse Rhetoric CO-4. The learners will be able to know Literary Terms and Types	The Course Outcomes of CO-1, CO-2 and CO-3 and CO-4 have been taught to the students by the teachers of this department to the best of their ability and major parts of the syllabus which comes under CO:- 1-4 have been covered in due time.

ATTAINMENT OF PO & PSO

The course curriculum of the Programme: The syllabus English (H) as recommended by Sidho-Kanho-Birsha University has been duly taught by the teachers of this department. After the completion of the entire 3 year undergraduate course, the students have learnt the fundamental ideas, content and form of British Literature, Indian and European Classical Literature in English Translation and as per the results 90% of the students have passed out with variuos CGPA, which implies that the students have learnt. Apart from this, the students have also learnt to apply theories and critical ideas to analyse the text more intensely. In our assessment, the department has achieved 90% of the Program Outcome and hopes that the students will be able to employ their knowledge in their higher studies.

Report on CO, PO, PSO

Department of Environmental Science

2017-2018

Semester I and II (Hons)

Students learned from these semesters the holistic concept of Environment and society, multidisciplinary nature of the subject and its scope in future in the arena of job, need of environmental education, fundamental concepts of biological Cell, and basic idea of Gene, taxonomic classification, ecology, biomes, biotic communities and biogeochemical cycles; the basic concept and application of General Chemistry, Biochemistry, aquatic and atmospheric chemistry and Basic knowledge of Green Chemistry in Environment related Matters; the basic concept of radioactivity, thermodynamics, biophysics and analytical Physics regarding Environment related Matters. 100 % syllabus was completed within time. Regular class tests, group discussions were arranged for skill development. Pass out percentage was also good. They follow reference books on relevant topics.

2018-2019

Semester I and II (Hons)

Students learned from these semesters the holistic concept of Environment and society, multidisciplinary nature of the subject and its scope in future in the arena of job, need of environmental education, fundamental concepts of biological Cell, and basic idea of Gene, taxonomic classification, ecology, biomes, biotic communities and biogeochemical cycles; the basic concept and application of General Chemistry, Biochemistry, aquatic and atmospheric chemistry and Basic knowledge of Green Chemistry in Environment related Matters; the basic concept of radioactivity, thermodynamics, biophysics and analytical Physics regarding Environment related Matters. 100 % syllabus was completed within time. Regular class tests, group discussions were arranged for skill development. Pass out percentage was also good. They follow reference books on relevant topics.

Sem III and IV

Students learned about earth processes, Geological time scale, climatology, earth resources, hydrological cycle, aquifers, soil characteristics, application of remote sensing. They also have the knowledge about natural resources, energy resources, concept of wealth and resource among students. Practical Paper boosts the skill of application of methodologies for water parameter analysis, plant biochemical parameter analysis.

SEC paper imparts basic Knowledge of ecotourism, types of tourism, its impact on environment and culture as well as conservation of wild life.

Papers of Sem IV helps to build up sound knowledge level among students about toxicology, elementary idea about biotechnology and its recent application processes in environment related matters Enriches the store of information of regarding environment related laws, provision of environmental matters in Indian constitution, public policies, Environmental Impact Assessment, its goal etc.

Practical paper enhances analytical skill for quantitative estimation of soil physico-chemical characteristics, Study of aquatic flora, fauna; ecosystem study Develops sound knowledge about histological as well as cytological techniques, microscopy etc. among students.

Full efforts were given for covering 100% syllabus within time, pass percentage was good; students develop skill and knowledge among them. They follow reference books on relevant topics.

2019-2020

Semester I and II (Hons)

Students learned from these semesters the holistic concept of Environment and society, multidisciplinary nature of the subject and its scope in future in the arena of job, need of environmental education, fundamental concepts of biological Cell, and basic idea of Gene, taxonomic classification, ecology, biomes, biotic communities and biogeochemical cycles; the basic concept and application of General Chemistry, Biochemistry, aquatic and atmospheric chemistry and Basic knowledge of Green Chemistry in Environment related Matters; the basic concept of radioactivity, thermodynamics, biophysics and analytical Physics regarding Environment related Matters. 100 % syllabus was completed within time. Regular class tests, group discussions were arranged for skill development. Pass out percentage was also good. They follow reference books on relevant topics.

Sem III and IV

Students learned about earth processes, Geological time scale, climatology, earth resources, hydrological cycle, aquifers, soil characteristics, application of remote sensing. They also have the knowledge about natural resources, energy resources, concept of wealth and resource among students. Practical Paper boosts the skill of application of methodologies for water parameter analysis, plant biochemical parameter analysis.

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Full efforts were given for covering 100% syllabus within time, pass percentage was good; students develop skill and knowledge among them. They follow reference books on relevant topics.

Sem V and VI

Students gained the concept of pollution, Pollutants, their types. Practical paper imparts practical knowledge to analyze few water parameters and learn to study air quality, watershed model etc.

DSE papers deal with the concept of pollution, pollutants, their types, analytical techniques, basic concept of data collection, water distribution pattern and quality of water resources;

Social and environmental Issues, environmentalism, awareness, concept of sustainability among students. This paper helps to grow sound knowledge about environmental economics, accounting auditing and management procedures of environmental problems among students

Dissertation paper imparts knowledge of project or dissertation work in the arena of environment among students, and also provides basic information on computer application In Sem VI students learn about the environmental economics, ecological economics, Types of economic system, supply and demand, Kuznet's curve; CBA ration , valuation of environmental resources, management of pollution. DSE papers deals with disaster and their

management; students learn to grow ability for risk assessment, Enhances the knowledge of environmental statistics and modelling, measurement of central tendencies. Health related DSE paper imparts the concept of health, disease, health related programmes and common stress factors in plants physiology among students. Full efforts were given for covering 100% syllabus within time, pass percentage was good; students develop skill and knowledge among them. They follow reference books on relevant topics.

2020-2021

Semester I and II (Hons)

Online classes were held due to Covid 19 pandemic situation. Students learned from these semesters the holistic concept of Environment and society, multidisciplinary nature of the subject and its scope in future in the arena of job, need of environmental education, fundamental concepts of biological Cell, and basic idea of Gene, taxonomic classification, ecology, biomes, biotic communities and biogeochemical cycles; the basic concept and application of General Chemistry, Biochemistry, aquatic and atmospheric chemistry and Basic knowledge of Green Chemistry in Environment related Matters; the basic concept of radioactivity, thermodynamics, biophysics and analytical Physics regarding Environment related Matters. 100 % syllabus was completed within time. Regular class tests, group discussions were arranged for skill development. Pass out percentage was also good. They follow reference books on relevant topics.

Sem III and IV

Students learned about earth processes, Geological time scale, climatology, earth resources, hydrological cycle, aquifers, soil characteristics, application of remote sensing. They also have the knowledge about natural resources, energy resources, concept of wealth and resource among students. Practical Paper boosts the skill of application of methodologies for water parameter analysis, plant biochemical parameter analysis.

SEC paper imparts basic Knowledge of ecotourism, types of tourism, its impact on environment and culture as well as conservation of wild life.

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provision of environmental matters in Indian constitution, public policies, Environmental Impact Assessment, its goal etc.

Practical paper enhances the theoretical skill for quantitative estimation of soil physico-chemical characteristics, Study of aquatic flora, fauna; ecosystem study Develops sound knowledge about histological as well as cytological techniques, microscopy etc. among students. Due to online mode of class, practical analysis of parameters was not possible. This was the weaker portion of the students.

Full efforts were given for covering 100% syllabus within time, pass percentage was good; students develop skill and knowledge among them. They follow reference books on relevant topics.

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Students gained the concept of pollution, Pollutants, their types. Practical paper imparts practical knowledge to analyze few water parameters and learn to study air quality, watershed model etc. Due to online mode of class, practical analysis of parameters was not possible. This was the weaker portion of the students.

DSE papers deal with the concept of pollution, pollutants, their types, analytical techniques, basic concept of data collection, water distribution pattern and quality of water resources;

Social and environmental Issues, environmentalism, awareness, concept of sustainability among students. This paper helps to grow sound knowledge about environmental economics, accounting auditing and management procedures of environmental problems among students

Term papers were carried out in the pandemic situation. In Sem VI students learn about the environmental economics, ecological economics, Types of economic system, supply and demand, Kuznet's curve; CBA ratio, valuation of environmental resources, management of pollution. DSE papers deals with disaster and their management; students learn to grow ability for risk assessment, Enhances the knowledge of environmental statistics and modelling, measurement of central tendencies. Health related DSE paper imparts the concept of health, disease, health related programmes and common stress factors in plants physiology among students. Full efforts were given for covering 100% syllabus within time, pass percentage was good; students develop skill and knowledge among them. They follow reference books on relevant topics.

2021-2022

Semester I and II (Hons)

Students learned from these semesters the holistic concept of Environment and society, multidisciplinary nature of the subject and its scope in future in the arena of job, need of environmental education, fundamental concepts of biological Cell, and basic idea of Gene, taxonomic classification, ecology, biomes, biotic communities and biogeochemical cycles; the basic concept and application of General Chemistry, Biochemistry, aquatic and atmospheric chemistry and Basic knowledge of Green Chemistry in Environment related Matters; the basic concept of radioactivity, thermodynamics, biophysics and analytical Physics regarding Environment related Matters. 100 % syllabus was completed within time. Regular class tests, group discussions were arranged for skill development. Pass out percentage was also good. They follow reference books on relevant topics.

Sem III and IV

Students learned about earth processes, Geological time scale, climatology, earth resources, hydrological cycle, aquifers, soil characteristics, application of remote sensing. They also have the knowledge about natural resources, energy resources, concept of wealth and resource among students. Practical Paper boosts the skill of application of methodologies for water parameter analysis, plant biochemical parameter analysis.

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DSE papers deal with the concept of pollution, pollutants, their types, analytical techniques, basic concept of data collection, water distribution pattern and quality of water resources;

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NISTARINI COLLEGE, PURULIA

ATTAINMENT OF CO, PO & PSO

DEPARTMENT OF GEOGRAPHY

PROGRAMME NAME: GEOGRAPHY (H)

Course Outcomes of B.A Honours in Geography

SEMESTER-I			
Course	**Co No.**	**Outcomes**	**Attainment**
BGEOCCHT101 Geo-tectonics and Geomorphology	**CO-1.**	Students will understand and gather knowledge about the evolution of earth's structural evolution relating to the geological time scale.	The teachers in this department have done their best to teach the students the Course Objectives of CO-1, 2, 3, and CO-4, and they have completed all of the coursework for CO:-1-4 on schedule.
	CO-2.	Able to understand how the various kinds of landscape has developed and their route beneath the earth surface.	
	CO-3.	Will Understand the processes and landforms associated with various exogenetic forces : river, glacier, wind	
	CO-4.	Knowledge of Models of landscape development as envisaged by Davis, Penck, King and Hack	
BGEOCCHS102 Cartographic Techniques	**CO-1.**	Acquire Knowledge of map making with precision of scale , coordinate system and bearings	The teachers have done their utmost to teach the students the Course Objectives of CO:-1 – 4 and have completed the whole CO: – 1-4 course on time.
	CO-2.	Idea of map projection with special reference to UTM projection	
	CO-3.	Concept of surveying and use of surveying equipment like prismatic compass, dumpy level, theodolite, abney level and clinometer	
	CO-4.	Interpretation of topographical map based on morphometric analysis	

SEMESTER-II			
Course	**Co No.**	**Outcomes**	**Attainment**

BGEOCCHT201 Hydrology and Oceanography	CO-1.	To study the dynamic processes of global hydrological cycle and its components: runoff, infiltration and evapotranspiration	The Course Outcomes of CO:-1-4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO: - 1-4 have been covered in due time through offline and online mode.
	CO-2.	Acquire knowledge of water harvesting and watershed management	
	CO-3.	Concept of groundwater, recharge, discharge and movement	
	CO-4.	Study the form and nature of sea water and gain knowledge on current issues related to marine resources and sea level changes	
BGEOCCHS202 Cartograms and Thematic Mapping	CO-1.	Construction of thematic maps based on cartographic techniques	The course outcomes for CO:-1-4, which fall under CO: have been taught to the students by the teachers to the best of their abilities and according to 100% of the curriculum. - Via offline and online modes, 1-4 have been handled in a timely manner.
	CO-2.	Preparation of socio-economic maps using statistical methods like Z-score and LQ techniques	
	CO-3.	Use of surveying instruments: prismatic compass and dumpy level	
	CO-4.	Interpretation of geomorphological maps, climatological maps, synoptic charts and land use/land cover maps	

SEMESTER-III			
Course	**Co No.**	**Outcomes**	**Attainment**
BGEOCCHT301 Climatology	CO-1.	Knowledge of earth atmosphere and its various constituents.	To the best of their abilities and using the whole CO:-

	CO-2.	Consciousness on the impact of greenhouse effect and importance of ozone layer	1–4 syllabus, the teachers have taught the students the course outcomes. - Via offline and online modes, 1-4 have been handled in a timely manner.
	CO-3.	Concept of various atmospheric phenomena	
	CO-4.	Climatic classification as envisaged by Koppen, Thornthwaite and Oliver	
BGEOCCHS302 Geography of India	CO-1.	The stratigraphic structure of a country helps to understanding the types and characteristics of rocks and physiography of an area.	To the best of their abilities and using the whole CO:- 1–4 syllabus, the teachers have taught the students the course outcomes. A timely offline and online coverage of outcomes 1-4 has been made.
	CO-2.	Knowing the wide diversity of regions of India with reference to the climate, soil , vegetation, socio-cultural stratification,	
	CO-3.	Technical revolution in agriculture and acquire knowledge regionalisation of India in various aspects	
	CO-4.	Highlight the facts on reginal problems in India	
BGEOCCHS303 Statistical Methods in Geography	CO-1.	Knowledge of statistical methods in geography with emphasis on data collection and sampling	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO: - 1-4 have been covered in due time through offline and online mode.
	CO-2.	Representation of data by its central tendency , dispersion and correlation	
	CO-3.	Plotting of regression line both linear and non-linear	
	CO-4.	Time series analysis of data to know the trend	
BGEOSEHT305	CO-1.	Knowledge of hazard and disaster	

Disaster Management	CO-2.	Classifying the various disaster and areas effected by them	CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO: -1-4 have been covered in due time through offline and online mode.
	CO-3.	Idea of risk and vulnerability assessment	

