Suri Vidyasagar College (Govt. Sponsored)

Suri, Birbhum. PIN- 731101, West Bengal

(Affiliated to the University of Burdwan &

Accredited by NAAC B^{++})

PROGRAMME OUTCOME, PROGRAMME SPECIFIC OUTCOME AND COURSE OUTCOME FOR THE U.G. AND P.G. COURSES OF THE FACULTIES OF ARTS, SCIENCE AND COMMERECE

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DEPARTMENT OF BENGALI
SURI VIDYASAGAR COLLEGE

B.A.(Hons) & B.A.(Gen) Bengali language & Literature

Programme Outcome:

The programme, famed by the UGBS, University of Burdwan,is expected to develop an understanding of the Bengali Literature along with Bengali language skills.The student of both programme get acquainted with the different forms of poetry,Prose,Fiction and Drama of different period of Literary history and culture started from old period (900 -1000A.D.) to modern and post-modern period. The programme offered enable the students get exposed to advanced level of grammatical patterns and usages in Bengali written language. The students are also able to improve their skills to speak and communicate properly and write Bengali accurately. This programme is expected to help the students in exploring an area of knowledge.

Course Outcome:

There are six semesters in the three years B.A. Honours in Bengali.the curriculum consists 14 core courses(CC),2 Ability Enhancement Courses(AECC),2 Skill Enhancement Courses(SEC) 4 Discipline Elective Courses(DSE) and 4 Generic Elective Courses(GE).

There are six semesters also in the three years B.A. General programme consists 12 Core Courses.4 Core Courses are being taken from Discipline -1, 2 Core Courses from MIL ,2 Core Courses from AECC ,4 Core Courses from DSE and 4 Core Courses from SEC.

Semester –I

a) Bangla Sahiter Itihas (Prachin o Madhyayug)

b)Chandda ,Alankar

This courses enable the students to identify the structure of language during the reformation period of Bengali Language. The students are also able to locate diverse points of metre and prosody from old period to post- modern period.

Semester –II

2.a)BaishnabPadabali ,Shakta Padabali

b)Ramayana ,Annadamangalkabya

This courses enable the students to attain various perspectives in reading authentic epic and the medieval literature as well as the cultural history of Bengal.This Courses also helps the students to create awareness about different forms of themes of poetry from different sects ob Bengal.

Semester –III

a) Bangla Sahiter Itihas (1801-1950 A.D.)

b) Bhashatattwa

c) UnishShataker Bangla Kabya

d) Bangla Byakaran

The Learners get acquainted with divergence in history of Bengali Language and Literature,especially diversity of Bengali Dialects, Phonetics , Morphology , Syntax etc.and also able to recognize the different forms of Bengali poetry. The students attain an advanced level of mastery in the skill of Bengali Language.

Semester –IV

4.a) kabita b) Upanyas c) Natak d) RachanashaktirNaipurna

Students are able to understand the different forms of Literature and improve their ability to discover the pleasure in reading fiction . They also recognize the society during reading the dramas and learn the technique of analysis the narratives and dramas .They also get a detail idea in the the field how to write Bengali better.

Semester –V

5.a) ChhotoGolpo b) prabandha o prachyaKabyatattwa c) UnishShataker Bangla Kabya o Prabandha d) UnishShatakerBangalNatak o Kathasahitya

The students will be familiar with the structure related to Bangla ChhotoGalpo and the literary theory of eastern and western and understand the difference between fictions and plays. They get a concept to implement a theatrical project.

Semester –VI

6.a) Sanskrito o Ingrejisahiter Itihas b)Sahiter Rup-riti o Sangrup c)BisshatakerSwadhinatapurbarty Bangla Kathasahitya d) Sahitya bisyakPrababdha o Loksahitya ,Loksanskriti.

The students are able to acquaint with great classics of Sanskrit literature and enlightened by the reading of the great writings of English literature also. They also able to develop their knowledge of comparative literature and provide them an area of knowledge in folk literature along with Folk Culture. They also learn different pattern and structure of Literature genre.

B.A.(Gen) Bengali

Semester –I

1.Discipline-1 Prabandha Sahitya

Semester –II

2.Discipline -1 ChhotoGalpo

Semester –III

3.Discipline -1 a) Bangla Sahityer Itihas b) Bangla Byakaran

Semester –IV

4.Discipline-1 a)Bhashatattwa b) kabita c) RachanashaktirNaipurna

Semester – V

5.Discipline-1 a)Unishshataker Bangla Upanyas o Chhotogalpo b)UnishShatakerPrabandha c) Prabandha o Pratibedan Rachana.

Semester – VI

6. Discipline -1 a) UnishShataker Bangla Natak b) Unishshataker Bangla Bhraman sahitya o chitipatrac)Byabaharik Bangla Charcha o AnubadCharcha.

These courses are designed to help the students to develop writing skill and ability to presentable academic writing and empower them for professional success. The students are able to identify the latest trend of language and Literature and get knowledge in the area of media writing.This Courses also provide space to the students' expression of acquired knowledge and potential skill in essay writing, translation, transliteration based on the art they had acquired through three years programme.

DEPARTMENT OF ENGLISH

SURI VIDYASAGAR COLLEGE

Programme outcomes:

To help students to become sensitive human beings possessing aesthetic awareness.

To produce more humane individuals in this fast-paced world of mechanized existence.

Programme Specific Outcomes:

The Department of English sees itself as a centre for intellectual and creative thinkingwhich will help students to become sensitive human beings possessing aestheticawareness. The department attempts to redefine the parameters of knowledge dissemination withinthe rich cultural heritage of the College. Analytical skills in linguistic communication and literary criticism enables them toanalyze oral and written discourse of various genres, social, cultural, political andhistorical contexts and use them in advanced studies in a wide range of corporate,communication, research and knowledge fields.

Students who have graduated from the department of English have used their newlyacquired knowledge practices and aesthetic expressions to engage in research work andhigher studies. Others have used their writing and reading skills to take up professionslike teaching, journalism, copywriting, editing, publishing, advertising and marketing aswell as analogous disciplines like theatre and film studies. Knowledge of English andprecise communication skills stand them in good stead in professions like banking, publicadministration and human resource.

Course Specific Outcomes:

SEM-I

CC-I: Indian Classical Literature: To promote a contextual awareness and understanding of ancient Indian classical literature and realization of rich Indian literary ethos.

CC-ll: European Classical Literature: To promote a contextual awareness and understanding of ancient European classical literature and realization of rich European literary ethos.

SEM-II

CC-lll: Indian Writing in English: To highlight the tradition of Indian authors writing in English from 1870s to the 1990s.

CC-lV: British Poetry and Drama (16th and 17th Century) and Rhetoric & Prosody: This paper covers British literature from Shakespeare to the Metaphysical poets along with the conceptual understanding of the poetics of literature.

SEC1&2 (For SEM-I and SEM-II):

These courses (Creative Writing and Film Studies) are a blend of theoretical and practical components that encourage skill development by providing hands on experience for potential future utility.

SEM-III

CC-V: American Literature: Students are encouraged to learn various aspects of American poetry, fiction and drama.

CC-Vl: Popular Literature: True to its title, this paper caters to the taste of the common readers with the additional purpose of entertainment. It involves detective stories, children's classics and even graphic novels.

CC-Vll: British Poetry and Drama (17th and 18th Century): This paper covers British poetry, drama and fiction of the aforementioned time. It helps students to form the religious and secular thoughts of the period including the role of the women and the Comedy of Manners.

SEM-IV

CC-Vlll: British Literature (18th Century): The paper envisages to cover an awareness of the ideas of Enlightenment and Neoclassicism, Restoration Comedy, of the early novel and the periodical press.

CC-lX:British Romantic Literature: This paper focuses on the understanding of conceptualization of nature, reason and imagination and literature revolutions, especially the gothic and the romantic lyric.

CC-X:British Literature (19th Century): Through this paper, students are expected to get acquainted with the basics of the time such as ideas of utilitarianism, social concepts of marriage and sexuality, of the clash of faith with doubt as well as the dramatic monologue.

SEM-V

CC-Xl: Women's Writing: The purpose of this paper is to encourage inquiry into concepts of gender, caste and race, of social reforms and women's rights and the confessional mode in women's writing.

CC-Xll: British Literature (Early 20th Century): It investigates into modernism, postmodernism and non-European cultures of Women's Movement in the early 20th century, of psychoanalysis and the Stream-of-Consciousness method of narration and application of Myth in literature.

DSE1: Modern Indian writing in translation

This paper encourages an understanding of the aesthetics of translation and the modernity of Indian writing. It shows role of caste, gender and politics in such fiction and also the choice of form for various expressions.

DSE2: Partition literature

Students can realize the role of colonialism, nationalism and Partition in such fiction. Communalism, violence (especially against women), homelessness and exile are issued focused on.

SEM-VI

CC-Xlll: Modern European Drama: Through the four selected plays of this paper students are encouraged to acquire the domain knowledge of politics, social change and the stage, text and performance of European drama considering the key factors like tragedy and heroism and the Theatre of the Absurd.

CC-XlV: Postcolonial Literatures: The idea of the paper is to address the problems and consequences of decolonization, especially questions relating to the political and cultural independence of formerly subjugated people and things such as racialism and colonialism.

DSE3: Literary theory
As the name implies, this paper is a study of the various theories of literary understanding and analysis and promotes better understanding of literature and society.

DSE4: Literary Criticism and History of the English Language
The objective of this paper is to enable an understanding of ideas of classicism, imagination, imitation and pleasure in literary aesthetics and also the growth, development and expansion of the English language.

Generic

L-1_1 and L-1_2: This paper targets thorough understanding of language, variety and stylistics for betterment of language potential of general course students.

AECC2: The objective of this course is enhancing competence and skill in use of English for social and professional requirements.

Programme outcomes:

To help students to become sensitive human beings possessing aesthetic awareness.

To produce more humane individuals in this fast-paced world of mechanized existence.

Programme Specific Outcomes:

The Department of English sees itself as a centre for intellectual and creative thinkingwhich will help students to become sensitive human beings possessing aestheticawareness. The department attempts to redefine the parameters of knowledge dissemination withinthe rich cultural heritage of the College. Analytical skills in linguistic communication and literary criticism enables them toanalyse oral and written discourse of various genres, social, cultural, political andhistorical contexts and use them in advanced studies in a wide range of corporate,communication, research and knowledge fields.

Students who have graduated from the department of English have used their newly acquired knowledge practices and aesthetic expressions to engage in research work and higher studies. Others have used their writing and reading skills to take up professions like teaching, journalism, copywriting, editing, publishing, advertising and marketing as well as analogous disciplines like theatre and film studies. Knowledge of English and precise communication skills stand them in good stead in professions like banking, public administration and human resource.

Course Specific Outcomes:

B. A. General Programme in English.

CORE COURSE (CC)

CC1A: Poetry & Short Story: To promote an awareness and understanding of British poetry and short story.

CC1B: Essay, Drama & Novel: To promote an understanding of British essays, drama and novel.

CC1C: Contemporary India: Women and Empowerment: to promote an understanding of gender construction, gender role, history of women's movement, women's rights in India.

CC1D: Academic Writing and Composition: To give them the basics of academic writing, critical thinking, citing resources, structuring arguments.

L-1_1 and L-1_2: This paper targets thorough understanding of language, variety and stylistics for betterment of language potential of general course students.

DSE1: British Literature OR Environment &Literature: To provide the students' knowledge and understanding of British literature and the interconnectedness literature and environment.

DSE2: Indian Literature in Translation OR Literary Cross Currents: To promote understanding of Indian literature by indigenous writers in English translation.

GE1 and GE2: To give them awareness of Gender and human rights and the relationship between environment and literature.

AECC: Communicative English: Students can learn how to communicate in English and the skills of reading, writing and speaking in English.

SEC: There are four SEC papers in the syllabus. SEC1 is aimed to give knowledge of translation studies and to enhance their ability in creative writing. SEC2 opts for English language teaching and film studies. Sec3 is about technical writing and business communication. While SEC4 is about soft skills and spoken English. All these papers are intended to enhance their working knowledge in English.

DEPARTMENT OF MASS COMM. AND JOURNALISM
SURI VIDYASAGAR COLLEGE

Programme outcomes:

Program outcomes examine what a program or process is to do, achieve, or accomplish for its own improvement and/or in support of institutional or divisional goals.

UG programme:

This department is providing education towards students through six semesters. The entire duration to complete this course is 3 years. It is a under graduation course where teachers are trying to teach students by following the syllabus which is provided by the Burdwan University.

To complete the session the students must study:

14 Core Course (CC) papers of 6 credits

4 Generic Elective (GE) papers of 6 credits

2 Skill Enhancement Course (SEC) papers of 2 credits

4 Discipline Specific Elective (DSE) papers of 6 credits and

Ability Enhancement Compulsory Course (AECC) in Environment Studies

Semester I is composed of:

CC1: Introduction to journalism

CC2: Introduction to media and communication

GE 1: Any discipline other than MCJ

AECC: Environment Studies

Semester II is composed of:

CC3: Reporting and editing for print

CC4: Development of media in India and Bengal

AECC: English / MIL

GE 2: Discipline other than MCJ

Semester III is composed of:

CC5: Introduction to broadcast media: Radio

CC6: Introduction to broadcast media: Television

CC7: Advertising and Public relations

SEC 1: Radio production or Development journalism

GE 3: Discipline other than MCJ

Semester IV is composed of:

CC8: Introduction to new media

CC9: Development communication

CC10: Media ethics and law

SEC 2: Documentary production or photography

GE 4: Discipline other than MCJ

Semester V is composed of:

CC11: Global media and politics

CC12: Introduction to film studies

DSE 1: Communication research and methods or print journalism and production

DSE 2: Corporate social responsibility or media gender and human rights

Semester VI is composed of:

CC13: Rural communication

Cc14: Media industry and management

DSE 3: Multimedia journalism or dissertation

DSE 4: Media & industry or community outreach programme

CC 1 to CC 14 each Honours paper is consisting of 75 marks which is parted as 60+10+5. 60 is for theory paper, 10 is for Internal assessment and 5 is for Attendance. Where the teachers can take total 60 classes to complete each paper.

In Semester I and Semester II, there is no skill enhancement course (SEC) or discipline specific elective (DSE) paper. Two SEC papers are in semester III and semester IV. Four DSE papers are in semester V and semester VI.

SEC 1 and SEC 2 each paper consisting of 50 marks which is parted as 40+10. 40 is for theory paper and 10 is for internal assessment. Where the teachers can take total 40 classes to complete each paper.

DSE 1, DSE 2, DSE 3, DSE 4 each paper is consisting of 75 marks which is parted as 60+10+5. 60 is for theory paper, 10 is for Internal assessment and 5 is for Attendance. Where the teachers can take total 60 classes to complete each paper.

Semester wise programme outcomes:

Semester I: After completion of these paper the students will be able to understand:

CC 1: Introduction to Journalism

the basic concept of news and the basic components of a news story.

The different forms of print media which opens the vast area of media reach to the students to get a taste of diversified media portfolio.

the structure and construction of news story that helps the students to get an overview about the process of organizing news stories with archives, internet and with other sources.

The comparison of different types of media and its role towards the democratic society enriches the students with contemporary issues and debates.

CC 2: Introduction to Media and Communication

The definition of communication

different forms and levels of communication like verbal, non-verbal communication, and mass communication, public communication, trans personal communication etc.,

the mediated and non-mediated communication

How media is impacting on every day's life

The mass communication and mass media

the entire communication process through models and theories

about the earlier models like Aristotle model, Laswell model, Shanon-Weaver model, Berlo's model etc., which defined communication as a linear process where the feedback is missing

the non-linear communication process through Wilbur Schramm and Charles E Osgood's Circular model of communication

the concept of Effects, levels of Noise, frame of reference etc.,

the concept of Freedom of press, social responsibility through 'Four theories of the press' which is also known as the 'Normative theories of the Press'.

the concept of Jurgen Habermas's Public Sphere and Walter Lippmann's Public Opinion

how the media is affecting the people. Is it directly effecting or limitedly effecting the people? Few theories like hypodermic needle, individual difference, personal influence, limited effects theory will help to understand the effects of media.

The concept of Spiral of silence, reception theory, propaganda model, cultivation analysis, agenda setting theory, ritual model etc., which will help the students to think critically about the communication process.

Semester II: After completion of these papers the students will be able to understand:

CC 3: Reporting and editing for print

the concept of news reporting and writing.

The news editing like page planning, proof reading, photo editing techniques etc.,

The concept of beat reporting.

Organizational structure of newspaper, newsroom.

Paid news, agenda setting, what are these issues, and how pressures can be created on a newsroom has been said, the role of gatekeepers in a newsroom has been discussed.

CC 4: Development of media in India & Bengal

the concept of early days of press and its evolution (1780-1940)

some historical press law during the British era.

The recent developments in Indian press.

Semester III: After completion of these papers the students will be able to understand:

CC 5: Introduction to Broadcast Media: Radio

The concept of wireless communication and radio's characteristics as an audio medium.

How the electromagnetic wave is helping in communication.

Evolution of radio in India and around the world

The Radio as a medium of mass communication as it can inform, educate, entertain, correlate, interpret, surveillance etc., like other mass media.

The concept of HAM radio, Internet radio, Podcasting etc.,

The concept of worldwide radio stations like British Broadcasting Corporation, Voice of America with the reference of All India Radio

The radio news and news bulletin's structure

How the news will be presented and what will be qualities of the presenter?

The concept of radio newsroom: inside and outside

The reporters, sub-editors, editor's work process

How live streaming is happening through OB van

The radio programme formation like how to take interview, what is panel discussion, radio talk, radio package, radio feature etc.,

The need of illustrated reading and proper storytelling for an audio medium.

How to produce a radio programme through the production process like scripting, editing, mixing etc.,

Uses of microphones and its different forms

acoustic treatment to record in the indoor studio

non-linear editing with the transition like cross fade, wrap-up, dissolve etc., and the use of sound card, sound effects

limitations of the editor and the estimated budget for the radio programme

the concept of public and private FM broadcasting

scope of community radio in rural development in reference to BNNRC and Nepal's community radio.

CC 6: INTRODUCTION TO BROADCAST MEDIA: TV

different types of script writing in television program.

How to prepare news capsules

The concept of Prasar Bharati, public service broadcaster, community television, different types of shot, camera angles, camera movements etc.

CC 7: Advertising & Public Relations

the vast area of marketing strategies, different types of advertising, different mediums of ad., Branding, ad agencies and their work process, ethics regarding ad. Campaigns, how to make budgets for ad. etc.

the Public Relations which enables the students to learn about publics and PR of different sectors, PR campaigns as well as crisis management.

Social media marketing helps students to learn about the tactics and strategies of social media PR.

Semester IV: After completion of these papers the students will be able to understand:

CC 8: Introduction to New media

the importance of new media Technologies and digital journalism.

The concept of computer mediated communication (CMC) & convergence media.

the concept of WEB SITE planning and blog writing etc.,

CC 9: Development Communication

the concept of development, Development vs growth, Development as freedom.

The various Development related model like Nehruvian model, Gandhian model etc.,

the different types of paradigms (dominant paradigm, alternative paradigm, and dependency paradigm).

the various Development approaches like that diffusion of innovation, mass media as magic multiplier, sustainable development, participatory development, role of media in development, media tools in Development communication etc.,

the topic like NGO support in Development communication. Government scheme- SITE (1975), KHEDA (1990), JHABUA (1990), MNREGA (2005) etc.,

the concept of E-governance, E-chaupal, ICT for Development.

The Development support communication of India in the eras of agriculture Development, women empowerment, and others.

CC 10: Media Ethics and the Law

the difference between Ethics and Law

the basic knowledge of Indian Constitution and Indian Penal Code

the Fundamental rights, article 19 (1) and article 19 (2) is concentrated mainly.

The libel and slander of defamation, sedition, inflammatory writings etc.,

Breaching of privacy and surveillance is legal in some cases.

About the working hour, wages etc., of working journalists.

About the rights of common people through the Right to information act of 2005

How to treat court? No one can contempt the court as per their own.

Ethical issues in social media through different sections of IT Act.

The sting operations through a case study named Operation Westend held by Samuel Mathew

The ethical guidelines like News Broadcasters Association guidelines, broadcast bill guidelines etc.,

The laws regarding pornography, indecent representation of women in advertisement, sexual harassment, or molestation in workplaces etc.,

How to regulate the media organizations to maintain the quality of the media product

Media reporting on gender gap, marginalized sections etc.,

Semester V: After completion of these papers the students will be able to understand:

CC 11: Global media & politics

the concept of contemporary global media politics.

some media conglomerate and media typhoon.

the concept of globalization.

CC 12: Introduction to film studies

an overview of world cinema as well as Indian cinemas.

enriches the students with different forms of films, they get to know the stages of film making, different shots and languages of films.

Semester VI: After completion of these papers the students will be able to understand:

CC 13: Rural communication

the concept of Rural vs urban society, rural vs urban cultural perspective, sociological perspective and demographical perspective, agriculture development.

model of rural communication (communication for social change) Gandhian view of rural development.

Panchayat Raj Institution System (PRIS), PRIS communication gap, communication strategy, Rural co-operative, and self-help group etc.,

The concept of rural media (Folk media), community media and rural development.

CC 14: Media industry and management

the concept of media management, planning, structure, hierarchy.

Some management oriented important theories.

The management functions like financial management, personal management, strategic management, budgeting etc.

Programme specific outcomes:

It makes students to realize the practical fact that the knowledge and techniques learnt in this course has direct or indirect implication for the betterment of society and its sustainability.

In Semester I and Semester II, there is no programme specific outcomes papers like skill enhancement course (SEC) or discipline specific elective (DSE) paper. Two SEC papers are in semester III and semester IV. Four DSE papers are in semester V and semester VI.

Semester wise programme specific outcomes:

Semester III: After completion of this paper the students will be able to gain the practical knowledge about:

SEC 1: Radio production

The radio broadcast formats, advertising jingles, radio magazine, feature, talk show, discussion etc.

The concept of radio production- A. pre-production B. production C. post-production.

script writing format, creative sound effects, acoustic treatment of audio studio, studio console etc.,

Semester IV: After completion of this paper the students will be able to gain the practical knowledge about:

SEC 2: Documentary production

an overview of a documentary making with its different forms and styles.

This skill enhancement course also helps the students with practical guidance of the overall production of a documentary.

Semester V: After completion of these papers the students will be able to gain the practical knowledge about:

DSE 1: Communication Research & Methodology

The concept of research and it's methodology

Communication research as the subset of research

Difference between applied and basic research

How the theoretical overview is helping to construct the new scientific research

How to write literature review

Research design formulation

The concept of qualitative and quantitative method

How to do survey for quantitative study

Difference between questionnaire and schedule

The concept of open and close ended question

Difference between longitudinal and cross-sectional study

Need of pilot study

Difference between primary and secondary data

How to do qualitative research with observation method

The methodology of experimental study, case study, historical research, narrative analysis, content analysis, ethnographic study, discourse analysis etc.,

Need of focus group discussion, interview etc.,

The concept of universe and population.

Need of sampling and its representativeness

How to minimize sampling error

The concept of Probability and non-probability sampling method

The concept of data analysis technique like coding, tabulation

How to relate and interpret the data

Ethical perspectives in research, plagiarism checking

Their individual project and how practically do the communication research by self

How to write the research report from the cover page to the bibliography with foot notes

DSE 2: Corporate social responsibility (CSR)

the concept of corporate and organization, corporate governance, and management.

the stakeholder, stakeholder relationship and James e. Grunigs theory (1984).

The corporate crisis, crisis plan management system, corporate brand implementation.

CSR and media relation, CSR budget and social audit.

Semester VI: After completion of these papers the students will be able to gain the practical knowledge about:

DSE 3: Dissertation

The project works of related issues regarding communication research in the field of journalism, public relations, development communication, advertising, mass communication etc.,

DSE 4: Community Outreach Programme

The concept of community and their work

Contemporary social issues of the community

The practical experience of the doing research in the field of development communication

The concept of community outreach programme

The concept of Ethnographic studies, participatory development communication, development support communication, sustainable development etc.,

How to do practical research by following the research methodology

How to do field survey

The process of making questionnaire

How to fill the data bank and its interpretation

The audio-visual documentation process of their work

how to present the entire research report

Course outcomes:

Course Outcomes are the statements that help the learners to understand the reason for pursuing the course and helps them to identify what they will be able to do at the end of the course.

After completion of the entire three years of bachelor's degree in Mass Communication and Journalism a student can join in various department. This subject is a convergence of many subjects. This degree opens amazing careers. one degree and huge opportunities are there. One can follow the diagram:

Source: created by Bahnisikha Ghosh

Explanation of the diagram:

If any student passionate about teaching profession, then that student must go for MA in Mass Communication and Journalism and should follow the NET/SET/RET examination to get scope in the PhD or in Lectureship.

If the student does not want to do higher studies, then can go for government jobs like Banking, UPSC etc.,

After completion of graduation one can join print journalism where is a huge scope to work. In case of print journalism one can be reporter, correspondent, sub editor, freelancer, stringer, editor in chief, proof-readers, feature writer, columnist, photographer etc.,

After completion of graduation one can join as Radio Jockey, broadcast assistant, radio news presenter, anchor etc., in the public or private radio stations.

In case of television journalism there must be a cameraman and other opportunities like print and radio journalism.

One can join as public relations officer in public or private sector to handle the relations with the common people.

In case of advertising one can work in ad agency to create advertising for the clients.

After doing the course related to film studies one can work as film director, actor, producer etc.,

Photographers are important for different medium. They can be photographer for the print medium or can be the camera person for the electronic medium. They may be paparazzi or wild photographer or anything else. Photography is a vast area where students can get many opportunities.

Media person can join as media manager where they have to work as a media organisation's manager like print media manager or electronic media manager.

Through web journalism freelancers are doing well. They can make blog, YouTube content, Instagram live, promote Facebook page etc.,

Can work as an event manager. They can manage any kind of event which is related to media.

Now a days content writing is an attractive job. One can do it from office or from home.

After completion of graduation student can do certificate course or diploma in many areas like diploma in public relations, media management, public administration, media studies etc.,

DEPARTMENT OF ARABIC

SURI VIDYASAGAR COLLEGE

GENERAL COURSES

Programme Outcomes

The department of Arabic started its journey in 2013. It is working hard for gradually development of students' skills enabling them to get admissions to higher education. It renders the following services:

It practically teaches how to understand poetry.

It teaches Arabs' history in Arabic

It focuses on speaking in Arabic.

It enables the students to translate from Arabic into English and Vice-versa.

Thus after completing B.A. in Arabic the students can get admission to higher courses like M.A. in Arabic.

It enables them to get job through SSC and MNC (Multi National Company) in India and abroad.

Program specific outcomes:

Communication skills in Arabic and English enable the students to make career and business opportunities

Translation skills in both oral and written enable the students to get jobs and opportunities in Medical tourism and B.P.O s provide ample opportunities for Oral translation and numerous books

Knowledge of the contribution of Indians to Arabic literature would serve as an inspiration for further contributions in the future.

Course outcomes:

Semester I: to focus on knowledge of classical prose and poetry in pre-Islamic to Umayyad period and to develop translation skill with selected applied grammar lessons from Arabic to English and vice-versa to empower them to understand classical Arabic; prose & poetry, grammar, translation and language learning process as well.

Semester II: to enable the students to get knowledge regarding the history of Arabic Literature during Abbasid period (750-1258A.D.) and Indian Arabic literature focusing on study of some famous Indian Arabic Scholars; life and works as well as Arabic prose during Islamic and Medieval period, and to develop translation skill with selected applied grammar lessons from Arabic to English and vice-versa.

Semester III: To provide knowledge of classical poetry in pre-Islamic, Islamic and Umayyad period, a cursorily study as well as life and works of some selected poets of the same period are taught. It also enables the students to get knowledge of history of Arabic literature in Spain/Andalusia and in Egypt. As Skill Enhancement Course (SEC) which develops their language skills and focuses on composition and translation.

Semester IV: To introduce the Abbasid and Fatmid period a thorough study of the said period are done and lives and works of some selected poets of the same period are also taught. It also empowers the students to know the Adabul Mahjar (migrant literature) especially the literature in North and South America. It focuses, as well, to introduce Modern Arabic Literature such as Novel, short-stories and Drama and provides sufficient knowledge of literary movements and groups that played big role in the development of Arabic language. An Skill Enhancement Course (SEC) of this semester focuses to improve the translation skills and enables the students to speak involving them in conversation, dialogue and speeches on different topic.

Semester V: As we belong to the modern era so the students will get to know the history of modern prose as well as they will be able to improve their skills by studying DSE papers. The students will be able to know some of the modern eminent writers and poets through studying their lives and works. It will help the students to get knowledge of Islamic history from especially life of Prophet Mohammad (SAW) along with caliphs of Islamic history. They will also be able to know the Quran and Hadith; history and compilation. The study of Rhetoric, Prosody and Philology will help them to know the essence and eloquence of Arabic language. And will obviously learn classical and modern terminologies.

Semester VI: To help the students to be aware of life and works of some selected modern Arabic writers and poets as well. To focus on developing skills of composition and enrich the students with modern terminologies and vocabularies. As DSE papers will introduce them to Modern Arab world and its famous personalities along with different literary organizations. Some selected lessons of grammar will be explained to the students to develop their writing skills and to enhance the vocabularies.

THE DEPARTMENT OF SANSKRIT
SURI VIDYASAGAR COLLEGE

Programme Outcomes:

VALUE BASED EDUCATION: The most important outcome of this programme is that the students can realize the greater values of human life, social ethics and social responsibilities through this programme.

RESEARCH: This programme motivates students in their further studies and research work.

EMPLOYMENTS: This programme enhances abilities of students in their employments like writer, translator, interpreter, editor, historian, social worker, teacher, priest etc.

KNOWLEDGE AND THINKING: This programme motivates students in their critical thinking, comparative thinking and self-learning approaches.

ABILITY IN LANGUAGE: This programme enhances language ability, translation power and grammatical knowledge in Sanskrit language.

KNOWLEDGE OF HISTORY, CULTURES AND TRADITIONS OF INDIA: This programme helps students to know and feel the ancient and medieval cultures, traditions and enrichments of India as well as the historical developments of Indian civilization.

ARTS AND IMAGINATIONS: This programme promotes students to practice and enrich artistic abilities and power of imagination in literature also.

Programme Specific Outcomes:

The programme gives an overall idea on the great cultural and traditional heritage of India.

It acquaints the learners with the primaryconcepts of differentdisciplineslike the Vedic literature, Epic literature, Purana literature, Philosophy, grammar, Medical science, Vedic Mathematics, Vaastu Sastra, Poetics, philology etc.

Students are expected to get a broader idea of Sanskrit literature.

Students will learn the systematic aspects of Sanskrit language, grammatical concepts and developments and they will also get the knowledge of the huge vocabulary of Sanskrit language.

Students are expected to learn the systematic approaches of the study of old manuscripts which are written in Brahmi script.

Students will also learn the different philosophical doctrines of India.

Students can get clear knowledge of ancient and medieval Indian moral values and political concepts.

Students will know about the literature and the great scholars of Sanskrit literature of modern period of India as well as the whole world.

It gives an opportunity to the learners to know about the comparative linguistic patterns and developments of various linguistic groups.

It acquaints the learners with the technical and scientific methods of the writings in Sanskrit language like Poetics, Rhetoric, Prosody etc.

Course Outcomes:

Honours Courses

SEMESTER-I

Course Code	Course Name	Course Outcomes
CC-1	**Classical Sanskrit Literature(Poetry)**	This course helps learners to understand some famous poetic texts of Sanskrit literature. Learners come to know the historical developments of Indian poetics which is a great treasure of India.
CC-2	**Critical Survey of Sanskrit Literature**	This course helps learners to understand the cultural, traditional and social aspects of the age of Veda, Rāmāyaṇa, Mahābhārata and Purāṇa. Moreover learners can get some kind of spiritual knowledge and moral values from this course. This course also helps the learners to understand the historical development of Sanskrit grammar and philosophical literature.