SEMESTER-IV			
Course	**Co No.**	**Outcomes**	**Attainment**
BGEOCCHT401 Regional Planning and Development	CO-1.	Understanding the basic concept of different regions and the need for specialised multilevel planning in India	The course outcomes for CO:-1to CO:-4, which are covered by the 100% syllabus, have been taught to the students by the teachers in the greatest way possible. CO-1-4 have been properly addressed in both offline and online mode.
	CO-2.	The various concepts and models of regional development	
	CO-3.	The need and measure of balanced development in India with reference to regional inequality, disparity and diversity	
	CO-4.	Understanding the concept of human development index	
BGEOCCHT402 Economic Geography	CO-1.	Idea of economic geography with reference to economic man distance and transport cost	The teachers have done their best to teach the course outcomes for CO:-1 through CO:-4, which are covered by the CO:-1–4 syllabus, to the students. A timely offline and online
	CO-2.	Models determining the location of various economic activities	
	CO-3.	Knowledge of the different primary, secondary and tertiary activities	

	CO-4.	Importance of the international agreements and trade blocks in recent global scenario	coverage of 1-4 has been made.
BGEOCCHS403 Remote Sensing	CO-1.	Able to learn in details about the concept of remote sensing process	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO: -1-4 have been covered in due time through offline and online mode.
	CO-2.	To understand the importance of resolution of sensors in data capturing	
	CO-3.	Can learn about Electro Magnetic Radiation and object based reflection	
	CO-4.	Land use/land cover mapping from satellite data and map making using GIS software	
BGEOCCHS405 Advanced Spatial Statistical Techniques	CO-1.	Use of software like MS-Excel and SPSS for data interpretation	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:-1-4 have been covered in due time through offline and online mode.
	CO-2.	The different probability theories and their geographical applications	
	CO-3.	Sampling procedure in statistical software	
	CO-4.	Correlation, regression and time series analysis	

SEMESTER-V			
Course	**Co No.**	**Outcomes** Students will know about the	**Attainment**
BGEOCCHT501 Environmental Geography	CO-1.	Importance of environmental studies in geography and the perception of environment through the various stages of civilization	The Course Objectives of CO:-1 -4 have been taught to the students to the best of their ability and 100%

	CO-2.	The concept of ecosystem and its component parts	of the curriculum which falls under CO:-1 -4. - 1-4 have been completed on schedule, in both offline and online mode.
	CO-3.	Urban environmental issues and remedies	
	CO-4.	Environmental programmes and policies envisaged at the local, national and global level	
BGEOCCHS502 Research Methodology and Field Work	CO-1.	Introduction to good research work with knowledge of research problem, objective and hypothesis	The Course Objectives of CO:-1 -4 have been taught to the students to the best of their ability and 100% of the curriculum which falls under CO:-1 -4. - 1-4 have been completed on schedule, in both offline and online mode.
	CO-2.	Concept of literature review and plagiarism	
	CO-3.	Techniques of report writing	
	CO-4.	Field work for collecting physical and socio-economic data	
BGEODSHT1 Fluvial Geomorphology	CO-1.	Understanding the river as a separate hydro entity, the processes it operates and the relationship with the various components in the catchment	The teachers in this department have done their best to teach the students the Course Objectives of CO-1, 2, 3, and CO-4, and they have completed all of the coursework for CO:-1-4 on schedule.
	CO-2.	The importance of drainage basin with reference to fluvial morpho-dynamics	
	CO-3.	The study of the various fluvial landforms	
		Knowledge of integrated watershed management and its importance	
BGEODSHT2 Urban Geography	CO-1.	Development of urban geography as a discipline	The course outcomes for CO:-1-4, which fall under CO: have been taught to the students by the
	CO-2.	Theories of origin and evolution of urban places through ages	

	CO-3.	Urban issues and challenges in post liberal period	teachers to the best of their abilities and according to 100% of the curriculum. - Via offline and online modes, 1-4 have been handled in a timely manner.
	CO-4.	Pattern and trend of Urbanization in India with specific case studies of Delhi, Kolkata and Chandigarh	
BGEODSHT3 Population Geography	CO-1.	Knowledge of the various parameters of population	The course outcomes for CO:-1-4, which fall under CO: have been taught to the students by the teachers to the best of their abilities and according to 100% of the curriculum. - Via offline and online modes, 1-4 have been handled in a timely manner.
	CO-2.	Causes, types and patterns of national and international migration with special reference to India	
	CO-3.	Lessons of population policies from the developed and less developed countries	
	CO-4.	Current issues of population related to ageing, sex ratio, environment and diseases	

SEMESTER-VI			
Course	**Co No.**	**Outcomes**	Attainment
BGEOCCHT601 Evolution of Geographical Thought	CO-1.	Development of geographical thought through ages: ancient, medieval and modern period	To the best of their abilities and using the whole CO:-1–4 syllabus, the teachers have taught the students the course outcomes. A timely offline and online coverage of
	CO-2.	Concept of various approaches in geographical study	
	CO-3.	Contribution of eminent geographers of various schools	

	CO-4.	Post-modern development in geography with special reference to space	outcomes 1-4 has been made.
BGEOCCHS602 Geographical Information System	CO-1.	Construct knowledge about co-ordinate system assignment to specific layer	This department's professors have done their best to teach the students the Course Objectives of 1, 2, 3, and 4, and they have finished all of the assignments for CO:-1-4 on time.
	CO-2.	Able to distinguish between raster and vector data	
	CO-3.	Database creation and spatial modelling of events	
	CO-4.	Application of GIS in physical geography like geomorphology mapping	
BGEODSHT4 Soil and Biogeography	CO-1.	Type, characteristics, profile and pattern of soil formation	The teachers taught the course objectives to the best of their ability, utilising the whole CO:-1-4 curriculum. Outcomes 1-4 have been timely covered both offline and online.
	CO-2.	Importance of soil in human life and challenges of soil erosion and degradation	
	CO-3.	Knowledge of biosphere and the importance of bio-geochemical cycles	
	CO-4.	Causes, consequences and management of deforestation	
BGEODSHT5 Social Geography	CO-1.	Evolution of social region with emphasis to space	The teachers taught the course objectives to the best of their ability, utilising the whole CO:-1-4 curriculum. Outcomes 1-4 have been timely covered both offline and online.
	CO-2.	Different social categories and their social behaviour in the social environment	
	CO-3.	Idea of social wellbeing and its measures	
	CO-4.	Importance of five year plan with special reference to SIA	

BGEODSHT6 Political Geography	CO-1.	Knowledge of state, nation and nation-state with reference to geopolitics and conflicts	To the best of their abilities and using the whole CO:-1–4 syllabus, the teachers have taught the students the course outcomes. A timely offline and online coverage of outcomes 1-4 has been made.
	CO-2.	Electoral geography and the concept of voting and representation	
	CO-3.	Interstate and territorial politics of India	
	CO-4.	The idea of the formation of new states within the Indian federalism	

ATTAINMENT OF PO & PSO

The teachers of this department have taught the course curriculum of the Programme: Geography (H) as outlined in the Sidho-Kanho-Birsha University syllabus. After the completion of the entire 3 year undergraduate course, the students have learnt the fundamentals of physical geography, human geography, cartography, applied statistical methods, and as per the results 100% of the students have passed out with high CGPA, which implies that the students have learnt efficiently. Aside from that, the students have learned how to utilise various instruments for field survey and statistical analysis, and they have had hands-on experience with some of them, such as remote sensing data and geographical information softwares, survey equipment. According to our evaluation, the department has met 100% of the Program Result and anticipates that the students will be able to apply their knowledge in their future studies.

NISTARINI COLLEGE, PURULIA

ATTAINMENT OF CO, PO & PSO

DEPARTMENT OF HISTORY

PROGRAMME NAME: HISTORY (H)

Course	Outcome	Attainment
Semester-I		
BHISCCHT-101	CO-1. Understanding the Pre-history and Ancient Indian History CO-2. Understanding of the Cultural history CO-3.Political invasion and historical Consciousness	The Course Outcomes of CO-1, CO-2 and CO-3 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time.
BHISCCHT-102	CO-1. Understand the Urbanization CO-2. Expansion of Settlements CO-3. Cultural development of Post Maurya. CO-4. Cultural developments in Gupta era	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time.
SEMESTER - II		
BHISCCHT-201	CO-1. Changing Political formations CO-2. The Maurya empire: Nature and Bases CO-3. Post Maurya Developments CO-4. Age of Guptas	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISCCHT-202	CO-1. Studying early Medieval India. CO-2. Political Structure. CO-3. Agrarian Structure and Social Change. CO-4. Trade and Commerce.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time

		through offline and online mode.
SEMESTER - III		
BHISCCHT-301	CO-1. Development of Medieval Literature CO-2. Medieval Schools of Philosophy CO-3. Religious development in Sultanate period. CO-4. Religious development in Mughal period.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISCCHT-302	CO-1. The Delhi Sultanate CO-2. Ruling elites CO-3. Society and Economy in North India. CO-4. Urbanization and Trade.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISCCHT-303	CO-1. Growth of Mughal power till Akbar. CO-2. Rural economy and society. CO-3. Urban Centres. CO-4. Urban social structure.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
SEMESTER - IV		
BHISCCHT-401	CO-1.Colonial State and ideology. CO-2. Rural economy and society. CO-3. Popular Resistance. CO-4. Popular Resistance.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISCCHT-402	CO-1 Understanding the culture of Bengal CO-2. Trade and Commerce CO-3. Society in the late 18^{th} century CO-4. Conservative response.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have

		been covered in due time through offline and online mode.
BHISCCHT-403	CO-1. Historiography CO-2. Gandhian Nationalism. CO-3. Nationalism and movements. CO-4. Freedom struggle.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
SEMESTER - V		
BHISCCHT-501	CO-1. Communalism. CO-2. Politics and Partition CO-3. Integration of Princely States. CO-4. Kashmir Questions.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISCCHT-502	CO-1. Changing European Economy. CO-2. Renaissance and Reformation. CO-3. European Crisis. CO-4. Scientific revolution and culture.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISDSHT1-503 **(DSE-1)**	CO-1. British annexations. CO-2. Indonesia. CO-3. Vietnam. CO-4. Malay.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISDSHT2-504 **(DSE-2)**	CO-1. America Independence. CO-2. Slavery and abolition movement. CO-3. Emergence of USA. CO-4. New Nationalism.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time

		through offline and online mode.
BHISDSHT3-505 **(DSE-3)**	CO-1. Jahangir. CO-2. Decline of Mughal. CO-3. Bengal under Murshid. CO-4. Battle of Boxer.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
SEMESTER - VI		
BHISCCHT-601	CO-1. 18th Century Europe. CO-2. Industrialization in Europe. CO-3. Towards Imperialism. CO-4. World War 1 and Impact.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISCCHT-602	CO-1. World inter War Period. CO-2. World after 1945. CO-3. China in World politics. CO-4. Globalization.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISCCHT-603 **DSE- 4**	CO-1. China under traditional Society. CO-2. Self Strength. CO-3The rise of KMT. CO-4. Economy and Industrializations.	The Course Outcomes of CO:-1 -4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BHISCCHT-604 **DSE- 5**	CO-1. Meiji Restoration. CO-2. Emergence of Japan. CO-3. Japan in the Pacific.	The Course Outcomes of CO:-1 -3 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time through offline and online mode.

ATTAINMENT OF PO & PSO

The course curricula of the Programme: History (H) as laid down in the syllabus of Sidho-Kanho-Birsha University has been duly taught by the teachers of this department. After the completion of the entire 3 year undergraduate course, the students have learnt the fundamentals of Ancient, Medieval and Modern India and World as per the results 100% of the students have passed out with high CGPA, which implies that the students have learnt. Apart from this, the students have also learnt the use of various instruments for analysis and they have also experienced the hands. In our assessment, the department has achieved 100% of the Program Outcome and hopes that the students will be able to use their knowledge in their higher studies.

Department of Mathematics

NISTARINI COLLEGE, PURULIA

NAAC Accredited with 'A' Grade (CGPA 3.30) in 2015
(Affiliated to Sidho-Kanho-Birsha University, Purulia, W.B.)

Attainment on

Course Outcomes,
Programme Specific Outcomes
&
Programme Outcomes

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Attainment of Course Outcomes

In the Outcome Based Education, assessment is done through one or more processes carried out by the department/university to evaluate the achievement of course outcomes. The process for finding the attainment of course outcomes uses various methods, classified in two types-Direct and Indirect methods.

Direct Methods signify students' knowledge and skills from their performance in class tests, assignments, internal assessment examinations, semester examinations. These methods provide strong evidence of student learning.

Indirect Methods reflect students' learning through course exist survey and examiner feedback.

Generally the department follows direct methods to study the attainment of course outcomes. Each teacher of the department conducted class tests after completing one or two sections of his / her allotted portion of the course in each semester. Internal Assessment Examinations conducted at the end of each semester on each paper. The Internal Assessment Marks for each paper was calculated giving proportionate weightage on the marks of class tests, internal assessment examinations and class attendance throughout the semester.

End semester examinations were conducted by the university (SKBU) and the department preserved university results along with the internal assessment marks of all semesters and studies the students' learning with knowledge & skills on the course from their performance.

COURSE OUTCOMES:

Mathematics (Hons.)

SEMESTER 1

Course Code & Course Title	Course Outcomes		Course Attainment
BMTMCCHT-101 **DIFFERENTIAL & INTEGRAL CALCULUS and ANALYTICAL GEOMETRY (2D)**	CO-1	Familiarize with Higher Order Derivatives & Leibnitz Rule for Successive Differentiation with its applications	The students have been familiarized with the Course Outcomes of CO-1 to CO-8 through completing 100% syllabus by the teachers of this department to the best of their ability and the attainment being studied by direct methods
	CO-2	Understanding of Intermediate Forms & L'Hospital's Rule	
	CO-3	Understanding the basic ideas Partial Derivatives and applications of Euler's Theorem	
	CO-4	Familiarize with applications of Differential Calculus	
	CO-5	Familiarize with Reduction Formulae in Integration and applications of Integral Calculus	
	CO-6	Understanding of Transformation of Axes and its uses for the reduction of General Equation of Second Degree to Canonical form	
	CO-7	Understanding geometry of two-dimensional plane figures	
	CO-8	Familiarize with Polar Co-ordinate system and polar equation of line, circle, conics & tangent and normal to conics	
BMTMCCHT-102 **CLASSICAL ALGEBRA,** **ABSTRACT ALGEBRA - I** **and** **NUMBER THEORY**	CO-1	Understanding of De-Moivre's theorem and its application	The teachers of the department have taught 100% syllabus of the Course of the paper and tried to familiarize the Course Outcomes described in CO-1 to CO-10 of this paper and studied attainment by direct methods
	CO-2	Understanding of Rolle's theorem and its application	
	CO-3	Learn methods to solve equations, transformed equations, cubic, bi-quadratic and reciprocal equations	
	CO-4	Familiarize with A.M, G.M, & H.M and useful inequalities	
	CO-5	Familiarize with Simple Continued Fractions and its convergent	
	CO-6	Concept of Mappings, Equivalence Relation and Lattice	
	CO-7	Concept of Mathematical Induction & Fundamental Theorem of Arithmetic	
	CO-8	Understanding of Euclid's Algorithm, GCD, LCM	
	CO-9	Understand the definitions of congruence, power of congruence and related theorems	
	CO-10	Familiarize with Euler's φ-function , Mobius μ-function and Solution of Diophantine Equation	

SEMESTER II			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMCCHT-201 **REAL ANALYSIS - I**	CO-1	Understand algebraic & order properties of Real numbers and completeness of Real numbers	The teachers completed 100% syllabus of the paper and tried to conceptualize the Course Outcomes CO-1 to CO-4 of this paper and studied attainment by direct methods
	CO-2	Idea of countable and uncountable sets	
	CO-3	Concept of limit points, open sets and closed sets	
	CO-4	Concept of Sequence and Series of Real numbers and their convergences	
BMTMCCHT-202 **ORDINARY DIFFERENTIAL EQUATIONS** **and** **LINEAR ALGEBRA - I**	CO-1	Familiarize with First order linear Ordinary Differential Equations and their solution techniques	The students have been familiarized with the Course Outcomes of CO-1 to CO-7 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Identification and solution techniques of First order non-linear Ordinary Differential Equations	
	CO-3	Understanding of applications of First order Ordinary Differential Equations, Orthogonal Trajectories	
	CO-4	Familiarize with different solution techniques of Higher order linear Ordinary Differential Equations with constant co-efficients and variable co-efficients	
	CO-5	Understanding simultaneous linear Ordinary Differential Equations and Total Differential equations	
	CO-6	Concept of vector space, Basis and Dimension of a finite dimensional vector space	
	CO-7	Acquainted with the Existence of solutions of system of Linear Equations and their solution techniques	

SEMESTER III			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMCCHT-301 **REAL ANALYSIS- II**	CO-1	Concept of limit, continuity and differentiability of functions of one and several variables	The teachers completed 100% syllabus of the paper and tried to conceptualize the Course Outcomes CO-1 to CO-5 of this paper and studied attainment by direct methods
	CO-2	Mean value theorems and their applications	
	CO-3	Finding series expansion of various functions	
	CO-4	Finding extremum of functions including the method of Lagrange's multipliers	
	CO-5	Idea of double and triple integration to find area and volume	
BMTMCCHT-302 **ABSTRACT ALGEBRA - II**	CO-1	Concept of Groups, Subgroups, Cyclic groups, Permutations groups, Centralizer, Normalizer	The teachers completed 100% syllabus of the paper and tried to conceptualize the Course Outcomes CO-1 to CO-3 of this paper and studied attainment by direct methods
	CO-2	Learn Lagrange's theorem and it's consequences including Fermat's little theorem	
	CO-3	Understand the concept of Rings and Fields	
BMTMCCHT-303 **ANALYTICAL GEOMETRY (3D)** **and** **VECTOR ANALYSIS**	CO-1	Understanding the concept of Three-dimensional space and it's geometry	The students have been familiarized with the Course Outcomes of CO-1 to CO-9 through completing 100% syllabus of thepaper by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Understanding the geometrical characteristics of Sphere, Cone, Cylinder and the Generators of the Quadrics	
	CO-3	Concept of Central Conicoids like Ellipsoid, Hyperboloids of One or Two Sheets	
	CO-4	Familiarize with Generating lines with Ruled and Skew Surfaces	
	CO-5	Understanding the concepts of Transformation of co-ordinate axes in three dimensions and reduction of Second degree equations to its canonical form	
	CO-6	Understanding the Product of three or more vectors	
	CO-7	Concept of Vector Calculus, Differentiation and Integration of vector-valued functions	
	CO-8	Idea of Gradient, Divergence & Curl of Vectors and their properties	
	CO-9	Understanding of Line integral. Surface integral and Volume integral of vector functions; applications of Green's theorem and Stokes' theorem	
BMTMSEHT-305 (SEC-1) **LOGIC & SETS**	CO-1	Concept of propositions and truth table	The teachers completed 100% syllabus of the paper and tried to conceptualize the Course Outcomes CO-1 to CO-4 of this paper and studied attainment by direct methods
	CO-2	Precedence of logical operators and propositional equivalency	
	CO-3	Concept of predicates and quantifiers	
	CO-4	Elementary idea of sets and Relations with their applications	

SEMESTER IV			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMCCHT-401 **DYNAMICS OF PARTICLES**	CO-1	Understanding the concept of motion of a particle in a straight line in resisting and non-resisting medium	The students have been familiarized with the Course Outcomes of CO-1 to CO-6 through completing 100% syllabus of this paper by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Familiarize with Simple Harmonic Motion and its applications	
	CO-3	Understanding the concept of Impulsive Forces and its application in collision of elastic bodies	
	CO-4	Understanding the concept of motion of a particle in two dimensional Cartesian plane	
	CO-5	Understanding the concept of motion of a particle in two dimensional polar plane and its application in the study of Central Orbits and Planetary Motion	
	CO-6	Conceptualize the idea of Constrained Motion	
BMTMCCHT-402 **PARTIAL DIFFERENTIAL EQUATIONS,** **LAPLACE TRANSFORM,** **and** **TENSOR ANALYSIS**	CO-1	Understanding the basic concepts of Partial Differential Equations	The students have been familiarized with the Course Outcomes of CO-1 to CO-7 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Familiarize with Formation and Solution techniques of linear and non-linear Partial Differential Equations	
	CO-3	Understanding the basic concepts of Laplace Transform and the idea Laplace Transform of Some Elementary Functions & Derivatives	
	CO-4	Understanding the Convolution Theorem & Inverse of Laplace Transform and application of Laplace Transform in Ordinary Differential Equations	
	CO-5	Understanding the Tensor as generalized concept of Vector in E_3 and E_n	
	CO-6	Understanding Covariant, Contravariant and Mixed Tensors, Algebra of tensors, Contraction, Outer and Inner product, Quotient law in Tensors	
	CO-7	Familiarize with Metric tensor of Riemannian Space, Christoffel Symbols and covariant differentiation of tensors	
BMTMCCHT-403 **REAL ANALYSIS - III**	CO-1	Acquire in-depth knowledge of Riemann and Improper Integration	The teachers completed 100% syllabus of the paper and tried to conceptualize the Course Outcomes as stated in CO-1 to CO-4 of this paper and studied attainment by direct methods
	CO-2	Understanding of the Convergence of Beta and Gamma functions	
	CO-3	Concept of sequence and series of functions and their convergences	
	CO-4	Learn Fourier series and Fourier expansion of functions	
	CO-5	Understand the Power series & finding radius and interval of convergence of power series	
BMTMSEHT-405 (SEC-2) **GRAPH THEORY**	CO-1	Concept and basic properties of Graphs	The teachers completed 100% syllabus of the paper and tried to conceptualize the Outcomes of CO-1 to CO-4 of this paper and studied attainment
	CO-2	Understanding of Eulerian and Hamiltonian Graphs	
	CO-3	Representation of Graph by matrix (Adjacency and incidence matrix)	
	CO-4	Understanding of Travelling Salesman Problem using Graphs	

SEMESTER V			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMCCHT-501 **ABSTRACT ALGEBRA - III** **and** **LINEAR ALGEBRA - II**	CO-1	Understanding the concept of Quotient groups and Quotient Rings	The teachers have completed 100% syllabus of the paper and tried to conceptualize the Course Outcomes CO-1 to CO-5 of this paper and studied attainment by direct methods
	CO-2	Familiarize with Isomorphism Theorems of Groups and Rings	
	CO-3	Understanding the Linear Transformation and Matrix representation of a Linear Transformation	
	CO-4	Concept of Eigen values and Eigen vectors of a matrix and Diagonalization of Matrices of order 2 and 3	
	CO-5	Understanding the concept of Elementary of Inner Product Spaces and Norms	
BMTMCCHT-502 **METRIC SPACES** **and** **COMPLEX ANALYSIS**	CO-1	Idea of Metric Spaces with some standard examples	The students have been familiarized with the Course Outcomes of CO-1 to CO-6 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Familiarize with Continuity and Homeomorphisms in Metric Spaces	
	CO-3	Detailed study of Compactness, Connectedness and Completeness of Metric Spaces	
	CO-4	Understanding the Stereographic projection of complex number and extended complex plane	
	CO-5	Understanding the Concept of Limit, Continuity and Differentiability of a complex function and Cauchy-Riemann equation	
	CO-6	Understanding the Concept of Conformal mappings and Bilinear transformations	
BMTMDSHT-1 (DSE-1) **LINEAR PROGRAMMING**	CO-1	Introduction of the Optimization Problems and Formation of Linear Programming Prob.	The students have been familiarized with the Course Outcomes of CO-1 to CO-6 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Familiarize with the basic theorems of LPP and concepts of Convex Sets, Convex Functions, Feasible and Basic Feasible Solutions of LPP	
	CO-3	Understanding the idea of Simplex Algorithm as a Solution technique of LPP and Duality Theory	
	CO-4	Understanding of Transportation and Assignment Problems with their solution techniques	
	CO-5	Introduction of the concept of Game Theory, Two-Person-Zero-Sum Game	
	CO-6	Familiarize with different solution techniques of Game Problems and also solving Game Problems using LPP	
BMTMDSHT-2 (DSE-2) **MECHANICS - I**	CO-1	Concept and basics of Classical Dynamics, Inertial Frames, Galilean Transformation and its applications	The students have been familiarized with the Course Outcomes of CO-1 to CO-4 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Understanding of the motion of System of Particles	
	CO-3	Understanding the Moments and Product of Inertia and M.I. and P.I. of some Plane Laminas and Rigid Bodies	
	CO-4	Understanding of Projection Dynamics, the Two-dimensional motion of Rigid Bodies	

SEMESTER VI			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMCCHT-601 **NUMERICAL METHODS** **and** **COMPUTER PROGRAMMING**	CO-1	Understanding the concept of Convergence, Errors, Rounding-off, Truncation in Numerical methods	The students have been familiarized with the Course Outcomes of CO-1 to CO-9 through completing 100% syllabus of the paper by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Familiarize with Interpolation for equispaced and un-equispaced arguments	
	CO-3	Understanding different solution methods for finding root of algebraic and transcendental equations with their geometrical interpretations and convergence conditions	
	CO-4	Familiarize with solution methods of system of linear equations	
	CO-5	Concept of Numerical Integration, idea of Newton-Cotes' quadrature formula, Trapezoidal and Simpson's formula	
	CO-6	Understanding the concept of numerical methods for solving First Order Ordinary Differential Equations using Euler method and Runge-Kutta method of order 2 and 4	
	CO-7	Familiarize with computer system, Hardware and Software of Computers	
	CO-8	To develop the idea of Binary number system and computer languages, ML, AL & HLL	
	CO-9	Introduction C programming language; its structure, operators, keywords and some simple programs using C language to solve numerical problems	
BMTMCCHS-602 **COMPUTER AIDED NUMERICAL PRACTICAL**	CO-1	Familiarize with hand-on experience of using computers for solving numerical problems	The teachers completed 100% syllabus and tried to develop the practical knowledge and skills of CO-1 to CO-4 and studied attainment
	CO-2	Understand to write the programs using C language for solving interpolation problem, finding root of an equation, solving numerical integration and differential equations	
BMTMDSHT-4 (DSE-3) **PROBABILITY** **and** **STATISTICS**	CO-1	Acquire in depth knowledge of Probability, probability density function, probability distribution function, moment generating functions for discrete and continuous variables	The students have been familiarized with the Course Outcomes of CO-1 to CO-4 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Understanding the joint cumulative distribution function, probability density function and expectations	
	CO-3	To develop the concept of statistical population and random sample, sampling distribution sample mean with χ^2 and t distribution	
	CO-4	Familiarize with the concept of Testing of hypothesis based on z, χ^2 and t distributions	
BMTMDSHT-5 (DSE-4) **MECHANICS - II**	CO-1	Familiarize with Statics, Reduction of forces in three dimensions and its resultant, concept of couple and Poinsot's central axis	The students have been familiarized with the Course Outcomes of CO-1 to CO-5 through completing 100% syllabus by the teachers to the best of their ability and studied the attainment through direct methods
	CO-2	Understanding the concept of virtual work and its applications, Stable and unstable equilibrium and idea of equilibrium of heavy inextensible string	
	CO-3	To develop the concept of continuum mechanics	
	CO-4	To develop the concept of equilibrium of fluids in a field of force, pressure and thrust on heavy fluids	
	CO-5	Familiarize with equation of state of perfect gas, isothermal and adiabatic process in an isothermal atmosphere.	

COURSE OUTCOMES:

Mathematics (Regular Program)

SEMESTER 1

Course Code & Course Title		Course Outcomes	Course Attainment
BMTMCCRT-101 **DIFFERENTIAL & INTEGRAL CALCULUS** **and** **ANALYTICAL GEOMETRY (2D)**	CO-1	Familiarize with Higher Order Derivatives & Leibnitz Rule for Successive Differentiation with its applications	The students have been familiarized with the Course Outcomes of CO-1 to CO-8 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Understanding of Intermediate Forms	
	CO-3	Understanding the basic ideas Partial Derivatives and applications of Euler's Theorem	
	CO-4	Familiarize with applications of Differential Calculus	
	CO-5	Familiarize with Reduction Formulae in Integration and applications of Integral Calculus	
	CO-6	Understanding of Transformation of Axes and its uses for the reduction of General Equation of Second Degree to Canonical form	
	CO-7	Understanding geometry of two-dimensional plane figures	
	CO-8	Familiarize with Polar Co-ordinate system and polar equation of line, circle, conics & tangent and normal to conics	

SEMESTER II

Course Code & Course Title		Course Outcomes	Course Attainment
BMTMCCRT-201 **ORDINARY DIFFERENTIAL EQUATIONS** **and** **LINEAR ALGEBRA-I**	CO-1	Familiarize with First order linear Ordinary Differential Equations and their solution techniques	The students have been familiarized with the Course Outcomes of CO-1 to CO-7 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Identification and solution techniques of First order non-linear Ordinary Differential Equations	
	CO-3	Understanding of applications of First order Ordinary Differential Equations, Orthogonal Trajectories	
	CO-4	Familiarize with different solution techniques of Higher order linear Ordinary Differential Equations with constant co-efficients and variable co-efficients	
	CO-5	Understanding simultaneous linear Ordinary Differential Equations and Total Differential equations	
	CO-6	Concept of vector space, Basis and Dimension of a finite dimensional vector space	
	CO-7	Acquainted with the Existence of solutions of system of Linear Equations and their solution technique	