SEMESTER-II

Course Code	Course Name	Course Outcomes
CC-3	**Classical Sanskrit Literature (Prose)**	This course helps learners to understand some famous texts of prose of Sanskrit literature. Learners come to know the historical developments of Sanskrit prose literature and fable literature which are great treasure of India. Learners can realize the greater values of human life, social ethics and social responsibilities through this course.
CC-4	**Self Management in the Gītā**	Through the study of the Gītā learners can realize the power and effects of Spiritual Knowledge. Learners will practically be benefitted by the prescribed techniques of self-management in the Śrīmadbhagavadgītā. It helps learners to understand the ultimate goals of life. It helps the learners to know various ways of meditation and the effects of meditation. It helps learners to control mind and thoughts of one-self. Learners come to know about the positive and negative effects of different types of foods. This course also helps learners to find out the relevance and importance of Śrīmadbhagavadgītā in present context.

SEMESTER-III

Course Code	Course Name	Course Outcomes
CC-5	**Classical Sanskrit Literature (Drama)**	This course offers learners to study the most famous drama Abhijñānaśakuntalam. They also come to know about the poetic approaches and the views of aesthetics of the great poet Kālidāsa.

		Learners come to know about the historical developments and different interesting contexts of Sanskrit drama literature which are great treasure of India.
CC-6	**Poetics and Literary Criticism**	This course helps learners to study about some important techniques and mechanisms of Sanskrit poetics. Some styles on Sanskrit rhetoric are prescribed here to realize the formulations and functions of aesthetic pleasures. Learners make them more familiarize in Sanskrit literature with the help of this course. This course helps learners to be more creative in their literary writings and compositions.
CC-7	**Indian Social Institutions and Polity**	This course helps students to know about the ancient and medieval social and political systems of India. This also helps students to realize comparative discussions between the ancient laws and modern laws of India.
SEC-1	**Basic Sanskrit**	Basic grammatical knowledge helps students to be more skilled in Sanskrit language. It makes Sanskrit language easier to understand and write.

SEMESTER-IV

CC-8	**Indian Epigraphy and Chronology**	This course helps learners to be the witness of some historical facts and developments of India. They also come to know how historical facts are derived from the paleographical scripts of past. Learners also come to know different types of carving writings of Sanskrit scripts.
CC-9	**Modern Sanskrit Literature**	This course depicts a clear picture of modern creative poetic compositions. This course also helps learners to know about the various modern contexts of poetic compositions in Sanskrit literature.
CC-10	**Sanskrit and World Literature**	This course helps learners to know about the scope and importance of Sanskrit language and literature in the world. This provides lots of information about the modern researches, compositions and works on editing in Sanskrit language and literature.

SEC-2	**Political Thought in Sanskrit Literature**	This course helps learners to study about the political thoughts of ancient and medieval times of India. It helps students to know about the laws of ancient and medieval times of India. It helps to develop comparative thinking between past and present in students.

SEMESTER-V

CC-11	**Vedic Literature**	Learners are expected to study some texts of selected hymns of the Veda and Iśopaniṣad. They will get some kind of spiritual and philosophical knowledge from these texts. Learners will also come to know about the phonetic system of Vedic chanting. Learners are expected to learn the history of Vedic literature. Learners are also expected to learn some grammatical systems of Vedic literature. Learners are also expected to know some social systems and cultural aspects of the Vedic era.
CC-12	**Sanskrit Grammar**	Learners are expected to study some general rules of Sanskrit grammar which will help the students to be more perfect in application of Sanskrit language. Concepts of Samāsa will help students to read and write Sanskrit language more easily and perfectly.
DSE-1	**Dramaturgy**	This course helps learners to study about some important techniques and mechanisms of the composition of Sanskrit drama. Learners make them more familiarize in the study of Sanskrit drama with the help of this course. This course helps learners to be more creative in their literary compositions.
DSE-2	**Elements of Linguistics**	It gives an opportunity to the learners to know the comparative linguistic patterns and developments of various linguistic groups. It helps the students to understand the heritage and antiquity of Sanskrit language. It also helps the students to learn that many regional Indian languages have originated from the Sanskrit language.

		It helps students to develop their concepts of comparative linguistics.

SEMESTER-VI

CC-13	**Indian Ontology and Epistemology**	This course helps learners to understand the primary concepts of the deep metaphysical and epistemological discussions and arguments of Indian philosophy. Tarkasaṃgraha helps them to enter and realize the logical arguments of Nyāya-Vaiśeṣika philosophy. This course also helps them to understand the primary concepts of the Vedānta philosophy through Vedāntasāra. It helps them to develop their rational thinking. It also helps them in their advance studies and researches in Indian philosophy.
CC-14	**Sanskrit Composition**	This course contains the application of some very important grammatical techniques of Sanskrit language. It helps students to learn the methods of formation and application of Sanskrit words and sentences. It also develops the concepts of translation in Sanskrit language and the skill to apply it. It also helps students to develop some technical writing skills in Sanskrit like paragraph writing, report writing etc. It is very helpful to the learners in their further studies and researches in Sanskrit language and literature.
DSE-3	**Fundamentals of Āyurveda**	This course helps learners to understand the fundamental concepts of Āyurveda which is a great treasure of India. Learners come to know about the historical developments and different interesting applications of Āyurveda. Learners come to know the practical benefits of Āyurveda. It is very helpful to the learners in their further studies and researches in Āyurveda.
DSE-4	**Indian System of Logic**	This course helps learners to understand the primary concepts of the epistemological discussions and arguments of Indian philosophy. Anumānakhaṇḍa and Upamānakhaṇḍa of Tarkasaṃgraha help them to enter in the world of logical arguments of Nyāya philosophy. It also helps them to develop their rational thinking.

General Courses

SEMESTER-I

Course Code	Course Name	Course Outcomes
CC-1/GE-1	Sanskrit Poetry	This course helps learners to understand some famous poetic texts of Sanskrit literature. Learners come to know the historical developments of Indian poetics which is a great treasure of India.

SEMESTER-II

Course Code	Course Name	Course Outcomes
CC-2/GE-2	Sanskrit Prose	This course helps learners to understand some famous texts of prose of Sanskrit literature. Learners come to know the historical developments of Sanskrit prose literature, historical Kāvyas and fable literature which are great treasure of India. Learners can realize the greater values of human life, social ethics and social responsibilities through this course.

SEMESTER-III

Course Code	Course Name	Course Outcomes
CC-3/GE-3	Sanskrit Drama	This course helps learners to study the most famous Sanskrit drama Abhijñānaśakuntalam. They also come to know about the poetic approaches and the views of aesthetics of the great poet Kālidāsa. Learners come to know about the historical developments and different interesting contexts of Sanskrit drama literature which are great treasure of India.
SEC-1	Aṣṭāṅga-Āyurveda	This course helps learners to understand the fundamental concepts of Āyurveda which is a great treasure of India.

		Learners come to know about the historical developments and different interesting applications of Āyurveda. Learners come to know the practical benefits of Āyurveda. It is very helpful to the learners in their further studies and researches in Āyurveda.
		SEMESTER-IV
CC-4/GE-4	**Sanskrit Grammar**	This course contains with the application of some very important grammatical systems of Sanskrit language. It helps students to learn the methods of formation and application of Sanskrit words and sentences. It makes Sanskrit language easier to understand and write. It also develops the power and concepts of translation and writing skill in Sanskrit language.
SEC-2	**Basic Sanskrit Part-I**	Basic knowledge of grammatical systems helps students to be more skilled in Sanskrit language. It makes Sanskrit language easier to understand and write. It helps students to learn the systems of forming and application of Sanskrit words and sentences. It also develops the concepts of translation and writing skill in Sanskrit language.
		SEMESTER-V
DSE-1A/ DSE-2A	**Philosophy, Religion and Culture in Sanskrit Tradition**	This course provides some kind of spiritual and philosophical knowledge. Learners are expected to know about the history of Vedic literature. Learners are also expected to know some social systems and cultural aspects of Vedic era. Learners are expected to know about the social, religious and cultural aspects as reflected in the Purāṇas.
GE-1	**Indian Social Institution and Polity**	This course helps students to know about the ancient and medieval social and political systems of India. This also helps students to make and realize comparative discussions between the ancient laws and modern laws.
SEC-3	**Basic Sanskrit Part-II**	This course helps learners to understand the cultural, traditional and social aspects of the age of Rāmāyaṇa, Mahābhārata, Sanskrit fables and historical kāvyas. Learners can enjoy and get refreshments from the text of the very popular comedy of Pañchatantra.

		Learners come to know the historical developments of Rāmāyaṇa, Mahābhārata, Sanskrit fable literature and historical kāvyas which are great treasure of India. Learners can realize the greater values of human life, social ethics and social responsibilities through this course.

SEMESTER-VI

DSE-1B/ DSE-2B	**Literary Criticism**	This course helps learners to study about some important techniques and mechanisms of Sanskrit poetics. Some styles of poetic compositions are prescribed here to make them realize the formulations and functions of aesthetic pleasures. Learners make them more familiarize in Sanskrit literature with the help of this course. This course helps learners to be more creative in their literary compositions.
GE-2	**Sanskrit Metre and Composition**	This course helps learners to study about some important techniques and mechanisms of the composition of Sanskrit poems. Learners make them more familiarize in Sanskrit literature with the help of this course. This course helps learners to be more creative in their literary compositions. It also develops the concepts of translation and writing skill in Sanskrit language.
SEC-4	**Vedic Literature**	Learners are expected to study some texts of selected hymns of the Veda and Iśopaniṣad. They will get some kind of spiritual and philosophical knowledge from these texts. Learners also come to know about the phonetic styles of Vedic chanting. Learners are also expected to learn some grammatical methods of Vedic texts. Learners are also expected to know some social systems and cultural aspects of Vedic era.

THE DEPARTMENT OF POLITICAL SCIENCE

SURI VIDYASAGAR COLLEGE

COURSE OUTCOME OF B.A (HONOURS) IN POLITICAL SCIENCE (CBCS)

Semester-I

CC-1: WESTERN POLITICAL THOUGHT

After completing this paper students will be able to comprehend

Aristotle's ideas on state and Plato's ideas of Justice

Hobbes and Locke's ideas on sovereignty

Dialectical and Historical materialism of Marx

J.S.Mill's concept of Liberty

Lenin's imperialism

CC-2: POLITICAL THEORY

After completing this paper students will be able to understand

Different approaches to political theory viz. traditional, behavioural, post behavioural and Marxist

The concept of sovereignty

Rawl's theory of justice

Ideological difference between Anarchism, Liberalism and Neo- liberalism

Idealist and liberal views of state

Semester-II

CC-3: INDIAN POLITICAL THOUGHT

After completing this paper students will be able to assimilate

Kautilya's Arthshastra

Ram Mohan Roy as Modernizer

M.K.Gandhi's Satyagraha

Tagore's ideas on State,Society and Nation

B.R.Ambedkar's Social Justice

CC-4: INDIAN GOVERNMENT AND POLITICS

After completing this paper students will be able to familiar with

Fundamental Rights and Duties

Centre-states relations

The working of the Union Legislature

Powers and functions of the Prime Minister and Chief Ministers

Supreme Court and High Court

Electoral Process and party System

SEMESTER-III

CC-5: COMPARATIVE POLITICS

After completing this paper students will be able to grasp

Rule of law in UK and Bill of Rights in USA

Unitary system (UK and France) and Federal system of USA

Parliamentary (UK) and Presidential system (USA and China)

Judiciary in UK, USA and France

Legislatures in UK and USA

CC-6: PUBLIC ADMINISTRATION

After completing this paper students will be able to decode

Public Administration as a specialized discipline of Political Science

Scientific Management Theory (Taylor) and Human Relations Theory (Mayo)

Motivation theory (Maslow and Herzberg)

Decision making theory (H.Simon)

Concepts of administration viz. Hierarchy, Span of Control, Unity of Command, Line and Staff, Centralization- Decentralization, Devolution

CC-7: LOCAL GOVERNMENT IN INDIA

After completing this paper students will be able to understand

73^{rd}constitutional amendment and rural local self- government

74^{th}constitutional amendment and urban local self- government

Panchayati raj institution and the role of BDO

District administration and the role of DM, SP and SDO

Administrative reforms in India- RTI, Lokpal and Lokayukta

SEC-1: LEGISLATIVE SUPPORT

After completing this paper students will be able to understand

Powers and functions of peoples representatives at different tiers of governance- MPs and MLAs

Law making procedures and role of committees

Budget and the role of parliament in reviewing the Union budget

Examination of demands for grants of ministries

working of ministries

OR **SEC-1: PEACE AND CONFLICT RESOLUTION**

After completing this paper students will be able to understand

International peace and conflict resolution

Theories of international conflict resolution

Cross border relationship

Refugee and forced migration

Grass root level perspective on war and peace

SEMESTER-IV

CC-8: INTERNATIONAL RELATIONS

After completing this paper students will be able to understand

Basic concepts, theories ideologies and approaches to the study of International Relations

Concepts and elements of National Power

Global Politics

Foreign policy and diplomacy

Indian foreign policy

CC-9: SOCIOLOGY AND POLITICS

After completing this paper students will be able to understand

Basic concepts of political sociology and sociology of politics

Political participation

Power and types of authority

Feminism and its significance

Religion and politics

State and civil society

CC-10: INTERNATIONAL ORGANIGATIONS

After completing this paper students will be able to understand

United nations and its security council

International court of justice

Peacekeeping and peace building role of United Nations

APEC and OPEC

SAARC

SEC-2: PUBLIC OPINION AND SURVEY RESEARCH

After completing this paper students will be able to understand

Characteristics of public opinion

Types of sampling to measure the public opinion

Structured and unstructured methods of interviewing

Questionnaire

Possibilities and pitfalls in predicting polling research

OR

SEC-2: DEMOCRATIC AWARENESS THROUGH LEGAL LITERACY

After completing this paper students will be able to understand

Fundamental rights and duties

Social evils such as dowry, sexual harassment and violence against women

Consumer rights

Juvenile courts, Mahila courts and tribunals

Criminal and civil writ jurisdiction

SEMESTER-V

CC-11: SOCIAL MOVEMENTS IN INDIA

After completing this paper students will be able to understand

Basic concepts of social movements

Trade union movements and their strength and weaknesses

Peasant movements in India

Women's movements in India

Environmental movements in India- chipko, Narmada bachao andolan

CC-12: ELEMENTARTY RESEARCH METHODS IN POLITICAL SCIENCE

After completing this paper students will be able to understand

Basics of social science research

Positivism and post positivism

Quantitative and qualitative research

Hypothesis formulation, data collection and testing of hypothesis

Different methods of data collection

DSE-1: SELECT COMPARATIVE POLITICAL THOUGHT

After completing this paper students will be able to understand

Salient features of Indian and Western political thought

Kautilya on state

Ambedkar on social justice

Nehru on democracy

Locke on rights

Rousseau on inequality

J.S.Mill on liberty and democracy

OR **DSE-1: ADVANCED POLITICAL THEORY**

After completing this paper students will be able to understand

Contemporary trends in political theory

Libertarianism and post modernism

Nozick's views on entitlement theory and minimal state

Amartya Sen's concept of justice

Post- colonialism and orientalism

DSE-2: DEMOCRACY AND DECENTRALIZED GOVERNANCE

After completing this paper students will be able to understand

Evolution of state system and the concept of sovereignty

Bretton woods institutions (WORLD BANK, IMF) and WTO

Role of MNCs

Sustainable development goals

Civil society and role of NGOs

OR **DSE-2: UNERSTANDING GOOD GOVERNANCE**

After completing this paper students will be able to understand

Basic concepts of good governance

Democratic governance

E-governance

Corporate governance

Global governance

SEMESTER-VI

CC-13: INDIAN FOREIGN POLICY

After completing this paper students will be able to understand

Key determinants of India's foreign policy viz. parliament, cabinet and the PMO

Foreign policy with neighbours

India's relation with major powers

Recent trends in India's foreign policy

CC-14: CONTEMPORARY ISSUES IN INDIA

After completing this paper students will be able to understand

Caste system in India

Discrimination and violence against women

Political economy of poverty and inequality

Rights of persons with disabilities (PWDs) in India

Disaster risk reduction and development planning

DSE-3: PUBLIC POLICY- CONCPT AND IMPLICATIONS IN INDIA

After completing this paper students will be able to understand

- Policy making and policy implementation in India
- Economic, Social constrains of public policy
- Public health policy and NRHM
- Public education policy and the sarbashikshyaabhiyan
- Socio- cultural constrains of public policy

OR**DSE-3: LOCAL GOVERNMENT IN WEST BENGAL**

After completing this paper students will be able to understand

Evolution of rural and urban local government in west Bengal

Structure and functions of panchayati raj institutions

Empowerment of women, SCs and STs in the local government

State- local government relations (financial)

West Bengal Panchayat Act,1973

DSE-4: UNDERSTANDING GLOBALIZATION

After completing this paper students will be able to understand

Debates on globalization

Impact of globalization on Indian economy

Globalization and terrorism

Globalization and new international order

Globalization and localization

OR**DSE4: POLITICAL ECONOMY OF INTERNATION RELATIONS**

After completing this paper students will be able to understand

Basics of political economy

Global trade regime- The World Bank, IMF and the GATT

Functioning of the WTO

WTO and the developing countries

Trends in global trade and finance

COURSE OUTCOME OF B.A GENERAL IN POLITICAL SCIENCE (CBCS)

Semester-I

CC-1A: WESTERN POLITICAL THOUGHT

Aristotle's ideas on state and Plato's ideas of Justice

Hobbes and Locke's ideas on sovereignty

Dialectical and Historical materialism of Marx

J.S.Mill's concept of Liberty

Lenin's imperialism

Semester-II

CC-1B: POLITICAL THEORY

Different approaches to political theory viz. traditional, behavioural, post behavioural and Marxist

The concept of sovereignty

Rawl's theory of justice

Ideological difference between Anarchism, Liberalism and Neo- liberalism

Idealist and liberal views of state

Semester-III

CC-1C: INDIAN POLITICAL THOUGHT

Kautilya's Arthshastra

Ram Mohan Roy as Modernizer

M.K.Gandhi's Satyagraha

Tagore's ideas on State,Society and Nation

B.R.Ambedkar's Social Justice

SEC-1: LEGISLATIVE PRACTICES AND PROCEDURES

Powers and functions of peoples representatives at different tiers of governance- MPs and MLAs

Law making procedures and role of committees

Budget and the role of parliament in reviewing the Union budget

Examination of demands for grants of ministries

Working of ministries

OR**SEC-1: ELECTORAL PRACTICES AND PROCEDURES**

Method of conducting General (Parliamentary) elections and elections to state assemblies

Composition, structure and functions of the election commission in India

Chief election commissioner

State election commission

Electoral reforms in India

Semester-IV

CC-1D: INDIAN GOVERNMENT AND POLITICS

- Fundamental Rights and Duties

Centre-states relations

The working of the Union Legislature

Powers and functions of the Prime Minister and Chief Ministers

Supreme Court and High Court

Electoral Process and party System

SEC-2: PUBLIC OPINION AND SURVEY RESEARCH

Characteristics of public opinion

Types of sampling to measure the public opinion

Structured and unstructured methods of interviewing

Questionnaire

Possibilities and pitfalls in predicting polling research

OR **SEC-2: ENVIRONMENTAL AWARENESS**

Environmentalism

Environmental challenges in developing and developed countries

Major environmental movements in India

Climate change

Sustainable human development

Semester-V

DSE-1A: SELECT COMPARATIVE POLITICAL THEORIES

Salient features of Indian and Western political thought

Kautilya on state

Ambedkar on social justice

Nehru on democracy

Locke on rights

Rousseau on inequality

J.S.Mill on liberty and democracy

OR **DSE-1A: DEMOCRACY AND DECENTRALIZED GOVERNANCE**

Evolution of state system and the concept of sovereignty

Bretton woods institutions (WORLD BANK, IMF) and WTO

Role of MNCs

Sustainable development goals

Civil society and role of NGOs

SEC-3: DEMOCRATIC AWARENESS THROUGH LEGAL LITERACY

Fundamental rights and duties

Social evils such as dowry, sexual harassment and violence against women

Consumer rights

Juvenile courts, Mahila courts and tribunals

Criminal and civil writ jurisdiction

OR **SEC-3: GENDER SENSITIZATION**

Conceptualizing gender in politics; political participation

Security concern for women

Participation of women in decision making structures

Impact of reservation in local government

- Gender identity

GE-1: INDIAN POLITICAL THOUGHT (For the students of other discipline)

Kautilya's Arthshastra

Ram Mohan Roy as Modernizer

M.K.Gandhi's Satyagraha

Tagore's ideas on State,Society and Nation

B.R.Ambedkar's Social Justice

Semester-VI

DSE-1B: PUBLIC POLICY: CONCEPT AND IMPLICATIONS IN INDIA

Policy making and policy implementation in India

Economic, Social constrains of public policy

Public health policy and NRHM

Public education policy and the Sarba Shikshya Abhiyan

Socio- cultural constrains of public policy

OR DSE-1B: UNDERSTANDING GLOBALIZATION

Debates on globalization

Impact of globalization on Indian economy

Globalization and terrorism

Globalization and new international order

Globalization and localization

SEC-4: PEACE AND CONFLICT RESOLUTION

International peace and conflict resolution

Theories of international conflict resolution

Cross border relationship

Refugee and forced migration

Grass root level perspective on war and peace

OR **SEC-4: HUMAN RIGHTS EDUCATION**

Brief history of human rights

Universal Declaration of Human Rights (UDHR)

Indian constitution and protection of human rights

National human rights commission

Human rights movements in India; evolution, nature, challenges and prospects

GE-2: INDIAN GOVERNMENT AND POLITICS (For the students of other discipline)

Fundamental Rights and Duties

Centre-states relations

The working of the Union Legislature

Powers and functions of the Prime Minister and Chief Ministers

Supreme Court and High Court

Electoral Process and party System

DEPARTMENT OF GEOGRAPHY

SURI VIDYASAGAR COLLEGE

B.A. / B.Sc. (Honours) in Geography

Program outcomes:

The undergraduate program of Geography helps student to get a knowledge base in the following ground of Geography-

Students will able to get a theoretical understanding of physical geographical processes and their changing pattern over space and time; different landform development processes and related theories.

Acquire knowledge about different aspects of human geography viz. Population growth; factors influencing population growth and distribution, population pattern and population structure; population compositions etc.

Students will have some understanding of theoretical, practical and methodological understanding of both physical and human geography. Besides students will also develop some practical knowledge about the different field techniques and use of instruments like- dumpy level, prismatic compass, theodolites etc.

Gain some knowledge about the temporal changes of Geography and contributions of several eminent scholars to develop geography.

Able to acquire some theoretical and practical knowledge of Remote sensing and GIS.

Program specific outcomes:

Students will able to acquire knowledge about different landform development theories; land form building processes; pattern of landforms at local, regional, national as well as global scale.

Students will build theoretical knowledge of the environmental systems, process, space, place and their importance in geography.

Students will able to understand demographic principles, their changing pattern over space and time.

Students will know about the environmental setup; causes of environmental pollution and degradation; policies and strategies to control environmental pollution and degradation.

Students will gain some knowledge about the cartographic and statistical and geographical practical knowledge.

Course Outcomes:

Semester-I

CC1: Geotectonics and Geomorphology

Students will able to-

Understand the Earth's tectonic and structural evolution with reference to the geological time scale and its interior with special reference to seismology.
Know the concept of Isostasy: models of Airy and Pratt and their applicability.
Understand plate tectonics as a unified theory of global tectonics: processes and landforms at plate margins and hotspots in connection to folds and faults—origin and types.
Understand the Degradational processes like- Weathering, mass wasting and resultant landforms.
Develop the knowledge about different of landscape evolution models.
Able to understand different types of rocks and landforms like- Karst landforms, Glacial and Aeolian and fluvio-aeolian.

CC2: Cartographic Techniques and Geological map study

Students will able to-

Have the opportunity to improve their understanding of the many processes involved in the production of maps, which is the unique responsibility of geographers.

Will learn about the concepts of scale and its types: plain scale, comparative scale, diagonal scale, and vernier scale.

Learn about the various projection systems of map making by developing broad knowledge about latitude, longitude, meridians, parallels, etc.

Know about the Topographical Map reference scheme and the procedure of drawing the relief map, slope map, stream map.

Semester-II

CC3: Human Geography

Students will able to-

Gain an understanding of the nature, scope, and recent trends of human geography.

Understand the evolution of human societies and human adaptation to the environment.

Understand the concept and classification of race, ethnicity, and cultural regions and the concepts of culture, cultural diffusion, convergence, and cultural realms of the world.

They also can generate ideas about Population growth and distribution, population composition; demographic transition model and Population–Resource regions; population and environment relation.

Develop the concept about the social morphology, rural settlement pattern, house types and functional classification of rural and urban settlement.

CC4: Cartograms, Survey and Thematic Mapping

Students will able to-

Gain a comprehensive idea of cartograms and thematic maps.

Build their concept about climograph, hythergraph and ergography and learn about their utility.

Study about different types of demographic chart and diagrams like star diagram, age sex pyramid.

Able to develop practical knowledge of Contouring by Dumpy Level and Prismatic Compass and determination of Height of objects using Transit Theodolite.

Semester-III

CC 5: Climatology

Student will able to-

Gain knowledge about the composition of atmosphere and layering of the atmosphere.

Know about the insolation, heat budget of atmosphere, the horizontal and vertical distribution of temperature, inversion of temperature.

Know about the atmospheric phenomena like condensation, precipitation and air mass.

Have an idea of the cyclones, warm and cold front, frontogenesis and frontolysis. They also will gain knowledge about stability, instability, barotropic and baroclinic condition.

Gain knowledge about planetary wind system, jet stream and monsoon wind system.

Learn about the cyclones, characteristics of cyclones, types, origin and its impact on general air circulation.

Identify the cause and consequence of climate change.

Acquire knowledge of climatic classification based on world climate.

CC 6: Statistical Methods in Geography

Students will able to-

Understand the importance and significance of statistics in geography.

Know about the data types, their sources, collection procedures, and analysis tools.

Build concept of the application of different statistical techniques.

CC 7: Geography of India

Students will able to-

Understand the Geology and physiographic divisions, Climate, soil and vegetation of India.

Develop knowledge about Population, Agricultural regions, Green revolution and Mineral and power resources; Industrial development and Regionalisation of India.

Know about the Physiographic divisions, forest and water resources of West Bengal.

Have some knowledge of Population: Growth, distribution and human development Mining, agriculture, industries and Regional Development.

SEC 1: Computer Basics and Computer Applications

Students will able to-

Understand the concept of Numbering Systems.

Learn how to compute, store, and format data in spreadsheets; technique selection and interpretation.

Learn how to prepare annotated diagrams and their interpretation.

Gets knowledge on how to generate data as well as how to extract data from internet surfing?

Semester - IV

CC8: REGIONAL PLANNING AND DEVELOPMENT

Students will able to-

Understand Concept and Classification of Regions; Types of Planning; Principles and Techniques of Regional Planning; the need for regional planning and multi-level planning in India and their concepts, types, and delineation.

Acquire knowledge of Metropolis, Metropolitan Areas, and Metropolitan Regions.

Understand the theories and models for regional development and the concept of regional inequality and disparity.

Understand the concept of human development and its significance, indicators, and measurement.

Built knowledge about the strategies for regional development in India and NITI Aayog and its functions.

CC 9: ECONOMIC GEOGRAPHY

Student will able to-

Develop the concept of Meaning and significance Economic Geography.

Understand the relationship between goods, services, production, transport cost, consumption.

Develop concept about factors influencing location of economic activity and forces of agglomeration and the differentiation between primary, secondary and tertiary activity.

Understand about agricultural Systems; Forestry; Fishing, Manufacturing, Types of Trade and Services.

Understand Roles of Highways in Economic Development of India since 1990s

Gain knowledge about WTO and OPEC.

CC 10: ENVIRONMENTAL GEOGRAPHY

Students will able to-

Understand Geographers' Approach to Environmental Studies.

Develop knowledge about Changes in Perception of Environment in different stages of Human Civilization.

Know about the Concept, Structure and Functions of Ecosystem.

Understand the concept of Environmental Degradation and Pollution.

Understand Environmental Issues related to Agriculture and Urban Environmental issues related to Waste Management.

Get knowledge about Concept and Issues related to Bio-diversity.

Know about the Environmental Programs and Policies on Forest and Wetland: National and Global.

Will develop some practical knowledge about Preparation of questionnaire; application of Leopold Matrix.

Able to develop knowledgebase of Quality assessment of soil using field kit.

Know how to interpret air quality using CPCB / WBPCB data.

SEC -2: ADVANCED SPATIAL STATISTICAL TECHNIQUES

Students will able to-

Understand the concepts of probability and normal distribution and their geographic applications as well as Pearson's Method of Skewness.

Understand the differences between spatial and non-spatial data.

Understand what Nearest Neighbor Analysis is and how it can be used in geography.

Built concepts of correlation and regression analysis, t-test, Spearman's Rank Correlation, Product Moment Correlation,Nearest Neighbor Analysis and linear regression.

Learn Time Series Analysis; smoothing time series using the Least Square and/or Moving Average Methods.

Semester – V

CC 11: RESEARCH METHODOLOGY AND FIELD WORK

Students will able to-

Develop concept of Meaning, types and significance Research in Geography.

Know the Significance of Literature review in research.

Understand the concept of research problem, objectives, hypothesis, Research materials and methods; Techniques of writing scientific reports: Preparing notes, references, bibliography (APA Style), abstract and keywords.

Understanding the role and significance of fieldwork in geographical studies.

Gain an understanding of field techniques and tools.

CC 12: REMOTE SENSING AND GIS

Students will able to-

Comprehend the Definition, Concepts, and Principles of Remote Sensing (RS): Types of Air Photos, RS Satellites, Sensors, and Platforms.

Learn about the principles of False Colour Composites (FCC) from IRS LISS-III and Landsat Images (ETM+) data: Image Processing, Preprocessing, Enhancement, and Classification.

Learn about the definition and components of a Geographical Information System (GIS) and raster and vector data structures by reading this paper. They also understand the principles of GNSS positioning-uses and waypoint collection methods.

Understand how Geographical Information Systems will apply to Flood Management and Urban Sprawl.

Gain practical knowledge about the georeferencing of scanned maps, Preparation of the LULC Map by Supervised Image Classification (Maximum Likelihood) using IRS LISS-IIIor Landsat (ETM+) data using QGIS Software.

DSE-1: CULTURAL AND SETTLEMENT GEOGRAPHY

Student will able to-

Develop the concept of Meaning and development of Cultural and Settlement Geography.

Understand about the concept of cultural hearth, Realm, Cultural Landscape, Cultural Innovation and Diffusion; Cultural Segregation, Cultural Diversity, and Acculturation.

Understand about Major Races of the World Distribution.

Develop the concept about the settlement pattern, house types and functional classification of rural and urban settlement.

DSE-2: POPULATION GEOGRAPHY

Students will able to-

Gain an understanding of Development of Population Geography and Relation between Population Geography and Demography.

Develop concept of Determinants of Population Dynamics and Optimum Population.

Understand the Theories of population growth and Distribution, Density and Growth of Population in India.

Learned about Fertility, Mortality and Migration

Population Composition of India, Occupational Structure as per Census of India.

Develop about theoretical background of Population policies in Selected Countries: Sweden and China and Contemporary Issues in Population.

Semester – VI

CC 13: EVOLUTION OF GEOGRAPHICAL THOUGHT

Student will able to-

Understand the meaning and significance of Geography as a spatial science

Develop a solid understanding about geography in ancient period medieval period.

Understand about the Development of Mapping and Knowledge about the World Regional Geography in the Age of Explorations

Understand the evolution of geographical philosophy, contribution of school of thought.

Develop a solid understanding the concept of determinism, possibilism, and Neo determinism.

CC 14: DISASTER MANAGEMENT

Student will able to-

Understand the concept of hazards and disasters, their types, approaches to hazard study and Hazard paradigms etc.

Learned about Responses to hazards: Preparedness, trauma and aftermath as well as Resilience and capacity building

Develop a solid understanding of Hazards mapping.

Understand the concept of Earthquake: Factors, vulnerability, consequences and management.

Learned about Landslide, Cyclone and Fire: Factors, vulnerability, consequences and management

DSE 3: RESOURCE GEOGRAPHY

Student will able to-

Acquire knowledge about Resource Geography and Its Importance and relation with other sub-disciplines.

Develop concept of Resource and its Classification and the Problems of Resource Depletion and the Principles and Methods of Resource Conservation.

Develop theoretical knowledge about the Distribution and Utilisation of Metallic and Non-Metallic Mineral Resources in Indian.

Acquire knowledge about Distribution, Problems and Management of Energy Resources and Power resources.

Understand the concept of Sustainable Resource Development.