SEMESTER III			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMCCRT-301 **ANALYTICAL GEOMETRY (3D)** **and** **VECTOR ANALYSIS**	CO-1	Understanding the concept of Three-dimensional space and it's geometry	The students have been familiarized with the Course Outcomes of CO-1 to CO-9 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Understanding the geometrical characteristics of Sphere, Cone, Cylinder and the Generators of the Quadrics	
	CO-3	Concept of Central Conicoids like Ellipsoid, Hyperboloids of One or Two Sheets	
	CO-4	Familiarize with Generating lines with Ruled and Skew Surfaces	
	CO-5	Understanding the concepts of Transformation of co-ordinate axes in three dimensions and reduction of Second degree equations to its canonical form	
	CO-6	Understanding the Product of three or more vectors	
	CO-7	Concept of Vector Calculus, Differentiation and Integration of vector-valued functions	
	CO-8	Idea of Gradient, Divergence & Curl of Vectors and their properties	
	CO-9	Understanding of Line integral. Surface integral and Volume integral of vector functions; applications of Green's theorem and Stokes' theorem	
BMTMSERT-304 (SEC-1) **LOGIC & SETS**	CO-1	Concept of propositions and truth table	The teachers completed 100% syllabus and tried to conceptualize the Outcomes of CO-1 to CO-4 and studied attainment
	CO-2	Precedence of logical operators and propositional equivalency	
	CO-3	Concept of predicates and quantifiers	
	CO-4	Elementary idea of sets and Relations with their applications	

SEMESTER IV			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMCCRT-401 **PARTIAL DIFFERENTIAL EQUATIONS,** **LAPLACE TRANSFORM** **and** **TENSOR ANALYSIS**	CO-1	Understanding the basic concepts of Partial Differential Equations	The students have been familiarized with the Course Outcomes of CO-1 to CO-7 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Familiarize with Formation and Solution techniques of linear and non-linear Partial Differential Equations	
	CO-3	Understanding the basic concepts of Laplace Transform and the idea Laplace Transform of Some Elementary Functions & Derivatives	
	CO-4	Understanding the Convolution Theorem & Inverse of Laplace Transform	
	CO-5	Understanding the Tensor as generalized concept of Vector in E_3 and E_n	
	CO-6	Understanding Covariant, Contravariant and Mixed Tensors, Algebra of tensors, Contraction, Outer and Inner product, Quotient law in Tensors	
	CO-7	Familiarize with Metric tensor of Riemannian Space, Christoffel Symbols and covariant differentiation of tensors	
BMTMSERT-404 (SEC-2) GRAPH THEORY	CO-1	Concept and basic properties of Graphs	The teachers completed 100% syllabus and tried to understand Outcomes of CO-1 to CO-4 and studied attainment
	CO-2	Understanding of Eulerian and Hamiltonian Graphs	
	CO-3	Representation of Graph by matrix (Adjacency and incidence matrix)	
	CO-4	Understanding of Travelling Salesman Problem using Graphs	

SEMESTER V			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMDSRT-1 (DSE-1) **LINEAR PROGRAMMING**	CO-1	Introduction of the Optimization Problems and Formation of Linear Programming Problem	The students have been familiarized with the Course Outcomes of CO-1 to CO-6 through completing 100% syllabus by the teachers of this department to the best of their ability and studied the attainment through direct methods
	CO-2	Familiarize with the basic theorems of LPP and concepts of Convex Sets, Convex Functions, Feasible and Basic Feasible Solutions of LPP	
	CO-3	Understanding the idea of Simplex Algorithm as a Solution technique of LPP and Duality Theory	
	CO-4	Understanding of Transportation and Assignment Problems with their solution techniques	
	CO-5	Introduction of the concept of Game Theory, Two-Person-Zero-Sum Game	
	CO-6	Familiarize with different solution techniques of Game Problems and also solving Game Problems using LPP	
BMTMDSRT-504 (SEC-3) **NUMERICAL METHODS**	CO-1	Understanding the concept of Convergence, Errors, Rounding-off, Truncation in Numerical methods	The teachers completed 100% syllabus and tried to conceptualize the Outcomes of CO-1 to CO-4 and studied attainment
	CO-2	Familiarize with Interpolation for equispaced and un-equispaced arguments	
	CO-3	Understanding different solution methods for finding root of algebraic and transcendental equations with their geometrical interpretations and convergence conditions	
	CO-4	Understanding the solution technique of system of equations	
SEMESTER VI			
Course Code & Course Title	**Course Outcomes**		**Course Attainment**
BMTMDSRT-3 (DSE-3) **PROBABILITY** **and** **STATISTICS**	CO-1	Acquire in depth knowledge of Probability, probability density function, probability distribution function, moment generating functions for discrete and continuous variables	The teachers have completed 100% syllabus of the paper and tried to conceptualize the Course Outcomes CO-1 to CO-4 of this paper and studied attainment by direct methods
	CO-2	Understanding the joint cumulative distribution function, probability density function and expectations	
	CO-3	To develop the concept of statistical population and random sample, sampling distribution sample mean with χ^2 and t distribution	
	CO-4	Familiarize with the concept of Testing of hypothesis based on z, χ^2 and t distributions	
BMTMDSRT-604 (SEC-4) **BASIC C-PROGRAMMING**	CO-1	Introduction C programming language; its structure, operators, keywords	The teachers completed 100% syllabus and tried to develop knowledge and skills of CO-1 and CO-2 and studied attainment
	CO-2	Familiarize with some simple programs using C language to solve numerical problems	

Attainment
of
Program Specific Outcomes
and
Program Outcomes

The Attainment of Program Specific Outcomes and Program Outcomes are obtained through 80% weightage on Direct Methods through the Attainment of Course Outcomes of all papers in all the semesters and 20% weightage on Indirect Methods through the Program Exit Survey, Alumni Survey and Employer Survey.

The syllabus Mathematics (Hons.) and Mathematics (General), as recommended by Sidho-Kanho-Birsha University, has been duly taught by the teachers of this department. After the completion of three years undergraduate course, the students have developed logical and analytical skills for abstract thinking which is required for higher studies, learnt advanced topics in Mathematics that will pave their way for further studies in Mathematics, developed mathematical arguments in a logical manner, acquired knowledge and understanding in advanced areas of Mathematics from the allotted courses, equipped with the mathematical problems from real life situations and their analysis with possible solutions and learnt mathematical techniques required for jobs in educational, banking, corporate, IT sectors etc. The department observed, by the concept of direct methods of attainment study, through the performance indicator i.e. the results of the students; 90% of the students were passed with good CGPA having average 8.5 out of 10, which implies that the students have learnt and achieved the Program specific Outcomes. As per assessment of the department, the department has achieved 90% of the Program Specific Outcomes and Program Outcomes; hopes that the students will be able to employ their knowledge and skills in their Higher Studies or in Professional life.

NUTRITION DEPARTMENT
CO PO ATTAINMENT

PO: B.Sc. Nutrition: The B.Sc Nutrition enabled the students to enhance their criticalthinking, during the three year period of study and the curriculum stimulates the mental thoughtsand assumptions of the students. This helps the students to take up practical work and comparethe results with their assumptions, there by leading to accuracy and validity of the practical knowledge. This Analysis leads to take decisions at intellectual, organizational and personal from different perspectives of life. Most of the students are getting selected for placements.

The level of attainments for BSc Nutrition is: 100%

NISTARINI COLLEGE, PURULIA
ATTAINMENT OF CO, PO & PSO
DEPARTMENT OF PHILOSOPHY
PROGRAMME NAME: PHILOSOPHY(H)

Curriculum of CBCS (Introduced from the Academic Year 2017-2018)

Course	Outcome	Attainment
Semester-I (July to December)		
BPHICCHT-101 **General Features of Indian Philosophy & *Nastik Sampradaya***	Provides the basic features of Indian philosophy emphasizing on its origin, developments of various schools, concepts of rta, rna, yajna. However main focus will be on three sect of Nastik philosophy- Carvaka, Buddhism and Jainism.	The Course Outcomes of BPHICCHT-101 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time. Students also learnt the basic conceptsofmaterialistic approach of life and the world, which developed in Indian thought in the past.
BPHICCHT-102 **Pre-Socratic Period to Aristotle.**	The objective of this course is to provide the origin and development of the philosophy of Greek sphere. The Pre-Socretic, Platonic and Aristotelian conception of epistemology, causation, theory of ideas, theory of forms and matter is included in this paper.	The Course Outcomes of this paper have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
BPHIGEHT11 **General Elective (GE) GE-I** **Ethics in Public Domain**	Students from other disciplines will get familiarised with some basic philosophical concepts and also interact with some ethical problems, facing in our day-to-day life. This paper includes Morality, Cultural Relativism, Subjectivity, Media Ethics, Caste and Poverty.	The Course Outcomes of BPHIGEHT11 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.

SEMESTER – II (Januaryto June)		
BPHICCHT-201 **Indian Ethics**	This paper will explain the core ideas of Indian ethical thinking, such as theory of karma, re-birth, and various types of dharmas. Also the students will understand the meaning of *Purusarthas* and their inter- relations. The paper also provides the basic features of ethical thinking of Buddhist and Jaina philosophies.	The Course Outcomes of BPHICCHT-201 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
BPHICCHT-202 **Western Logic**	In this paper the students will acquire the basic concepts of the logical thinking of Western Philosophy. Emphasis will be on deductive logic with special reference to the text of I. M. Copi and C. Cohen's "*Introduction to Logic*".	The Course Outcomes of BPHICCHT-202 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
BPHIGEHT11A **General Elective (GE) GE-II** **Formal Logic**	Students, other than Philosophy, will understand the basic features of deductive arguments. They will learn the principles of valid argument and establish their understanding accordingly.	The Course Outcomes of BPHIGEHT11A have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
SEMESTER – III (July to December)		
BPHICCHT-301 **Western Ethics**	The objective of this paper is to develop the notion of basic concepts of western ethical thinking. Students will understand the some basic ideas of ethics, i.e., ideas of Good, Right, Justice, Duty and Obligation. Basically, traditional western ethical thinking such as Kant's Categorical Imperative, Bentham and Mill's Utilitarianism will be discussed here. Also, students will get some practical ethical problems concerning the issues of crime and punishment, free will and responsibility.	The Course Outcomes of BPHICCHT-301 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time. Online mode.
BPHICCHT-302 **Astik Sampradaya (Indian Philosophy)**	This paper is introduced in the syllabus to elucidate the basic concepts of the Indian Astik philosophy. Four pramanas of Nyaya, seven categories of Vaisesika, Satkarya Vada and the	The Course Outcomes of this have been taught to the students by the teachers of this department to the best of their ability

	concepts of Prakriti of Samkhya, the philosophy of Yoga and the nature of Brahman and its relation to Jiva of Advaita philosophy will be primarily focussed here.	and 100% syllabus which comes under this paper has been covered in due time. As the syllabus of this paper covers most of the modern western philosophy, some extraclasses were needed and virtual classes arranged accordingly to cover the syllabusproperly.
BPHICCHT-303 Medieval Age: Western Philosophy	For better understanding of the views of western modern philosophers this paper is included. Descartes's method of doubt, Cogito ergo sum, criterion of truth, nature of substance, classification of ideas and the problem of mind-body; Spinoza's substance, attributes and modes, concept of God and Leibnitz's theory of Monad will be discussed here. In contrast to such rational philosophy the empirical philosophy of John Locke, Berkeley and David Hume will also be discussed. Finally, students will get the glimpses of Kant's critical philosophy.	The Course Outcomes of BPHICCHT-303 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time. As the syllabus of this paper covers most of the modern western philosophy, some extra classes were needed and virtual classes arranged accordingly to fulfil the needs of our students.
BPHISEHT-305(SEC-1) Method of Induction & Probability.	Keeping in mind the introductory idea of the CBCS system, this paper deals with the idea of method of induction and probability as a specific skill enhancement course.	The Course Outcomes of BPHICCHT-305 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
SEMESTER – IV(January to June)		
BPHICCHT-401 Existentialism	As a rational as well as critical thinker, the students of philosophy should understand the philosophy of Sartre and such existential thinkers. This paper introduces the chief features of existentialism and many critical ideas such as anxiety, freedom, Bad Faith, authentic and inauthentic existence and the notion of Being-in-itself and Being-for- itself.	The Course Outcomes of this paper, including present literature of Existential Philosophy have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.

BPHICCHT-402 **Philosophy of Religion**	As a student of philosophy our students should understand the philosophy of religion and various doctrines accordingly. That is why this paper has been included in the curriculum. The Judaic-Christian concept of God, arguments for the existence of God and the arguments against the existence of God will be our major concern. In addition to that, the problem of evil and the problem of religious languages will imbibe in the students to think rationally about the various religious problems in our society.	The Course Outcomes of BPHICCHT-402 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
BPHICCHT-403 **Indian Logic and Epistemology**	Under the title of "Indian Logic and Epistemology" a popular text of Nyaya Philosophy *Tarkasangraha* of famous writer Annambhatta is introduced in this paper. Elaborate discussion of four Pramanas of Nyaya philosophy has been introduced here to understand the student valid cognition and its origins according to Nyaya philosophy.	The Course Outcomes of this paper have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.

BPHISEHT-405(SEC-2) Practical Ethics	To develop values of the good citizen as well as the demand of the skill enhancement course, some contemporary practical, social as well as ethical problems has been discussed in this paper. Emphasis will be on Environmental Ethics, Feminism and Euthanasia.	The Course Outcomes of BPHICCHT-405 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
SEMESTER – V (July to December)		
BPHICCHT-501 Special Text(Indian) Vedantasara	As a subject philosophy wants to develop the skill of critical thinking among the students, '*The Problems of Philosophy*' by Bertrand Russell is introduced here. The text includes appearance and reality, existence of matter, idealism, knowledge by acquaintance and knowledge by description and Russell's view about induction has been included in this course.	The Course Outcomes of this paper have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
BPHICCHT-502 Special Text (Western) The Problems of Philosophy	As a subject philosophy wants to develop the skill of critical thinking among the students, '*The Problems of Philosophy*' by Bertrand Russell is introduced here. The text includes appearance and reality, existence of matter, idealism, knowledge by acquaintance and knowledge by description and Russell's view about induction has been included in this course.	The Course Outcomes of BPHICCHT-502 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.