DSE 4: SOIL AND BIO GEOGRAPHY

Student will able to-

Understand the definition, factors of formation, and significance of soil physical and chemical properties with special reference to texture, structure, organic carbon, and p^{H}.

Understand the principles of soil classification with special reference to Russian and Indian (ICAR), concepts of zonal, azonal, and intrazonal soil; formation and profile characteristics of laterite and Podsol.

Gain an understanding of soil erosion and degradation: factors, processes, and management measures.

Understand the meaning of biosphere, ecology, ecosystem, environment, communities, habitats, niches, ecotone, and biotopes, Biosphere and Energy: Laws of Energy Exchange, Food Chain, and Food Web Energy Flow.

Understand the bio-geochemical cycles, especially the carbon and nitrogen cycles.

Understand the concept and classification of biomes, especially the tropical rainforest and temperate grassland, threats to biodiversity: causes, consequences, and conservation.

DEPARTMENT OF PHYSICAL EDUCATION
B.A/B.Sc. GENERAL PROGRAMME IN
UNDER CHOICE BASED CREDIT SYSTEM (CBCS)

PROGRAM SPECIFIC
COURSE OUTCOMES
PROGRAM OUTCOMES

PROGRAM SPECIFIC:

Physical Education as an "Integral part of total educational process, is a field of endeavour which has its aim — the development of physically, mentally, emotionally and socially fit citizens through the medium of physical activities which have been selected with a view to realize these outcomes."

Physical Education is an education which brings improvement in human performance with the help of physical activities. Physical activities range from simple walking to jogging, running, sprinting, hopping, jumping, climbing, throwing, pushing, pulling, kicking, etc. Education without physical activities is like body without soul. There is no controversy in giving due place to physical education and different forms of exercises in the total set-up of education. All teachings in human education begin with physical education. Physical education is also considered as movement education as the life begins from movement only. In general life is characterized by movement. The movement starts from the birth of a child, till the end of life.

Mental, intellectual, emotional and social development of a growing child is dependent and closely related to physical development. A physically fit individual possesses a well balanced personality which is, mentally sharp, emotionally stable and socially well-adjusted. Physical education teaches how to acquire ability to develop strength, speed, endurance and coordination abilities. It also emphasizes on achieving social qualities, such as, empathy, cooperation, friendliness, team spirit, and respect for rules, which are essential for healthy social relations with others. In this era of technological advancement, physical education and sports are considered essential for health, fitness, wellness, vigour and strength. The concept of physical education is not new. The fact is that it has its roots in the ancient period. At various stages in history, different people have associated different meanings to the word 'Physical Education'. Physical Education in simple words is understood as learning with the help of movements of body and realising the benefits at mental level. It simply means education through the use of physique and physical movements and deriving the advantage for social gain. Some of the definitions given by well known authors are given here to understand and for the ready reference of the students.

In modern times, Physical Education is one of the most exciting and dynamic subjects. This subject has changed dramatically during the last 50 years. It has expanded in different areas from school to non-school setting and from school-aged children to people of all ages. Earlier, physical education was generally understood as physical activities either in school time table or some free hand exercises, games, sports, racing, swimming, etc. If we look at the Indian history of physical education after Independence, a number of schemes were launched by the Government of India for schools, where every student must participate in physical activities. We can witness the growing interest in games and sports exemplified by the fitness boom and the wellness movement. Sports events receive worldwide coverage. In schools, students like sports and other forms of physical activities, which help to achieve and maintain their health and well-being.

Aims and Objectives:- If you are doing physical exercises or playing any game regularly, you must have realised their importance. The aim of physical education is to target the total development of human personality. In physical education, the final aim is to make every human being physically, mentally and emotionally fit and also to provide each kind of opportunity to them, so that they can develop such personal and social qualities which will help them to live happily with others and shape themselves as true citizens of the country. Efforts are needed to provide adequate facilities and ample time for the individuals and the groups to participate in situations that are physically wholesome, mentally stimulating and socially sound. Through physical education one can strive to achieve the following aims and objectives.

Physical development

Mental development

Social development

Motor development

The modern researches have proven that the views of Greek philosophers Aristotle and Socrates in considering athletics as complete education is correct. It has been scientifically observed that adequate exercise of limbs is essential for disciplining one's mind in the right spirit. Regular exercises and playing games help the body and mind to deal with the modern day silent killers, such as, stress, strain, worry, anxiety and tension. The need and importance of physical education may be understood in several ways which describes the different kinds of requirements for various sections of the society

The need and importance of physical education for every section of people in the modern society can be understood from the points given below—

Optimum development of child's physical growth
Intellectual development
Emotional development
Social development
Personal development
Character building
Physical fitness
Development as a disciplined citizen of the country
Neuromuscular development
Cultural development
Developing leadership qualities
Healthy and safe environment
Development of national integration
Better international understanding

Sports and games play an important role in the development of human personality. They are no less important than food and fresh water. It is interesting to note that there are many nurseries and training centres for games in most of the developed countries.

CAREER OPTIONS:-

Physical education school teacher
Physical Education College, university teacher.
Director of Health and Physical Education in College & Universities
Coach
Yoga instructor
Nutritionist
Naturopathy
Sports journalist
Sports organizer/presenter
Sports manager. Etc..

COURSE OUTCOMES:

2017 SYLLABUS – CBCS

For each Core Course (CC) and Discipline Specific Elective (DSE) paper, distribution of 75 marks be as follows:
i) Class Attendance: 5 marks
Attendance 50% & above but below 60%: 2 marks
Attendance 60% & above but below 75%: 3 marks

Attendance 75% & above but below 90%: 4 marks
Attendance 90% & above: 5 marks

ii) Internal class test/assignment/seminar: 10 marks
iii) Semester-end- Practical Examination: 20 marks
Record Book: 5marks
Practical Examination: 10 marks
Viva-Voce: 5 marks
iv) Semester-end-Theoretical Examination: 40 marks

Duration of Exam: 2 hours, marks distribution of which may be as under:
Answer 05 questions out of 08 carrying 02 marks each: 2×5= 1o
Answer 02 questions out of 04 carrying 05 marks each: 5×2= 1o
Answer 02 questions out of 04 carrying 10 marks each: 10×2=2o
However, questions, carrying 5 or 10 marks, need not necessarily to be a single question
For each Skill Enhancement Course (SEC) paper, distribution of 50 marks be as follows:
i) Internal class test/assignment/seminar: 10 marks
ii) Semester-end- Practical Examination: 20 marks

Record Book: 5marks
Practical Examination: 10 marks
Viva-Voce: 5 marks
For each General Elective (GE) paper, distribution of 75 marks be as follows:
i) Class Attendance: 5 marks

Attendance 50% & above but below 60%: 2 marks
Attendance 60% & above but below 75%: 3 marks
Attendance 75% & above but below 90%: 4 marks
Attendance 90% & above: 5 marks
ii) Internal class test/assignment/seminar: 10 marks
iii) Semester-end-Theoretical Examination: 60 marks

Duration of Exam: 2 hours, marks distribution of which may be as under:
Answer 10 questions out of 15 carrying 02 marks each: 2×10= 2o
Answer 04 questions out of 06 carrying 05 marks each: 5×4= 2o
Answer 02 questions out of 04 carrying 10 marks each: 10×2=2o
However, questions, carrying 5 or 10 marks, need not necessarily to be a single question

SEMESTER- 1
COURSE TITLE: Foundation and History of Physical Education
Course Code- CC1A
Full Marks: 75 (Theory: 40, Internal: 10, Semester-end- Practical: 20, Attendance: 5)
Credits: Theory- 04, Practical- 02 Lecture Hours: 60

Introduction
Biological and Sociological Foundations of Physical Education
History of Physical Education
Yoga Education and Recreation
Practical.

Objective of this semester-
Physical education provides cognitive content and instruction designed to develop motor skills, knowledge, and behaviors for physical activity and physical fitness. Supporting schools to establish physical education daily can provide students with the ability and confidence to be physically active for a lifetime.

Knowing the heritage of physical education allows educators to understand why instruction and curriculum has evolved and how it will continue to change. Through the study of the historical perspective of physical education, students learn why present practices have emerged and why they may change with new knowledge.

SEMESTER- 2
COURSE TITLE: Management of Physical Education and Sports
Course Code- CC1B
Full Marks: 75 (Theory: 40, Internal: 10, Semester-end- Practical: 20, Attendance: 5)
Credits: Theory- 04, Practical- 02 Lecture Hours: 60

Introduction
Tournaments
Facilities and Equipments
Leadership
And practical

Objective of this semester-
Management in various sports organizations ensures the smooth flow of all the activities that are involved in the program and provides development in the field of physical education. Business functions, communication skills, and proper coordination are also improved through management in sports and physical education

SEMESTER- 3
COURSE TITLE: Anatomy, Physiology and Exercise Physiology
Course Code- CC1C
Full Marks: 75 (Theory: 40, Internal: 10, Semester-end- Practical: 20, Attendance: 5)
Credits: Theory- 04, Practical- 02 Lecture Hours: 60

Introduction
Musculo-skeletal System

Circulatory System
Respiratory System

Objective of this semester
Helps in physical fitness: Strong and fit body is an inevitable asset in the field of sports. Study of anatomy and physiology helps a sport person to understand the structure and function of different parts of human body and to acquire a fit and healthy body.

COURSE TITLE: Track & Field and Racket Sports (SEC-1)

Objective of this semester
Students can know the rules and regulation & skill about track and field and racket sports.
Rules provide an agreement of understanding to competition. In sports, rules define what is allowed or not allowed to occur during situations on and off the court. Rules govern anything from wearing proper uniforms to how to keep score during games of different levels of competition.
And also they -
Burn calories

Boost metabolism.

Build muscle.

Reduced risk of running injury.

Better balance.

Improved running form.

Stronger bones.

Faster race pace.

SEMESTER- 4
COURSE TITLE: Health Education, Physical Fitness and First-Aid
Course Code- CC1D
Full Marks: 75 (Theory: 40, Internal: 10, Semester-end- Practical: 20, Attendance: 5)
Credits: Theory- 04, Practical- 02 Lecture Hours: 60

Introduction
Health Problems in India- Prevention and Control
Physical Fitness and Wellness
Health and First-aid Management
FIELD & LAB PRACTICAL

Objective of this semester
In any medical emergency situations, following proper first aid procedures is highly critical in helping alleviating pain and possibly saving lives of victims. This includes emergency scene

management and the skill to promptly assess the situation in order to provide adequate and appropriate response.
Physical education offers students the opportunity to not only be physically active, but it helps students to build confidence, to learn different movement skills, and it helps them to work as a team. Health and Physical Education is important because it will help our students live longer, healthy lives.

COURSE TITLE: Kho-Kho and Volleyball (SEC2)

Objective of this semester
Students can know the rules and regulation & fundamental skill of kho-kho and volleyball.
Rules provide an agreement of understanding to competition. In sports, rules define what is allowed or not allowed to occur during situations on and off the court. Rules govern anything from wearing proper uniforms to how to keep score during games of different levels of competition.

SEMESTER- 5
COURSE TITLE: Tests, Measurements and Evaluation in Physical Education
Course code: DSE1
Full Marks: 75 (Theory: 40, Internal: 10, Semester-end- Practical: 20, Attendance: 5)
Credits: Theory- 04, Practical- 02 Lecture Hours: 60

Introduction
Measurements of Body Compositions and Somatotype Assessment
Fitness Test
Sports Skill Test
FIELD & LAB PRACTICAL

Objective of this semester
To evaluate the learners: In the field of physical education and sports, Test and Measurement helps in collection of data which further helps in evaluating the learners ability separately. It also helps the sportsperson in enhancing his sports performance.

Or,

COURSE TITLE: Psychology in Physical Education and Sports
Corse Code- DSE1
Full Marks: 75 (Theory: 40, Internal: 10, Semester-end- Practical: 20, Attendance: 5)
Credits: Theory- 04, Practical- 02 Lecture Hours: 60

Introduction
Learning
Psychological Factors

Stress and Anxiety
FIELD & LAB PRACTICAL

Psychology helps to improve the performance and personality of players by scientifically modifying his behavior. Proper motivation and feedback enhances the performance of the player.

SEMESTER- 5
COURSE TITLE: Trends and Practices in Physical Education and Exercise Sciences
(For the students other than Physical Education)
Course code: GE1
Full Marks: 75 (Theory: 60, Internal: 10, Attendance: 5)
Credits: 06 Lecture Hours: 60

Introduction
Biological, Psychological and Sociological Foundations of Physical Education
History of Physical Education
Exercise Sciences

Objective of this semester
Physical education programs are recognizing the academic benefits of quality fitness programs. Exercise increases oxygen flow to the brain, thereby increasing cognitive skills. It also increases neurotransmission in the brain, or the connection of neurons, also known as brain cells.

Course Code: SEC3
Full Marks: 50 (Practical: 40, Internal: 10)
Football and Kabaddi.

Objective of this semester
Students can know the rules and regulation & fundamental skill of football and kabaddi.
Rules provide an agreement of understanding to competition. In sports, rules define what is allowed or not allowed to occur during situations on and off the court. Rules govern anything from wearing proper uniforms to how to keep score during games of different levels of competition.

SEMESTER- 6
COURSE TITLE: Sports Training
Course code: DSE2
Full Marks: 75 (Theory: 40, Internal: 10, Semester-end- Practical: 20, Attendance: 5)
Credits: Theory- 04, Practical- 02 Lecture Hours: 60

Introduction
Principle of Training and Conditioning
Training Load and Kinesiology
Training Techniques
FIELD & LAB PRACTICAL

Objective of this semester
Training allows the body to gradually build up strength and endurance, improve skill levels and build motivation, ambition and confidence. Training also allows athletes to gain more knowledge of their sport as well as enabling them to learn about the importance of having a healthy mind and body.

COURSE TITLE: Project Work
Course code: DSE2
Full Marks: 75

Physical Education (PE) develops students' competence and confidence to take part in a range of physical activities that become a central part of their lives. A high-quality PE curriculum enables all students to enjoy and succeed in many kinds of physical activity. Project work can develop personality, thinking ability, creativity etc.

SEMESTER- 6
COURSE TITLE: Health Education and Tests & Measurements in Physical Education
(For the students other than Physical Education)
Course Code: GE-2
Full Marks: 75 (Theory: 60, Internal: 10, Attendance: 5)

Introduction
Health and First-aid Managements
Measurement of Body Compositions and Somatotype Assessment
Fitness Test

Objective of this semester.
In any medical emergency situations, following proper first aid procedures is highly critical in helping alleviating pain and possibly saving lives of victims. This includes emergency scene management and the skill to promptly assess the situation in order to provide adequate and appropriate response.
Physical education offers students the opportunity to not only be physically active, but it helps students to build confidence, to learn different movement skills, and it helps them to work as a team. Health and Physical Education is important because it will help our students live longer, healthy lives.

SEMESTER- 6

BALL GAMES (Any two)
Course code: SEC4
Full Marks: 50 (Practical: 40, Internal: 10)

HANDBALL
BASKETBALL

Objective of this semester
Students can know the rules and regulation & fundamental skill of Hand Ball and Basketball Rules provide an agreement of understanding to competition. In sports, rules define what is allowed or not allowed to occur during situations on and off the court. Rules govern anything from wearing proper uniforms to how to keep score during games of different levels of competition.

2015-2016 SYLLABUS OLD SYSTEM

Part- I , Theoretical , **PAPER- I**
TOTAL MARKS- 100

Unit- I: Principles and Foundation of Physical Education
Unit- II: History of Physical Education

Objective of this 2 unit
Physical education provides cognitive content and instruction designed to develop motor skills, knowledge, and behaviors for physical activity and physical fitness. Supporting schools to establish physical education daily can provide students with the ability and confidence to be physically active for a lifetime.

Knowing the heritage of physical education allows educators to understand why instruction and curriculum has evolved and how it will continue to change. Through the study of the historical perspective of physical education, students learn why present practices have emerged and why they may change with new knowledge.

Unit- III: Anatomy and Physiology

Objective of this unit
Helps in physical fitness: Strong and fit body is an inevitable asset in the field of sports. Study of anatomy and physiology helps a sport person to understand the structure and function of different parts of human body and to acquire a fit and healthy body.

Unit- IV: Organization and Administration of Physical Education and Sports

Objective of this unit
Management in various sports organizations ensures the smooth flow of all the activities that are involved in the program and provides development in the field of physical education. Business functions, communication skills, and proper coordination are also improved through management in sports and physical education

Part- II, Theoretical, Paper- **II**
Total marks- 100

Unit- I: Health Education and Dietetics

Objective of this unit
In any medical emergency situations, following proper first aid procedures is highly critical in helping alleviating pain and possibly saving lives of victims. This includes emergency scene management and the skill to promptly assess the situation in order to provide adequate and appropriate response.
Physical education offers students the opportunity to not only be physically active, but it helps students to build confidence, to learn different movement skills, and it helps them to work as a team. Health and Physical Education is important because it will help our students live longer, healthy lives.

Unit- II: Exercise and Sports Physiology

Objective of this unit
Helps in physical fitness: Strong and fit body is an inevitable asset in the field of sports. Study of anatomy and physiology helps a sport person to understand the structure and function of different parts of human body and to acquire a fit and healthy body.

Unit- III: Sports Psychology

Objective of this unit
Sports psychology looks at how physical activity and mental well-being intersect. Sports psychologists help athletes maintain high levels of performance by prioritizing mental fitness. They also look at sports participation in relation to skills like teamwork and emotional regulation

Unit- IV: Test, Measurement and Evaluation in Physical Education

Objective of this unit

To evaluate the learners: In the field of physical education and sports, Test and Measurement helps in collection of data which further helps in evaluating the learners ability separately. It also helps the sportsperson in enhancing his sports performance.

Practical, paper- III total marks- 100

Unit- I: Practical in Field
Unite- II: Practical in Laboratory

Objective of this unit.
Objective of our Laboratory is designed to assess how the human body responds and adapts to sport and exercise. This is fully equipped with a wide range of facilities to allow individuals to be assessed using the most appropriate sport-specific methods.

Part- III, Theoretical, Paper- IV-A total marks- 65.

Unit- I: Sports Training

Objective of this unit.
Every sport activity needs specific type of physical fitness, and hence, the improvement of various components of physical and skills related fitness like strength, speed, coordination, endurance and flexibility is an important aim and objective of sports training.

Unit- II: Therapeutic Aspect of Physical Education

Objective of this unit.
Therapeutic exercise can reduce pain and improve muscular strength, balance, and range of motion in individuals with osteoarthritis. Resistance training and endurance training can improve pain and balance for those with osteoarthritis of the knee. It also improves performance of the players.

Unit- III: Recreation and Adapted Physical Education

Objective of this unit.
Adapted physical education is the art and science of developing, implementing, and monitoring a carefully designed physical education. Instructional program for a learner with a disability, based on a comprehensive assessment, to give the learner the skills necessary for a lifetime of rich leisure, recreation, and sport experiences to enhance physical fitness and wellness.

Principles and Methods of Adapted Physical Education and Recreation.Adapted physical education generally refers to school-based programs for students ages 3–21yrs.

Part- III, Practical, Paper- IV-B total marks- 65.

Objective of this unit.
It promotes physical fitness, develops motor skills and the understanding of rules, concepts and strategies of playing games and sports. Students learn to either work as part of a team, or as individuals in a wide variety of competitive activities.

PROGRAM OUTCOMES:

HIGHER EDUCATION OF OUR STUDENTS					
Name	**Mobile Number**	**Pass out**	**B.A Marks**	**H.E**	**University**
Pintu Das	**9647951546**	**2018**	**64%**	**M.P.Ed, NET**	**VIBHA-BHARATI**
SubhrajitDebangshi	**9614064412**	**2018**	**55.58%**	**B.P.Ed**	**Gitanjali College of Phy.Edu. (B.U)**
Suraj Tudu	**9641727814**	**2019**	**50%**	**B.P.Ed**	**Nikhil Banga Sikshan Mahavidyalaya (B.U)**
SOUMITA DAS	**8373828002**	**2019**		**D.Ed**	

SPORTS ACHIEVEMENT OF OUR STUDENTS				
Name	**Sports Level**	**Mobile No.**	**Pass out**	**Name of Sports**
Prasenjeet Sarkar	District Sports (Winner)	8617688952	2022	**VOLLEYBALL**
Sandip Bhandary	All India Intra University	6294828681	2022	**VOLLEYBALL**
Sudip Bhandary	District Sports (Winner)	9614057188	SEM- V	**VOLLEYBALL**
Swapnaneel Dutta	Inter College(Runners-up) B.U	9002456716	2022	**BADMINTON**
Saroj Saren	Inter College (Runners-up) B.U	8637057467	SEM-IV	**BADMINTON**
PommyBhakat	National level 3rd Position, Bengal Olympic Participate, District Shot-put 2nd, KHELO INDIA KHELO JUDO National Level Tournament 3rd position	8972573767	SEM-III	**KARATE**

Suri Vidyasagar College (Govt. Sponsored)

Suri, Birbhum. PIN- 731101, West Bengal

(Affiliated to the University of Burdwan &

Accredited by NAAC B^{++})

JOB PROFILE				
Name	**Mobile Number**	**Pass out**	**Job Title**	**LOCATION**
SAHADAT ANSARI	6294424874	2021	Site Civil Engineer L&T Company	Gujarat
POMMY BHAKAT	8918732485	-	PHY.EDU INSTRUCTOR	Gurukul Public School - Rampurhat

TOTAL STUDENTS (2022)

SL.NO	SEMESTER	NUMBER OF STUDENTS
1.	SEM- II	53
2.	SEM- IV	27
3.	SEM- VI	32
4.	SEM-VI, GE-2	24
	TOTAL SUTDENTS	**136**

DEPARTMENT OF PHILOSOPHY

SURI VIDYASAGAR COLLEGE

HONOURS COURSES

SEMESTER- 1

CC- 1 (Outlines of Indian Philosophy- I)

After having undergone the Course of study the learners' performances in the classroom interaction, internal test and final examination it is evident that they have come to know-

that philosophy is the mother of all subjects. Philosophy deals with 'why' questions. i.e., deep knowledge of the subject.

how a theory (in Indian philosophy) is established by the refutation of argument and dis-argument.

that Indian philosophy is associated with the school of Indian thinkers such as *Carvaka*, Jainism, Buddhism, *Nyaya-Vaisesika* school, etc.

that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

the terminology of Indian philosophy such as -- *prama*, *prameya*, *pramata*, *pramana*, *atman*, *karmavada*, *janmantorvada*& liberation, etc.

how Indian philosophy can be extended to their practical life. The ultimate vision of Indian philosophy is the assimilation of true knowledge *charcha*&*charja*.

CC- 2 (Outlines of Western Philosophy- I)

At the end of this Course, our learners have developed the knowledge relating to:

the history of Western Philosophy from the pre-Socratic era to the modern era.

the various theories such as rationalism, scepticism, etc.

the terminology as 'Cogito ergo sum', substance, God, attribute, mode, monadology, etc.

their ability compares their philosophical thinking from the viewpoint of Greek Philosophy to modern philosophy.

SEMESTER- 2

CC- 3 (Outlines of Indian Philosophy- II)

At the end of this Course of study our learners have come know, as reflected in their performances in classroom interaction, internal test and final examination:

how an Indian philosophical theory is established by the refutation of argument and disargument.

that Indian philosophy is associated with the school of Indian thinkers such as the school of *Samkhya*, *Yoga*, *Vedanta* and *Mimansa*.

that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

the terminology of Indian philosophy such as *atman*, *Brahman*, *karmavada*, *janmantorvada*& liberation, etc.

the ultimate vision of Indian philosophy assimilation of true knowledge *charcha*&*charja*.

CC- 4 (Outlines of Western Philosophy- II)

At the end of this Course our students have evidently acquired knowledge relating to:

the history of Western Philosophy of the modern era.

the various theories such as empiricism, objective idealism, scepticism, etc.

such terminology as substance, God, soul, space & time, etc.

the comparative opinion the philosophical thinking from the viewpoint of the modern philosophy.

SEMESTER- 3

CC- 5, 6 (Indian & Western Ethics)

At the end of this Course the learners have perceived and understood (that):

Ethics or *Nitividya* is the study of moral philosophy through which students can determine what actions and behaviours are right and wrong; good and bad can deepen their reflection on life's ultimate questions.

the conflict between the concepts of ethics and morality in real-life situations.

While making moral decisions, moral philosophy can help them clarify their moral positions. It broadens their perspective and makes them more well-thought-out and clear.

the right answer to ethical problems regardless of the consequences by using ethical theories such as deontology and utilitarianism.

the means to apply the ethical concepts and principles to current social issues through the study of practical ethics.

CC- 7 (Indian Logic - Textbook *Tarkasamgraha* with *Dipika* based on Indian Philosophy of *Nyaya-Vaisesika*)

At the end of this Course the students are evidently equipped to be able:

to know only theoretical viewpoints, on the other hand here they will be able to know methodically.

to differentiate between a primary book & monograph and also understand that the book of 'Tarkasamgraha' is not a root book, it is a monograph of 'Nyaya-Vaisesika' philosophy.

to differentiate between western logic & Indian logic.

to know that in western logic, an argument may be valid or invalid. An invalid argument occurred due to various types of fallacies. On the other hand in Indian Logic, they have known that here fallacy occurs only in respect of ' 'Hetu-pado' (middle term) i.e., the five types of 'Hetwabhas' (Five fallacies Hetu-pado).

to be acquainted with the terminology of Indian Logic --'Buddhi', 'Smriti', 'Karana', 'Fallacy of atibapti', 'Gourob Dasha', Laghab Dasha', Anyatha-siddhi, etc.

SEMESTER- 4

CC- 8 (Western Logic- I)

At the end of this Course, the learners are expected:

to have developed sound knowledge in the Western logic

to be methodical in thinking.

to have increased thinking power through the practice of formal logic and to be able to solve critical problems in life.

to acquire a firm foundation of logic a student could pass out easily other disciplines, where logic places an important role. Such as mathematics, computer science semantical linguistics.

to translate natural language sentences into symbolic form.

to understand various types of sentences, propositions, and symbols from traditional logic to modern logic.

CC- 9 (Psychology)

At the end of this Course our learners have gained knowledge in psychology which has expectedly enabled our students:

to gain a better understanding of themselves and competently inspire others, resulting in personal development.

to analyse the human behaviour and understand why people act the way they do, connect with others, and become more effective in the workplace.

to understand, predict, influence, and controlling behaviour, as well as improve their overall quality of life.

to study other people's emotions, language, and body language,

to become better communicators.

to determine their own IQ and others as well.

to apply it in real life.

to improve their learning and unlearning abilities.

CC- 10 (Philosophy of Religion)

At the end of this Course our learners have achieved competence in or to have:

the Philosophy of Religion enabling them to comprehend other people's beliefs, reflect on their own beliefs, and examine alternative belief systems.

a deeper understanding of God and humanity by interpreting religious philosophy. Their attitude toward religions, religious arguments, and God becomes brighter and stronger as a result.

the distinction between theology and Philosophy of religion.

the analytical reasoning abilities, enhances the articulation of complex and abstract concepts, and fosters critical thinking.

in recognising and clarify different belief systems, as well as appreciating how they impact people's lives in a variety of ways in the arts, politics, the economy, society, and other areas.

SEMESTER- 5

CC- 11 (Socio-Political Philosophy)

At the end of this Course the students have acquitted the various aspects of socio-political philosophy which has enabled them to:

be conversant with the studies in human society and its the fundamental laws regulating society and navigate the significance of the substantial mode of existence.

be concerned with individuals' relationships with society and with how they interact with one another.

know about how we live together and facilitates them to distinguish between what is just/correct and what is not.

see how to establish cooperative life, political institutions, and social practices in the best possible way.

improve students' critical deciphering of political tenets and policies to assess their relevance and shortcomings.

also review political concepts such as justice, freedom, equality, rights, duties, and so on to provide a general understanding of the political system and its impact on society.

CC- 12 (Western Logic- II)

At the end of this Course learners have been conversant with:

the studies in Western logic human thinking making them methodical.

the practice of logic our thinking power increase. As a result, a student is able to solve critical problems in life.

a firm foundational knowledge of logic enabling them to pass out easily other disciplines, where logic places an important role. E.g., mathematics, computer science semantical linguistics.

ability to know different types of Hypothesis & also conclude that scientific hypothesis is best.

the various types of sentences, propositions, and symbols from traditional logic to modern logic.

how to solve probability calculus.

that every effect has a cause & causal relation based on uniformity of nature.

DSE- 1 (Special Text - *Kaṭhopaniṣad*)

At the end of this Course the students easily realize:

that the *Upanishads* are the means of knowing the truth. In that way, by studying *KathaUpanishad* students can deal with the finite world while revealing the infinite truth.

that the *Katha Upanishad* can understand that the formless and inconceivable *Brahman* is the same as *Atman*.

that Brahman represents the whole universe, and the atman is a part of that divine oneness that we carry within us.

that according to the *Katha Upanishad*, as a religious and philosophical treatise, consciousness is the source of everything and that consciousness is indistinguishable from the individual.

the value of life after death

the distinction between *Sreya* and *Preya*

the Yama's analogy of Body and Soul with *Ratha* and *Rathi*

the Nachiketa as an *Adhikari Purusa* seeking *Brahman* knowledge

the *Kaṭhopaniṣad* as it also teaches the importance of showing reverence or respect to elders in their daily lives.

DSE- 2 (Special Text - B. Russell: Problems of Philosophy)

At the end of this Course students develop capability to:

understand the philosophical justification of common sense beliefs in the existence of physical objects.

make the difference between appearance and reality following Russell.

explain the shortcomings in the theories of modern philosophers.

developed regarding whether the existence of matter can be proved.

illustrate the difference between sense-data and sensation.

apply critical thinking to prove the existence of the physical world.

know the gaps in the philosophical theories of Descartes, Locke, and Berkeley.

make the distinction between ambiguous descriptions and definite descriptions. And they can analyse the principle of induction and state whether this principle can be proved by experience or not.

SEMESTER- 6

CC- 13 (Philosophy in the Twentieth Century - Indian)

At the end of this Course students have expectedly understood:

that philosophy is the mother of all subjects. Philosophy deals with 'why' questions. Therefore, students will be able to have deep knowledge of the subject.

how a theory is established by the refutation of argument and disargument.

that Indian philosophy is associated with the modern Indian thinkers such as Rabindranath, Vivekananda, Aurobindo, Radhakrishnan, Iqbal and Gandhi.

know that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

be acquainted with the concept of *atman*, *Brahman*, *karmavada*, *janmantorvada*& liberation, etc.

extend Indian philosophy into their practical life.

perceive that the ultimate vision of Indian philosophy is the assimilation of true knowledge *charcha*&*charja*.

take the way of the ideal life of modern Indian thinkers.

CC- 14 (Philosophy in the Twentieth Century - Western)

At the end of this Course of study our students have, as observed, been acquainted with:

the history of modern Western philosopher's views.

the various theories such as empiricism, rationalism, skepticism, pragmatism, logical-positivism, etc.

some concepts like substance, God, facticity, sense-data, space & time, nothingness, existence, etc.

the modern Western philosophy thinker's views and their philosophical thinking from the viewpoint of Greek Philosophy to modern Western philosophy.

DSE- 3 (Special Text: Rabindranath Tagore - *Sadhana*)

At the end of this Course students have been able:

to discern Rabindranath's philosophical thinking that the ultimate goal of life can be achieved through an understanding of humanity.

to understand Rabindranath's educational philosophy, which includes naturalism, humanism, internationalism, and idealism.

the means as propounded by Rabindranath Tagore in Sadhana to guide them (students) toward spiritual unity and purity.

to understand the significance of inner transformation through the true knowledge of the self and the Supreme.

DSE- 4 (Special Text: Hume - An Enquiry Concerning Human Understanding)

At the end of this Course our students have been observed to have:

understood that true philosophy is based on arguments of common people and free from prejudice and blind faith.

known that by nature speculations of traditional metaphysics are contingent and domestic. Therefore David Hume tries to explain metaphysics from the pure empirical point of view.

known from the quote "Be a philosopher" but, amidst all of your philosophy be still a man" First of all, he or she is a real man after that will be a philosopher.

understood that without the course not a single thing will be happened.

PROGRAMME SPECIFIC OUTCOME

SEMESTER- 3

SEC- 1 (Philosophy in Practice)

At the end of this Course students have equipped with the skills:

to make critical examination of various Indian and Western philosophers' ideas

to understand some worldviews of the Indian and Western thinkers.

to make a comparison between Philosophy and Darshana

to understand the methods of darsanika discourse (katha)

to apply the different methods of inquiry mentioned in the study of philosophy and darsana in their real life.

SEMESTER- 4

SEC- 2 (Philosophy of Human Rights)

At the end of this Course students have equipped with the skills:

to explain how Human Rights came to be and how they have evolved.

to compare and contrast Natural Rights, Fundamental Rights, and Human Rights.

to deliberate the philosophies embedded in the Preamble of the Indian Constitution.

to grasp the concept of Equality, Liberty, and Dignity of all people as necessary conditions for the empowerment of Human Rights.

to evaluate various perspectives and roles of Human Rights protection mentioned in the World Organisations.

to comprehend the significance of the Fundamental Rights enshrined in the Indian Constitution.

to develop a sense of social responsibility and critical thinking.

DEPARTMENT OF PHILOSOPHY
SURI VIDYASAGAR COLLEGE

GENERAL COURSES

PROGRAMME OUTCOME

SEMESTER- 1

CC- 1A/GE- 1 (Indian Philosophy)

After having undergone the Course of study the learners' performances in the classroom interaction, internal test and final examination it is evident that they have come to know-

that philosophy is the mother of all subjects. Philosophy deals with 'why' questions. i.e., deep knowledge of the subject.

how a theory (in Indian philosophy) is established by the refutation of argument and disargument.

that Indian philosophy is associated with the school of Indian thinkers such as *Carvaka*, Jainism, Buddhism, *Nyaya-Vaisesika* school, the school of *Vedanta*, *Mimansa*, etc.

that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

the terminology of Indian philosophy such as -- *prama*, *prameya*, *pramata*, *pramana*, *atman*, *karmavada*, *janmantorvada*& liberation, etc.

how Indian philosophy can be extended to their practical life. The ultimate vision of Indian philosophy is the assimilation of true knowledge *charcha*&*charja*.

SEMESTER- 2

CC- 1B/GE- 2 (Western Philosophy)

At the end of this Course, our learners have developed the knowledge relating to:

the history of Western Philosophy and the nature of metaphysics and its elimination.

the various theories such as empiricism, rationalism, scepticism, etc.

the terminology as 'Cogito ergo sum', substance, God, attribute, mode, space & time, monadology, etc.

the differences between Naïve Realism, Scientific Realism, and Representative Realism.

understanding the concept of Subjective and Objective Idealism.

their ability compares their philosophical thinking from the viewpoint of Greek Philosophy to Modern Philosophy.

SEMESTER- 3

CC- 1C/GE- 3 (Logic)

At the end of this Course the learners are expected:

to have developed sound knowledge in the Western logic

to be methodical in thinking.

to have increased thinking power through the practice of formal logic and to be able to solve critical problems in their life.

to acquire a firm foundation of logic a student could pass out easily other disciplines, where logic places an important role. Such as mathematics, computer science semantical linguistics.

to translate natural language sentences into symbolic form.

to understand various types of sentences, propositions, and symbols from traditional logic to modern logic.

SEMESTER- 4

CC- 1D/GE- 4 (Contemporary Indian Philosophy)

At the end of this Course, learners should be able to:

know that Indian philosophy is associated with the modern Indian thinkers such as Rabindranath, Vivekananda, Aurobindo, Radhakrishnan, Iqbal and Gandhi.

Understand that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

acquainted with the concept of *atman*, *Brahman*, *karmavada*, *janmantorvada*& liberation, etc.

take Indian philosophy into their practical life. The ultimate vision of Indian philosophy is the assimilation of true knowledge *charcha*&*charja*.

take the way of the ideal life of modern Indian thinkers.

SEMESTER- 5

DSE- 1A (Philosophy of Religion)

At the end of this Course, our learners have achieved competence in or to have:

the Philosophy of Religion enabling them to comprehend other people's beliefs, reflect on their own beliefs, and examine alternative belief systems.

a deeper understanding of God and humanity by interpreting religious philosophy. Their attitude toward religions, religious arguments, and God becomes brighter and stronger as a result.

the distinction between theology and Philosophy of religion.

the analytical reasoning abilities, enhances the articulation of complex and abstract concepts, and fosters critical thinking.

in recognising and clarify different belief systems, as well as appreciating how they impact people's lives in a variety of ways in the arts, politics, the economy, society, and other areas.

GE- 1 (Indian Philosophy)

After having undergone the Course of study the learners' performances in the classroom interaction, internal test and final examination it is evident that they have come to know-

that philosophy is the mother of all subjects. Philosophy deals with 'why' questions. i.e., deep knowledge of the subject.

how a theory (in Indian philosophy) is established by the refutation of argument and disargument.

that Indian philosophy is associated with the school of Indian thinkers such as Carvaka, Jainism, Buddhism, *Nyaya-Vaisesika* school, the school of *Vedanta*, *Mimansa*, etc.

that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

the terminology of Indian philosophy such as -- *prama*, *prameya*, *pramata*, *pramana*, *atman*, *karmavada*, *janmantorvada*& liberation, etc.

how Indian philosophy can be extended to their practical life. The ultimate vision of Indian philosophy is the assimilation of true knowledge *charcha*&*charja*.

SEMESTER- 6

DSE- 1B (*Tarkasamgraha with Dipika*)

At the end of this Course, the students are evidently equipped to be able:

to differentiate between a primary book & monograph. They also understand that the book of 'Tarkasamgraha' is not a root book, it is a monograph of 'Nyaya-Vaisesika' philosophy.

to distinguish between western logic & Indian logic.

to acquainted with the terminology of Indian Logic – *Dravya*, *Guna*, *Karma*, *Samanya*, *Visesa*, *Samavaya*, *Abhava*, etc.

to know that all *Dravya* are not material things, some are non-material or *chetana*. So*Nyaya-Vaisesika* school are not materialistic.

GE- 2 (Western Philosophy)

At the end of this Course, our learners have developed the knowledge relating to:

the history of Western Philosophy and the nature of metaphysics and its elimination.

the various theories such as empiricism, rationalism, scepticism, etc.

the terminology as 'Cogito ergo sum', substance, God, attribute, mode, space & time, monadology, etc.

the differences between Naïve Realism, Scientific Realism, and Representative Realism.

understanding the concept of Subjective and Objective Idealism.

their ability compares their philosophical thinking from the viewpoint of Greek Philosophy to Modern Philosophy.

PROGRAMME SPECIFIC OUTCOME (GENERAL)

SEMESTER- 3

SEC- 1 (Philosophy in Practice)

At the end of this Course students have equipped with the skills:

to make critical examination of various Indian and Western philosophers' ideas

to understand some worldviews of the Indian and Western thinkers.

to make a comparison between Philosophy and *Darshana*.

to understand the methods of darsanika discourse (*katha*).

to apply the different methods of inquiry mentioned in the study of philosophy and *darsana* in their real life.

SEMESTER- 4

SEC- 2 (Philosophy of Human Rights)

At the end of this Course students have equipped with the skills:

to explain how Human Rights came to be and how they have evolved.

to compare and contrast Natural Rights, Fundamental Rights, and Human Rights.

to deliberate the philosophies embedded in the Preamble of the Indian Constitution.

to grasp the concept of Equality, Liberty, and Dignity of all people as necessary conditions for the empowerment of Human Rights.

to evaluate various perspectives and roles of Human Rights protection mentioned in the World Organisations.

to comprehend the significance of the Fundamental Rights enshrined in the Indian Constitution.

to develop a sense of social responsibility and critical thinking.

SEMESTER- 5

SEC- 3 (Philosophical Analysis)

At the end of this Course the learners have enriched themselves in the subject to:

develop their analytical reasoning abilities, enhances the articulation of complex and abstract concepts, and fosters critical thinking.

perceive that Studying Philosophy of Religion is beneficial for students to recognise and clarify different belief systems, as well as appreciate how they impact people's lives in a variety of ways in the arts, politics, the economy, society, and other areas.

understood that 'meaning' is the smallest unit of a word, but without a word, meaning can be possible by various symbols.

able to acquainted with various types of word meanings & Sentence meanings.

know the source of knowledge, the Nature of knowledge, Nature of truth. Students will know the actual meaning of truth.

by the study of this course, skilling power of knowledge will be increasing.

SEMESTER- 6

SEC- 4 (Ethics in Practice)

At the end of this Course our learners have, as observed during the study:

understood that Ethics or *Nitividya* is the study of moral philosophy through which students can determine what actions and behaviours are right and wrong; good and bad can deepen their reflection on life's ultimate questions.

developed capability to distinguish the conflict between the concepts of ethics and morality in real-life situations.

acquired ability to clarify their moral positions during decision making. It broadens their perspective and makes them more well-thought-out and clear.

found the right answer to ethical problems regardless of the consequences by using ethical theories such as deontology and utilitarianism.

acquired the ability to apply ethical concepts and principles to current social issues through the study of practical ethics.

DEPARTMENT OF PHILOSOPHY

SURI VIDYASAGAR COLLEGE

PROGRAMME OUTCOME (Old Syllabus)

PART- I

Paper- I (Indian Philosophy)

After having undergone the Course of study the learners' performances in the classroom interaction, internal test and final examination it is evident that they have come to know-

that philosophy is the mother of all subjects. Philosophy deals with 'why' questions. i.e., deep knowledge of the subject.

how a theory (in Indian philosophy) is established by the refutation of argument and disargument.

that Indian philosophy is associated with the school of Indian thinkers such as *Carvaka*, Jainism, Buddhism, *Nyaya-Vaisesika* school, the school of *Vedanta*, *Mimansa*, etc.

that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

the terminology of Indian philosophy such as -- *prama*, *prameya*, *pramata*, *pramana*, *atman*, *karmavada*, *janmantorvada*& liberation, etc.

how Indian philosophy can be extended to their practical life. The ultimate vision of Indian philosophy is the assimilation of true knowledge *charcha*&*charja*.

PART- II

Paper- II (Western Logic and Metaphysics)

At the end of this Course the learners are expected:

to have developed sound knowledge in the Western logic

to be methodical in thinking.

to have increased thinking power through the practice of formal logic and to be able to solve critical problems in their life.

to acquire a firm foundation of logic a student could pass out easily other disciplines, where logic places an important role. Such as mathematics, computer science semantical linguistics.

to translate natural language sentences into symbolic form.

to understand various types of sentences, propositions, and symbols from traditional logic to modern logic.

to know the history of Western Philosophy and the nature of metaphysics and its elimination.
to understand the various theories such as empiricism, rationalism, scepticism, etc.
understanding the terminology as 'Cogito ergo sum', substance, God, attribute, mode, space & time, monadology, etc.
to differentiate between Naïve Realism, Scientific Realism, and Representative Realism.
to understanding the concept of Subjective and Objective Idealism.
to compare their philosophical thinking from the viewpoint of Greek Philosophy to Modern Philosophy.

PART- III

Paper- III (Ethics: Indian and Western)

At the end of this Course our learners have, as observed during the study:
understood that Ethics or *Nitividya* is the study of moral philosophy through which students can determine what actions and behaviours are right and wrong; good and bad can deepen their reflection on life's ultimate questions.
developed capability to distinguish the conflict between the concepts of ethics and morality in real-life situations.
acquired ability to clarify their moral positions during decision making. It broadens their perspective and makes them more well-thought-out and clear.
found the right answer to ethical problems regardless of the consequences by using ethical theories such as deontology and utilitarianism.
acquired the ability to apply ethical concepts and principles to current social issues through the study of practical ethics.

Paper- IV (Religion and Social Philosophy)

At the end of this Course our learners have achieved competence in or to have:
the Philosophy of Religion enabling them to comprehend other people's beliefs, reflect on their own beliefs, and examine alternative belief systems.

a deeper understanding of God and humanity by interpreting religious philosophy. Their attitude toward religions, religious arguments, and God becomes brighter and stronger as a result.

the distinction between theology and Philosophy of religion.

the analytical reasoning abilities, enhances the articulation of complex and abstract concepts, and fosters critical thinking.

in recognising and clarify different belief systems, as well as appreciating how they impact people's lives in a variety of ways in the arts, politics, the economy, society, and other areas.

be conversant with the studies in human society and its the fundamental laws regulating society and navigate the significance of the substantial mode of existence.

concerned with individuals' relationships with society and with how they interact with one another.

knowing about how we live together and facilitates them to distinguish between what is just/correct and what is not.

see how to establish cooperative life, political institutions, and social practices in the best possible way.

DEPARTMENT OF PHILOSOPHY
SURI VIDYASAGAR COLLEGE
COURSE OUTCOME (Old Syllabus)

PART- I

Paper- I (Outlines of Indian Philosophy)

At the end of this Course our learners have, as observed during the study:

known that philosophy is the mother of all subjects. Philosophy deals with 'why' questions. Therefore, students will be able to have deep knowledge of the subject.

understood how a theory is established by the refutation of argument and disargument.

been able to know that Indian philosophy is associated with the school of Indian thinkers such as Buddhism, Nyaya-Vaisesika school, the school of Vedanta, Mimansa, etc.

known that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

been acquainted with the terminology of Indian philosophy such as -- *prama*, *prameya*, *pramata*, *pramana*, *atman*, *Brahman*, *karmavada*, *janmantorvada*& liberation, etc.

taken Indian philosophy into their practical life. The ultimate vision of Indian philosophy assimilation of true knowledge *charcha*&*charja*.

Paper- II (History of Western Philosophy)

At the end of this Course our learners have, as observed during the study:

known the history of Western Philosophy from the pre-Socratic era to the modern era.

understood various theories such as empiricism, rationalism, skepticism, etc.

been able to acquainted with such terminology as 'Cogito ergo sum', substance, God, attribute, mode, fact & facticity, space & time, monadology, etc.

developed, through the study of Western Philosophy thinkers, the ability to compare their philosophical thinking from the viewpoint of Greek Philosophy to modern philosophy.

PART- II

Paper- III (Ethics: Indian and Western)

At the end of this Course our learners have, as observed during the study:

understood that Ethics or *Nitividya* is the study of moral philosophy through which students can determine what actions and behaviours are right and wrong; good and bad can deepen their reflection on life's ultimate questions.

developed capability to distinguish the conflict between the concepts of ethics and morality in real-life situations.

acquired ability to clarify their moral positions during decision making. It broadens their perspective and makes them more well-thought-out and clear.

found the right answer to ethical problems regardless of the consequences by using ethical theories such as deontology and utilitarianism.

acquired the ability to apply ethical concepts and principles to current social issues through the study of practical ethics.

Paper- IV (Western Logic)

At the end of this Course learners have been conversant with:

the studies in Western logic human thinking making them methodical.

the practice of logic our thinking power increase. As a result, a student is able to solve critical problems in life.

a firm foundational knowledge of logic enabling them to pass out easily other disciplines, where logic places an important role. E.g., mathematics, computer science semantical linguistics.

understanding the various types of sentences, propositions, and symbols from traditional logic to modern logic.

the translation of the natural language sentences into symbolic form.

PART- III

Paper- V (Indian Logic)

At the end of this Course, students should be able to:

In Indian Philosophy they know only theoretical viewpoints, on the other hand here they will be able to know methodically.

differentiate between a primary book & monograph. They also understand that the book of 'Tarkasamgraha' is not a root book, it is a monograph of 'Nyaya-Vaisesika' philosophy.

differentiate between western logic & Indian logic.

that in western logic, an argument may be valid or invalid. An invalid argument occurred due to various types of fallacies. On the other hand in Indian Logic, a student could know that here fallacy occurs only in respect of ' 'Hetu-pado' (middle term). Therefore they know there are five types of 'Hetwabhas' (Five fallacies Hetu-pado).

acquainted with the terminology of Indian Logic --'Buddhi', 'Smriti', 'Karana', 'Fallacy of atibapti', 'Gourob Dasha', Laghab Dasha', Anyatha-siddhi, etc.

Paper- VI (Psychology and Socio-Political Philosophy)

At the end of this Course students have been enabled:

to gain a better understanding of themselves and competently inspire others, resulting in personal development.

to have light on human behaviour and assists students to understand why people act the way they do, connect with others, and become more effective in the workplace.

to understand, predict, influence, and controlling behaviour, as well as improve their overall quality of life.

to become better communicators by studying other people's emotions, language, and body language.

to determine their own IQ and others as well.

to have their own understanding of attention boosts them to apply it in real life.

to improve their learning and unlearning abilities.

to have the fundamental laws that regulate society and excavate the significance of the substantial mode of existence.

to be aware of the individuals' relationships with society and how they interact with one another and the concepts based on social interactions.

to know how we live together and facilitates them to distinguish between what is just/correct and what is not.

to know how to establish cooperative life, political institutions, and social practices in the best possible way.

to improve students' critical deciphering of political tenets and policies to assess their relevance and shortcomings.

to review political concepts such as justice, freedom, equality, rights, duties, and so on to provide a general understanding of the political system and its impact on society.

Paper- VII (Philosophy of Religion and Philosophical Analysis)

At the end of this Course the learners have enriched themselves in the subject to:

enable themselves to comprehend other people's beliefs, reflect on their own beliefs, and examine alternative belief systems.

gain a deeper understanding of God and humanity by interpreting religious philosophy. Their attitude toward religions, religious arguments, and God becomes brighter and stronger as a result.

make the distinction between theology and Philosophy of religion.

develop their analytical reasoning abilities, enhances the articulation of complex and abstract concepts, and fosters critical thinking.

perceive that Studying Philosophy of Religion is beneficial for students to recognise and clarify different belief systems, as well as appreciate how they impact people's lives in a variety of ways in the arts, politics, the economy, society, and other areas.

understood that 'meaning' is the smallest unit of a word, but without a word, meaning can be possible by various symbols.

able to acquainted with various types of word meanings & Sentence meanings.

know the source of knowledge, the nature of knowledge, the nature of truth. Students will know the actual meaning of truth.

by the study of this course, skilling power of knowledge will be increasing.

Paper- VIII (Philosophy in the Twentieth Century: Indian and Western)

At the end of this Course our students are expected to:

have known that philosophy is the mother of all subjects. Philosophy deals with 'why' questions.

have understood how a theory is established by the refutation of argument and disargument.

have known that Indian philosophy is associated with the modern Indian thinkers such as Rabindranath, Vivekananda, Aurobindo, Radhakrishnan, Iqbal and Gandhi.

have known that Indian philosophy discusses main two sides - epistemological & metaphysical points of view.

have been acquainted with the concept of *atman*, *Brahman*, *karmavada*, *janmantorvada*& liberation, etc.

have evidently taken Indian philosophy into their practical life.

have realized that the ultimate vision of Indian philosophy is the assimilation of true knowledge *charcha&charja*.

have the way of the ideal life of modern Indian thinkers.

have been able to know the history of modern Western philosopher's views.

have understood various theories such as empiricism, rationalism, scepticism, pragmatism, logical-positivism, etc.

have been able to acquainted with some concepts like substance, God, facticity, sense-data, space & time, nothingness, existence, etc.

have evidently capability to compare their philosophical thinking from the viewpoint of Greek Philosophy to modern Western philosophy.

Department of Economics

Suri Vidyasagar College

Programme Outcomes, Programme Specific Outcomes and Course Outcomes
Name of the Programme : B.A./B.Sc Honours in Economics

Programme Outcomes:

The B. A./B.Sc (Honours) Economics programme offered by Suri Vidyasagar College as a constituent college of the University of Burdwan provides a firm basis for much of the advanced thinking in the Economics discipline. It provides the student with alogical paradigm for conceptualizing and interpreting the behaviour and interactions of households, firms, and government institutions. The curriculum allows students to choose elective courses from a set of courses with contemporary relevance, The undergraduate Programme will prepare the students for both, academia and employability.

Programme Specific Outcomes:

The Programme specific outcome in B.A. /B.Sc Honours in Economics programme are:

1. To provide students a well-founded educational base as well as well-resourced learning environment in Economics.
2. Introduction to real world economic issues and problems facing the country and the world;
3. Gain an understanding of proper policy responses to economic problems;
4. Learn the mathematical and statistical techniques necessary for a proper understanding of the discipline.
5. To provide structured curricula which support the academic development of students and to acquire knowhow on Methodology of Economics as a branch of social sciences.
6. Develop the ability to collect, process, and interpret data, including statistical inference.
7. Be able to use critical thinking skills within the discipline of economics about economic matters.
8. To provide and adapt curricula that prepare our graduates for employment and further study that emphasizes quantitative and theoretical aspects of Economics.
9. To provide programmers that allows the students to choose from a wide range of economic specialization and familiarise with different branches of economics.
10. The programme also emphases on conducting Social and Economic Researches.

Course Outcomes
Course Outcomes for B.A. /B.Sc (Honours.) Economics (CBCS)

Semester I

Introductory Microeconomics: Core Course (CC1), Credit: 6

Course Outcomes

The course introduces the students to the first course in economics from the perspective of individual decision making as consumers and producers. The students learn some basic principles of microeconomics, interactions of supply and demand, and characteristics of perfect

and imperfect markets. Therefore, it helps the students to think how microeconomic concepts can be applied to analyze real-life situations.

Statistics I: Core Course (CC2), Credit: 6

Course Outcomes

This is the first of a compulsory two-course sequence on statistical methods for economics. The course upgrades the statistical skills acquired in school and paves the way for the second semester course Statistics II. It begins with some basic concepts and terminology that are fundamental to statistical analysis. At the end of the course the students learn the collection and presentation of statistical data. Students also learn how to analysis the statistical data through the estimation of descriptive statistics.

Semester II

Introductory Macroeconomics: Core Course (CC3), Credit: 6

Course Outcomes

This is the first course that introduces students to the basic concepts of Macroeconomics. This course discusses the preliminary concepts of the determination and measurement of aggregate macroeconomic variable like GDP, savings, investment, money, and inflation. It also introduces students to simple analytical frameworks (e.g., the IS-LM model) for the determination of equilibrium output. The conceptual frameworks which will enable students to understand and comment upon real economic issues like inflation, money supply, GDP, and their interlinkages. It will also allow them to critically evaluate various macroeconomic policies of the government in terms of IS-LM model.

Mathematical Economics I: Core Course (CC4), Credit: 6

Course Outcomes

This is the first of a compulsory two-course sequence. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory. The analytical tools introduced in this course enable the students for the applications to

the economic theory wherever optimisation techniques help the students to understand in business decision-making.

Semester III

Intermediate Microeconomics: Core Course (CC5), Credit: 6

Course Outcomes

The course is designed to provide sound training in microeconomic theory. In this course, the students learn the market structure of Imperfect competition, the theory of factor pricing, general equilibrium, and economic welfare. Therefore, essential concepts covered in this course help the students for understanding other broad areas of economics.

Intermediate Macroeconomics: Core Course (CC6), Credit: 6

Course Outcomes

This is the second module of Macroeconomics. Through this course, the students learn various alternative theories of output and employment determination in both closed and open economy, different growth models, and theory of inflation. This course enables students to analyse the different macroeconomic thoughts. It also allows them to evaluate important macroeconomic policies and their implications.

Mathematical Economics II: Core Course (CC7), Credit: 6

Course Outcomes

This paper is a progression from the Mathematical Economics-I paper. The students learn the concepts of matrix and determinants in this course. This course also helps the students to develop understanding and skills in the application of mathematical theorems and techniques to economic theory. At the end of the course, the students learn the input –output analysis, game theory, linear programming, and decision under uncertainty.

Skill Enhancement Course: SEC 1, Credit-2

Indian Official Statistics

Course Outcomes

This course allows the students to know the various sources of data related to the Indian economy. Students can analyse the different Indian official Statistics, and demographic statistics. Economic survey helps the student to understand the current scenario and economic policy of India.

OR

Managerial Economics

Course Outcomes

In this course, the students learn the concepts and techniques of production management. They will learn the various theoretical concepts of Economic Analysis so that they can use this as inputs in the managerial decision-making process when they are engaged in corporate employment. The broad topics include demand, cost and profit analysis, pricing policies and practices, capital budgeting, and appraisal methods. Cost of capital- notions of debt, share and equity capital, inventory management costs, concepts of average inventory, and various inventory models. Skill outcomes will be reflected in the ability of students to demonstrate the use of economic concepts and policies to improve skills in business decision-making.

OR

Insurance market and its Products

Course Outcomes

The course program will be able to understand the students regarding the insurance markets and its product. It demonstrates the features of property-liability insurance, life and health insurance, and employee benefit plans. It develops skills to facilitate insurance product cost and pricing, marketing, and distribution.

Semester IV

Selected Features of Indian Economy: (CC8), Credit: 6

Course Outcomes

At the end of the course, a student should be able to understand the development paradigm adopted in India since independence and evaluate its impact on economic as well as social indicators of progress and well-being. The student should be able to understand the role of economic policies in shaping and improving economic performance in agriculture, manufacturing, banking, and services.

Statistical Methods –II: (CC9), Credit: 6

Course Outcomes

In this course, the student should understand the concept of random variables and be familiar with some commonly used discrete and continuous distributions of random variables. The students learn the basics of probability theory and statistical inference. They will be able to estimate population parameters based on random samples and test hypotheses about these parameters. An important learning outcome of the course will be the capacity to analyse statistics in everyday life to distinguish systematic differences among populations from those that result from random sampling.

Development Economics: (CC10), Credit: 6

Course Outcomes

The students learn with in-depth discussion of the theory of development economics and growth economics. This course teaches the student various aspects of poverty, and inequality, as well as the important themes relating to the environment and sustainable development. It also introduces them to some issues of globalisation.

Skill Enhancement Course: SEC 2, Credit-2

Basic Computer Applications

Course Outcomes

This course aims at imparting basic knowledge and skills in handling statistical data using Excel Tool Pak which helps to aid in data exploration, visualization, and statistical analysis. Students get a first-hand experience in handling data and applying appropriate data analysis

techniques which they learn in theoretical papers on Statistics and Econometrics. The fruitful learnings from this paper are used by students in their project works in the remaining semesters, in their research work as well in their professions requiring analytical work.

Indian Stock Market and Trading

Course Outcomes

Students will be able to understand the role and importance of the Indian stock market. It describes the Concepts relevant to the Indian stock market and trading. Students learn the basics of stock trading and are able to analyse the mechanics and regulation of financial instruments and determine how the value of stocks, bonds, and securities are calculated.

Business Plan Formulation and Appraisal

Course Outcomes

The course programme would be to enable students to understand the mechanism of business plan appraisal in various stages. Students learn different techniques applied in project appraisal, and understand new and innovative sources of financing projects in the present day world. Students will be able to understand that appraisal is a process that is required in all aspects of life, and is important in narrowing down to choosing the best alternative.

Semester V

International Economics: (CC11), Credit: 6

Course Outcomes

The purpose of this course is to inform the basics of international trade theory and to examine the effects of international economic policies on domestic and world welfare. The students learn the main theoretical and empirical concepts in international trade with a thorough analytical grasp of trade theory, ranging from Ricardian comparative advantage to modern (H-O) theorem (H-O), intra-industry trade, and the main issues in trade policy. At the end of the course, the students should be able to demonstrate their understanding related to the economic welfare effects of free trade, and protection, balance of payments in trade and different exchange rate regimes.

Money & Banking: (CC12), Credit: 6

Course Outcomes

In this course, students learn the theory and functioning of the monetary and financial sectors of the economy. Students understand the organisation, structure, and role of financial markets and institutions. This course provides the knowledge of interest rates, monetary management, and instruments of monetary control of the banking sector. This allows students to understand current monetary policies and financial market outcomes.

Discipline Specific Elective Papers: DSE1, Credit: 6

Rural Development

Course Outcomes

This course allows the student's ability to look into the real issues of rural development and its connection with agricultural development and rural non-farm sector and the role of NGOs and Panchayats in rural development in India as well as in the state of West Bengal. This course helps the students to understand the role of the National Bank for Agriculture and Rural Development (NABARD) in promoting rural development through the provision of rural credit and the role of Self Help Groups. The course helps students to take a critical look at some major rural government programmes like MGNREGA, National Rural Health Mission (NRHM), and Pradhan Mantri Gramin Sadak Yojana (PMGSY).

OR

Selected Features of West Bengal Economy

Course Outcomes

At the end of the course students will be able to know the characteristics of the West Bengal economy, such as employment, growth, infrastructure, development index, and rural livelihood. Students understand its potential for natural resources.

Discipline Specific Elective Papers: DSE2, Credit: 6

Environmental Economics

Course outcomes

This course focuses on the economic causes of environmental problems. Students understand the economic principles of environmental questions viewed as externalities, and their management through various economic institutions, economic incentives and other instruments and policies. Students will be able to analyse the economic implications of environmental policy as well as the valuation of environmental quality, assessment of environmental damages, and tools needed for the evaluation of projects such as cost-benefit analysis, and environmental impact assessments.

OR

Public Economics

Course Outcomes

Public economics is the study of government policy from the points of view of economic efficiency and equity, including public goods, market failures, and externalities. The course enables the students to understand the main theoretical and empirical concepts in public economics with a thorough analytical grasp of the implications of government intervention for allocation, distribution and stabilization. At the end of the module the students should be able to demonstrate the taxation and government expenditure policy and various environmental policy options.

Semester VI

Basic Econometrics: (CC13), Credit: 6

Course Outcomes

This course introduces students to the econometric methods used to conduct empirical analysis in Economics. Students will learn to estimate linear models using ordinary least squares and make inferences about population parameters. They will also understand the problems, detection, and consequences of multicollinearity, heteroscedasticity, and autocorrelation due to violations of Classical assumptions.

Field Survey and Project Report: (CC14).Credit:6

Course Outcomes

The project work may be done on any economic problem relevant to the study of Economics. This course helps to develop the ability of the students in field surveys and research work.

Discipline Specific Elective Papers: DSE3, Credit: 6

Social Economics

The course allows students to understand on the relationship between social behavior and economics. It explains how a particular social group or socioeconomic class behaves within a society, including their actions as consumers. Students examine the factors and decisions that relate to a person's educational level, health outcomes, or involvement in crime or violence.

OR

Political Economy

Course Outcomes

This course prepares the students to develop critical thinking on systemic structures, institutions of capitalist economies, and their evolution in a political-economic framework. Students will be able to understand the alternative schools of thought and are expected to read some classic texts and commentaries as well as more contemporary essays on the subject.

Discipline Specific Elective Papers: DSE4, Credit: 6

Entrepreneurship Development

Course Outcomes

Entrepreneurship Development will be able to develop the ideas, the master oral and visual presentation skills of students. Students establish a foundation of confidence in the skills necessary to cause others to act. It helps to find problems worth solving, mobilize people and resources, company formation, social innovation, the intellectual property licensing.

OR

Financial Economics

Course Outcomes

This course provides a strong theoretical foundation and an economic framework to understand the world of modern finance. Students acquire extensive knowledge of the interest rates; portfolio theory and pricing models such as the capital asset pricing model; hedging, speculation, and arbitrage; futures and options contracts; determination of forward and futures prices; trading strategies involving options;

The course also helps to enhance a student's understanding of real life investment decisions. The course has a strong employability quotient given the relatively high demand for skilled experts in the financial sector.

Generic Elective Courses

Introductory Microeconomics (GE1)

Generic Elective (GE) Credit: 6

Course Outcomes

The course introduces the students to the first course in Economics from the perspective of individual decision making as consumers and producers. The students learn some basic principles of microeconomics, interactions of supply and demand and characteristics of perfect, and imperfect markets.

Introductory Macroeconomics (GE2)

Generic Elective (GE) Credit: 6

Course Outcomes

This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course will allow students to understand the concepts associated with the determination and measurement of aggregate macroeconomic variables like GDP, savings, investment, money, inflation, and the balance of payments. It also introduces students to simple analytical frameworks (e.g., the IS-LM model) for the determination of equilibrium output.

Indian Economy (GE3)

Generic Elective (GE) Credit: 6

Course Outcomes

This course will help students understand the key issues related to the Indian economy. It will broaden their horizons and enable them to analyze current economic policy thus improving their chances of getting employed, and being more effective, in positions of responsibility and decision making. The course also serves to understand government policies related to agriculture, industry, banking, and services.

Development Economics (GE4)

Course Outcomes

This paper provides an insight into the issues in growth, development, and sustainability, factors responsible for the development, demographic and urbanization trends, and occupational structure in organized and unorganized sectors. It also discusses Indian development experience in terms of poverty, competitiveness, reforms, savings, investment, monetary and fiscal policies, and financial relations between centre and state. The purpose of this paper is to provide a comprehensive view of the issues at hand, and to make them aware of the current burning issues facing the Indian economy.