BPHIDSHT-503(DSE-1) **Text from Western Epistemology (*An Enquiry Concerning Human Understanding*)**	British philosopher David Hume's well-popular text '*An enquiry Concerning Human Understanding*' is incorporated as a DSE paper in our honours curriculum, keeping in mind to acquire knowledge of Hume's philosophy.	The Course Outcomes of BPHICCHT-503 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
BPHIDSHT-504 **(DSE-2)** **Text from Modern Indian Thought (*Practical Vedanta*)**	Students will understand how Vivekananda laid philosophical foundations for Hindu cultural reformation and Indian society utilizing Advaita logic and its practical aspects.	The Course Outcomes of BPHICCHT-504 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
SEMESTER – VI (January to June)		
BPHICCHT-601 **Contemporary Indian Philosophy**	Contemporary Indian philosophy has arisen in awareness of the need to reconcile the forces of tradition with those of modernity. The paper is about the philosophical views of K. C. Bhattacharryay, B. R. Ambedkar, Sri Aurobindo, S. Radhakrishnan and M. K. Gandhi.	The Course Outcomes of BPHICCHT-601 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
BPHICCHT-602 **Contemporary Western Philosophy**	A well-known text of A. J. Ayer, Language, Truth and Logic is introduced here. The book is a modified version of logical positivism, which Ayer called 'logical empiricism'. Here students will understand the logic behind the elimination of metaphysics, the function of philosophy and specially the nature of philosophical analysis according to Ayer.	The Course Outcomes of BPHICCHT-602 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.
BPHICCHT-603(DSE-3) **Text: *Hind Swaraj***	No doubt that as a prominent example of good citizen, freedom fighter and moreover a philosopher, student of philosophy should understand the life and views of M. K. Gandhi. So as a path-breaking book '*Hind Swaraj*' of Gandhi has been incorporated here to induce in the students the concept of *Satyagraha*, the	The Course Outcomes of BPHICCHT-603 have been taught to the students by the teachers of this department with the text and reference books to the best of their ability and the syllabus which comes under this paper has

	power of passive resistance and Gandhi's view about rail, doctor and lawyers and finally the meaning of actual civilization.	been covered in due time.
BPHICCHT-604(DSE-4) **Text:** ***The Communist Manifesto***	Students will understand the goals of Communism, as well as the theory underlying this movement. The text argues that class struggle, or the exploitation of one class by another, are the motivating force behind all historical developments.	The Course Outcomes of BPHICCHT-604 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under this paper has been covered in due time.

ATTAINMENT OF PO & PSO

The course curriculum of the Programme: The syllabus of UG Philosophy(H) as recommended by the Sidho-Kanho-Birsha University, Purulia has been duly taught by the teachers of this department. After the completion of the entire three year undergraduate course, the students have learnt some fundamental ideas of Indian as well as Western Philosophy as per the results 90% of the students have passed out with sound CGPA, which implies that the students have learnt the course properly. Apart from this, the students have also learnt to apply theories of fundamental philosophical ideas as well as logical reasoning more intensely. In our assessment, the department has achieved 90% of the Program Outcome and hopes that the students will be able to employ their knowledge in their higher studies and in their personal life.

NISTARINI COLLEGE, PURULIA

ATTAINMENT OF CO, PO & PSO

DEPARTMENT OF POLITICAL SCIENCE

PROGRAMME NAME: POLITICAL SCIENCE (H)

Course	Outcome	Attainment
Semester-I		
BPLSCCHT-101	CO-1. Understanding the Political Theory CO-2. Understanding of the critical and contemporary perspectives CO-3.Feminism, Post Modernism CO-4. Equality, Justice, democracy Co-5. Anarchism, Liberalism, Neo-Liberalism CO-6. Marxism, Gramsci's Hegemony	The Course Outcomes of CO-1, CO-2 and CO-3 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time.
BPLSCCHT - 102	CO-1. Understanding the Indian Constitutions CO-2. Fundamental Rights & State Policy CO-3. Nature of the Indian Federation. CO-4. State Autonomy CO-5. Regionalism CO-6. Grass Root Politics	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time.
SEMESTER - II		
BPLSCCHT - 201	CO-1. Understanding Governments CO-2. Empowerment and decentralization CO-3. Participation and Government CO-4. Role of Civil Society Co-5. Quest for Good Governance CO-6. Minimum Government and Maximum Governance	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT - 202	CO-1. Disintegration of the Congress system. CO-2. Politicisation of Caste. CO-3. Judicial Autonomy.	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of

	CO-4. Indian Secularism. CO-5. Lok Pal Debate CO-6. Political Culture	their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
SEMESTER - III		
BPLSCCHT - 301	CO-1. Comparative government and Politics CO-2. Comparative Study between UK PM & US President CO-3. Constitutional development in Nepal CO-4. Democracy and its Crisis in Pakistan CO-5. Local Government in India and Bangladesh CO-6. India and US Judiciary	The Course Outcomes of CO:-1 - 6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT - 302	CO-1. Understanding Public Administration CO-2. Scientific Management School CO-3. New Public administration. CO-4. Hierchy, Unity of Command. CO-5. Bureaucracy CO-6. E-Governance	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT - 303	CO-1. Understanding Indian administration. CO-2. Union Administration. CO-3. Institutional Reforms. CO-4. UPSC. CO-5. State Administration CO-6. Rural Administration	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
SEMESTER - IV		
BPLSCCHT - 401	CO-1.International Relations. CO-2. Realism. CO-3. Liberalism. CO-4. Marxist Theories. CO-5. Social Constructivists CO-6. Feminism	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.

BPLSCCHT-402	CO-1 Understanding Non Alignment Movement CO-2. Climate Diplomacy CO-3. Human Rights CO-4. Politics in Middle East. CO-5. International Migration CO-6. Arabs Spring in Egypt	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT - 403	CO-1. Ancient Political thought CO-2. Medieval Political thought. CO-3. European Renaissance and Machiavelli. CO-4. Hobbes and Lock. CO-5. Rousseau. CO-6. Karl Marx.	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
SEMESTER - V		
BPLSCCHT - 501	CO-1. Ancient Indian Political thought. CO-2. Political thought in Medieval India. CO-3. Raja Rammohon Roy. CO-4. Swami Vivekananda. CO-5. Rabindranath Tagore. CO-6. Ambedkar	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT - 502	CO-1. Modernity and its discourse. CO-2. Utilitarianism. CO-3. Anarchism. CO-4. Feminism. CO-5. Libertarianism CO-6. Communitarianism	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT 1-503 **(DSE-1)**	CO-1. Basic tenants of Indian foreign Policy. CO-2. Non Alignment. CO-3. Indian Emergence as a Soft Power. CO-4. Indias neighbourhood policy. CO-5. Indias extended neighbourhood	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and

	CO-6. Look East and Act East policy	online mode.
BPLSCCHT 2-504 **(DSE-2)**	CO-1. Human Rights. CO-2. Universal Declaration of Human Rights. CO-3. Protective Mechanism. CO-4. Women and Child Right. CO-5. Crimes against Humanity CO-6. Global Human Rights	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
SEMESTER - VI		
BPLSCCHT - 601	CO-1. Understanding political sociology. CO-2. Political culture and political socialisation. CO-3. Elite theories. CO-4. Authority. CO-5. Ethnicity and Politics in India CO-6. Increasing dalit mobilisation	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT - 602	CO-1. Environmental Concerns in globalising world. CO-2. Pollutions. CO-3. North- South divides. CO-4. Sustainable development. CO-5. Indian stand in environmental negotiations CO-6. Some Major environmental Movement	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT - 603 **DSE- 3**	CO-1. Indian Constitution and Human rights. CO-2. History of dalit movements. CO-3.History of civil liberties movement. CO-4. Human right commission. CO-5. Human Rights violation in India CO-6. Role of India	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and online mode.
BPLSCCHT - 606 **DSE- 6**	CO-1. Understanding Indian Constitutional history. CO-2. Fundamental Rights. CO-3. Indian federalism. CO-4. Constitutional Amendment Procedure CO-5. Indian Party system	The Course Outcomes of CO:-1 -6 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-6 have been covered in due time through offline and

	CO-6. Indian Judiciary	online mode.

ATTAINMENT OF PO & PSO

The course curricula of the Programme: Political Science (H) as laid down in the syllabus of Sidho-Kanho-Birsha University has been duly taught by the teachers of this department. After the completion of the entire 3 year undergraduate course, the students have learnt the fundamentals of India constitution, political thought and World politics, environmental situations, society and politics and modernity and dalit up liftmen. As per the results 100% of the students have passed out with high CGPA, which implies that the students have learnt. Apart from this, the students have also learnt the use of various theories, philosophy for analysis and they have also experienced. In our assessment, the department has achieved 100% of the Program Outcome and hopes that the students will be able to use their knowledge in their higher studies.

NISTARINI COLLEGE, PURULIA

ATTAINMENT OF CO, PO & PSO

DEPARTMENT OF SANSKRIT

PROGRAMME NAME: SANSKRIT HONOURS

Course	Outcome	Attainment
Semester-I		
BSNSCCHT-101	CO-1 Understanding the conception of human values in *Raghuvamśam*. CO-2 Understanding the conception of Kalidāsa's *Kumārasambhavam.* CO-3 Understanding the conception of values in *Kīrātārjunīyam*. CO-4 A clear idea of Environment and Sustainability as *Nītiśatakam* deals with some *śloka* with conservations to the environment. CO-5 It intends to give an understandingof literature.	The Course Outcomes of CO-1 to CO5 have been taught to the students by the teachers of this department to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time.
BSNSCCHT-102	CO-1 Understanding the basic knowledge of Vedic literature CO-2 Understanding the conception of human values, ethics in Rāmāyaṇa. CO-3 Acknowledge regarding environment and sustainability in some verses of *Mahābhārata* CO-4 Understanding the conception of human values,ethics in Puāṇas. CO -5 It intends general introduction to Vyākaraṇa, Darśana , and Sāhityaśāstra.	The Course Outcomes of CO:-1 - 5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time.
SEMESTER – II		
BSNSCCHT-201	CO-1 It intends to provide the knowledge about the social and political thoughts in *Śukanāsopadeśa*. CO-2	The Course Outcomes of CO:-1 - 3 have been taught to the students by the teachers to the best of

	It intends to provide the knowledge about *Viśrutacaritam.* CO-3 Understanding the origin and development of prose and fables.	their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time through offline and online mode.
BSNSCCHT-202	CO-1 Understanding Cognitive and emotive apparatus in *Śrīmadbhagavadgītā* CO-2 It intends to provide the knowledge how to controlling the mind. CO-3 Knowledge about Self-management through devotion in Gitā.enclosed the clear idea about Human Values as the Gītā.	The Course Outcomes of CO:-1 - 3 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time through offline and online mode.
SEMESTER – III		
BSNSCCHT-301	CO-1 This section mentioned the clear idea regarding Human Values in the society during the time of Bhāsa CO-2 This section provides the data based on *Abhijñānaśakuntalam* by Kālidāsa regarding environment and sustainability CO-3 This section reflected the position of women in the Society during the time of Śrīharṣa in *Ratnāvalī* CO-4 It provides the knowledge three stages in the growth of Sanskrit drama.	The Course Outcomes of CO:-1 - 4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BSNSCCHT-302	CO-1 Self-development and self-regulation skill. CO-2 Provides the knowledge of Translation and Communication. CO-3 It provides the conception of human values, ethics, social problems and environment through essay writing in Sanskrit Language.	The Course Outcomes of CO:-1 - 3 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time through offline and online mode.

BSNSCCHT-303	CO-1 This section envisages the the sources of Indian Social institutions (Purāṇa, Rāmāyaṇa, Mahābhārata, Dharmaśāstra, Buddhist and Jain Literature) and Literary Works and Inscriptions. CO-2 This course enlightens brief survey of position of women in different stages of Society. Position of women in *Mahābhārata* (Anuśāsanaparva and Sabhāparva). Praise of women in the *Bṛhatsaṁhitā* of *Varāhamihira*. CO-3 Professional ethics are also reflected inelection of king by the people: '*Viśas*' in Vedic period, in the parliamentary Institutions of Vedas i.e., Sabhā, 'Samiti, in the concept of welfare state in Arthaśāstra of Kauṭilya, and in relevance of Gandhian thought in modern period with special reference to 'Satyāgraha' Philosophy. CO-4 This section deals with the concept of human values in social relevance of Indian life stylewith special reference to Sixteen Saṁskāras. CO-5 Four aims of life 'Puruṣārtha-catuṣṭaya'- 1.*dharma* 2. *artha* 3. *kāma* 4. *mokṣa*. Four Āśramas 1.Brahmacarya, 2. Gārhasthya, 3. Vānaprastha, 4. Sannyāsa. CO-6 This sectiondeals with the Important Thinkers regarding the Indian Polity. CO-7 This section pins the cardinal theory of Indian Polity.	The Course Outcomes of CO:-1 - 7 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-7 have been covered in due time through offline and online mode.
SEMESTER – IV		
BSNSCCHT-401	CO-1 Introduction of Epigraphy and types of Inscriptions. CO-2 Introduces about the antiquity of art of writing, writing materials. CO-3 Study of selected Inscriptions and understanding social dynamic and social problems. As well as Human values and professional ethics are reflect in various inscriptions. CO-4 This unit put a great idea about the dating system in the inscriptions (Chronograms).	The Course Outcomes of CO:-1 - 4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.

BSNSCCHT-402	CO-1 This section introduces modern rich and profound tradition of modern creative writing in Sanskrit. CO-2 This sections insides the great poet Abhiraja Rajendra Misra and Birendrakumar Bhattacarya in prose segment of literature. *Śārdulaśakaṭam* trying to understand the Social dynamics and social problems. The great prose *Śataparvikā* deals with the gender theory prudently. CO-3 This section deals with Gītikāvya and other genres of Literature. CO-4 This course reflects some thoughts of human values through the reading of modern Literature. CO-5 The general survey section deals with the Modern writers who contributed a lot in the field of Sanskrit.	The Course Outcomes of CO:-1 - 5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
BSNSCCHT-403	CO-1 This section defines the survey of Sanskrit literature in the world. CO-2 This section provides a framework of Upaniṣads and Gītā in World Literature. CO-3 This section limns a general conception on Rāmāyaṇa, Mahābhārataand fables in South East Asian Countries. CO-4 The great poet Kālidāsa's Literature also depicted in World Literature. CO-5 E-resources provide an outline of World Sanskrit Literature. E-resources help them a lot.	The Course Outcomes of CO:-1 - 5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.
SEMESTER – V		
BSNSCCHT-501	CO-1 This section introduces various types of Vedic texts. Like the conceptions of professional ethics as reflected in Atharvaveda-Sāmmanasyam. It also mentioned the clear idea regarding Human Values in Akṣa-sūkta. CO-2 Understanding the knowledge about Vedic grammar.	The Course Outcomes of CO:-1 - 3 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered

	CO-3 In *Muṇḍakopanishad* primary Vedānta view is propounded.	in due time through offline and online mode.
BSNSCCHT-502	CO-1 This section provides disciplinary knowledge. CO-2 Understanding the sutras of Kāraka, and also developing skills in scientific writing and effective presentation skills. CO-3 Understanding the sutras of Samāsa also developing Conversational competence and communication skills.	The Course Outcomes of CO:-1 - 3 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time through offline and online mode.
BSNSDSHT1 **DSE-1**	CO-1 Understanding the method of self presentation CO-2 This unit put a great idea about self development and self regulation skills. CO-3 This section deals the methods of improving behaviour. Multilevel Commitment to health and wellbeing.	The Course Outcomes of CO:-1 - 3have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time through offline and online mode.
BSNSDSHT2 (DSE2)	CO-1 This course envisages with the disciplinary knowledge. CO-2 It limns a conversational competence and communication skills. CO-3 Self development and self regulation skills CO-4 Focusing to understand the various languages schools.	The Course Outcomes of CO:-1 - 4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BSNSDSHT3 (DSE3)	CO-1 Understanding the types of theatre and construction. CO-2 Cultural and historical sensibility CO-3 It emphasizes collaboration; corporation and community feel throughout the dramaturgy.	The Course Outcomes of CO:-1 - 3have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered

		in due time through offline and online mode.
SEMESTER – VI		
BSNSCCHT-601	CO-1 This Section deals with the essential aspects of Indian Philosophy. CO-2 It provides the knowledge of Nyāya-Vaiśeṣika philosophy through *Tarkasaṁgraha*. CO-3 This section deal with experimental learning and critical thinking.	The Course Outcomes of CO:-1 - 3 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-3 have been covered in due time through offline and online mode.
BSNSCCHT-602	CO-1 This develops capacity for creative writing and literary appreciation. CO-2 Experimental learning and critical thinking. CO-3 Critical evolution of theoretical approaches. CO-4 This section deals with the multi schools of Indian Literary Tradition.	The Course Outcomes of CO:-1 - 4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BSNSDSHT-4 **DSE- 4**	CO-1 Understand the basic principles and concepts of Ayurveda. CO-2 preventative medicine and health maintenance, diet and nutrition, CO-3 Usage of commonly used spices and herbs and outline of Ayurvedic therapeutic procedures in Ayurveda. CO-4 Application of Multilevel Commitment to health and wellbeing.	The Course Outcomes of CO:-1 - 4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.