Department of History
Suri Vidyasagar College

Programme Outcomes (PO):

The CBCS system (educational pattern), if effectively implemented, provides academic flexibility to meet various needs of the students through learner-centric approach. It establishes relation between education, employment and skill development by improving course-curricula and evaluation system.

The students of all undergraduate courses are expected to acquire the following abilities at the time of their graduation as follows:

a) Critical Thinking

b) Self-directed Learning

c) Ethics and Social Interaction

d) Awareness of Environment and Sustainability

e) Participation in Effective citizenship.

Programme Specific Outcomes (PSO)

After completion of this course it helps to grow ethical values among history students. They gathered knowledge about the socio-cultural heritage of India and world as well. This course helps to grow intellectual values among history students and to develop liberal values among them. As a branch of social science, this course helps to develop social values among history students. Above all, it helps to grow national and international understanding among history students. After successful completion of B.A. three-year-degree course (honours/ General) in History, a student is expected to achieve the following outcomes:-

a) Critical approach to the study of history as a discipline by acquiring ability to distinguish between fact and fiction with the understanding that there is no one historical truth.

b) Understanding the theories and history of historical writing.

c) Developing perspectives on historical inquiry to understand different values and beliefs that shaped and affected the lives of the multiple cultures in the past.

d) Recognition of continuity and change, sequence of historical events across every civilization and any given period of time.

e) Understanding the concept of cause and effect to identify chains of events and developments, both in short term and long term. This concept aims to identify, examine and analyse the reasons why events have occurred and the resulting consequences or outcomes.

f) Developing a range of historical skills, essential for the process of historical inquiry.

g) Understanding the origin and purpose or usefulness of primary and secondary sources and production of well researched work using both sources.

h) Careers of history students can engage as educators in elementary schools, secondary schools and Higher Educational Institute, historic Sites and Museums etc. as a researcher they will associated in several fields like, Museums and Historical Organizations, Cultural Resources Management and Historic Preservation etc. this course provides to the students as communicator like, Writers and Editors, Journalists, Documentary Editors and Producers of Multimedia Material. History Student can employ as Information Manager in different fields

i.e. Archivists, Records Managers, Librarians and Information Managers. They will engage as Lawyer like, Lawyers and Paralegals, Litigation Support, Legislative Staff Work and Foundations. They might be involved in Business Associates as Historians in Corporations or Contract Historians, Historians and Non-profit Associations. They may directly engage in different ranks of the Archaeological Survey of India according to their performances like as Heritage Manager, Historic buildings inspector or conservation Officer, Museum education Officer etc.

Course Outcomes (CO)- CBCS Honours/ General Course

SEMESTER-I, HISTORY (HONOURS)

CC Paper-I History of India I (From Earliest Times to 600 AD)

Students of history will acquire knowledge regarding the primitive life and cultural status of the people of ancient India. They can gather knowledge about the society, culture, religion and political history of ancient India as well. They will learn about the origin of the Indian empire, trade and urbanizations of ancient civilization, like Harappa civilization, Vedic civilizations, later Vedic civilizations etc. How to develop Palaeolithic, Neolithic and Chalcolithic cultures in pre-Harappan period.

CC Paper-II Social Formations & the Cultural Pattern of the Ancient World

Students of can acquire knowledge about the evolution of human Society & how the society of agricultural and animal husbandry had begun in Ancient Times. They also learn how the human society had transformed from Nomadic to civilized society in ancient history of the World. They can acquire knowledge about the origin, features, nature and class composition of ancient Greek and Polis society. They can compare to each and other among the several societies of the world.

SEMESTER-I, HISTORY (GENERAL)

GE Paper – I/CC-1A History of India from Earliest Times to 300 AD)

As a history student will learn from this paper about the status of the society and culture of the Paleolithic, Mesolithic, Neolithic, Harappa and Bronze ages in ancient India. They will learn how to interpret of the historical sources of ancient India. They can acquire knowledge about the Vedic and later-Vedic Period of India and gather knowledge how to rise of Jainism and Buddhism religion and culture in ancient India. As well as conception will gather among them, how to rise of Magadha Empire from other sixteen Janapadas. They will realize about the religion and messages from Ashoke, the great Mourya Emperor from this paper.

SEMESTER-II, HISTORY (HONOURS)

CC Paper-III History of India II (600 - 1206 AD)

They can achieve knowledge how to develop Indian feudalism and evolution of the political structures of early-medieval north and south India. They can learn how the conquering of Islam had initiated in India and had transformed of Indian culture, society, religion and agrarian structures under the Islam power of medieval India. They will achieve knowledge about the religious and cultural changing scenarios after the advent of the Islam in India. They will gather knowledge how the Sultanate of Delhi had established in 1206.

CC Paper-IV Social Formation and Cultural Pattern of the Medieval World

They will learn about the religion, culture, literature and philosophy of the ancient Roman civilization. As well as they will acquire knowledge, how the crises of the Roman Empire had made and transitioned to Participate. They will acquire knowledge how the economic, social and religious development had made during the medieval European society. They can be learning about the socio-economic and political condition of the feudal organization of production, town's formation, trade and commerce, technological developments and crisis of feudalism in Europe.

SEMESTER-II, HISTORY (GENERAL)

GE-II/CC-1B History of India from 300 to 1206 AD)

They will learn how to rise & Growth of the Gupta's Empire in ancient India and to raise regional Kingdoms in different parts of India after downfall of the Empire. They can acquire knowledge towards the society, economy and culture in early medieval India. They can gather knowledge towards the Arabs conquest of Northern part of India from this paper. They can understand how the land of India becomes handed over to the foreign powers gradually from the ancient times to medieval.

SEMESTER-III, HISTORY (HONOURS)

CC Paper-V History of India III (1206 - 1525 AD)

Students of history will learn about the foundation, expansion and consolidation of the Sultanate of Delhi and also to the downfall of the Delhi Sultanate. They will learn towards the emergence of provincial dynasties & Consolidation of regional identities like, Bahamanis, Vijayanagar and Bengal. They also acquire the knowledge about the Changing scenarios of the

urban and rural societies after consolidation of the rule of the Sultanate of Delhi. They can learn about the activities of Delhi Sultanate i.e., revenue systems monetization, market regulations, growth of urban centers, trade and commerce, Indian Ocean trade etc.

CC Paper-VI Rise of Modern West – I (15th& 16th Centuries)

Students of history will learn about the rise of the modern west world and transition the society and economy from feudalism to capitalism. They will learn how to rise of Renaissance in Italy and spread of humanism in Europe and results of the European Reformation in the 16th century and Shift of economic balance from the Mediterranean to the Atlantic, Commercial Revolution, Influx of American silver and the Price Revolution. They gathered knowledge towards the emergence of European state system like Spain, France, and England etc.

CC Paper-VII History of India III (1526 - 1757 AD)

They acquire knowledge towards the Turkey's invasion & Struggle for Empire in North-Western India and foundation of the Mughal Rule in India. Students will learn about the Mugham Indian society, economy and culture after consolidation of the Mughal rule India. They will learn about how the Regional Powers had been raised in different parts of India after downfall of the Mughal Empire of Delhi. They can gather knowledge to the downfall of the Mughal Empire only lack of unity among the Mughal courtiers and resulted to raise provincial kingdoms in Bengal, Hyderabad, Ayodhya, Mysore and Maratha in Western India.

SEMESTER-III, HISTORY (GENERAL)

CC-1C/GE Paper-III History of India from 1206-1707 AD)

They will learn how the foundation, expansion and consolidation of the Delhi Sultanate had established and ruled under five dynastic i.e. Ilbari Turky's, Khaljis, Tughlaqs, Syed and Lodhi for a long time. They also learn about the nature of the state, nobility and under the Ulemas during Sultan and Mughal rule in medieval India. After the downfall of the Delhi Sultanate how the Mughal dynasty had come to power in 3 India and had ruled upto 1707. They can acquire knowledge towards the polity, economy, Religion, Art, Architecture and Society during Mughal rule in India.

SEC Paper-I Archives & Museums in India

Students will learn how to maintain documentary, visual and material remains of the past either in house or Institutions. Students will be encouraged to undertake collection, documentation and exhibition of such materials in their localities and colleges. They can understand towards the important and significance of the Museum and Archives to build the history of India. Thus

education tour to the National Archives and National Museum is an integral part of the history students.

SEMESTER-IV, HISTORY (HONOURS)

CC Paper-VIII Rise of Modern West – II (17th & 18th Centuries)

History students will learn about the European crisis of economic, social and political dimensions as well as the English Revolution, major issues like political and intellectual currents in 17th century. They will learn about the rise of modern science in relation to European society by the Renaissance and the European politics in the 18th century like parliamentary monarchy, patterns of Absolutism in Europe and prelude to the Industrial Revolution in England and other European countries.

CC Paper-IX History of India (1758 -1857)

They learn how to establish the Company's Rule in India after the battle of Plessey and Legitimized the regulating Act, Pitt's India Act, Charter Acts of 1813, 1833 and 1853, Administrative, Military, Police and Educational Reforms as well. They will learn towards the land revenue systems under the company's rule in India at the same time. The renaissance and socio-religious reforms movement occurred by Rammohan Roy (Brahma Samaj), Young Bengal, Vidyasagar under the rule of the Company's rule in Bengal.

CC Paper-X History of India III (1858 - 1964)

They will learn from this chapter about the local rebellion and movements like the Indigo rebellion, the Deccan Riots, the growth of the new middle class; the age of associations, the Aligarh movement, the Arya and the Prarthana Samaj aftermath of 1857. They will learn the real historiography of Indian Nationalism; Birth of Indian National Congress, The Moderates and the Extremists, Partition of Bengal, the Swadeshi movement in Bengal in 1905. They can acquire knowledge how to rise of Gandhis power in Indian politics and his activities towards the freedom like, Rowlatt Satyagraha, Khilafat and Non-cooperation movement, The Swarajya party, Poona Pact, Civil Disobedience Movement, Quit India Movement. They also learn how to raise communal politics and opposition politics on the eve of the freedom movement in India and aftermath of partition in India.

SEMESTER-IV, HISTORY (GENERAL)

CC-1D / GE Paper-IV History of India (from 1707-1950 AD)

Students of history will learn how to raise regional powers in India after the downfall of the Mughal Empire and in the course of time how to rise of the Company's absolute power in India. They can understand about the colonial nature of state during 200 years rule of the British power in this land. Hey can gather knowledge about how the Indian society, politics, religion and economy had changed during the Company's rule in India. They will aware about in which situation the Indian Nationalism had raised among the Indian people for freedom. They will acquire knowledge about the freedom struggle and partition of India and aftermath.

SEC Paper-II Understanding Popular Culture

They will gather knowledge regarding the popular culture through audio-visual expressions like, Folk Art, Calendar Art and Photography. They will acquire knowledge about the Theatre, Music, folk songs and Jatras by performance and Participations in real life. They can realize about the impact of the internet and audio-visual media on popular culture of the World.

SEC Paper-II Or Art Appreciation: An introduction to Indian Art

Students will learn about the Indian art, from ancient to contemporary times, in order to understand and appreciate its diversity and its aesthetic richness. As well as student will equip with the abilities to understand art as a medium of cultural expression. It will give students direct exposure to Indian art through visuals, and visits to sites and museums.

SEMESTER-V, HISTORY (HONOURS)

CC Paper-XI History of Modern Europe I (1789 - 1870)

They will learn about the French Revolution and its impact of European countries. Unity and power makes people to strength which has showed in the French revolution in 1789. How the Industrialization had occurred and it's affected on socio economic transformation of Europe. They will know about the politics of super power among the European countries. How the sense regarding the nationalism and unification had developed among the European countries on eve of the 2nd world war.

CC Paper-XII Studying History Writing: Indian & Western

Students of history will acquire knowledge about the importance of Time, Space & Human Agency and sources in History. They will gather knowledge towards the primary and secondary sources of Indian history. They can understand regarding the historiography, subjectivity, objectivity and the relation between history and other disciplines. They can gather knowledge about the process of research history.

DSE Paper-I Life & Culture in Pre-Colonial Bengal: Prehistoric times to mid 18th century

Students will acquire about the socio-economic, cultural and religious life of Bengal from earliest inhabitants to colonial period through this paper. As well as they will acquire knowledge about how to rise and development of Bengali language and literature and about the origin of Folk traditions of Bengal. They acquire to knowledge how to raise Vaisnavism, Spread of Buddhism, Jainism, and Islamism in Bengal.

DSE Paper-II Life & Culture in Colonial Bengal (1757-1947)

Students will learn how to rise and establishment of East India Company's rule in Bengal after the downfall of the Nawab's regime. As well as they will gather knowledge towards the changing scenarios of the social-cultural and economic life up to 19th Century. As well as they acquire knowledge about the Missionaries activities and influence on the contemporary society this led to raise renaissance in Bengal. Above all they will gather knowledge about the impact of the company's Rule in Bengal and mergence of Nationalism upto Freedom in 1947.

SEMESTER-VI, HISTORY (HONOURS)

CC Paper-XIII History of Modern Europe II (1871-1945)

Students of history will learn about how the world became dividing after First World War among the super powers of the world. They also learn how the aggressive foreign policy of Italy and Germany influenced to the European countries and compelled to form allied powers of the world. Gradually, the 2nd world war had occurred and the League of Nations was established aftermath of the war which affected to the world politics. Ultimately, the world became divided into two super powers .i.e. USSR and associate countries on the other hand USA and their associate powers.

CC Paper-XIV Making of the Contemporary World (1946 – 2000)

Students will learn about the post-war developments of Social, Political and Economic scenarios of the World and decolonization and the emergence of the Third world. As well as they will learn origin of the Cold War and Changing World political Scenarios and emerging trends in culture, Media and Revolution among European countries.

DSE Paper-III History of Modern East Asia (1840-1919)

Students will learn about the nature and structure of the traditional Chinese society and how to transform the Chinese society from traditional to modern cultures. They can also learn about how the strong countries of the World were captured the Chinese society, culture and economy during the nineteenth century. They will be aware how the Chinese were united towards the foreign colonial powers and defeated them and ultimately gain to freedom.

DSE Paper-IV History of China & Japan (1919-1949)

Students will aware about the emergence of the communist party of China and it's affected to the entire Asian countries. They will learn how the Chinese Republic came out from colonial pressure and bondage. As well as they will gather knowledge about the emergence of Japan as military state of East Asia on the eve of the World War-II this had influenced to the World War-II.

B. **Course Outcomes (CO)- CBCS General Course**

(SEMESTER-I)

CC Paper-I A -History of India from Earliest Times to 300 AD)

As a history student will learn about the age of Palaeolithic, Mesolithic, Neolithic, Harappan and Bronze Cultures in ancient India. Interpretation of the historical sources of ancient India as well. They can acquire knowledge about the Vedic Period and the Rise of Jainism and Buddhism culture in ancient times of India. They will gather conception how to Rise of Magadha Empire after complete the abolition of other sixteen Janapadas and after the downfall of the Magadhan empire how to rise of regional powers in Northern part of ancient India.

(SEMESTER-II)

CC Paper-I B-History of India from 300 to 1206 AD)

They will learn about how to rise of Mauryan Empire & politics led by Asoka and the Fall of the Mauryas. They can acquire knowledge about the Post-Mauryan Polities with special

reference to the Kushanas and the Satavahanas; Gana-Sanghas, rise of the Guptas, development of the Empire, Art, Architecture and Literature etc. They acquire knowledge towards the changing status of agrarian economy, trade, commerce and urbanization of towns.

(SEMESTER-III)

CC Paper-I (C)-History of India from 1206-1707 AD)

They will learn how the foundation, expansion and consolidation of the Delhi Sultanate had established under five dynastic i.e. Ilbari Turky's, Khaljis, Tughlaqs, Syed, Lodhi and the nature of the state, nobility and under the Ulemas in medieval India. After the downfall of the Delhi Sultanate how the Mughal dynasty had come to power in India. They can acquire knowledge about the polity, economy, Religion, Art, Architecture and Society upto 1707.

SEC Paper- I-Museums & Archives in India

Students will learn how to maintain documentary, visual and material remains of the past either in house or Institutions. Students will be encouraged to undertake collection, documentation and exhibition of such materials in their localities and colleges. They can understand towards the important and significance of the Museum and Archives to build the history of India. Thus education tour to the National Archives and National Museum is an integral part of the history students.

CC Paper-I OR Indian History & Culture

Students will learn about the environment, culture, tradition, practices of Indian people. They will acquire knowledge towards the urbanization and changing socio-cultural scenarios of India. As well as they can gather knowledge about the cultural heritage, cultural forms and cultural expressions performing arts, fairs and festivals. That does will be fruitful through the field work by the history students.

(SEMRSTER IV)

CC Paper-I D-History of India from 1707 - 1950 AD)

Students of history will learn how to raise regional powers in India after the downfall of the Mughal Empire and in the course of time how to rise of the Company's rule in India. They can understand during two hundred years rule of the British power in this land, how the society, politics, religion and economy had changed and how to rise of the National Movement for freedom. They will acquire knowledge about the freedom struggle and freedom of India and aftermath of Indian status.

CC Paper-2 D-Social Formations & the Cultural Pattern of the Ancient World

Students of can acquire about the evolution of human Society & how to beginning of agriculture and animal husbandry of Ancient Times. About how to transform the human society from Nomadic to civilized society of ancient World. They acquire the knowledge about the origin, features, nature and class composition of ancient Greek and Polis culture and society.

SEC Paper-II-Understanding Heritage

Students to understand the different facets of heritage and their significance, they also understand about the legal and institutional frameworks for heritage protection in India as the challenges facing it. They can examine towards the implications of the rapidly changing interface between heritage and history. They will gather knowledge about the heritage through project and visit to Museum and Archives.

(SEMESTER-V)

DSE Paper-I-(A)-Some Aspects of Society & Economy of Modern Europe (15th to 18th Centuries).

Students will learn political and economic structure of Feudal society in 15th century and its crisis in 18th century. They will gather knowledge about the nature Feudal Society, regional variation, crisis in Feudalism and transition debate. They will acquire knowledge how to raise renaissance in Europe after downfall of feudal Society in Europe and also be learn how the European Society transformed from Feudalism to Capitalism.

GE Paper-I-Women Studies in India

Students will learn about the basic Concepts & Theories of women studies as well as defining gender, ideology, practice and relationship between gender, caste, class religion & politics. They will acquire knowledge about the emergence of women studies in India from 1980 to till that. They will gather knowledge about the contribution of women towards the society through political, social and religious fields. They will aware about the violence against the women and government preventive laws for their save. Now the government became active to the development of women empowerment by introducing new rules and regulations which also are learn as history student.

GE Paper-I-Or Political History of Modern Europe 17th-18th Century

Students will learn about the nature of Feudal Society and its regional variations, Political dimensions of feudal and Economic crisis. They also be learn how to emergence of absolutist States in European countries and their formation patterns. They will acquire knowledge about

the political situation of the 15th to 18th century Europe which impetus to form the modern European society. SEC-III-Understanding Popular Culture They will gather knowledge towards the popular culture through audio-visual expressions like, Folk Art, Calendar Art and Photography. They will acquire knowledge about the Theatre, Music, folk songs and Jatras by performance and Participations in real life. They can realized about the impact of the internet and audio-visual media on popular culture of the World.

SEC-III-OR An Introduction to Archaeology

Students will gather knowledge about definition &components of archaeology. They will acquire knowledge from this paper how to write historiography and research methodology in history. They will learn how to identify archaeological sites and explorations of ancient history. Students of this paper will acquire a huge knowledge towards the documentation, codification, classification, analysis of findings through field work.

(SEMESTER-VI)

DSE Paper-I (B)-Some Aspects of European History (1789 - 1945)

They will learn about the French Revolution and its impact of European countries. Unity and power makes people to strength which has showed in the French revolution in 1789. How the Industrialization had occurred and it's affected on socio economic transformation of Europe. They will know about the politics of super power among the European countries. They also learn how Italy and Germany's aggressive foreign policy which influenced to form opposition allied powers of the world. Gradually, the 2nd world war had occurred and the League of Nations was established aftermath of the war which affected to the world politics. Ultimately, the world became divided into two super powers .i.e. USSR and associate countries on the other hand USA and their associate powers.

GE Paper-I-Gender & Education in India

Students will gather knowledge about the history of education in India and the status of women education from earliest times to modern age. They will be aware about the women's education in medieval times as well as regional trends of women's education in pre-colonial India. They will be aware about the role of Christian missionaries in spreading female education, recent debates and indigenous initiatives at women's education in India. They will be aware about the role of Schools and Colleges to spread women education in colonial and post-colonial period through expansion of infrastructural facilities in education, Technical and vocational education for women. At last they will learn that education as a tool of Empowerment today.

SEC-I (A)-Art Appreciation: An Understanding to Indian Art

Students will gather knowledge about the Indian art, from ancient to contemporary times, in order to understand and appreciate its diversity and its aesthetic richness. The course will equip for history students with the abilities to understand art as a medium of cultural expression. Students will acquire knowledge through direct exposure to Indian art through visuals, and visits to sites and museums.

DEPARTMENT OF BOTANY
SURI VIDYASAGAR COLLEGE

Programme outcomes:

The under-graduate programme of Botany enhances students' skills in the following aspects:

Understood the basic concepts of plant kingdom and interactions with the fauna and environments and their significance in our everyday life.

Acquired knowledge about different instruments and their uses. This knowledge helps in skill development of students in practical fields.

Developed skills from different practical experiments to analyze scientific data critically and systematically.

Acquired the skills of planning, habit of working in groups, field survey, deliver own view after analyzing various scientific phenomenon and other skills which strengthen their future.

Understood the significance of plantation, found way out for utilization of renewable natural resources in daily life to construct sustainable development.

Besides regular curriculum, department allows some of the extracurricular programmes such as, singing, dancing, making wall magazine etc.

This programme have been inducing our students to secure their jobs as teachers-both in schools and higher education institutes, administrators in government jobs as well as in private companies, personnels in industries, naturalists and in many other positions.

Every year 6-7 students get admission for PG in different university in West Bengal and outside the state. Last year TCS Company hired one graduate student from this department through compassing.

Programme specific outcome

Students develop a holistic knowledge in the undergraduate course starting from archegoniate group, Taxonomy of Angiosperm, Morphology, Palynology, Palaeobotany, Anatomy, Phytogeography, to advanced fields of plant science such as Cell and Molecular Biology, Inheritance biology, Plant metabolism, Microbiology, Plant physiology etc.

In practical classes students work out the specimens which help them to understand and to identify the specimens.

In practical classes students can use simple and compound microscope, centrifugation, laminar air flow, autoclave, electronic balance, several apparatus regarding biochemistry and plant physiology practical.

Students have a vast knowledge about preparation of thin section of plant materials in slides, different types of staining procedure, squashing and smearing technique, preparation of practical records, field note books, herbarium sheets of plant specimens, projects assignments etc., which can boost them in their professional carrier in future as technical point of skills.

Students have a concrete knowledge regarding computer's software, mean, median, mode, standard deviation, standard error, chi-square test etc. which can build up and strengthen their analytical mind in future.

The local and long field excursions help the students to develop knowledge about the local flora and flora of specific phytogeographic region in their natural habitat.

Students build up awareness and knowledge in environmental related issues such as waste management, biodiversity conservation, pollution monitoring, etc.

Students after passing under graduate course can explore in various field of research viz. Conservation of Ecosystem, Environmental Disaster Management, herbal drugs and medicinal plants, Host pathogen interaction, crop protection and plant disease management, GIS and remote sensing, Intellectual Property Rights, Quarantine etc.

Students of UG course get the chance to have an exposure in skill enhancement courses such as Agricultural Botany, Biofertilizers, Medicinal Botany and discipline specific elective courses such as Reproductive biology of Angiosperms, Bioinformatics, Natural Resource Management, Plant Evolution and Biodiversity, Industrial and environmental Microbiology, Medicinal and Ethno Botany etc .This will open up new avenues and job opportunities for the Honours and General students

The contents of core course and optional courses in UG curriculum are beneficial for the students to get prepared for Post-Graduation admission, NET/SET/GATE and teaching in Schools other competitive examinations.

Course outcomes:

The subject "Botany" has two distinct prospective –Classical and Applied. Thus the Botany course has been designed in theoretical and practical parts.

The undergraduate Microbiology syllabus has been designed under choice based credit system (CBCS) since 2017-2018.

The B.Sc. Botany Honours syllabus has been divided in six semester programme containing total fourteen (14) Core Course i.e., CC1 to CC14, two Skill Enhancement Courses i.e., SEC 1 & SEC 2 in 3rd and 4th semester and four Discipline Specific Elective Course i.e., DSE 1, DSE 2 in 5th semester and DSE 3, DSE 4 in 6th semester.

The B.Sc. Botany General syllabus has been divided in six semester programme containing total four (4) Core Course i.e., CC1A to CC1D and two (2) two Discipline Specific Elective Course i.e., DSE-1A & DSE-1B. Apart from that four (4) Skill Enhancement Courses i.e., SEC 1 to SEC 4 is incorporated from 3rd to 6th semester.

Paper wise details course outcome B.Sc. Honours in Botany

Semester- I

Paper Code	Paper Name	Outcome
CC 1	Microbiology and Phycology	Students acquire knowledge about history of Microbiological inventions. Contribution of scientists in various fields of Microbiology. Diversity of Microbial world. Life cycle and economic importance of microbes. Algal evolution, range of thallus structure of algae, economic importance of algae Algal classification Staining techniques and Microscope handling
CC 2	Archegoniatae	Students learn about morphology, anatomy, reproduction, lie cycle and economic importance of Bryophyta. Students learn about morphology, anatomy, reproduction, lie cycle and economic importance of Pteridophyta. Students learn about morphology, anatomy, reproduction, lie cycle and economic importance of Gymnosperms. In practical classes students get knowledge about staining techniques and microscope handling In local field excursions enable the students to identify the different genera of moss, fern and gymnosperms.

Semester- II

Paper Code	Paper Code	Outcome
CC 3	Mycology and Phytopathology	In mycology students acquire knowledge about thallus structure, life cycle, reproduction and economic importance of various classes of fungi. They can be interested about applied area of fungal biotechnology. In Phytopathology, students' study about important plant diseases, host pathogen interaction and plant disease management. The study of Phytopathology is very much essential in the field of crop protection and disease management

CC 4	Morphology & Anatomy of Angiosperms	Student have a definite knowledge about the details morphological structure of root, stem, leaf, bud, flower, fruit, seed and their dispersal mechanism, inflorescence etc. They get information about various morphological alternation of root, stem, leaf and floral parts for their adaptive purpose. In anatomy students get knowledge about various types of plant tissues and their arrangements in plants body with their functions. In practical they are accustoming with microscope handling.

Semester- III

Paper Code	Paper Code	Outcome
CC 5	Plant Ecology and Phytogeography	Students get knowledge about various ecological components and their importance such as soil, water, land, light, wind, temperature, fire etc. They have grown concept about ecosystem, population, energy flow, productivity, plant communities, phytogeography. In practical students can habituated with various instruments i.e., Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer/hygrometer, rain gauge and lux meter
CC 6	Plant Systematics	Student get clear concept about basic components of taxonomy with systematics. They know modern terminologies of taxonomy, Taxonomic hierarchy, Botanical nomenclature, Systems of classification, Biometrics, numerical taxonomy and cladistics. students go for a long excursion in a place of higher altitude to observe and identify these groups of plants in their natural habitat
CC 7	Economic Botany	students know about the economic importance of cereals, legumes, sugar, spices, braverages, oil, natural rubber, timber yielding plants, fiber producing plants and their origins. In practical, students have developed the idea of project work.
SEC-1	Agricultural Botany	Students can grow their skills in organic farming technology.

		They may get knowledge about some phenomena of physiology of plants. They may develop skill about plant breeding, plant biotechnology through tissue culture.

Semester- IV

Paper Code	Paper Code	Outcome
CC 8	Palaeobotany& Palynology	Students come to know fossils and fossilization process, stratigraphy, geologic time scale, microsporogenesis, pollination and ovule types In practical they can recognize various types of fossils and they get knowledge about various types of pollen structure in compound microscopes.
CC 9	Biomolecules and Cell Biology	Students come to know about origin and evolution of cells. They know the detailsultra structure of nucleus and various cell organelles and their functions. In practical they get details knowledge about mitosis and meiosis cell division from plant specimens and chromosomal morphology.
CC 10	Molecular Biology	Students get knowledge about DNA replication, transcription, translation, gene regulation and recombinant DNA technology. In Practical classes students carry out a number of experiments on Plant Molecular Biology.
SEC-2	Biofertilizers	Students may develop skill about microbes as biofertilizers, isolation and mass multiplication of microbes, mycorrhizal association. They develop skill about organic farming.

Semester- V

Paper Code	Paper Code	Outcome
CC 11	Plant Physiology	Students may well aware about plant-water relation, mineral nutrition, nutrient uptake, translocation in phloem, plant hormones, flowering physiology and circadian cycle of plants. They get details concept of plant physiology through various physiological experiments.
CC 12	Plant Metabolism	Students come to know about metabolism, carbon assimilation and oxidation, carbohydrate, lipid and nitrogen metabolism.

		They get knowledge about signal transduction of plants. In practical they get details experimental knowledge about various aspects of photosynthesis, respiration and germination.
DSE-1	Reproductive Biology of Angiosperms	Student get details theoretical and practical knowledge about anther and pollen biology, pollination, fertilization, ovule, embryo, endosperm, seed, polyembryony, apomixis etc.
DSE-2	Bioinformatics	Students can introduce a new concept of Bioinformatics and its modern uses in research. They get theoretical knowledge about database, biological sequence, sequence alignment, molecular phylogeny. In practical they are accustoming with computer software with internet browsing.
	Natural Resource Management	Students know the essentiality of natural resources and their proper managements for sustainable developments. They know about land, water, biodiversity, forests, energy flow, ecological footprints and different national and international organization of natural resources management and conservation agencies.

Semester- VI

Paper Code	Paper Code	Outcome
CC 13	Genetics & Plant Breeding	Student must aware about mendelian genetics, extra chromosomal inheritance, linkage, crossing over, chromosome mapping, gene and chromosomal mutations, population genetics. They get knowledge about methods of crop improvements via plant breeding. In practical class they can study chi-square test, chromosome structure and behaviour, pedigree analysis, epistatic problems through seed samples.
CC 14	Plant Biotechnology	Students get knowledge about plant tissue culture, recombinant DNA technology, gene cloning, gene transfer method. They should know about the application of plant biotechnology. In practical they can accustoms with tissue culture medium, various technique of plant tissue culture with different equipments.

DSE-3	Plant Evolution and Biodiversity	Students get knowledge about early forms of plants life, evolutionary trends, phylogeny, evolutionary theories and plant diversity. In practical they must know morphological and anatomical structure of plants with their adaptive features. Know about the habit and habitat of diversed plants genera through field visit.
DSE-4	Industrial and Environmental Microbiology	Students get details skill about industrial microbiology and its application in modern world. They get knowledge about bioreactors and fermentation process, importance of microbial enzymes in industry. They know the different types of microbes in environment and their agricultural importance. In practical, industry visit may enhanced their interest manyfold about practical application of microbes.

DEPARTMENT OF MICROBIOLOGY

SURI VIDYASAGAR COLLEGE

Programme outcomes:

The under-graduate programme of Microbiology enhances students' skills in the following aspects:

Understood the basic concepts and fundamental principles related to various scientific facts and their significance in our everyday life.

Acquired the knowledge about different instruments and their uses. This knowledge helps in skill development of students in practical fields.

The skills of observations from the scientific experiments make them able to analyze the scientific data critically and systematically.

Acquired the skills of planning, habit of working in groups, field survey, deliver own view after analyzing various scientific phenomenon and other skills which strengthen their future.

Developed scientific outlook not only with respect to science subjects but also in all aspects related to life.

Besides regular curriculum, department allows some of the extracurricular programmes such as, singing, dancing, making wall magazine etc.

Programme specific outcomes:

The whole biosphere depends on the activities of microorganisms and they influence human society in innumerable ways. Students will appreciate the biological diversity of microbial forms. They will become aware of the important role of microorganisms play in buildup and maintenance of a clean and healthy environment.

Students, after studying Microbiology, will acquire precise knowledge on different microbial culture techniques. This knowledge will help them in fields of industry and research work.

Students will gather clear knowledge about sterilization and disinfectant procedures. Students will be able to implement this knowledge in preventing to spread contagious microbial diseases in community.

From this programme, students will learn various industrial processes like “Fermentation” and the gain knowledge on handling of different industrial instruments through visiting programme in industry and institution which is included in our Microbiology programme.

Students become familiar with various environmental issues such as, waste management, roll of microbes in green-house effect, GM crops etc.

Students will able to communicate and analyze the core theories in Microbiology and related sciences (Biochemistry, Immunology, Medical Microbiology, Molecular Biology, Genetic Engineering, Bioinformatics)

From the practical microbiology, students will become familiar with laboratory rules and regulations, various instruments, their standard operating procedures and their maintenance. This practical based knowledge will become very much helpful for students in their professional fields.

Course outcomes:

The subject “Microbiology” has two distinct prospective – Academic and Applied. Thus the Microbiology course has been designed in theoretical and practical parts.

The undergraduate Microbiology syllabus has been designed under choice based credit system from 2017.

The B.Sc. Microbiology Honours syllabus has been divided in six semester programme containing total fourteen (14) Core Course i.e., CC1 to CC14, two Skill Enhancement Courses i.e., SEC 1 & SEC 2 in 3rd and 4th semester and four Discipline Specific Elective Course i.e., DSE 1, DSE 2 in 5th semester and DSE 3, DSE 4 in 6th semester.

Semester – I:

The semester-I syllabus contains two core courses i.e., CC1: Introduction to Microbiology and Microbial Diversity and CC2: Bacteriology.

From CC1: (Introduction to Microbiology and Microbial Diversity), Students acquire knowledge about history of Microbiological inventions, contribution of scientists in various fields of Microbiology, the diversity of Microbial world.

Develop knowledge on the structure, general characteristics, and reproduction of various microorganisms such as bacteria, algae, fungi, protozoa etc.

From CC2: (Bacteriology), Students learn about different Microbial culture techniques (isolation, identification, cultivation etc.), culture preservation, Staining techniques and Microscope handling.

Semester- II:

In semester –II, there are two Core courses- CC3: Biochemistry and CC4: Virology

In CC3: (Biochemistry), Students develop knowledge on different structure, properties, reactions of different biomolecules such as, Carbohydrates, Proteins, Lipids, Enzymes, Vitamins, Nucleic Acids and also their role in developing cell as well as living organisms.

In CC4: (Virology), Students get clear knowledge on structure, characteristics, reproduction of viruses and also learn the techniques of isolation and enumeration of Bacteriophage.

Learn concepts of cancer and oncogene, antiviral drugs and their mode of action etc.

In applied sense, students study about viral vectors, vaccines, gene therapy and able to understand their future roles.

Educational tour in industry/institute enables the students to gather a clear knowledge on various instruments and their practical implications.

Semester- III:

In semester –III, the students are offered three Core courses i.e., CC5: Microbial Physiology and Metabolism; CC6: Cell Biology; CC7: Molecular Biology and one Skill Enhancement Course i.e., SEC 1: Microbial analysis of air and water or Microbial diagnosis in health clinics.

In CC5: (Microbial Physiology and Metabolism), students learn about different physiological and metabolic processes of microorganisms. This knowledge helps them to know how to cultivate bacteria in their optimum condition.

In CC6: (Cell Biology), students gather knowledge on cell structure, cell division, cell cycle, and abnormality of cell division.

In CC7: (Molecular Biology), students acquire a clear concept on DNA Replication, Transcription, Translation and other molecular mechanisms.

In molecular biology practical, they learn about isolation and estimation of DNA from bacteria, purity checking of DNA, separation of DNA etc.

Semester – IV:

Semester-IV contains three Core course i.e., CC8: Microbial Genetics; CC9: Environmental Microbiology; CC10: Food and Diary Microbiology and SEC2: Bio-fertilizers and Bio-pesticides or Food fermentation Techniques.

The course CC8: (Microbial Genetics) help to understand genome organization and mutation mechanisms of microorganisms.

Students learn the mechanisms of genetic exchange between organisms, acquire basic idea on transposable elements and also concepts of Phage genetics.

In CC9: (Environmental Microbiology), students are able to know the habitats and associated ecosystem of microorganisms; solid and liquid waste management techniques, methods to detect coliform bacteria present in water.

In CC10: (Food and Diary Microbiology), students learn the microbial activity in food; fermented food products, concept of food preservation methods, various cause of food spoilage.

Semester – V:

In semester-V, there are two Core course, i.e., CC11: Industrial Microbiology; CC12: Immunology, and two Discipline Specific Elective, i.e., DSE1: Microbes in Sustainable Agriculture and Development or Bioinformatics, and DSE2: Instrumentation and Biotechniques or Microbial Biotechnology.

In CC11: (Industrial Microbiology), students learn about a fermenter – its structure, types, operational mode, design etc., the fermentation process, production mechanisms of industrial products like citric acid, antibiotics etc and their purification process.

In CC12: (Immunology). Students gain knowledge on immune system and associated immune cells and organs, understand the structure and function of Antigen and Antibody.

Educational tour in industry/institute enables the students to gather a clear knowledge different parts and their function of an industrial fermenter as well as various recovery processes of fermented products. This knowledge enhances skills of students and also helps in their practical implications.

Semester – VI:

Semester –VI comprises two Core course named CC13: Medical Microbiology; CC14: Recombinant DNA Technology and two Discipline Specific Elective, i.e., DSE3: Advances in Microbiology or Term paper and its power point presentation and DSE4: Biosafety and Intellectual Property Rights or Plant Pathology.

From CC13: (Medical Microbiology), students acquire knowledge on normal microflora of human body, techniques of sample collection, transport and storage for disease diagnosis, diseases caused by microbes like bacteria, virus, fungi.

In CC14: (Recombinant DNA Technology), gather concept of genetic engineering based techniques like molecular cloning and associated enzymes, different cloning vectors, techniques of Polymerase chain reaction.

Skill enhancement course and Discipline specific elective course:

Students have to take one Skill enhancement course (SEC1 & SEC2) in 3rd and 4th semester and Discipline specific elective course, i.e., DSE1 and DSE2 in 5th semester and DSE3 and DSE4 in 6th semester.

From this course, students acquire knowledge on advanced microbiological procedures, researches, modern disease diagnosis techniques, and related instruments.

Students are able to understand about different microorganisms used as bio-fertilizer and bio-pesticide

Able to know fermentation techniques and production of fermented foods.

Students acquire valuable knowledge on microbial activity in sustainable agriculture, different tools and softwares of Bioinformatics.

Learn about different bio-safety laboratories, their rules and regulations.

Learn about various intellectual property rights and duties of a patent owner. This helps them to understand the importance of invention and their documentation.

These courses help students to increase their practical based knowledge; they are able to apply this knowledge in practical fields. Therefore, the Microbiology course will become more attractive and enthusiastic to students.

After completion of undergraduate programme from our Microbiology department, most of the students go for post-graduation.

Many students of our department have been placed in hospitals and industries as microbiologists, many students have got admission in different research institute and universities for PhD programme.

DEPT. OF PHYSIOLOGY
SURI VIDYASAGAR COLLEGE
SURI, BIRBHUM

Program Outcome:

Programmes in Physiology enrich the students in various scientific skill both in theory and practice. It develops their aptitude for different stream of physiology such as systems physiology, cell and molecular biology, genetics, biochemistry, biophysics and instrumentation, biostatistics, nutrition, ergonomics, sports physiology, environmental physiology, immunology and microbiology, biotechnology and toxicology including pharmacology.

This programme helps the students to acquire practical knowledge on pathology, hematology, histology, electrophysiology, microbial techniques and human experiments. The programmes have been instigating the students to secure skillfully their jobs as researchers and

scientists in the institutes, teachers-both in schools and higher education institutes, administrators in government jobs as well as in private companies and in many other positions. From the programmes, the learners develop their aptitude of individual planning, habit of working in groups, field survey, literature reviews, diligence and other skills which fit them in various aspects of life.

Physiology Honours:

Program Specific Outcome:

Semester	Program Specific Outcome (Semester Specific)
SEM I	This semester is crucial for the students as basic concepts are developed which will help them to comprehend about cell biology and biophysical techniques. These core courses are needed to be studied in details. Students can apply their acquired knowledge in their higher studies as well as to prepare for different competitive exams. Students often find their interest from the given topics and can pursue career on molecular biology and biophysics. They develop a liking for the subject and often choose academic career. After completion of SEM-I, students successfully acquires both theoretical and practical knowledge on Nerve and Muscle physiology, Sensory physiology and basic concepts on Biochemistry. They gain experience on experimental physiology.
SEM II	Students gain conceptual knowledge about the biomolecules. After interacting with these topics in this semester, students open up their inquisitive mind. Students in their post graduation can choose Nerve physiology or Biochemistry. Students are able to clear different exams like IIT-JAM, NET, SET, TIFR-ICMR after thoroughly learning these chapters in both the semesters. Students after studying SEM III, get knowledge on properties and functions of blood and lymph pursue idea on features of heart, systematic and regional circulation, concept of electrocardiogram and identifying cardiac arrhythmia and other cardiac tissues.
SEM III	Get idea about ascending and descending tracts, physiology of pain, role of basal ganglia and cerebellum in controlling posture and movement, functions of higher centre's of brain have the ability to use techniques, skills, resources for practicing in the field of hematology and cardiovascular diseases have the ability to do higher studies in neuroscience, good research work on Parkinson's disease, Ahlzeimer's disease cognitive neurobiology, learning and memory, etc

ability to design and conduct experiments, as well as to analyze and interpret data, and synthesis of information.

After successfully completion of the courses of SEM-IV students have both theoretical and practical knowledge about metabolism & nutrition, gastrointestinal functions, respiration and clinical biochemistry or hematological techniques.

SEM IV

The skill enhancement courses will open up technical and practical site for the students and they will able to acquire knowledge in the applied field of clinical biochemistry and hematological techniques.

After studying all these courses in detail most of the students go for the post-graduation and higher studies.

They mainly go for various research fields like nutrition, biochemistry, high altitude physiology etc. and get established in research and development section of many medical and nutritional based industries.

SEM V

Learn the structure function relationship of vision, audition, olfaction and gestation.
Learn the location, function, disorders of all endocrine glands of human and other mammals.
Learn statistical application in biological sciences. Can able to validate the experiment with testing hypothesis.
Learn bacteriology, virology, antibiotics, immune system, immunity, abnormal immunity.
Learn how to humanizing work and work environment. Can evaluate occupational stresses and apply ergonomic intervention to alleviate the stress.
Learn sports science with respect to sports nutrition, metabolism, training, detraining, sports injury.
Learn mammalian reproductive system, their endocrine role in reproductive life. Understand disorders of reproductive system.
Learn structure function of different parts of excretory system, their endocrine and non-endocrine role in detoxification of human body. Also learn non excretory functions of kidney.

SEM VI

Learn different aspects food and nutrition, estimation of energy requirement, preparation of balanced diet chart of normal and diseased human beings. Can able to assess nutritional status of an individual or a family.
Learn cytogenetics and molecular aspects of gene, genetic engineering.
Understand principles of pharmacology, toxicology, drug, drug response relationship and effect of drugs on human health.

Learn the fundamental principles of nanoscience and nanotechnology, nanostructure and its application in medical science.

Understand bioinformatics as a subdiscipline of biology and computer science concerned with the acquisition, storage, analysis, and dissemination of biological data.

Course Specific Outcome:

Course Title	Course Specific Learning Outcome
CC1: Cellular basis of Physiology	Learn about different fluid compartments in human body and the relation between organ, tissue and cells. Know about morphology of cells, structure and functions of different cell organelles in eukaryotic cells. Learn about different ion channels, ionophores, etc. and cellular transport systems. Analytical study on intracellular communication and different cell junctions and cell adhesion molecules. Learn about the cellular components related to cell division – Mitosis and Meiosis. Apply their knowledge about cell biology to understand changes in cell function. This core course includes cellular Ageing and its characteristics, Apoptosis- Programmed cell death. Homeostasis in Physiological environment is also learnt. Studies about the histological structures of different mammalian tissues and organs through permanent slide in practical classes.
CC2: Biological physics and Enzymes	Students are able to recapitulate about concentrations of solutes, Moles, Osmoles. Learn about molecular interaction, membrane equilibrium, bonds, dilutions, pH of body fluids, acid-base neutralization curve. Learn about colloids, surface tension, specific gravity, viscosity and resistance, flow and pressure, pH and buffer. Learn Thermodynamics and its application.

	Learn about chromatography, dialysis, ultracentrifugation, Autoradiography, Electrophoresis, Cell Fractionation and Tracer Techniques, Nanoparticles and its application in Physiology.
	Laminar and Streamline Flow, Poiseuille- Hagen Formula and Laws of Laplace are included in this portion.
	Describe enzymes and its classifications, properties, functions, kinetics and regulations.
	They also get practical knowledge about different biophysical experiments like determination of oncotic solutions, colloidal solutions, determination of enzyme activities of SOD, Cat, Amylase, etc., determination of blood pressure.
CC3: Nerve and Muscle Physiology	Know about neurons and their classification- functions. structure, functions and classifications of neuron.
	Morphology, function of skeletal muscle, cardiac muscle and smooth muscles.
	Students learn about the structure- function of synaptic and NM junctions.
	Students acquire knowledge about sense organs and special senses.
	Get to know in details about receptors as bio transducers.
	General concept about receptors for different neurotransmitters.
	Electrical and ionic events in receptors and different laws like Muller's law, Weber Fechner law, Steven's power law.
	Students learn about the properties of nerve and muscles through hands on experiment on Kymographs.
CC4: Chemistry of Biomolecules	They develop ideas about structure of carbohydrate and it's classification.
	Stereochemistry of carbohydrates and the properties of carbohydrate.
	Derivatives of monosaccharide.
	Carbohydrates as structural and storage unit.
	They learn about structure of proteins and classification of proteins according to structure.

Different bonds and angles involved in protein structures.

Properties of proteins, denaturation and renaturation of proteins.

Structure and function of lipids and classification.

They get detailed idea about the properties of lipids – Saponification number, Iodine number, Rancidity acid number, etc.

Students learn about different biochemical reactions that identity the properties of Biomolecules.

Learns about the classification of DNA – A, B and Z and RNA – mRNA, tRNA and rRNA.

Functions of DNA and RNA.

Students gain practical knowledge about identification of different biomolecules through experiments.

CC5: Circulating Body Fluids

Students will come to know about two main fluid component presents in our body, i.e., blood and lymph.
Blood volume, its normal range, its regulated and determination by different methods.
Different types of White Blood Cell (WBC) present in blood, their normal range, their role in body defence, total count and differential count study to diagnose infection.
Role of platelets and clotting factors proteins in blood coagulation.
Structure, functions and fate of Red Blood Cell (RBC).
Structure, biosynthesis and functions of Hemoglobin, learn practically to estimate Hb. Concept of fetal hemoglobin, abnormal hemoglobin in Sickle cell anemia and thalassemia, anemia and its different types.
Knowledge on blood groups types, precautionary measures required to carry out blood transfusion.
Plasma proteins, their normal range, origin and functions
Lymph and tissue fluid formation, circulation their functions and fate, structure and functions of lymphatic organs like lymph gland and spleen.

CC6: Circulation

Learn the mechanism of development and propagation of action potential in cardiac muscle.
Electrocardiogram, electrocardiographic leads, mean electrical axis of heart, normal cardiac rate and cardiac arrhythmia due to myocardial infarctions and hypertrophy through ECG findings.
Learn about the structure of heart, properties of cardiac muscle, events of cardiac cycle along with heart sounds and a brief idea about cardiac output.

CC7: Functions of the Nervous System	Morphology of arteries, veins, capillaries and circulation through these blood vessels, dynamics of blood flow within our body. Role of vasomotor centre, baroreceptors, chemoreceptors and hormones in regulating the homeostasis of cardiovascular system. Blood pressure, its measurement, factors affecting it and its regulation Heart failure and stroke – causes and management Regional circulation through brain, heart, spleen, skin, placenta and fetus. Students will come to know about reflexes – types and general properties. Tracts – both ascending and descending tracts, their origin, course, termination and functions. Students will get to know how we receive sensations (touch, pain, temperature, kinaesthetic and other sensations) and react to them accordingly through motor responses Functions of Spinal Cord with reference to functional changes following hemisection and complete section. Physiology of pain and its regulation, physiological basis of sleep and wakefulness, role of reticular system in arousal, EEG, its physiological basis and its role in consciousness and sleep, interpretation of abnormal EEG pattern, involvement of Basal ganglia and erebellum in maintenance of body posture and movement, movement disorders, decerebrate rigidity, decorticate rigidity, postural reflexes and its regulation. Organization and chemical transmission within autonomic nervous system. Role of Medulla Oblongata and Hypothalamus in various visceral functions. Role of limbic system in behavior and emotions. Physiology of learning and memory, disorders related to these cognitive functions.
CC8: Energy balance, metabolism and nutrition	They learn about the function of specific anabolic and catabolic pathways. The interrelation between carbohydrate, lipid and protein metabolism. Understand the molecular basis of control of metabolism. Learn how reactive oxygen species are formed and the role of catalase, superoxide dismutase, glutathione peroxidase and glutathione reductase in combating oxidative stress. Explain elements of nutrition. Understand the role of dietary fibers in several aspects in human body. They will learn about the functions, mode of action of various types of vitamins. They understand the physiological functions of minerals in human body.

	Students will learn various methods and techniques of quantitative estimation of carbohydrates (glucose, sucrose, lactose) and amino-nitrogen from practical.
CC9: Gastrointestinal function	Learn the anatomy and histology of alimentary canal, movements of alimentary canal and their regulations. Understand the digestion and absorptions of various food stuffs such as carbohydrates, protein, lipid, nucleic acid, vitamin, minerals and also water and electrolytes. Describe the major anatomical characteristics of the enteric nervous system. They understand about the histological structure of digestive glands and they also know about the composition, function and regulation of secretion of digestive juices. Describe the synthesis and secretion of bile acids, bile salts, enterohepatic circulation of bile, composition of liver bile and gall bladder bile. They know about the basic concepts of jaundice, peptic ulcer, gall stone and cholelithiasis. Identify the cell type and anatomical location of the endocrine cells secreting major GI hormones such as gastrin, secretin, cholecystokinin etc. Students practically learn the effects of hypoxia, acetyl choline and adrenaline on normal intestinal movements.
CC10: Respiration	Learn the anatomy, functions of the respiratory system and the mechanism of breathing. Outline the mechanism of oxygen and carbon dioxide transport in the blood. Demonstrate how breathing is chemically and nervously regulated. Understand about the various types of hypoxia and various respiratory abnormalities and diseases. Know how increased and decreased barometric pressure affects physiological systems in human body. Discuss the compensatory changes at moderately high altitude (acclimatization) and mountain sickness. Learn the various processes and mechanisms of artificial respiration.

	Through practical courses students learn measurement of peak expiratory flow rate, measurement of oxygen saturation by pulse oximeter before and after exercise and measurement of forced expiratory volume in first second.
CC11: Special Senses	Understand the roles of generator potentials and depolarization in sensory neurons and receptor cells. Sensory organs of vision, audition, olfaction and gustation along with their perception in CNS. Understand receptive fields and basics of stimulus coding and processing.
CC12: Endocrinology	Classify hormones, properties of polypeptide and steroid hormones. Classification of receptors and their relation hormones. Apprehend where the hormones are synthesized. Illustrate what kind of hormone is synthesized and released in what kind of endocrine gland. Understand the action and functions of hormones along with their disorders.
CC13: Reproduction	Know the key gross and microscopic components of the reproductive systems in several male and female mammalian species. Understand gametogenesis and the gametes, structure, function. Demonstrate knowledge of key principles of reproductive endocrinology including: a) biosynthesis and chemistry of the different classes of hormones, b) mechanisms of action of hormones. Process of fertilization leading to blastocyst formation, implantation, embryological processes of gastrulation. Understand the structure, function and development of placenta, the amnion and the umbilical cord.
CC14: Formation and Excretion of Urine	Learn the anatomy of structures in posterior abdominal wall in relation to kidneys, ureter, blood supply and venous drainage of kidneys. Understand the structure, functions and regulations of nephrons and tubules and their role in urine formation, acid base balance along with other non-excretory functions. Be able to list at least 4 important inorganic ions the concentrations of which the kidneys help regulate, 3 important organic wastes that are eliminated by the kidney and at least 2 hormones normally produced by the kidney. Understand the concept of renal clearance and be able to perform clearance calculations and to interpret the results. Be able to explain the mechanisms by which the kidneys regulated the volume and composition of the extracellular fluid, the causes of ADH (vasopressin), aldosterone, renin-angiotensin and atrial natriuretic hormone release. Learn the systemic effects of ADH (vasopressin), aldosterone, renin-angiotensin and atrial natriuretic hormone release, the specific sites of ADH (vasopressin), aldosterone,

	renin-angiotensin and atrial natriuretic hormone release. Effects of sympathetic activity on renal function.
DSE1A: Biological Statistics	Principal concept of statistics, its subject and its relation with the other sciences. Learn how to Collect data relating to variable/variables which will be examined and calculate descriptive statistics from these data. Identify convenient sample by using sampling theory. Interpret data and identify distribution form relating to the variable/variables. Recognize location and dispersion statistics. Define and apply hypothesis testing via some of the statistical distributions and make a statistical decision.
DSE1B: Microbiology And Immunology	Learn multiple microbiology disciplines the core theories and practices along with the processes used by microorganisms for their replication, survival, and interaction with their environment, hosts, and host population. Understand the theoretical basis of the tools, technologies and methods common to microbiology along with practical skill in use of them. Learn the basic structure of immune system and realizes its importance. Learn antigen recognition and presenting Learn structure, of antibody and classes of antibody. Learn the basic functions of immunity of humoral and cellular typesand also the functions of the immune system abnormally, hypersensitivity reactions and the basic mechanisms of autoimmune reactions. Learn the basic mechanism of antigen antibody reactions, immune technique, methods of protection against infectious diseases.
DSE2A: Ergonomics And Occupational Physiology	Learn the basic concept of ergonomics and its importance in occupational health. Understand the impact of work environment in health. Learn the study of work rest cycle, WRMSD and other occupational problems on evaluation of work related stress. Will learn the anthropometry and its role in design. Learn about the industrial safety to minimize accident and injury.
DSE2B: Sports And Exercise Physiology	Demonstrate knowledge of general overall physiological principles associated with metabolic processes; musculoskeletal system; cardiovascular system; aerobic and anaerobic program design. Will learn cardiorespiratory response during exercise. Understand oxygen debt and its relation with post exercise recovery. Able to demonstrate the maximum aerobic capacity and its importance in excise physiology. Will understand how training improves exercise efficiency.

DSE3A: Human Nutrition And Dietetics	Will learn sports injury and its management, sports rehabilitation and sports medicine. Will learn different components food and their importance in daily life. Understand what an adequate and well-balanced diet is. Will Examine the several concepts and elements of nutrition. Interpret and apply nutrition concepts to evaluate and improve the nutritional health of individuals with medical condition. Make samples of menu planning suitable for the elderly people, growing child, adult man and woman, pregnant woman and lactating woman. Will learn physiology of starvation, obesity, space nutrition etc.
DSE3B: Genetics And Molecular Biology	Learn Mendelian concept in genetics and its extension in context of plants and animals. Will learn bacterial genetics and its role in genetic change. Understand and appreciate the diversity of life as it evolved over time by processes of mutation, selection and genetic change. Understand the human cytogenetic and its role in karyotype, medical science, sex determination. Will learn about the structure-function of chromosome, gene, DNA, RNA etc. Get a basic idea on genetic engineering and its role in GM plants, animals and crops. Learn some modern techniques applicable in molecular biology.
DSE4A: Toxicology	Learn and understand basic terms and principles of pharmacology with special reference to pharmacodynamics, pharmacokinetics and pharmacogenetics. Understand the basic principles of toxicology with emphasis on toxic chemicals pollutants and basic drug overdosage scenarios. Know the theories and principles and factors influencing drug action Know effects of toxicants and environmental pollutants toxicants on organ system and drug disposition. Know the mechanism of action, disposition, side effects, drug-drug interactions, contra-indication of the drugs. Know dose response relationship and how to plot dose response curves.
DSE4B: Nano-Biotechnology	Learn the fundamental principles of nanoscience and their application to biomedical engineering.

And Bioinformatics	Understand nanostructures, synthesis, properties, characterization techniques for nanomaterials using modern microscopy. Learn health threats with respect to toxicity of nanomaterials. Acquire knowledge and awareness of the basic principles and concepts of biology, computer science and mathematics. Use of existing software effectively to extract information from large databases and to use this information in computer modeling, problem-solving skills, including the ability to develop new algorithms and analysis methods. Understanding of the intersection of life and information sciences, the core of shared concepts, language and skills the ability to speak the language of structure-function relationships, information theory, gene expression, and database queries.
SEC1A: Detection of Food Additives and Adultarants	From this SEC course, students will be able to identify: the food adultarants like Metanil yellow, Rhodamin B, Saccharin, Monosodium glutamate, Aluminium foil, Chicory, Bisphenol A and Bisphenol S, Chocolate Brown HT, Margarine, Pb, Hg, As, PCB, Dioxin etc if present in the food stuffs like turmeric powder, besan, laddoo, noodles, chocolate and amrita
SEC1B: Histopathological Techniques	From this SEC course, students will be able to : prepare tissue sections from various organs and identify the sections after staining them with hematoxylin and eosin prepare bone marrow smear, stain and measure the diameter of megakaryocyte Stain reticulocyte and collagen present in tissues. Students practically learn photo-colorimetric estimation of blood constitutions.
SEC2A: Clinical Biochemistry	Measurement of blood glucose and blood inorganic phosphate. Measurement of serum total protein and determination of albumin-globulin ratio, determination of blood amylase. After completion of the skill enhancement elective course, students must be expertise in the hematological techniques.
SEC2B: Hematological techniques	Students will have ability to prepare blood smear and identify the blood cells. They will practically measure and determine hematocrit, MCV, MCHC, bleeding time, clotting time, hemoglobin etc.

Physiology General/ Generic:

Programme specific outcome:

Semester	Program Specific Outcome (Semester Specific)
SEM-I	This semester is crucial for the students as basic concepts are developed which will help them to comprehend about cell biology and biophysical techniques and basic concepts on Biochemistry. These core courses are needed to be studied in details. Students can apply their acquired knowledge in their higher studies as well as to prepare for different competitive exams. Students often find their interest from the given topics and can pursue career on molecular biology and biophysics. They develop a liking for the subject and often choose academic career.
SEM-II	After successfully completion of the courses of SEM-II students have theoretical knowledge about metabolism & nutrition, gastrointestinal functions. After studying all these courses in detail most of the students go for the post-graduation and higher studies. They mainly go for various nutritional based industries.
SEM-III	Students after studying SEM III, get knowledge on properties and functions of blood and lymph, pursue idea on features of heart, systematic and regional circulation and respiratory physiology. After studying all these courses in detail most of the students go for the post-graduation and higher studies. Learn application of statistics in biological sciences and also different aspects of pharmacology and pharmacokinetics.
SEM-IV	Learn structure function of different parts of excretory system, their endocrine and non-endocrine role in detoxification of human body. Also learn non excretory functions of kidney. Learn the location, function, disorders of all endocrine glands of human and other mammals. Learn structure of skin and regulation of body temperature. Will learn different aspects of molecular biology and social physiology.
SEM-V	Students successfully acquires both theoretical and practical knowledge on Nerve and Muscle physiology. Get idea about ascending and descending tracts, physiology of pain, role of basal ganglia and cerebellum in controlling posture and movement, functions of higher centers of brain. Also able to acquire knowledge on microbes and immunity functions.

SEM-VI	Learn mammalian reproductive system, their endocrine role in reproductive life. Understand disorders of reproductive system. Learn the structure function relationship of vision, audition, olfaction and gestation. Learn physiology of work and work environment and also the impacts of different pollutants on human body.

Course Specific Outcome:

Course Title	Course Specific Learning Outcome
CC-1A/ GE1: **a) Units of Human System**	Know about Structure and functions of plasma membrane and different cell organelles in eukaryotic cells. Learn about structure, function and classification of different types of tissues.
b) Biophysical and biochemical Principles	Learn biophysical phenomena like diffusion, osmosis, dialysis, ultra filtration, surface tension etc.
c)Biochemistry and Bio molecules	Learn about acid, base, buffers and indicators. pH and its significance and maintenance of pH in the blood. Learn about colloids, properties and its importance in physiology. Describe enzymes and its kinetics, functions. They develop ideas about structure and classification of carbohydrate, lipids and protein. Properties of lipids and structure of peptide bonds.
CC-1B/GE2: **a) Digestive System**	Learn the structure of alimentary canal, digestive glands and movements of alimentary canal. Will know composition, functions and regulation of secretion of digestive juices including bile.
b) Nutrition **c) Metabolism**	Understand the digestion and absorptions of carbohydrates, protein, lipid. Learn different components food and their importance in daily life. Learn about vitamins and minerals metabolism. Will learn about BMR, its measurement, significance, different protein evaluation methods.

	Learn about the function of specific anabolic and catabolic pathways.
	Understand the pathophysiological significance of blood constituents.
	Students will learn various methods and techniques of quantitative estimation of carbohydrates (glucose, sucrose, lactose) and amino-nitrogen from practical.
CC-1C/GE3:	Learn the anatomy, functions of the respiratory system and the mechanism of breathing.
a) Respiratory System	Understand how gaseous exchange takes place between the lung and blood.
b) Cardiovascular System	Will learn about lung volume and capacities.
c) Blood and Body Fluids	Learn breathing mechanism-regulations, O_2, CO_2 transport.
	Learn about the structure of heart, properties of cardiac muscle, events of cardiac cycle along with heart sounds, cardiac output. Morphology of arteries, veins, capillaries. Blood pressure and its regulations, Peculiarities of regional circulation. Students will come to know about blood constituents, plasma proteins its functions, blood volume. Also learn process of erythropoiesis and leucopoiesis. Learn biosynthesis and functions and estimation of Hemoglobin, concept of abnormal hemoglobin in Sickle cell anemia and thalassemia and different types of anemia. Role of clotting factors proteins in blood coagulation, knowledge on blood groups. Learn lymph, lymph glands and tissue fluids.
CC-1D/GE4:	Learn hormones, hormonal receptors, their functions, biosynthesis and classifications.
a) Endocrine system	Learn hormonal disorders.
	Learn the anatomy of kidney, nephron and their functional aspects.
b) Renal Physiology	Be able to list normal and abnormal constituents of urine. Be able to explain the mechanisms of urine storage and micturition.
c) Skin and Regulation of Body Temperature	Know about the structure and function of skin and understand the role of skin in the mechanism of regulation of body temperature.

DSE-1A: **a) Muscle and Nerve Physiology** **b) Nervous System**	Learn morphology and properties of skeletal muscle. Learn about the structure- function of synaptic and NM junction Know about neuron, generation of impulse and conduction through different types of neurons, properties of nerves. Students will come to know about reflexes – types and general properties. Tracts – both ascending/ sensory and descending/ motor tracts and their functions. Functions of Spinal Cord with reference to functional changes following hemisection and complete section. Physiology of pain and its regulation, cerebellum in maintenance of body posture and movement. Role of thalamus and Hypothalamus in various visceral functions. Organization and chemical transmission within autonomic nervous system. They have a brief idea of speech and physiology of learning and memory, disorders related to these cognitive functions.
DSE-1B: **a) Reproductive Physiology** **b) Sensory Physiology**	Learn about gross and microscopic structure of gonads and their functions. Learn functions of gonads- gametogenesis. Demonstrate knowledge of menstrual cycle and their hormonal control, process of fertilization, gastrulation. Learn about development of mammary gland and lactation. Understand the structure, function of placenta. Get to know in details about receptors as bio transducers, understand the roles of generator potentials and depolarization in sensory neurons and receptor cells. Sensory organs of vision, audition, olfaction and gustation along with their perception in CNS. Understand receptive fields and basics of stimulus coding and processing.
SEC-IA: **Pharmacology**	Describe the basic scientific concepts and principles that serve as the foundational underpinnings of the pharmacological sciences including pharmacokinetics; pharmacodynamics; drug metabolism; and drug-drug interactions; and explain how these fundamental pharmacological properties can influence route of administration, drug action; drug efficacy and potency; drug levels in the body;

	potential for drug interactions; drug toxicity; and the appropriate choice of drug for pharmacotherapy in a given patient.
SEC-IB: Bio Statistics	Principal concept of statistics, its subject and its relation with the other sciences. Learn how to Collect data relating to variable/variables which will be examined and calculate descriptive statistics from these data. Identify convenient sample by using sampling theory. Interpret data and identify distribution form relating to the variable/variables. Recognize location and dispersion statistics. Define and apply hypothesis testing via some of the statistical distributions and make a statistical decision.
SEC-IIA: Molecular Biology	Will learn about the structure-function of chromosome, gene, DNA, RNA etc. Get a basic idea on genetic engineering
SEC-IIB: Social Physiology	Apply best practices in developing, implementing, assessing, and evaluating programs and interventions related to health promotion, physical activity adoption and adherence, and the prevention and treatment of diseases. Understand what an adequate and well-balanced diet is. Examine the several concepts of nutrition. Explain elements of nutrition. List rules of adequate and balanced diet. Learn the physical and social changes taking place during the elderly period of life.
SEC-IIIA: Microbiology	Learn multiple microbiology disciplines the core theories and practices along with the processes used by microorganisms for their replication, survival, and interaction with their environment, hosts, and host population. Understand the theoretical basis of the tools, technologies and methods common to microbiology along with practical skill in use of them.
SEC-IIIB: Immunology	Learn the basic structure of immune system and realizes its importance. Learn structure, of antibody and classes of antibody. Learn the basic functions of immunity of humoral and cellular types.