BSNSDSHT-5 **DSE- 5**	CO-1 This course provided the data regarding environment and sustainability. CO-2 Understanding social dynamics and social problems. CO-3 Multilevel Commitment to health and wellbeing. CO-4 Understanding environmental awareness.	The Course Outcomes of CO:-1 - 4 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-4 have been covered in due time through offline and online mode.
BSNSDSHT 6 **DSE-6**	CO-1 Understanding the conception of human values in *Arthaśastra.* CO-2 Experimental learning and critical thinking. CO-3 Professional ethics are also reflected in election of king by the people. CO-4 Social skills (empathy) and accountability. CO-5 Understanding the social problems, it also provides moral and ethical awareness and reasoning.	The Course Outcomes of CO:-1 - 5 have been taught to the students by the teachers to the best of their ability and 100% syllabus which comes under CO:- 1-5 have been covered in due time through offline and online mode.

ATTAINMENT OF PO & PSO (SANSKRIT)

The course curricula of the Programme

Sanskrit Honours course laid down in the syllabus of Sidho-Kanho-Birsha University has been duly taught by the teachers of this department. After the completion of the entire 3 year undergraduate course, Bachelor's degree in Sanskrit is awarded upon completion of three full years of the subject study at the undergraduate level. The learning at the end of the course enables the student to have the academic, behavioral and social competencies as given below:

PROFICIENCY IN ACADEMICS

- Basic communication skills in understanding Sanskrit with LSRW (Listening, Speaking, Reading & Writing) capacities.
- Skill adaptability in specific areas.
- Usage of critical thinking while correlating concepts with personal experiences.
- Usage of Shastric discipline and ancient traditional learning while discriminating others.
- Articulation of ideas, literary writing, innovations and effective presentation skills in Sanskrit as well as in other native Indian languages and English.

- Building confidence to explore and study various Indian sciences.
- Ability to explore ancient Indian sciences with confidence.
- Competency building to convey the society at large about Indic Knowledge and wisdom.
- Confidence in the chosen discipline knowledge along with the methodology – like data analysis, computer literacy. Being technically sound to utilize various e-resources, social media network etc. for furthering the purposes of Sanskrit education.

PERSONAL & BEHAVIORAL COMPETENCE

- Self-respect and respect for others.
- Self-development, health and hygiene, self-regulation skills.
- Self-confidence in executing and planning and execution of tasks. Development of positive attributes such as empathy, compassion, social participation, accountability etc.
- Development of cultural and historical sensibility particularly indigenous traditions, socio-cultural context and diversity.
- Competency in communicating, interacting, listening, speaking nd observational skills.
- Appreciate and tolerate various perspectives.

SOCIAL COMPETENCE

- Ethical, social and ecological responsibility and acknowledging the dignity and presence of others, learning of values and social concerns reflected in social participation
- Objective and unbiased work attitude, avoiding unethical behaviors such as data fabrication and plagiarism, observing code of conduct, respecting intellectual property rights and being aware of the implications and ethical concerns of research studies.
- Commitment to health and wellbeing at different levels (e.g.individual, organization, community, society).
- Collaboration, cooperation and realizing the power of groups and community.
- Analyzing social problems and understanding social dynamics.
- Gender sensitization including gender respect, respect for one's own gender, dealing with gender confusion and gender identity issues.
- Commitment to keep the environment clean and green.

as per the results 100% of the students have passed out with high CGPA, which implies that the students have learnt. In our assessment, the department has achieved 100% of the Program Outcome and hopes that the students will be able to use their knowledge in their higher studies.

REPORT ON CO,PO,PSO
DEPARTMENT OF ZOOLOGY

PROGRAMME OBJECTIVES (PO)

Inspiring the students to pursue higher studies in the field of zoology that will be thefoundation stone for their future study & research works. It will also do the otheradvancementin most specific biological fields.

CORE AND PROGRAM SPECIFIC OUTCOMES (PSO)

SEM-I

CORET1-NonChordateI-PROTISTATOPSEUDOCOELOMATES

Introduction to nonchordate is the first foot step in the zoological science. There is abrief taxonomic study starting from classification to nomenclature. This part deals withthe invertebrates, starting from protista to pseudocoelomates which are the pioneers
inthisfieldwiththeirevolutionarysignificanceboththeoreticallyaswellaspractically.

Hopefully, students have gained the full essence of this part properly. Our success rate is satisfactory.

CORET2- PERSPECTIVESINECOLOGY

The subject ecology deals with the interaction of living and nonliving components inrelation to the environment. Students will get the ideas about population, community &their interaction.The flow of energy through several trophic layers in food chain open avastareaofthermodynamicsinlivingworld.Thepracticalaspectofthispapermakethestuden ts enthusiasts about several ecological factors and estimation in life.A field studymakethe studentsconcernedaboutconservation.

Ecology is the multidisciplinary subject including living and nonliving components of earth. Various physical and chemical factors influence our life processes in various forms. Mathematicians explain the community structure through various mathematical models which are very much beneficial to the students. Our practical courses include various chemical and physical effect of ecological parameters in life forms.

Students are enlightened regarding the conservation by visiting wildlife sanctuaries. This makes the study more interesting to them. Students are greatly benefitted by this design of the course.

SEM-II

CORET3-NonChordatesII-COELOMATES

The invertebrate world is so vast, it is quiet natural to divide in two successive parts:acoelomates and coelomates.This course comprises of the classification of coelomatesphylum,various peculiar / specialised features of them along with their evolutionarysignificance. In practical course students will be introduced with several museumspecimensas identifyingobjects.

1. Understanding animal diversity: Non-chordate coelomates are a diverse group of animals that occupy a wide range of ecological niches. Studying this group can help students appreciate the incredible diversity of animal life on Earth.

2. Understanding animal evolution: Non-chordate coelomates represent some of the earliest animal groups to evolve on Earth. Studying their anatomy, physiology, and behavior can help students understand the evolutionary history of animals and the origins of different animal traits.

3. Developing scientific skills: Studying non-chordate coelomates involves a range of scientific skills, including observation, data collection and analysis, and critical thinking. These skills can be useful in a variety of scientific fields and careers.

4. Understanding ecological and environmental issues: Non-chordate coelomates play important ecological roles in many ecosystems, and their populations are often impacted by environmental factors such as pollution, climate change, and habitat destruction. Studying non-chordate coelomates can help students understand the complex relationships between animals and their environment, and the importance of conservation efforts.

5. Career opportunities: Studying non-chordate coelomates can lead to career opportunities in fields such as marine biology, ecology, zoology, and conservation biology. These fields offer a range of career paths, from research and education to policy-making and advocacy.

Overall, studying non-chordate coelomates can provide students with a rich understanding of animal diversity, evolution, and ecology, as well as useful scientific skills and career opportunities.

CORET4-CELLBIOLOGY

This area decipher the knowledge about cell ; the structure and function of various cellorganelles , dividing process, cell cycle, cell- signalling ,so that it becomes clear that howacellbecomes theunitoflife.Italsogivestheideaaboutcelldeathandspecial

reference with some specialised genes which have a major role. Practically studentsequippedwithpreparation ofcytologicalslidesoncelldivision process.

Studying cell biology can provide students with a wide range of benefits, including:

1. Understanding the fundamental unit of life: Cells are the building blocks of all living organisms, and the study of cell biology provides students with a deep understanding of the fundamental unit of life. This knowledge can help students understand how living organisms function and how they are connected to each other.
2. Developing critical thinking skills: Cell biology involves the application of scientific methods and critical thinking skills. Students studying cell biology learn how to design and conduct experiments, analyze data, and interpret results. These skills can be useful in a wide range of scientific fields and other areas of study.
3. Understanding disease: Many diseases, such as cancer, heart disease, and diabetes, are caused by problems at the cellular level. Studying cell biology can help students understand how these diseases arise and how they can be treated.
4. Learning about genetics: Cells contain the genetic information that is passed on from one generation to the next. By studying cell biology, students can learn about the structure and function of DNA and how it is passed on to offspring.
5. Exploring biotechnology: Cell biology is the basis of many biotechnologies, including genetic engineering, stem cell research, and tissue engineering. Students who study cell biology can learn about the principles and applications of these technologies.
6. Career opportunities: Cell biology is a rapidly growing field, and students who study cell biology can pursue a wide range of career opportunities in research, biotechnology, medicine, and other fields.

Overall, studying cell biology can provide students with a deep understanding of the fundamental unit of life, as well as critical thinking skills, knowledge about disease and genetics, and opportunities for further study and career development.

SEM-

IIICORE-T5DIVERSITYOFCHORDATA

As the zoological world is not only consist of nonchordates students will also beintroduced with other part the chordate. They explore the distribution of chordateanimals in different regions of the globe in light of zoogeography. In practical, they willbeintroducedwiththesetheoreticaltopicsalongwithpowerpointpresentation.
Studying the diversity of chordates can provide students with a deep understanding of the evolutionary history and diversity of this important group of animals, which includes vertebrates and their closest relatives. Here are some of the benefits that students can attain by studying the diversity of chordates:

1. Understanding of evolutionary history: Chordates are one of the most diverse and evolutionarily important groups of animals. Studying their diversity can provide students with a comprehensive understanding of the evolutionary history of these animals, including the origin of vertebrates and the development of key features such as the vertebral column, jaws, and paired fins.

2. Understanding of biodiversity: Studying the diversity of chordates can help students understand the incredible biodiversity of the animal kingdom, and the many different adaptations that have evolved in response to different environmental pressures.

3. Understanding of ecology: Chordates occupy a wide range of ecological niches, from marine organisms to terrestrial vertebrates. Studying the diversity of chordates can help students understand the important roles that these animals play in their respective ecosystems.

4. Research: Understanding the diversity of chordates is essential for conducting research in fields such as comparative anatomy, physiology, and evolutionary biology, which can help to develop new insights into the origins and evolution of different features in these animals.

5. Conservation: Many chordate species are endangered or threatened due to habitat loss, overfishing, and other human activities. Studying the diversity of chordates can help students understand the importance of conservation efforts and the need to protect these animals and their habitats.

Overall, studying the diversity of chordates is essential for understanding the evolution and ecology of these animals, and for pursuing careers in fields such as biology, ecology, and conservation.

CORE-T6 Animal physiology-CONTROLLING & COORDINATINGSYSTEMS

This field deals about different biological systems, their specific structure, how theyfunction to regulate our body. Various physiological parameters like muscle twitchingreflexesandpreparationofhistologicalslidesthrough microtomyisdonepractically.

Studying the physiology of controlling and coordinating systems can provide students with a deep understanding of how the body's nervous and endocrine systems work together to control and coordinate physiological processes in the body. Here are some of the benefits that students can attain by studying the physiology of controlling and coordinating systems:

1. Understanding of the body's regulatory systems: The nervous and endocrine systems work together to regulate and control physiological processes in the

body. Studying these systems can provide students with a comprehensive understanding of how the body is able to maintain homeostasis, and how it responds to changes in the internal and external environment.

2. Understanding of disease processes: Understanding the physiology of controlling and coordinating systems can help students understand how diseases develop and how they affect the body. This knowledge can provide a foundation for understanding medical treatments and interventions.

3. Clinical application: Physiology is an important foundation for many medical professions, such as nursing, medicine, and physical therapy. By studying the physiology of controlling and coordinating systems, students can gain the knowledge and skills necessary to diagnose and treat various medical conditions, particularly those related to the nervous and endocrine systems.

4. Research: Understanding the physiology of controlling and coordinating systems is essential for conducting research in fields such as neurobiology and endocrinology, which can help to develop new treatments and interventions for a variety of medical conditions.

5. Personal health: Students who study the physiology of controlling and coordinating systems can use their knowledge to better understand how to maintain their own health and wellness, and make informed decisions about lifestyle choices.

Overall, studying the physiology of controlling and coordinating systems is essential for understanding the human body and for pursuing careers in medicine, research, and other health-related fields.

CORE–T7FUNDAMENTALSOFBIOCHEMISTRY

It is the study of chemical reactions that take place inside living body which regulatesthe living process.It introduces the students about the prime macromolecules likesugar, protein, lipid and nucleic acid that constitute the cellular structure and functionsassociated with living process. Students will know about the initial biochemical processlike preparation of different experimental solutions at various concentration; quantityestimationof protein usingcolorimetry.

After studying biochemistry they are fully enriched with knowledge about genetic disorder and physiological processes of cholesterol, fatty acid, tryglyceride etc. They can also establish pathological labs.

SEC-IAQUARIUMFISHKEEPING

Students will be acquainted with the fundamental of fish keeping, preparation andhandling of aquarium, importance of ornamental fish in trading and marketing. So thatthey will prepare themselves as skilled in this field. This world open a new avenue as analternativesourceofincome.

Every human has a desire to keep a glimpse of natural beauty in their own home corner. Aquarium fish are the jewel of nature for their bright color, beautiful body shape and also their behaviour. It will increase not only the aesthetic value but also enhance the opportunity to develop the socio economic condition of rural people particularly in developing country like us. It gives our student a great opportunity.

SEMIV

CORET8-COMPARITIVEANATOMYOFVERTEBRATES

This comparative study of anatomical structures of important system in differentgroups of vertebrates show the line of descent in light of evolution. Which enables thestudentsto know about designofbodysystemsandtheirfunctionasevolutionproceeds.

Studying comparative anatomy of vertebrates can provide a student with a deeper understanding of the structure, function, and evolution of various organisms. Here are some specific benefits of studying comparative anatomy of vertebrates:

1. Understanding of Structural Differences: By comparing the anatomical structures of different vertebrates, students can gain a better understanding of how different organisms have evolved over time and how their structures have adapted to their environment.

2. Understanding of Functional Differences: Comparative anatomy can also provide insight into the functional differences between different vertebrates. For example, by studying the skeletal structure of birds and mammals, students can gain an understanding of how these animals have adapted to different modes of movement.

3. Understanding of Evolution: By studying the anatomical similarities and differences between different vertebrates, students can gain insight into the evolutionary history of these organisms. This can also help students understand the relationships between different groups of organisms.

4. Medical Research: Comparative anatomy is also useful in medical research, as it can provide insights into the anatomical and physiological differences between humans and other animals. This knowledge can be used to develop new treatments and therapies for human diseases.

Overall, studying comparative anatomy of vertebrates can help students develop a deeper understanding of the diversity of life on Earth and the evolutionary processes that have shaped it.

CORET9-AnimalPhysiology-LIFESUSTAININGSYSTEMS

This area confers the study of physiology; how living organism functions in the

changedenvironmentstudentswillunderstandhowthe vitalsystemofanimalbodylikecirculatory,excretory,nervoussystemfunction;howtomaintainbody'shomeosatsis.They get the chance of different haematological test as well as recording of bloodpressure.

Studying the physiology of various life-sustaining systems can provide students with a deep understanding of how these systems work together to maintain homeostasis in the body, as well as the interdependence of different physiological processes.

Here are some of the benefits that students can attain by studying physiology of various life-sustaining systems:

1. Understanding of the body's functions: Studying the physiology of various life-sustaining systems can help students understand how the body functions as a whole, and how different organs and systems work together to maintain health.
2. Understanding of disease processes: Understanding the physiology of various life-sustaining systems can help students understand how diseases develop and how they affect the body. This can provide a foundation for understanding medical treatments and interventions.
3. Clinical application: Physiology is an important foundation for many medical professions, such as nursing, medicine, and physical therapy. By studying the physiology of various life-sustaining systems, students can gain the knowledge and skills necessary to diagnose and treat various medical conditions.
4. Research: Understanding the physiology of various life-sustaining systems can provide a basis for research in fields such as pharmacology and biomedicine, helping to develop new treatments and interventions.
5. Personal health: Students who study the physiology of various life-sustaining systems can use their knowledge to better understand how to maintain their own health and wellness, and make informed decisions about lifestyle choices.

Overall, studying the physiology of various life-sustaining systems is essential for understanding the human body and for pursuing careers in medicine, research, and other health-related fields.

CORET-10IMMUNOLOGY

This area deals with the body's natural defense mechanism along with the related cellsand organs of the system, ideas about immunogen and immunogenicity.It also gives thestudent idea about vaccination agents of different disease.In practical they will knowaboutseveral immunological organs.

Studying immunology can provide students with a wide range of benefits, including:

1. Understanding the immune system: Immunology is the study of the immune system, which is responsible for protecting the body against pathogens and other harmful agents. By studying immunology, students can gain a deep understanding of the mechanisms by which the immune system works.

2. Understanding disease: Many diseases, including infectious diseases and autoimmune disorders, involve problems with the immune system. Studying immunology can help students understand the causes of these diseases and how they can be treated.

3. Developing critical thinking skills: Immunology is a complex field that requires critical thinking and problem-solving skills. Students who study immunology learn how to design and conduct experiments, analyze data, and interpret results.

4. Learning about vaccines: Vaccines are one of the most effective ways to prevent infectious diseases, and immunology is the basis of vaccine development. Students who study immunology can learn about the principles of vaccine development and the different types of vaccines.

5. Exploring biotechnology: Immunology is the basis of many biotechnologies,including monoclonal antibodies, gene therapy, and immunotherapy. Students who study immunology can learn about the principles and applications of these technologies.

6. Career opportunities: Immunology is a rapidly growing field, and students who study immunology can pursue a wide range of career opportunities in research, biotechnology, medicine, and other fields.

Overall, studying immunology can provide students with a deep understanding of the immune system, as well as critical thinking skills, knowledge about disease and vaccines, and opportunities for further study and career development in the field of immunology.

SEC-II-SERICULTURE

In this skill enhancing course students will get the opportunity to know the culture ofsilk including different species of silk worm, rearing method ,extraction and reeling ofsilk; about the predators and disease of silk moth .This study will help the students tounderstand the significance importance of silk marketing in Indian economy; open anewavenueof occupation.

Students achieve a comprehensive understanding of the concepts of history of sericulture, types of silkworms, biology of silkworms, rearing of silkworms. They developed a critical appreciation of pest and diseases of silkworm.

SEM

VCORET-11MOLECULARBIOLOGY

Astheworldisbasedonmoleculethisareaintroducesthestudentsaboutthemolecularmake up of life;the core molecule DNA and RNA and protein; how they ineract to make asuccessful life. Student will observe the chromosome, demonstration about gelelectrophoresis& spectrophotometer.
DNA the hereditary material its structure and various important functions help the students to know about the core of life and diversity without which life is impossible. Our syllabus in this aspect is so well constructed that the student understand the basic fundamental ideas of hereditary structure and its function. It helps in their higher studies.

CORET-12PRINCIPLESOFGENETICS

Genetics is the study of genes.The hereditary unit gives the concept ofheredity,variation,mutation on living world. This area deals with the advance study ofgene at molecular level like genomic analysis together with gene replacement and theirexpression pattern.In the practical aspect students get the chance of solving geneticalproblemsbylinkage, genetic mapping, pedigreeanalysis etc.

This study helps the student about gene, the hereditary material responsible for our characteristic, its nature structure function. Various abnormal characteristics so far developed in human are the reason of various types of mutation. Pedigree analysis helps to understand the flow of genetic abnormality in human race. Students will be enlightened regarding genes and genetic counselling.

DSHC 1 ANIMALBIOTECHNOLOGY

Biotechnology is the most advance study in lifescience.It is an integrated ubjectcomprising biology, chemistry, computer science, physics starting from genome to cellculture.Various specialised advance studies accumulated here to give a complete pictureofgene manipulationandgenetherapywithits practical applications.

The most modern part of our syllabus including various sophisticated scientific method used

in established laboratories. Our students will be highly benefitted from this study for their future prospects specially in research works .By covering this syllabus both theoretically and practically they develop skills to make a project on modern aspects like cell culture.

DSHC 3WILDLIFECONSERVATIONANDMANAGEMENT

This field of study deals with importance, conservation & management of wildlife aswellasestimationofitspopulationanddiversityanalysisbyvariousmethod.

Wild life conservation After studying of wild life conservation development occurred about nature and natural resources. After development of nature of our students it is possible to convey the general public of endangered species. After attending of this classes they will protect the enemies of forest and various forest animal.

SEMVI

CORET-13DEVELOPMENTALBIOLOGY

This branch deals with the process of development of life starting from gametogenesisto organogenesis. It also includes some teratogenic effects on embryo ; the process ofamniocentesis, IVF, stem cell study. It also delivers the idea about placenta and differentdevelopmentalslopes inchickembryo and *Drosophila.*
Students achieve a comprehensive understanding of the ion of methodologies like concepts of early animal development as for example phases of development, gametogenesis, fertilization, blastulation, embryonic induction, implantation of embryo in humans. They developed a critical appreciation of methodologies like IVF, amniocentesis.

CORET-14EVOLUTIONARYBIOLOGY

This branch gives the idea of life, how it starts and its evolution on earth. Ideas aboutseveral evolutionary process including Lamarckism, Darwinism, molecular evolution,variationdifferentevolutionaryforcesleadstoevolution.Studentswillalsoknowab outthe human evolution. In practical portion there are some problem solving with HardyWeinberglaw, studyofhomologyandanalogy,fossilstudyetc.

Students achieve a comprehensive understanding of the concepts of beginning of life, Lamarckism, Darwinism, evolution of horse and human, neutral theory, sources of variation, population genetics, genetic drift, species concept, modes of speciation, K-T extinction, convergent and divergent evolution. They developed critical appreciation of phylogenetic trees.

DSHC6BIOSTATISTICSANDBIOINFORMATICS

This part deals with the application of statistics methodology to analyse biologicalvarieties. This is very much applicable in project report research work, specially inmedical science, in every sphere of calculation. It helps the students by giving the ideasabout data, distribution type, probilities. Bioinformatics represent the biological dataand analysing using computer.In practical students will make a small project reportbasedon anystatisticaltool.

Role of biostatistics in life forms is very important. Various processes, diagrams, various mode of concepts of statistical explanations are very much important in our relevant life processes. These all will help the students in their future higher studies; project report on any statistical method helps the student to know about the of collection of data, make a project and make a complete deduction of field study. This branch of science enlighten the students very much.

DSHC4PARASITOLOGY

Many organism lives in a host parasitic relationship starting from protista to mammalsspecially the group Helminthes.This study deals with the life cycle of the parasite , host,mode of infection, pathogenic effect epidemiology, porphylaxis and their controlmeasures.

According to study of morphology and life cycle of the various parasites mentioned in syllabus the gain some knowledge about various common diseases like sleeping sickness,kala fever etc. They also get to know about medical applications of these diseases. As a result, they get fully enriched about the treatments of various parasites.

DepartmentofPhysics
NistariniCollege

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Program outcome(PO) and Course outcome(CO) Attainment Report (2017-2020)

Program Name : B.Sc. (Hons.) in Physics

Program Outcome Report 2017-20

Based on the expected outcome of the B.Sc. (Hons.) in Physics program being conducted in the Department of Physics, Nistarini College, the following points are noteworthy :

1. Students developed great deal of knowledge on courses such as Mathematical Physics, Mechanics, Electromagnetic theory, thermal physics, analog and digital electronics etc.

2. Students were a bit slow at the beginning for Modern Physics courses such as Quantum mechanics and Special relativity etc. But as time progressed they developed good understanding over the topics. Also they were able to develop good problem solving skills in these topics.

3. As far as laboratory experiments are concerned, students really enjoyed staying in the laboratory performing experiments which enabled them to develop good knowledge about the subject as well as the precautionary measures that must be taken in the laboratory.

4. Students were rather slow in the beginning in computer programming but as they were given more and more exercise, they developed good programming skills.

Based on the above points it may be concluded that the expected program outcome has been attained to quite a good extent.

Semester	Coursename	Course Outcome Attainment Report

SemesterI	**Core course 1: Mathematical Physics I (Theory and Lab.):**	After the successful completion of the semester, the students gathered a great deal of knowledge over the course. They were able to apply the learned concepts to different problems. As far as the laboratory section of this course is concerned, students were a bit slow at the beginning as most of them did not have computer access before joining the program. But then, as time progressed, they were able to develop good programming skills.

		So, it may be concluded that around 95% of the expected course outcome has been attained.
SemesterI	**Core course 2: Mechanics (Theory and Lab.)**	At the end of the course, students developed good knowledge as well as problem solving skills over the subject. In the laboratory they were able to perform all experiments with good accuracy. Therefore. It may be concluded all the expected course outcomes has been achieved successfully.
SemesterII	**Core Course 3: Electricity and Magnetism (Theory and Lab.)**	At the end of the semester, students developed good knowledge over basic classical electricity and magnetism. Also they were able to develop good problem solving skills on electrical circuit related problems and network theorems. As far as the lab. Experiments are concerned, students became familiar with using electrical measurement instruments such as Voltmeter, ammeter etc and performed almost all experiments. It may be concluded that over 95% of the expected outcome has been attained.
	Corecourse4:Waves and Optics (Theory and Lab.)	The students grasped good knowledge over all the topics.

SemesterII		Also, they showed great interest in the optical experiments as they were introduced to the dark room for the first time in this course in the whole curriculum of the program. So, they learned a lot about how to operate spectrometers and other optical instruments. It may be concluded that almost all the expected course outcomes have been attained.
SemesterIII	**Corecourse5: Mathematical Physics II(Theory and Lab.)**	Students developed good knowledge and problem solving skills at the end of the course except for the special function portion which a lot of them didn't show a lot of interest in. Remedial classes for that were taken though. In the computer laboratory, they were introduced to solving differential equations using python and they did very well. Based on the above observations, it may be concluded that around 95% of the expected outcomes has been attained.
	Corecourse6: Thermal Physics (Theory and Lab.)	Students grasped fundamental concepts of heat and how it manifests itself in various forms in different physical processes. After the completion of the course the students developed the ability to analyze explain and predict a variety of natural phenomena. Also they have gained the knowledge of microscopic formulation of thermal physics. In the laboratory, the students performed various experiments on

		thermal physics which developed a better understanding and enriched their knowledge. It may be concluded that the expected course outcomes has been achieved successfully.

SemesterIII	**Corecourse7:Analogsystems and Applications (Theory and Lab.)**	Students showed a great interest towards the concept of transistors, amplifiers and diodes made up of semiconductor. Most of them were not interested of Sinusoidal oscillator as it consists of little bit of complex circuit design. Remedial classes for that were taken though. The concept they have learned is used to perform the experiments in the laboratory. So, it may be concluded that around 90% of the expected course outcome has been attained.
	Skill Enhancement Course1 : Renewable energy andenergy harvesting	Students learned about sources of energy that are renewable and alternate to fossil fuel. The details of the harvesting technique for the energy sources were also elaborated. At the end the students gathered good amount of knowledge about the topics. Thus, it may be concluded that more than 95% of the expected course outcomes have been achieved.
SemesterIV	**CoreCourse8: Mathematical Physics III (Theory and Lab.)**	Students developed knowledge about complex variables and their uses in Physics in details. In the laboratory, they visualized many physical mathematical concepts by computer programming such as Fourier series, Dirac delta function etc. It may be concluded that more than 95% of the expected outcome has been attained.

	Core Course 9: Elements of Modern Physics(Theory and Lab.)	Students were initially excited to learn quantum mechanics. Although initially they had faced difficulties to understand the new concept of physics. After that they have gradually learned the theoretical concept and able to solved various numerical problems. Around 95% of the expected course outcome has been attained.

SemesterIV	**Corecourse10: Digital Systems and Applications (Theory and Lab.)**	The students gained a thorough understanding of the fundamental concepts and techniques used in digital electronics. They developed the basic skills to handle the different number systems with a special emphasis to binary system and learned about the fundamentals of Boolean algebra. In the practical classes, they have designed various combinational and sequential circuits which helped them to develop skills to build and troubleshoot different circuits and to identify the basic requirements for cost effective design applications. The expected course outcome has been achieved successfully.