SEC-IVA: Work Physiology	Will able to understand the concept and classification of physical work. Will learn cardiorespiratory response during exercise. Understand oxygen debt and its relation with post exercise recovery. Basic idea of doping, anthropometry and its uses.
SEC-IVB: Environmental Physiology	Will know environment in its physiological aspects. Know sources of various pollutants and their effect on human body. Learn about noise pollution and its preventive measure.

DEPARTMENT OF ZOOLOGY

SURI VIDYASAGAR COLLEGE

B.Sc. Honours in Zoology

PROGRAMME OUTCOME (PO)

Our college is affiliated under The University of Burdwan, The Choice Based Credit System (CBCS) was introduced in the academic session 2017-2018. Therefore, it is not justified to give the expert remark or to enlighten significantly about the programme outcome by sharing views with the students who have just completed only four semesters. Still with merge experience of the students and gentle discussion of the teachers with them have been able to extract a glimpse of the programme outcome of the Department of Zoology which is given below:

PO-1: There is a tendency to provide symmetry in the Honours and General stream so that both can avail the chance to get berth in Post Graduate course or be competent enough to appear in different competitive examinations throughout India.

PO-2: As the system is a choice-based system, the students have option to choose the subject of choice. This apparent pliable system has the opportunity to avoid the stringent old base system.

PO-3: This system has tried to distribute the load of the subject in a symmetric manner so that it can reduce the burden propounded at a time.

PO-4: Certain activities like dissertation/term paper/assignment and excursion could cater the student for field work research, nature care etc. and to equip them in different techniques and instrumentation.

PO-5: There are certain applied part of zoology in the form of sericulture, sericulture aquarium fish farming which have traditional and modern value to make the students job oriented.

PO-6: Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms.

PO-7: The course may help the students to acquire gradual knowledge from base to its intrigue in a successful manner.

PO-8: The method and pattern of question may be helpful to make a student equipped for any public or competitive examination.

PROGRAMME SPECIFIC OUTCOME (PSO)

PSO-1: Understand the nature and basic concepts of cell biology, taxonomy, physiology, ecology, microbiology, parasitology, endocrinology and economic zoology.

PSO-2: Analyze complex interactions among the various animals of different phylum, their distribution and their relationship with the environment.

PSO-3: Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms. Correlates the physiological processes of animals and relationship of organ systems.

PSO-4: Understands the complex evolutionary processes and behavior of animals.

PSO-5: Understanding of wild life conservation processes and importance of biodiversity and protection of endangered species.

PSO-6: Gain knowledge of agro based small scale industries like sericulture, aquarium fish farming, sericulture, apiculture.

PSO-7: Understands the concepts of genetics and its importance in human health.

PSO-8: Apply the knowledge and understanding of Zoology to practical aspects.

PSO-9: Perform procedures as per laboratory standards in the areas of Ecology, Immunology, and Histology and Developmental biology.

PSO-10: Gains knowledge about research methodologies and skills of problem-solving methods.

COURSE OUTCOME (CO)

CO1: Non-Chordates

Gain a knowledge about Animal kingdom specially subkingdom Protozoa & Metazoa.

Location & importance of coral reef in nature & its economic importance.

Gain a detail knowledge of Classification, Excretion, Respiration, Nervous system& development of higher metazoa.

Gain a special knowledge of metamorphosis in insects &echinoderms & social life of insects like termite.

Gain knowledge of identifying different species taxonomically, staining some of species and comparative study of some of the groups.

CO2: Chordates

Gain a detail knowledge about classification of phylum Chordata.

Knowledge about special behavior like migration in fish & birds, parental care in amphibia, biting mechanism in snake.

Knowledge about aerodynamics in birds & echolocation in mammals.

Gains knowledge of functional anatomy of vertebrates from fishes to mammals.

Knowledge about distribution of animals in the world & division of world into different realms accordingly.

Achieving Practical knowledge to identify species taxonomically, studying some special features as well as comparative analysis of different significant groups.

CO3: Ecology

Gain sound knowledge on Population Ecology, Community Ecology and Ecosystem ecology.

Interaction of biota and abiota.

Knowledge on conservation and procedures of conservation.

Detail understanding on Tiger conservation.

Practically learned to do life tables. They are able to draw survivorship curve and draw conclusion from that.

Able to do sampling in quadrat method and from that data they can do Shannon-Wiener index and can infer about any community.

Expertise on study of any aquatic ecosystem.

CO4: Cell Biology

Gain a detail knowledge of prokaryotic & eukaryotic cell, cell organelles.

Gain a practical knowledge of Cell division & study of chromosomal changes during cell division.

Gain knowledge of cellular signaling and cell interaction.

Gather practical knowledge of preparation of cell divisional stages and identify specialized structures in bold cells.

CO5: Animal physiology

Gain fundamental knowledge of animal physiology.

Detailed concepts of action potential and its propagation.

Learn the concepts of endocrine systems and gain knowledge about hormones.

Gain fundamental knowledge of physiology of homeostasis.

Gain practical knowledges of muscle function, reflex action, histological preparation and histological studies of tissues of various organs.

CO6: Fundamentals of Biochemistry

Interactions and interdependence of physiological and biochemical processes.

Gain basic knowledge about various bio molecules and their role in metabolism.

Understanding through scientific enquiry into the nature of physical and biochemical functions of the cells.

Gain practical knowledges of quantitative and qualitative measurement of biomolecules, separation techniques and studding enzyme actions.

CO7: Immunology

Understanding types of immunity, antigens-antibodies and their properties.

Understanding immune mechanisms in disease control, vaccination, and process of immune interactions.

Gather practical knowledge of lymphoid tissues, blood cell morphology, histochemical analysis.

Working process of different lymphoid organ.

Practical knowledge on blood grouping and idea on different blood cell.

CO8: Genetics

Mendelian and non-Mendelian inheritance

Concept behind genetic disorder, gene mutations-various causes associated with inborn errors of metabolism.

Gain concepts of mutation, sex determination, special inheritance pattern, transposition and bacterial and viral recombination.

Becomes expertise through practical experience about aberration, chromosomal disorders, linkage analysis and genetic analysis techniques.

CO9: Molecular Biology

Sustain a basic knowledge about Nucleic acids, DNA replication, Transcription, Translation of prokaryotes and Eukaryotes as well.

Familiar with the gene modifications (post-translational modifications) and gene regulation.

Learn principles of molecular techniques such as PCR, Northern blot, Southern blot, Western blot etc.

Practical knowledge to handle spectrophotometer and Agarose Gel Eletrophoresis.

Gain experience on preparing liquid, solid media for bacteria culture and determining antibiotic sensitivity and resistance zones of bacteria.

CO10: Developmental biology

Develop the basic concepts of development, implication of embryonic development and post developmental aspects,

Gains knowledge about gametogenesis, cleavage mechanisms, gastrulation and role of hormones in metamorphosis and regeneration.

Gather practical knowledge about developmental stages and specialized structures in vertebrate and invertebrate models.

CO11: Evolutionary biology

Knowledge of eras and evolution of species.

Explain the genetic basis of evolution, correlate the theories with the evidences.

Knowledge regarding human origin, mode of evolution and its significance.

Gathering practical knowledge of fossil, comparison of characters to prove evolution and mathematical model of population study

CO12: Microbiology

Learn some basics on microbiology and their classification.

Have a lot of information on morphology of bacteria and virus.

Have a good understanding on pathogenicity of microorganisms and microbial diseases.

Have experience on diagnostic microbiology and bacteria culture.

Gain some basic knowledge on preparing liquid, solid media for bacteria culture and determining their biochemical characterization.

Have a good experience on staining of bacteria and microbial examination of milk.

CO13: Animal biotechnology

Imparts the knowledge to culture animal cells in artificial media.

Knowledge of animal cells in culture, growth of cell lines.

Application of DNA technology and molecular biology for research

Gain practical knowledge about restriction map, transformation efficiency, sequencing techniques, blot techniques, finger printing techniques and PCR

CO14: Biology of Insects

Gather a general idea about taxonomy, morphological features, and physiology of insects.

Knowledge about social behavior of insects like termites, bees & ants.

Gain Practical knowledge about harmful insects like pest causing economic loss and vectors spreading diseases like cholera, malaria, encephalitis, dengue, filaria etc. enables to take protective measures.

Gather practical knowledge regarding collection, preservation and identification of insects and their different body parts. Pest study and life cycle study

CO15: Animal Behavior

Imparts conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment.

Explain the relationship of behaviour and cognition.

Explain rhythmic behaviours and social behaviours.

Collect practical knowledge of nesting of birds and insects, tactic movements, circadiun function and ectogram construction

CO16: Wild life Conservation

Key threats to biodiversity.

Describe habitat management.

Understanding of Conservation will help protection of wildlife.

Explain wildlife trade that may enhance the economy.

Understanding of wildlife conservation, trade and management.

Gather and learn practical knowledges regarding faunal identification, equipment studies, identification of animal by special marks, nests, scats etc.

CO17: Parasitology

Explain the phenomenon of living together and symbiosis.

Describe parasitism.

Describe the life histories of some protozoan and helminths.

Describe parasitic arthropodes.

Gather practical knowledge regarding identification, staining and isolation of parasites

CO18: Endocrinology

Gain a detail knowledge of structure and function of endocrine glands including neuroendocrine glands and feedback mechanism.

A specific knowledge of mechanism of hormone action in the cell, disorders of endocrine glands, & role of hormones in homoeostasis.

A practical knowledge of demonstration of hormone assay through ELISA**,** anatomical and histological study of glands and tissue processing.

CO19: Reproductive biology

Gain detail knowledge of structure, function, development and differentiation of gonads.

A specific knowledge oh hormonal regulation of pregnancy, parturition & lactation

Specific knowledge of causes & management of infertility in male and female.

Gain practical knowledge of sections of male and female reproductive structures as well as vaginal fluid study.

CO20: Apiculture

Learned knowledge about method of apiculture, control & preventive measures of bee diseases & enemies and economic importance of products of apiculture such as honey, bee-wax.

Enriched knowledge of Apiculture will provide scope of self- employment.

CO21: Sericulture

Gives knowledge of silk worm rearing.

Mulberry cultivation.

Pests and diseases associated with silk worm.

Various process involved in silk production.

Prospects of sericulture in India, how get employment in sericulture industry.

CO22: Aquarium fish keeping

Provides knowledge of ornamental fish breeding which is highly professional and attractive avenue for youth.

Get knowledge regarding food and feeding of aquarium fishes.

Setting and maintenance of aquarium.

CO23: Medical diagnostic techniques

Gives knowledge related to the techniques involved in detection of various diseases.

Pathology associated with various diseases

Idea on chromosomal status of different genetic syndrome.

CO24: Applied Zoology

Describe general taxonomic rules on animal classification.

Classify phylum using characters and examples.

Acquire knowledge on artificial insemination poultry farming and fish induced breeding.

Concepts on host parasitic relationship.

Knowledge on different vector of human diseases.

Bionomics of stored grain pest.

CO25: Aquatic biology

Understands concepts of fisheries, fishing tools and site selection.

Idea on adaptation of marine organisms.

Physico-chemical parameters and nutrient cycles of lakes.

Get knowledge on water quality assessment.

CO26: Animal Diversity

Provide concepts of basic characteristics of invertebrate and vertebrates.

Concepts of respiratory system in invertebrate phylum.

Knowledge about flight mechanism in bird.

Gathering knowledge by observing real and preserved specimens.

Knowledge of poisonous and non-poisonous snakes

Concepts of permanent slide preparation.

CO27: Comparative anatomy and developmental biology of vertebrates

a) Detail knowledge of Respiratory, Circulatory, Digestive, Reproductive system of vertebrates.

b) Knowledge on comparative anatomy of different system of vertebrate phylum.

c) Concepts on embryonic development in different vertebrate animals.

d)Concepts on different sense organ.

Basic concepts on girdle and limb bones.

Basic concepts on skull.

Concepts on different developmental stages with slide and photograph.

Knowledge on gametes by identification of slide.

CO28: Physiology and Biochemistry

Details knowledge about nerve and muscle function.

Concepts on digestion, excretion and reproduction.

Structural correlation on endocrine gland.

Concepts on carbohydrate, lipid and protein structure; details of different metabolic pathway.

Idea on histological structure of different endocrine glands.

Experience on biochemical test

CO29: Genetics and Evolutionary biology

Knowledge on chromosome.

Concepts on different chromosomal mutation.

Knowledge about chromosomal map distance.

Concepts on different evolutionary changes.

Idea on chromosomal status of different genetic syndrome.

Different phylogeny study.

M.Sc. COURSE IN ZOOLOGY
[CHOICE BASED CREDIT SYSTEM]

PO (Program outcome)

PO.i) M.Sc. program offered by the Department will facilitate enhancement of knowledge, skills and attitude.

PO.ii) The program will impart training to become independent and support lifelong learning.

PO.iii) The PG program might help the students to prepare themselves appearing CSIR/UGC-NET, DBT-NET, ICMR-NET, SET, and GATE examinations.

PO.iv) The program entails development of effective communication regarding the subject concerned.

PSO (Program specific outcome)

PSO.i) The M.Sc. in Zoology course content is suitable for analytical as well as application orientation. The course will enable the students to catch the spirit of the course, generate idea on the content, expand the horizon of knowledge and will create enthusiasm to learn beyond the course content.

PSO.ii) The program might help to develop skills to open-up job opportunities as a taxonomists, entomologist, epidemiologist, fish biologist, wildlife and conservation biologist, and so on.

PSO.iii) The program will be helpful in developing technical skills in advanced areas, e.g., molecular biology, biotechnology, bioinformatics and biostatistics.

PSO.iv) Different DCE courses will help the students to develop understanding on basic as well as advanced areas of studies that include biodiversity conservation, population ecology, restoration ecology, environmental toxicology, animal behaviour, global warming, environmental disaster, disease biology, genetic and epigenetic markers, metabolomics, therapeutic aspects, biocontrol of vectors, integrated pest management, aquaculture management and so on.

PSO.v) The courses will also help the students for skill and entrepreneurship development (e.g., aquaculture, sericulture, apiculture, molecular diagnostics, microbiology and patho-biology) to make them economically independent.

PSO.vi) Knowledge disseminated through the specific program of PG in Zoology will help the students to prosper their carrier in different areas, viz., Scientists (in different disciplines of biology/Zoology), Assistant Teachers in schools, Assistant Professors in college/universities, West Bengal Forest Service, and Indian Forest Service.

PSO.vii) The course will help in choosing the specific research topic in the respective area in future.

Course specific outcome (CSO)

MSZO 101: Core Course

(ECOLOGY, ETHOLOGY AND CONSERVATION BIOLOGY)

This course is consisting of two units that deal with concept of ecosystem, habitat, niche, population and community ecology. Causes, effects and control of air pollution, and theory of island biogeography will also be presented. The course will offer understanding on behavioral ecology, mechanism of learning, territoriality and foraging behavior, mating behavior, altruism, and conservation biology.

MSZO 102: Core Course

(BASIC AND APPLIED ENTOMOLOGY)

This course is consisting of two units that deal with understanding insect diversity, basics of entomology, and control of insect pests. Co-evolutionary adaptations between plant and insects will also be emphasized.

MZGT 103: Core Course

(PARASITOLOGY AND VECTOR BIOLOGY)

CSO

This course is consisting of two units that provide advanced knowledge on general parasitology, host-parasite interactions, important disease causing parasites and their control measures.

MSZO 104: Core Course

(FISH BIOLOGY AND FISHERIES)

CSO

This course is consisting of two units dealing with classification, structural organization and life processes in fish, as well as basic aspects of diverse culture practices and marine fisheries resources. Students will have an overview of the fish as an organism along with social and economic importance of the fisheries sector.

This course will enable the students for field identification of the common freshwater fish species. In addition, determination of food and feeding habit, histological observations on the tissues and studies on some of the organ systems in fish will help the students to know the fish as an experimental model.

PRACTICAL PAPERS

MSZO 105 (Unit - I) Core Course

CSO

This course will offer basic methods used in ecology and conservation biology. The section will cover analysis of physico-chemical parameters of soil, line transact method and pug mark analysis used in conservation biology, effect of different stimulants on coughing rate and operculum movement in fish.

MSZO 105 (Unit - II) Core Course

CSO

This course will offer identification of common pests, insects of medico-legal importance, and social insects aiming at strengthening knowledge on external morphology.

MSZO 106 (Unit - I) Core Course

CSO

This course will offer first-hand knowledge on advanced parasitological techniques used in various clinical laboratories.

MSZO 106 (Unit - II) Core Course

CSO

This course will enable the students for field identification of the common freshwater fish species. In addition, determination of food and feeding habit, histological observations on the tissues and studies on some of the organ systems in fish will help the students to know the fish as an experimental model.

MSZO 201: Core Course

(BIOSYSTEMATICS AND EVOLUTIONARY BIOLOGY)

CSO

This course is consisting of two units, Biosystematics and Evolutionary Biology. Unit – I will provide understanding on naming of animals, development of concept on species, ontological issues and status, phylogenetical classification and trees, taxonomic characters, concept of homology and molecular taxonomy. While Unit – II will will deal with important population and quantitative genetic concepts such as genetic drift, natural selection, selective sweep, inbreeding, heritability and quantitative traits. These population and quantitative genetic concepts could be applied to problems related to the genetic dynamics of human evolution.

MSZO 202: Core Course

(MICROBIOLOGY AND IMMUNOLOGY)

CSO

This course is consisting of two units. The students successfully completing the course will be able to study the microflora of a particular area and its prospects in several fields of environmental, medical and animal microbiology. Students will have the knowledge on diversity of microbes, in-depth knowledge in the structure of a repertoire of microorganisms, metabolism in the cell, microbial physiology, host-microbe interactions, microbial pathogenicity and microbial diseases. Further, they will be able to realize the usefulness of immunology in different research areas. Students might apply their knowledge and design immunological experiments to demonstrate innate, humoral or cytotoxic T lymphocyte responses and figure out the kind of immune responses in the setting of infection (viral or bacterial) by looking at cytokine profile.

MSZO203: Core Course

(GENETICS AND CELL BIOLOGY)

CSO

This course is consisting of two units. Students will learn about the overview of Mendelian genetics and its extension and inheritance biology; variations and mutation; karyotyping; banded chromosomes and individual characterization of the human chromosomes. Advanced areas like gene therapy, cancer therapy techniques, personalized medicine and pharmacogenomics, genetic screening and counseling, as well as basic concept about databases will also be covered. Further, students will learn about the overview of cellular structure and division, cytoskeleton and cellular transport, cell signaling, molecular mechanisms apoptosis, cellular senescence, chaperones, exosome biogenesis and function, transcriptomics, along with metabolome and metabolic disorders.

MSZO 204: Core Course

(PHYSIOLOGY AND ENDOCRINOLOGY)

CSO

This course is consisting of two units. Students will learn about the concepts homeostasis, acclimatization and adaptation. A comparative account of circulation, respiration, excretion, osmoregulation, and thermoregulation will be provided. Genesis of membrane potential, nerve impulse conduction and role of neurotransmitters will be covered. Endocrinology

section deals with roles of chemical messengers in the control of homeostatic systems. It elaborates the chemical nature and its biological role of the cellular regulators, receptors. Endocrine physiology of various glands including neurohypohysial hormones, thyroid, pancreatic, adrenal, reproductive and GI tracts and understanding of endocrine disorders.

PRACTICAL PAPERS

MSZ0 205 (Unit - I) Core Course

CSO

This course will help to develop idea on dichotomous key construction. Identification of taxa using key and phylogenetic tree construction will be emphasized.

MSZ0 205 (Unit - II)Core Course

CSO

Students will be able to learn wide variety of Cell Biology and Genetics techniques like human peripheral blood lymphocyte isolation and culture, karyotyping; Mitotic index and mitotic abnormalities; MTT test, Trypan blue and Apoptosis test; Identification of mutants of Drosophila; polytene chromosomes preparation; DNA extraction and quality-quantity analysis; PCR and RT PCR techniques; determination of the molecular weight of the protein using SDS PAGE; cancer cell culture and counting of colony, scratch wound assay, Flow cytometry-based apoptosis and cell cycle analysis and Identification of cancer cells and stages.

MSZO 206 (Unit - I) Core Course

CSO

Students will learn about the basic Physiology and Endocrinology techniques like hemoglobin content, C.T. and B.T. in human blood; estimation of fasting and PP blood Sugar; estimation of blood Cholesterol; identification of abnormal RBC, TC -DC; pulse rate and blood pressure; estimation of steroid and thyroidhormone by ELISA; ovariectomy, orchidectomy and their effects in laboratory animals; estimation of ascorbic acid; identification of stages of estrous cycle in rat.

MSZO 206 (Unit - II) Core Course

CSO

Students will study different techniques used in microbiology like sterilization techniques, culture media preparation, preparation of plates, slants and stabs, isolation and enumeration of bacteria from soil, water and air, various staining techniques, phenotypic and biochemical properties of different bacterial strains. The objectives of this laboratory course are to develop an understanding about practical aspects of the components of the immune system as well as their function. Basic as well as advanced methods will be taught to detect different antigen and antibody interactions, isolation of different lymphocyte cells etc. and how they can be used in respective research work.

MSZO 301: Core Course

(BIOCHEMISTRY AND TOXICOLOGY)

CSO

The objectives of this course are to build upon advance level knowledge of biochemical principles with specific emphasis on different metabolic pathways. The course shall make the students aware of various biochemical methodologies associated within the context of each topic. Understanding the Laws of thermodynamics and their applications; pH and buffers; classification, structure and importance of carbohydrates, protein and lipids; enzyme kinetics and mechanisms action; carbohydrate, amino acid and lipid metabolism and metabolic disorders and concept of integration of metabolic pathways; energy transduction and ATP synthesis; oxidative stress and lipid peroxidation; free radicals and free radical scavengers; and techniques of analytical Biochemistry. Understanding the harmful effects of different types of chemical on man, animals and environment, mechanism of their action; detoxification mechanisms

MSZO 302: Core Course

(HISTOLOGY–HISTOCHEMISTRY AND COMPARATIVE ANATOMY)

CSO

The students will be able to identify the basic structure of cells, tissues and organs and describe their contribution to normal vs. disease function. The student will be able to interpret light- and electron-microscopic histologic and histochemical images and identify the tissue source and structures. Students will be acquainted with the comparative account of different

systems in invertebrates, organs of vertebrates, modifications in different systems in vertebrates for different modes of life.

PRACTICAL PAPERS

MSZO 303 (Unit - I) Core Course

CSO

The course is designed to provide a broad exposure to all basic techniques (Biochemical) used in current Modern Biology research. The goal is to impart basic conceptual understanding of the principles of these techniques and emphasize on the Biochemical utility. At the end of the course, the student is expected to have enough understanding of all the analytical techniques such that the barrier to implement the same is abated to a great extent. Students will learn the quantitation of proteins, lipid, nucleic acids, enzyme activity, lipid peroxidation, assessment of toxicity, secondary metabolites and antioxidants by various methods; morphological deformities, determination of LC50 and LD50, Probit analysis, etc.

MSZO- 303 (Unit - II) Core Course

CSO

The objective of this laboratory course is to introduce students to conduct experiments in Histology-histochemistry. The course is designed to teach students the utility of set of experimental methods in a problem-oriented manner. Students will learn the anatomy (different systems) of different animals viz., *Channa* sp., *Vespa* sp. and prawn.

MSZO 304Z: GENERAL ELECTIVE

MSZO 304Z: GENERAL ELECTIVE

(APPLIED ZOOLOGY)

CSO

Understanding scope and prospects of Zoology in different areas like Entomology, Aquaculture, Ecology, Ethology, Medical Entomology, Human genetics, Nanomedicine, Immunodiagnostics, Toxicology, Mosquito borne, Microbial, and metabolic diseases and community health.

MSZO 305: DISCIPLINE-CENTRIC ELECTIVE PAPERS

MSZO 305 (DE-1): AQUACULTURE AND FISHERIES

CSO

The course will develop understanding on economic importance of fishes; different aspects of fish breeding and diverse culture practices. Some advanced areas like genome manipulation techniques and fish biotechnology will also be undertaken.

MSZO 305 (DE-2): ECOLOGY AND ENVIRONMENTAL BIOLOGY

CSO

Development of concept on population ecology, metapopulation and metacommunity; conservation of nature and natural resources; working experience on analytical models and simulation/computation models (e.g., prey-predator, plant-insect, population growth).

MSZO 305 (DE-3): ENTOMOLOGY

CSO

It gives an overview of Insect Biology and its variation. Development of concept on integument proteins and chitin metabolism, and on various systems digestive, respiratory, nervous, and reproduction.

MSZO 305 (DE-4): MOLECULAR BIOLOGY AND GENETICS

CSO

Understanding human genome, genomic instability, genetic/epigenetic markers, metabolomics and disease biology; skill development on molecular biology techniques, detection of genetic disorders and cancer.

MSZO 305 (DE-5): PARASITOLOGY and MICROBIOLOGY

CSO

Strengthening knowledge-base on hosts, parasites and microbes; understanding disease causing vectors and their control measures.

MSZO 306: DISCIPLINE-CENTRIC ELECTIVE PRACTICALS

MSZO 306 (DE-1): AQUACULTURE AND FISHERIES

CSO

The course will introduce systematic identification of the fish so as to enable the students to determine taxonomic position of the fish species. Further, it will help to build-up confidence

to produce carp and catfish seeds by induced breeding technique. Students will also have an exposure to some basic analytical techniques like paper chromatography and TLC.

MSZO 306 (DE-2): ECOLOGY AND ENVIRONMENTAL BIOLOGY

CSO

Determination of primary productivity, nitrate, phosphorous and silica of aquatic ecosystem, study of population dispersion and association, construction of life table, hands on training of different protocols of biodiversity measurement, different ecotypes showing the modifications of different species according to their adaptation, and different instruments used in ecology and environmental biology.

MSZO 306 (DE-3): ENTOMOLOGY

CSO

Systematic identification of exopterygote insects, pests, vectors; training on field entomology; development of knowledge on haemocytes, salivary and gut enzymes.

MSZO 306 (DE-4): MOLECULAR BIOLOGY AND GENETICS

CSO

Students will learn basic molecular biology techniques including *Drosophila* culture maintenance, Culture of cancel cell lines, PCR and primer designing, Extraction of RNA and qPCR, Western blotting, Flow cytometry-based apoptosis and cell cycle analysis.

MSZO 306 (DE-5): PARASITOLOGY AND MICROBIOLOGY

CSO

Students will be acquainted with the standard methods for the isolation, identification and culturing of microorganisms and will be able to comprehend the ubiquitous nature of microorganisms and identify the different groups of microorganisms from different habitats like air, water, soil and their applications. They will carry out experiments to evaluate microbial quality of water and milk samples, antibiotic profiling of bacterial strains, physiological, bio-chemical and molecular properties of bacterial strains.

MSZO - 307: Community Engagement

CSO

This course will create a partnership between the communities and the students. Students will become aware about their social and moral responsibilities.

MSZO 401: Core Course

(DEVELOPMENTAL BIOLOGY AND STEM CELL BIOLOGY)

CSO

This course is consisting of two units. Developmental Biology unites the various disciplines Cell Biology, genetics and morphology. Molecular cell biology deals with how the individual components like the inducing factors, their receptors, signal transduction pathways and transcription factors. It emphasizes the function and activities of individual genes to form complex morphology. On the other hand, it is essential for biologists to understand how a single cell develops into a multicellular organism which involves complex process. On completion of a course on Stem cell Biology, students should be able to understand modern approaches including the logic of experiments and the inferences drawn from them; Develop key skills in imaging and manipulating stem cells in modern research.

MSZO 402: Core Course

(BIOSTATISTICS AND COMPUTATIONAL BIOLOGY)

CSO

Students will be introduced to the basic concepts of statistics and computational methods and its significance in Biological data analysis. They will learn the role of bioinformatics to characterize and manage the different types of Biological data. Introduction to the biological databases, basics of sequence alignment and overview about protein structure prediction will also be provided.

PRACTICAL PAPER

MZGP 403: Core Course

CSO

This course deals with hands on training on various models (insects, fish, frog, chick, mouse) of developmental biology particularly of embryonic stages through slide preparation. It also

includes specific studies on model organs: imaginal discs and notochord. Hands on training on sequence alignment, prediction on phylogeny; prediction on protein structure.

MSZO 404: DISCIPLINE-CENTRIC ELECTIVE PAPERS

MSZO 404 (DE-1): AQUACULTURE AND FISHERIES

CSO

This is in continuation of the previous course MSZO 305-DE1. This section will help to develop concepts on nutrition and feed management of the fish for intensification of the culture system. In addition, different aspects of farm maintenance, disease and health management, development strategies along with determination of freshness of fish will be introduced.

MSZO 404 (DE-2): ECOLOGY AND ENVIRONMENTAL BIOLOGY

CSO

Impact of alien species on ecosystem, biomonitoring of ecosystem through natural agents, impact of different toxicants and heavy metals on ecosystem health, causes, effects and control of air, water and noise pollution, causes of allergy and its control, different laws relating to maintenance of natural ecosystem, role of GIS in to monitor ecosystem health.

MSZO 404 (DE-3):ENTOMOLOGY

CSO

It gives an overview on the variation of biology of different orders of insects. Development of concept on insect development, exocrine system, immune system, perception, gall formation mechanism.

MSZO 404 (DE-4): MOLECULAR BIOLOGY AND GENETICS

CSO

Understanding Cellular organization, genome, epigenetics, Gene Expression, Cytoskeleton and cellular transport, Cell signaling pathways and cross talk mechanisms.

MSZO 404 (DE-5): PARASITOLOGY and MICROBIOLOGY

CSO

Strengthening knowledge-base on hosts and their helminth parasites; updated knowledge on taxonomy of helminthes; understanding disease causing helminthes and their control measures.

MSZO 405: DISCIPLINE-CENTRIC ELECTIVE PAPERS

MSZO 405 (DE-1): AQUACULTURE AND FISHERIES

CSO

This course will present the vast marine and brackish water fisheries resources. Basic concepts on marine fisheries, fish resources, conventional as well as modern fishing methods, and nutritive value of the fish will be focused. Further, culture and preservation/processing of the high-valued fish resources are highlighted.

MSZO 405 (DE-2): ECOLOGY AND ENVIRONMENTAL BIOLOGY

CSO

This course will cover species diversity study for conservation biology, conservation of natural resources, present status of sanctuary and national park in conservation, sustainable development, environmental management, environmental ethics, community study in hydrothermal vent, study of island biogeography and metacommunity concept.

MSZO 405 (DE-3): ENTOMOLOGY

CSO

This content deals with bionomics and management of pests of crops and stored grains, its various control, chemical, biological, hormonal and biotechnological. Concepts of vector transmission and surveillance and applications of molecular tools to study insect genomics and ecology.

MSZO 405 (DE-4): MOLECULAR BIOLOGY AND GENETICS

CSO

Understanding basic principles of sensitivity, specificity, application and importance of Molecular diagnosis for the detection cancer, rare genetic and metabolic disorders, infectious diseases; mode of infection and sero- surveillance by various modern diagnostic methods.

MSZO 405 (DE-5): PARASITOLOGY and MICROBIOLOGY

CSO

Strengthening knowledge-base on hosts and their helminth parasites; updated knowledge on taxonomy of helminthes; understanding disease causing helminthes including vector borne diseases and their control measures.