	SkillEnhancementCourse2 :ComputationalPhysics(T heory and Lab.)	Students were introduced to C programming language where they implemented their existing knowledge of Python programming. They were also introduced to basics of LINUX. Almost all the course objectives are attained.
SemesterV	**Core course 11: Quantum Mechanics And Applications (Theory and Lab.)**	Students were a bit slow in understanding few topics in this course but as time progressed they developed good knowledge over the course. In the lab also they were very enthusiastic. It may be said that over 95% of the course objectives have been achieved.

	CoreCourse12: Solid State Physics (Theory and Lab.)	The students developed the basic knowledge of mechanical, thermal, electrical and magnetic properties of crystalline solids. Through the different models they gained ideas about various atomic structure and symmetry elements of different crystals. In the practical classes, they performed different experiments on solid state physics which reinforced the concepts learned in theoretical classes and helped them to deepen their understanding. It may be concluded that the course objectives have been achieved successfully.
SemesterV	**Department Specific Elective1:Advanced Mathematical Physics (Theory and Lab.)**	All the topics were taught to the students well within time and students were very enthusiastic about learning this course. In the laboratory also they were very eager to learn. Almost all the expected course outcomes have been attained.

	Department Specific Elective 2: Classical Dynamics	Students developed good knowledge and problem solving skills at the end of the course except for the 'oscillations of N identical masses' as it consists of little bit of complex math. Remedial classes for that were taken though. Conclusion: Almost all of the desired course outcomes have been attained.
	Department Specific Elective 3 : Astronomy and Astrophysics	

SemesterV	studyongalaxies.	
SemesterVI	**CoreCourse13:ElectromagneticTheory(TheoryandLab.)**	All the topics were taught to the students and class test was also taken along the course. At the end of the course students became well equipped with classical electromagnetic theory. It may be concluded that all the expected course outcomes have been attained.
	Core Course 14 : StatisticalMechanics(TheoryandLab.)	By the end of the course, students had acquired basic subject knowledge as well as effective problem-solving skills. Thus, about 95% of the intended course outcomes have been attained.

SemesterVI	**Elective4:NuclearandParticle Physics:**Studentsgo through a detailed studyrelated to the nucleus of anatom.	
	Department Specifc Elective 5: Communication Electronics (Theory and Lab.):	This course allows students to go through an advanced study on communication electronics from application perspective. After the course the students grasped the basics of the various principles, techniques and the modern technologies used in the field of the communication electronics throughout the world. It may be said that 95% of the expected course outcomes has been achieved successfully.
	Department Specifi cElective6:PhysicsofEarth : In this course students gothrough a detailed study oftheearthandtheuniverse.	

Program Outcome : At the end of the program students became well equipped with the theoretical and practical

NISTARINI COLLEGE, PURULIA

ATTAINMENT OF CO, PO & PSO

DEPARTMENT OF HINDI

PROGRAMME NAME: HINDI PROGRAMME

Course **कोर्स**	**Outcome** **परिणाम**	**Attainment** **प्राप्ति**
Semester-I		
BHINCCRT-101	**CC1(A) हिन्दी साहित्य का इतिहास** **इकाई –एक** काल विभाजन, नामकरण **इकाई–दो** भक्ति आन्दोलन का सामान्य परिचय **इकाई–तीन** रीतिकालीन ऐतिहासिक पृष्ठभूमि **इकाई–चार** हिन्दी नवजागरण, भारतेंदु युगीन विशेषता	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।
BHINCCRT-103	**CC-3MIL** **हिंदी व्याकरण और सम्प्रेषण** **इकाई –एक** हिंदी व्याकरण और रचना–संज्ञा, सर्वनाम, विशेषण, क्रिया, अव्वय, शब्दों का लिंग निर्णय, 'ने' का प्रयोग **इकाई –दो** पर्यायवाची, विलोम अनेक शब्दों के लिए एक शब्द	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4

	शब्द शुद्धि, वाक्य शुद्धि, मुहावरे, लोकोक्तियाँ, पल्लवन, संक्षेपण **इकाई –तीन** सम्प्रेषण की अवधारणा और महत्व सम्प्रेषण के प्रकार, माध्यम और तकनीक **इकाई –चार** साक्षात्कार, भाषण कला रचनात्मक लेखन	तक) को कवर किया गया है।
BHINCCRT-104	**CC-9 हिन्दी व्याकरण और संप्रेषण** **इकाई –एक** संज्ञा, सर्वनाम, विशेषण, **इकाई–दो** पर्यायवाची, विलोम, अनेक शब्दों के लिए एक शब्द **इकाई–तीन** सम्प्रेक्षण की अवधारणा एवं महत्त्व **इकाई–चार** साक्षात्कार और भाषण कला	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।
SEMESTER – II		
BHINCCRT-201	**Course cc-4 मध्कालीन हिन्दी कविता** **इकाई –एक** **कबीरदास** साखी एवं पद	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों

	इकाई–दो **सूरदास** विनय के पद भ्रमरगीतसार **इकाई–तीन** **तुलसीदास–रामचरितमानस** चौपाइयाँ, दोहे व चौपाइयाँ **इकाई–चार** **बिहारीलाल** दोहे	को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।
SEMESTER – III		
BHINCCRT-301	**CC7(A) आधुनिक हिन्दी कविता** **इकाई –एक** **जय शंकर प्रसाद** अरूण यह मधुमय देश हमारा भारतवर्ष **इकाई–दो** **सूर्यकांत त्रिपाठी निराला** तोड़ती पत्थर, स्नेह निर्झर बह गया, बांधों न नाव **इकाई–तीन** **अज्ञेय** सोन मछली, साम्रागी का नवैद्य–दान **इकाई–चार** **नार्गाजुन** बहुत दिनों के बाद, अकाल और और उसके बाद, कालिदास, सिंदूर तिलकित भाल	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।

BHINCCRT-304	**कार्यालयी हिन्दी** **इकाई –एक** कार्यालयी हिन्दी का अभिप्राय कार्यालयी हिन्दी का उद्देश्य एवं क्षेत्र **इकाई–दो** कार्यालयी हिन्दी का और सामान्य हिन्दी का सम्बंध तथा अंतर कार्यालयी हिन्दी की स्थिति और संभावनाएँ **इकाई–तीन** कार्यालयी हिन्दी की पारिभाषिक शब्दावली कार्यालय से निर्गत पत्र ज्ञापन,अनुस्मारक, पृष्टांकन, आदेश, सूचनाएँ और निविदा **इकाई–चार** टिप्पण (नोटिंग) स्वरूप , विशेष्ताएँ और भाषा शैली प्रारूपण के प्रकार, भाषा शैली और विधि संक्षेपण के प्रकार, विशेषता संक्षेपण के विधि	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।
SEMESTER – IV		
BHINCCRT-401	**CC-10(a) हिन्दी गद्य साहित्य** **इकाई –एक** **उपन्यास** ‘त्यागपत्र’ **जैनेन्द्र** **इकाई–दो** **कहानी** ‘नमक का दारोगा’–**प्रेमचंद** ‘आकाशद्वीप’–**प्रसाद** **इकाई–तीन** **कहानी**	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।

	'परदा'**–यशपाल** 'वपसी'**–उषा प्रियम्वदा** **इकाई–चार** **निबंध** 'लोभ और प्रीति'**–शुक्ल** 'कुट्ज'–**हजारी प्रसाद द्विवेदी**	
BHINSERT404	**SEC-2 चलचित्र लेखन** **इकाई –एक** भारतीय सिनेमा का इतिहास मूक व सवाक फिल्में **इकाई–दो** विगत शताब्दी की लोकप्रिय फिल्में लोकप्रिय फिल्मी गीत, तथा प्रसिद्ध संवाद प्रमुख निर्देशक एवं अभिनेता दादा साहेब फाल्के पुरस्कार प्राप्त **इकाई–तीन** हिंदी पटकथा (सिनेरियों) का क्रमिक विकास संवाद लेखन, प्रणाली प्रविधि हिंदी ऐड फिल्में (विज्ञापन) **इकाई–चार** हिंदी की विश्व व्याप्ति में फिल्मों की भूमिका हिंदी के प्रमुख फिल्मों के आधार पर भाषिक संरचना का व्यावहारिक प्रशिक्षण देवदास (तीनों निर्मितियाँ) शोले	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।
GE-2	**GEC-2 पश्चात्य दार्शनिक चिंतन एवं हिंदी** **इकाई–एक**	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4

	अभिव्यंजनावाद स्वच्छंदतावाद **इकाई–दो** मनोविश्लेषणवाद मार्क्सवाद **इकाई–तीन** आधुनिकतावाद, फॅंटेसी मिथक एवं संरचनावाद **इकाई–चार** **कल्पना, बिम्ब**	के लक्ष्य और पणिामों को छात्राओं में ि जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।
SEMESTER – V		
BHINCCRT-501	**सूर्यकांत त्रिपाठी निराला** **इकाई –एक** **कविताएँ** सखी वसंत आया, जूही की कलि **इकाई –दो** जगो फिर एक बार–2, बादल राग–2, **इकाई–तीन** वर दे वीणावादिनी वर दे, गहन है यह अंधकारा **इकाई–चार कथा साहित्य** बिल्लेसुर बकरिहा	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।
BHINSERT-504	**SEC-3 भाषा शिक्षण** **इकाई–एक** हिंदी भाषा एवं शब्द भंडार–तत्सम, तत्भव, देशज, विदेशज, कृत्रिम	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में

	भाषिक प्रशिक्षण के विभिन्न क्षेत्र, प्रारंभिक कक्षाओं में, उच्च शिक्षा संस्थाओं में, हिंदीतर भाषा भाषियों–विदेशियों के बीच में द्वितीय भाषा के रूप में **इकाई–दो** भाषा विज्ञान के मूलाधार व्याकरण बोध, मानक वर्तनी का ज्ञान, शुद्ध वाक्य विन्यास, वैज्ञानिक उच्चारण, पयार्यवाची, समानार्थक, विलोम, अनेक शब्दों के लिए एक शब्द **इकाई–तीन** देवनागरी लिपि का इतिहास एवं वैशिष्ट देवनागरी लिपि वैज्ञानिकता **इकाई–चार** हिंदी भाषा के विशिष्ट शब्दों का भारतीय भाषा के संदर्भ में तुलनात्मक अध्ययन हिंदी भाषा का भविष्य	जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।
SEMESTER – VI		
BHINCCRT-601	**समकालीन हिन्दी कविता** **इकाई –एक** **धूमिल** मोचीराम, गाँव, रोटी और संसद **रघुवीर सहाय**–हँसो हँसो जल्दी हँसो,	इस विभाग के शिक्षक द्वारा इस कोर्स की इकाई–1 से इकाई–4 के लक्ष्य और पणिामों को छात्राओं में

	रामदास, दो अर्थ का भय **ओमप्रकाश वाल्मीकि** जाति अहंकार, भाग्यविधाता, सपने **इकाई–तीन** **त्रिलोचन** सहस्रदल कमल,समय यात्रा, पैरों के आस–पास **सर्वेश्वर दयाल सक्सेना** सौन्दर्यबोध, तुम्हारे साथ रहकर **इकाई–चार** **शमशेर बहादुर सिंह** बात बोलेगी घिर गया समय का रथ **भवानी प्रसाद मिश्र** सन्नाटा टूटने का सुख	जितना संभव हो सके भलिभांति पढ़ाया गया है, और शत–प्रतिशत (100%) पाठ्यक्रम (इकाई–1 से इकाई–4 तक) को कवर किया गया है।

THE COURSE CURRICULA OF THE PROGRAMME

SKBU के तहत हिन्दी प्रोग्राम कोर्स के पाठ्यक्रम को हिन्दी विभाग की शिक्षिका द्वारा पूरी तरह से पढ़ाया एवं समझाया गया है। पूरे तीन वर्ष के बाद छात्राओं को बी.ए. की डिग्री दी जाएँगी। इस पूरे कोर्स को पूरे करने के पश्चात उनमें हिन्दी साहित्य के पूर्ण ज्ञान के साथ–साथ जीवन में आगे बढ़ने का दृढ़ संकल्प भी प्राप्त होगा और जीवन में सफलता प्राप्त कर आगे बढ़ेगें।

PROFICIENCY IN ACADEMICS

1. इस पाठ्यक्रम का एक मात्र उद्देश्य है हिन्दी भाषा और साहित्य के माध्यम से विद्यार्थियों में हिन्दी भाषा के प्रति प्रेम और सम्मान की भावना जागृत करना।
2. हिन्दी साहित्य के जरिए समाज प्रेम, राष्ट्रप्रेम और मानव–प्रेम को बढ़ाना है।
3. नैतिक मूल्यों के प्रति उन्में आस्था को जागृत करना है।
4. सुदूर ग्रामीण इलाकों से पढ़ने आई छात्राओं में हिन्दी भाषा का प्रचार–प्रसार करना और उनमें ज्ञान एवं आत्म विश्वास को भरना है।
5. हिन्दी साहित्य के विविध विधाएँ जैसे कविता, कहानी, उपन्यास, नाटक, निबंध, एकांकी आदि के जरिए छात्राओं में साहित्य सृजन की भावनों को जागृत करना।

PERSONAL & BEHAVIORAL COMPETENCE

1. सम्पूर्ण पाठ्यक्रम को इस तरह से सजाया गया है ताकि छात्राओं में साहित्य के प्रति अभिरूचि पैदा हो।
2. छात्राओं में साहित्य सृजन के प्रति रूचि पैदा हो सके।
3. छात्राओं स्नातकोत्तर शिक्षा की ओर अग्रसर हो सके।
4. छात्राओं में भावात्मक शक्ति, कल्पना शक्ति और रचनात्मकता का विकास हो सके।

SOCIAL COMPETENCE

1 छात्राओं में आत्म–शक्ति का विकास इस तरह से हो जिससे वे सामाजिक उत्तरदायित्व को अच्छी तरह से निवाह सके।

2.दूसरो की मदद के लिए हर परिस्थितियों में तैयार हो सके।

3. शिक्षा का वास्तविक लक्ष्य क्या है ? इसे जानकर दूसरों का सम्मान, मानवता, सेवा और समता के भाव को परिलक्षित करा सके।

4. उनमें प्रेम भाईचारा और सौहार्द की भावना जागृत हो सके। पारीवारिक दायित्व के साथ समाज के पति अपने कर्तव्यों का भी निर्वाह कर सके।

इस कोर्स को पूरे करने के पश्चात शिक्षार्थी अपने ज्ञान का अपने जीवन में और उच्च शिक्षा के अर्जन में मदद ले सकंगें, वे जितना हो सके अपने को परिवेश के साथ जोड़कर प्रेम, भाईचारे, सौहार्द और मानवता का लोगों में बाँट सके।