MSZO 406: DISCIPLINE-CENTRIC ELECTIVE PRACTICAL PAPERS

MSZO 406 (DE-1): AQUACULTURE AND FISHERIES

CSO

This course will provide hands-on experience on diet preparation, analysis of physiological status of fish and farm management, which might offer the scope of entrepreneurship development.

MSZO 406 (DE-2): ECOLOGY AND ENVIRONMENTAL BIOLOGY

CSO

This course will provide hands-on training on isolation of carbohydrates, proteins, lipids, amino acids and phenols from plants, determination of BOD and COD, organic matter determination from soil, isolation, identification and quantification of plant secondary compounds through GC-MS and GC-FID, buccal micronucleus cytome assay to detect gross cytological abnormalities and its association with environmental exposure, fast halo assay to assess DNA damage in oral exfoliated cell and its comparison between exposed versus unexposed individuals, genotyping of polymorphisms providing susceptibility to airborne allergens, air pollution study.

MSZO 406 (DE-3):ENTOMOLOGY

CSO

Systematic identification of endopterygote insects, vectors, insects of medico-legal importance; training on field entomology; development of knowledge on polytene chromosomes, genomic DNA isolation, chitosan test, hsp-70 expression.

MSZO 406 (DE-4): MOLECULAR BIOLOGY AND GENETICS

CSO

Students will learn DNA sequencing, PCR, IHC and other modern procedures of molecular diagnosis and will develop skill for analysis of sanger sequence chromatogram, NGS data, application of Bioinformatics, molecular Docking, omics data analysis, etc.

MSZO 406 (DE-5): PARASITOLOGY AND MICROBIOLOGY

CSO

First-hand knowledge on collection, preparation and accurate identification of parasites and their vectors using various updated and advanced techniques used in pathological laboratories.

MSZO 407

TERM PAPER / PROJECT WORK

CSO

Hands on training on different methods used in different biological disciplines, development of a preliminary idea in pursuing research in future; learning to write a review article including its references.

DEPARTMENT OF PLANT PROTECTION
SURI VIDYASAGAR COLLEGE

Course outcomes for B.Sc. (General) Plant Protection:

Semester- I

Course Code	Course Name	Outcome
Core Course (CC -1A)	Pests and Vectors	Students acquire knowledge about different kind of pests, Major pests, Minor pests, Pathogenic pests, Protozoan pests, Nematode pests, Mite pests, Molluscan pests, Bird pests, Rodent pests, Locust, damage caused by locusts and Management, plant disease, causes of

		plant disease, symptoms of plant disease, management, disease triangle In practical classes Students have learnt about how to preserving and labelling of insect pests, identification of insects pests and plant disease, preparation of permanent slide. In local field trip enable the students to identify the different insect pests, plant disease and weeds.

Semester- II

Course Code	Course Name	Outcome
Corecourse (CC-1B)	Pest Management	Students have learnt about forecasting method of plant disease, monitoring of insect pests, major sign and damage due to insect pests, methods of insect pests management, IPM of some important field crops. In practical classes students get knowledge about sign and symptoms of insect pest attack, identification of insect pests and plant disease. In local field trip enable the students to identify the different insect pests, plant disease and weeds.

Semester- III

Course Code	Course Name	Outcome
Core Course (CC – 1C)	Bionomics, Plant disease and their management	Students get knowledge about bionomics and management of common pests and diseases of field crops, stored grain pests. Students get knowledge about seed pathology and weeds. In practical classes students get knowledge about sign and symptoms of insect pest attack, identification of insect pests and plant disease and weeds, preparation of desired strength of pesticide, plant

		protection equipments; handling of rotary duster, Knapsack sprayer and seeddresser. In local field trip enable the students to identify the different insect pests, plant disease and weeds.
Skill Enhancement Course SEC-1	GreenPesticides	Students have learnt about green pesticide, how to prepare green pesticide, mode of action and its use.

Semester- IV

Course Code	Course Name	Outcome
Core Course (CC – 1D)	Plant'sDefenceMechanisms	Students come to know about resistance of host plant to insect, insect attractants, repellents, antifeedant, allelochemicals, ovipositionalstimulantsanddeterrents. They get knowledge about plant defence mechanism. In practical they get knowledge structural defence of plants against insects.
Skill Enhancement Course SEC-2	Formulation and application of pesticides and their precautions	Students have learnt about different formulation, solid formulation (D, WP, WSP, WDP, G), liquid formulation (EC, SL, ULV) and gaseous formulation (Aerosol, fog, mist, fumigants). They come to know about different plant protection equipments, handling technique of plant protection equipments and its precaution during pesticide application.

Semester- V

Course Code	Course Name	Outcome

Discipline Specific Elective (DSE-1A)	Integratedpestmanagement	Students come to know about different tools of IPM (Cultural, Physical, Mechanical, Biological, Chemical, and Regulatory). They get details concept about Integrated pest managements of common field crops. Practical field trip enable the students to identify the different insect pests, plant disease and weeds.

Semester- VI

Course Code	Course Code	Outcome
Discipline Specific Elective (DSE-1B)	Dissertation(Curriculumbasedlocalarea surveyof pestand crop)	Student get knowledge by local area survey of a field crop, cultivation process, insect-pests, diseases, weeds problem of the crop and method of pest management. Students can learnt, how to prepare a survey report.

Programme outcomes for B.Sc. (General) Plant Protection:

Students have knowledge about-

Different Insect-pests, diseases of agricultural field crops.

Identify insect pests, diseases and weeds of agricultural field crops.

Insect pest and disease managements of agricultural field crops.

Stored grain pests, its problem and their managements.

Locust pests, its problem and their managements.

Integrated pest managements of some common agricultural field crops.

Pesticides and its problem.

Green pesticide or botanical pesticide preparation.

Host plant resistance and plant defence mechanism.

Plant protection equipments and its handling technique.

Precaution during formulation and application of pesticides.

Formulation of pesticides.

Local area survey of pest and crop and prepare survey report.

DEPARTMENT OF PHYSICS
SURI VIDYASAGAR COLLEGE

Program Outcome

The formal educational system of our country is to follow the age-old timeline of education i.e., primary school education, secondary school education, high school education, college education. After this we usually have a branching. In one section we go for higher education like University education, Research etc., while in the other section we aim at jobs in different sectors like teaching, banking and cooperate sectors, Industry etc.

Therefore, the Undergraduate teaching (UG) plays a very vital role in the structuring of the society, which means that the college level education is vitally important for the education, upliftment and overall development of oneself and society at large. Hence, the outcome of an undergraduate department needs to be focused upon.

To impart knowledge and create a viable way of earning living few things are necessary like

Clearing the basics of the courses to be undertaken

Focus upon mathematical foundations of underlying concepts which shall help in quantifying outcomes or express processes aptly

Easy testability of studied materials that strengthens the foundations

To develop acquired knowledge to areas where they can be directly applied

These are the outcomes that we try to achieve. For this we adopt measures like:

To familiarize the student with the language and methodology of the subject concerned.

To develop a healthy teacher-student relationship which helps in learning

To involve in developing different instruments or lab setups to verify or advance the horizon of knowledge

These are the outcomes we aim to achieve.

Program Specific Outcome

The BSc. Program in Physics (both Honours and Generic/General levels run in the Department have a number of program specific outcomes as detailed below:

With the up gradation of the syllabi, the students are more exposed to the mathematical tools used in Physics. Consequently, they can follow and apply methods used routinely in books (and research papers used occasionally).

Physics has an ever-expanding horizon, with newer theories, explanations and realizations emerging every day. Therefore, with the expanding syllabi, especially in computer-based techniques a good focus on these topics will create a well conversant group of youth who can aptly work in computer labs as and when necessary.

Advanced experiments as included in the latest syllabi will help the students in future jobs in applied areas.

For General and Generic students, a large number of experiments are performed regularly which is aimed at creating a general concept of the various experimental techniques used (at a non-expert level)

Course Specific Outcomes:Honours

The syllabus of Physics Honors of Burdwan University has a number of course specific outcomes as given below:

The stress upon mathematical methods i.e the mathematical tools that are routinely used in Physics occupy a very important role in the syllabus of Physics honors. In Semesters 1,3 and 4 the topics pertaining to mathematical physics are included that create a fairly strong foundation of the mathematics used in Physics.

Fundamental areas of Physics like Mechanics and General Properties of Matter are included in Semester 1. This helps in the discussion of advanced topics in latter semesters as also the understanding of the subject.

Waves and Optics are yet again a fundamental area of Physics that are included in the second semester. This helps in attaining a proper understanding of many phenomena in Physics.

Thermal physics is very basic and fundamental in nature. An extensive treatment is included in the third semester. This helps in realization of the thermal aspects of the physical world.

Digital systems and applications are discussed in fair details in this semester. This helps in creating a sound foundation of electronics.

In addition to this some relevant inter disciplinary topics are given as optional under skill enhancement courses like Renewable energy & energy harvesting and Weather Forecasting. These topics create consciousness about our impending calamities and try to figure out the possible way outs.

Elements of Modern Physics are extensively included in the fourth semester. These are important for the students and could be necessary for their future engagements. Analog systems and applications are also included in this semester having a similar necessity. Under SEC Computational physics, electric circuits and network skills are included which train the students for possible occupations in life.

For semester five the stress is on Quantum Mechanics and its applications. As an advanced topic discussions on Solid State Physics are included. Both of these topics are recent topics and could lead the student to frontiers of research.

Some Discipline Specific Elective papers are included in the fifth semester which include Mathematical Physics, Nuclear and Particle Physics, Nano materials and applications, Medical physics. All of these can launch the student into lines of future research.

Semester six deals with Electromagnetic theory, Statistical Physics which are both advanced topics of Physics. Here also we have few DSE papers like Classical Dynamics, Communication Systems, Astronomy and Astrophysics, Applied Dynamics which can be the lines of research of the student.

In each of the above-mentioned papers there are related Practicals that strengthen the understanding of the physics concerned. Plus, they train the students for job related interviews and work.

Course Specific Outcomes:General/Generic

The syllabus of Physics General/Generic of Burdwan University has a number of coursespecific outcomes as given below:

In Semester 1 the stress is upon Mathematical Methods, Mechanics, Vibrations & Oscillations and Special Theory of Relativity. The student is expected to learn about basic physics of particle kinematics, dynamics, oscillations, vibrations both at non relativistic and relativistic speeds.

In Semester 2 the syllabus focuses on Electricity, Magnetism, Electromagnetic Induction and Maxwell Equations. The student is expected to learn about electricity-magnetism along with different applications.

In Semester 3 the syllabus focuses on Thermal Physics, Thermodynamics and Statistical Physics. The students are expected to learn about Thermal and Statistical Physics along with practical applications.

The Skill Enhancement Course on Renewable Energy is a need of the day with rapidly depleting Fossil fuel reserves. The SEC on Renewable Energy teaches about Fossil fuels &

Alternate Sources of Energy, Solar Energy, Wind Energy, Ocean Energy, Geothermal Energy, Hydro energy, Piezoelectric Energy and Electromagnetic Energy Harvesting. The student is expected to be aware about our need of alternate energy resources with techniques and methodology.

In Semester 4 the stress is upon Waves, Fluids, Sound and Wave Optics. The student is expected to learn about vibration and waves applied to optical phenomena like Interference, Diffraction & Polarization.

The SEC on Weather Forecasting introduces the student to the atmosphere, Measuring the weather, The various Weather systems, Climate & Climate Change, and Basics of Weather Forecasting. The student is expected to get acquainted with the complex weather system which apart from gaining knowledge shall help the students in facing interviews in specific institutions.

In Semester 5 the stress is upon Modern Physics mainly focusing on Atomic Physics, Nuclear Physics & Quantum Mechanics with applications. The student is expected to be acquainted with present day techniques of solving problems on completing the course.

In Semester 6 the stress is on Quantum Mechanics along with some applications. The student is expected to learn modern ways of tackling different problems of Quantum physics.

The SEC on Electrical Circuits and Network Skills teaches the student about basic electricity principles, understanding electrical circuits, Drawing diagrams and different electrical technologies like Generators, Transformers, Motors, Solid State Devices, Electrical Protection and Wiring. This is surely to be a good training course for students.

In each of the above-mentioned papers there are related Practicals that strengthen the understanding of the physics concerned. Plus, they train the students for job related interviews and work.

To sum up it can be said that the General and Generic courses (in both theory and experiment) focus on both basic and advanced topics but at a not-too detailed level. The student achieves a general understanding and overall general expertise at a not too high level.

As the new CBCS system was introduced from 2017, for 2017 we had only 2nd and 3rd year students in the old syllabus (pre CBCS), while for 2018 we had only 3rd year students for the Old Syllabus. 2019 onwards there was no old Course student in the current batch.

OLD SYLLABUS (Pre CBCS)

Course Specific Outcome:Honours

The Old Syllabus of Physics Hons of Burdwan University has a few Courses Specific Outcomes as detailed below:

1. The syllabus of Physics Hons in the Old 2nd year focused on Mathematical Physics, Mechanics, Electromagnetic Theory, Wave Optics and Thermal Physics. The student is expected to gain proficiency in dealing with mathematical physics problems, Classical Mechanics, Electromagnetics, Physical Optical Phenomena like Interference, Diffraction & Polarization and Thermodynamics. The students are expected to learn about Electrical Experiments in the Experimental Physics section.
2. The syllabus of Physics Hons in the Old 3rd year focused on Special Theory of Relativity, Statistical Physics, Solid State Physics, Atomic and Molecular Physics, Quantum Theory, Nuclear Physics and Electronics. The student is expected to gain some expertise in dealing with basic problems pertaining to these topics. The student is expected to learn about experiments regarding optics specially the spectrometer, some advanced experiments in electricity-magnetism and atomic theory.

Course Specific Outcome:General

The Old Syllabus of Physics General of Burdwan University has a few Course Specific Outcomes as detailed below:

1. The course focuses on Electromagnetism, Wave Optics, Modern Physics and Electronics. The expanse of the syllabus is quite large and the student is expected to learn the topics at a not too deep level. The experiments span over a large area including basic mechanics, small oscillations, heat, optics, electronics, magnetism etc. This is likely to make the student conversant with different experimental techniques.

In the 3rd year a number of topics of relatively advanced topics are given ranging from different topics of interest. These introduce the students to various topics of contemporary interest.

In the practical paper a number of experiments are to be performed which is to introduce the student to some advanced level experiments.

OUTCOME

HIGHER EDUCATION OR JOB APPOINTMENTS RECEIVED BY STUDENTS WHO PASSED OUT DURING 2017

For 2017 pass out Honours students 2 had joined as PSC or Public Service Commission clerks

HIGHER EDUCATION OR JOB APPOINTMENTS RECEIVED BY STUDENTS WHO PASSED OUT DURING 2018

For 2018 pass out Honours students 2 had joined as GDS or Gramin Dak Sevak under India Post

HIGHER EDUCATION OR JOB APPOINTMENTS RECEIVED BY STUDENTS WHO PASSED OUT DURING 2019

For 2019 pass out Honours students 2 had joined MSc, 4 had joined as GDS and 1 had joined as SBI Clerk

HIGHER EDUCATION OR JOB APPOINTMENTS RECEIVED BY STUDENTS WHO PASSED OUT DURING 2020

For 2020 pass out Honours students 2 had joined as GDS and 3 had joined for B.Ed.

HIGHER EDUCATION OR JOB APPOINTMENTS RECEIVED BY STUDENTS WHO PASSED OUT DURING 2021

For 2021 pass out Honours students 6 had joined MSc and 1 had joined a Company for work.

THE DEPARTMENT OF MATHEMATICS

SURI VIDYASAGAR COLLEGE

Honours Courses

Program Specific Outcome:

Bachelor's degree in mathematics is the culmination of in-depth knowledge of algebra, calculus, geometry, differential equations and several other branches of mathematics. This also leads to study of related areas like computer science, Financial Mathematics, statistics and many more. Thus, this programme helps learners in building a solid foundation for higher studies in mathematics. The skills and knowledge gained has intrinsic beauty, which also leads to proficiency in analytical reasoning. This can be utilized in modeling and solving real life problems. Students undergoing this programme learn to logically question assertions, to recognize patterns and to distinguish between essential and irrelevant aspects of problems.

Programme Specific Outcome of B.Sc. (Hons) Mathematics:

(i) The students can understand that mathematics has wide applications in different branches of science, commerce & arts.

(ii) Familiarize the students with suitable tools of mathematical analysis to handle issues and problems in mathematics and related sciences.

(iii) Acquire good knowledge and understanding to solve specific theoretical and applied problems in advanced areas of mathematics and statistics.

(iv) Provide students/learners sufficient knowledge and skills enabling them to undertake further studies in mathematics and its allied areas on multiple disciplines concerned with mathematics.

(v) Encourage the students to develop a range of generic skills helpful in employment, internships and social activities.

(vi) The students have their course on Algebra, Real Analysis, Computer Programming in C++, Numerical Analysis, Mechanics & Differential Equation. All these courses help the students to do their research in future study.

(vii) All the topics of courses of Mathematics are helpful for the higher study in Mathematics.

(viii) Some courses of Mathematics help the students to sit in competitive examination like JECA, JEM, etc.

(ix) This course of Mathematics will provide different job-oriented courses which will be beneficial to the students.

(x) Many of our students are successfully doing their research work and many are placed in Banks, Companies etc.

Program Outcome:

The Bachelor's Degree in Mathematics(Honours) is awarded to the students on the basis of knowledge, understanding, skills, attitudes, values and academic achievements sought to be acquired by learners at the end of this program. Hence, the learning outcomes of mathematics for this course are aimed at facilitating the learners to acquire these attributes, keeping in view of their preferences and aspirations for knowledge of mathematics. Mathematics is the study of quantity, structure, space and change. It has very broad scope in science, engineering and social sciences. The key areas of study in mathematics are Calculus, Algebra, Geometry, Analysis, Differential Equations and Mechanics etc. The followings are some Program Outcome of under graduate Mathematics:

(i) After completion of the program the students perform more scientifically and logically for the betterment.

(ii) The program develops the skill to deal with the abstract idea of Mathematics.

(iii) The students can continue the study of Mathematics at the post graduate level or other related fields.

(iv) This program teaches the students to think logically which will help them in all future aspects of life.

(v) It teaches the students how to grow the teaching ability in education purpose, i.e., in school or under-graduate or post-graduate level.

Course outcome

CC01: Calculus, Geometry & Differential equation

It grows interest and develop the basic concepts in calculus, geometry and differential equation, which help the students to understand the courses in higher semesters. Graphical demonstrations help in plotting of graphs of polynomials exponential curves, parametric curves.

CC02: Algebra

This course helps the students to understand the basic concepts in Theory of equations (Classical Algebra), modern algebra and linear algebra. It is the foundation of the abstract nature of mathematics.

CC03: Real Analysis

Students understand the concepts of convergent and divergent of real sequence and series and develop the basic ideas in bounded and unbounded sets, limit points, open and closed sets etc. in real analysis.

CC04: Differential equation & Vector Calculus

It helps the students to solve different types of differential equations and graphical demonstration helps to understand the solution of the equations. It also helps to understand the vector concept of mathematical problem.

CC05: Theory of Real Functions & Introduction to Metric Space

The student acquired knowledge in limit, uniform continuity, differentiability of real functions etc. and it helps the student to solve the problem in application of differential calculus. Students also acquired knowledge in basic of a metric space.

CC06: Group Theory-I

The student understands the binary algebraic structure which from the group. It also helps to know subgroups, homomorphism etc.

CC07: Numerical Methods & Numerical Methods Lab

The numerical concept of mathematics helps to develop practical knowledge and know how the methods work in different real problems.

CC08: Reimann Integration & Series of Functions

It develops the concept of Reimann integration and different types of series of functions, e.g. Fourier series, power series etc.

CC09: Multivariate Calculus

The students acquired knowledge of real analysis of more than one variable, integration for more than one variable. It also develops the concept of different types of operator in vector calculus.

CC10: Ring Theory & Linear Algebra-I

It helps the students to develop the concept of algebraic structure for more than one binary operation which from Ring, Field etc.

CC11: Partial Differential Equations & Applications

The students acquired knowledge to solve partial differential equation and apply these to solve real problems like the vibrating string problem, heat conduction problem etc. Graphical demonstration helps to sketch the solution.

CC12: Mechanics-I:

Students will learn Coplanar forces in general, An arbitrary force system in space, Equilibrium in the presence of sliding Friction force, Virtual work, Stability of equilibrium, Kinematics of a particle, Planar motion of a particle, Motion of a particle in three dimensions,Keplar's laws of motion, Motion under the inverse square law, Stability of nearly circular orbits, linear momentum principle, angular momentum principle, energy principle. Degrees of freedom, Moments and products of inertia, D'Alembert's Principle, Motion of a rigid body in two dimensions under finite and impulsive forces, Conservation of momentum and energy.

CC13: Metric Spaces & Complex Analysis:

Students will understand several standard concepts of metric spaces and their properties like openness, closedness, completeness, Bolzano-Weierstrass property, compactness, and connectedness. Identify the continuity of a function defined on metric spaces. Students will also understand the significance of differentiability and analyticity of complex functions leading to the Cauchy Riemann equations. Apply Liouville's theorem in fundamental theorem of algebra. Learn Taylor and Laurent series expansions of analytic functions.

CC14: Ring Theory & Linear Algebra-II:

Students will learn Polynomial rings, principal ideal domains, unique factorization domains, Euclidean domains. The students will also learn Dual spaces, transpose of a linear transformation, Inner product spaces and norms, Orthogonal projections and Spectral theorem.

SEC: From Skill Enhancement Course one can learn logic and sets, computer graphics, object oriented programming in C++, graph theory, operations systems, LINUX, MATLAB programming which will helpful in the future for research and competitive examination.

DSE: From Discipline Specific Elective courses one can get an overview of specialized sections of mathematics which will help to choose the right track for the future. The students are also provided Project Work as DSE paper which enables them to be methodical in his approach to solving the research problem. It also helps them in acquiring appropriate project writing skill and self-confidence which propel them to always insist on producing an original research report.

General Courses

Program Specific Outcome:

Bachelor's degree in mathematics is the culmination of in-depth knowledge of algebra, calculus, geometry, differential equations and several other branches of mathematics. This also leads to study of related areas like computer science, Financial Mathematics, statistics and many more. Thus, this programme helps learners in building a solid foundation for higher studies in mathematics. The skills and knowledge gained has intrinsic beauty, which also leads to proficiency in analytical reasoning. This can be utilised in modelling and solving real life problems. Students undergoing this programme learn to logically question assertions, to recognise patterns and to distinguish between essential and irrelevant aspects of problems.

Programme Specific Outcome of B.Sc. (General) Mathematics:

(i) The students can understand that mathematics has wide applications in different branches of science, commerce & arts.

(ii) Familiarize the students with suitable tools of mathematical analysis to handle issues and problems in mathematics and related sciences.

(iii) Acquire good knowledge and understanding to solve specific theoretical and applied problems in advanced areas of mathematics and statistics.

(iv) Provide students/learners sufficient knowledge and skills enabling them to undertake further studies in mathematics and its allied areas on multiple disciplines concerned with mathematics.

(v) Encourage the students to develop a range of generic skills helpful in employment, internships and social activities.

(vi) The students have their course on Algebra, Real Analysis, Numerical Analysis, Mechanics & Differential Equation. All these courses help the students to do their research in future study.

(vii) This course of Mathematics will provide different job oriented courses which will be beneficial to the students.

(viii) Many of our students are successfully doing their research work and many are placed in Banks, Companies etc.

Program Outcome:

The Bachelor's Degree in B.Sc. (General) Mathematics is awarded to the students on the basis of knowledge, understanding, skills, attitudes, values and academic achievements sought to be acquired by learners at the end of this program. Hence, the learning outcomes of mathematics for this course are aimed at facilitating the learners to acquire these attributes, keeping in view of their preferences and aspirations for knowledge of mathematics. Mathematics is the study of quantity, structure, space and change. It has very broad scope in science, engineering and social sciences. The key areas of study in mathematics are Calculus, Algebra, Geometry, Analysis, Differential Equations and Mechanics etc. The followings are some Program Outcome of under graduate Mathematics:

(i) After completion of the program the students perform more scientifically and logically for the betterment.

(ii) The program develops the skill to deal with the abstract idea of Mathematics.

(iii) This program teaches the students to think logically which will help them in all future aspects of life.

(iv) It teaches the students how to grow the teaching ability in education purpose, i.e., in school or under-graduate level.

Course outcome

CC 1A: Differential Calculus

It grows interest and develops the basic concepts in calculus such as limits, continuity, differentiability, tangent, normal, partial differentiation and applications.

CC 1B: Differential Equations

It helps the students to solve different types of differential equations. In this course they learn about first order ordinary differential equations, integrating factors, Wronskian, homogeneous and non-homogeneous, higher order differential equations-method of variation of parameters, Cauchy-Euler equations. Simultaneous and total differential equations are also taught in this paper. The students also learn partial differential equations of first and second order.

CC 1C: Real Analysis

Students understand the concepts of convergent and divergent of real numbers, real sequence and series of real numbers and develop the basic ideas in bounded and unbounded sets, limit points, open and closed sets etc. in real analysis. The students also learn sequence and series of functions, power series and their basic properties.

CC 1D: Algebra

After completion of this unit of the course, the students will be able to demonstrate the mathematical maturity of understanding a group, a ring and a field in Abstract Algebra. Students will get an overall understanding of the following concepts: Introduction of Group Theory: Definition and examples taken from various branches, some elementary properties of groups. Definition and examples of sub- group - Statement of necessary and sufficient condition and its applications. Definitions and examples of rings and fields.

SEC (SKILL ENHANCEMENT COURSE): From Skill Enhancement Course one can learn logic and sets, analytical geometry, integral calculus, vector calculus, theory of equations, number theory, Probability and Statistics, Mathematical modeling, Mathematical Finance, Boolean Algebra, Transportation and Game Theory, Graph theory which will helpful in the future for research and competitive examination. After completion of this Skill Enhancement Course, students may enhance their skill in different branches of mathematics.

DSE (DISCIPLINE SPECIFIC ELECTIVE COURSES): From Discipline Specific Elective courses one can get an overview of specialized sections of mathematics which will help to choose the right track for the future. The students are provided matrices, mechanics, linear algebra, numerical methods, complex analysis and linear programming which enable them to be enhancing their mathematical ability in different branches of mathematics. It also helps them in different competitive examination.

Course outcome (General Course)

Part-I

Paper-I: Differential Calculus,Integral calculus, ordinary differential equations: It grows interest and develop the basic concepts in calculus and differential equations. This course helps the students to understand the basic concepts of differential calculus, integral calculus and help to solve different types of ordinary differential equations.

Part-II

Paper-II: Abstract Algebra, Classical Algebra, : Linear Algebra, Geometry (2D & 3D), Vector Analysis: The student understands the concepts of abstract nature of algebra. They learn about Mappings, Composition of two mappings, Inverse mapping. Binary composition, groups – simple examples, properties subgroups, permutation, group of permutation, divisor of zeros, Rings, Integral domain, fields. Polynomials, Division Algorithm, Fundamental Theorem of Classical algebra Descartes, rule of signs, Relation between roots and co-efficients, symmetric functions of roots, transformation of polynomial equations, Cardan's solution of cubic equation. Complex numbers, De-Moivre's theorem are also taught in this course. They also develop their knowledge of non-homogeneous system of three linear equations by matrix inversion method. Elementary row and column operations, rank of a matrix, row reduced echelon form and fully reduced normal form. Vector spaces over reals, linear dependence and independence of a finite set of vectors, sub-spaces, definition and examples. Cayley – Hamilton Theorem. In geometry they gather knowledge about Transformation of rectangular axes, Invariants, General equation of second degree, reduction to standard forms and classification. Polar co-ordinates, polar equation of a straight line, circle and conic. Rectangular Cartesian co-ordinates. Transformation of axes. Equations of a plane and a straight line, Shorter distance between two skew lines. Sphere, Cone, Cylinder, Ellipsoid, Hyperboloid and Paraboloid referred to principal axes. Tangent planes and normals. In vector analysis section, they taught about different types of vectors and its applications.

Paper-III: Dynamics of a Particle, Statics, Probability and Statistics: It helps the students to develop the concept of Motion of a particle in one dimension : Rectilinear motion under constant and variable forces ; Motion under gravity in a resisting medium where resistance varies as the velocity or square of the velocity; Terminal velocity; Simple Harmonic Motion (S.H.M); Elastic string; Damped and forced oscillations. Motion of a heavy particle along a smooth and rough inclined plane. Students will learn about Laws of motion; Impulse and Impulsive forces; Work, power and energy; Principle of conservation of energy and linear momentum; One dimensional collision of two elastic bodies; Coefficient of restitution; Loss

of kinetic energy in direct collision. Students also understand the basic ideas of Motion of a connected system and related problems. Motion of a particle in two dimension : Expressions of velocity and acceleration components in Cartesian and polar co-ordinates; Angular velocity and angular accelerations; Equations of motion in Cartesian and polar co-ordinates; Motion of a projectile under gravity (neglected air resistance); Circular motion; Tangential and normal accelerations; Central forces and central orbits; Apses; Motion under inverse square law; Planetary motions; Keplar's laws; Escape velocity. This part helps the students to acquire knowledge in particle dynamics and their applications.

In statics portion, students get some basic knowledge of statics such as Forces, Forces acting at a point, Parallelogram of forces, Lami's theorem, Converse of Lami's theorem, Parallel forces, Moments, Couples, General conditions for equilibrium of coplanar forces.

In this section, students learn about the basic concepts in probability such as Random variable, distribution function of discrete and continuous random variable, Probability mass and density function, Mathematical Expectations, Tchebyshev's inequality and Bernoulli's theorem, Expectation, Variance of the distributions.

Statistics helps the students in different practical problems in different statistical data. It also help the student to solve the practical problems by statistical analysis of the data.

Part-III

Paper-IV: Linear Programming, Numerical Analysis, Computer Programming: Students get basic knowledge of LPP, Numerical analysis and computer programming in this paper. They learn about General introduction of LPP, Convex set, hyper plane, extreme point, convex polyhedron, basic solution, feasible solution, basic feasible solution, Fundamental theorem of L.P.P., Duality in L.P.P, Transportation problem and Assignment problem.

In numerical analysis part, students get some knowledge in numerical analysis such as Approximate numbers, significant figures, rounding off numbers. Errors , Ordinary and divided

differences, Numerical integration, Solution of system of linear equations, Solution of first order o.d.e., Solution for real roots of algebraic and transcendental equations.

In computer programming section, one can get basic concepts of computer (hardware and software) and C-programming language and its applications to write C-programming for numerical problems.

Department of Computer Science
Suri Vidyasagar College

Course: B.Sc (General/Generic)

Programme outcomes:

Develop competences and independence needed to further studies in the field of Computer Science.
Prepare students to undertake careers involving problem solving using Computer Science and technologies.
Develop skills from different practical experiments to analyze scientific data critically and systematically.
Provide hands-on experience to apply computing skills in other different field of study like mathematics, physics, chemistry, bio-sciences etc.
Develop ability to analyze a problem, identify and define the computing requirements which are required to its solution.
Produce skilled individuals who can innovate and develop software product.

Programme specific outcomes:

Gain ability to apply knowledge of Computer Science to the real-world issues.

Know the recent development in Information Technology, future possibilities and limitations and understand the value of life-long learning.

Build up programming, analytical and logical thinking abilities.

Get familiar with current trends in various fields of Computer Science.

Ability to understand the principles and working of different aspects of computer hardware and software.

Improvement in critical reasoning, logical judgment, communication and presentation skill through the use of ICT

Course outcomes:

Paper wise course outcome of B. Sc. (General/Generic) in Computer Science:

Semester- I

Paper Code	Paper Name	Outcome
CC -1A	Problem Solving Using Computer	Students come to know about computer fundamentals and basic organization of a computer system. Students get understanding of basic and some advanced concept of Python programming language like inheritance, event driven programming, GUI programming. In practical using Python language students solve simple mathematical and logical problems as well as some visual python problems that include histogram, curves, geometrical shapes etc.

Semester- II

Paper Code	Paper Code	Outcome
CC -1B	Database Management Systems	Students are introduced with fundamental concepts of DBMS, like data models, architecture, data independence etc. They grow concept on Entity Relationship model, Relational data model and SQL that helps to design some typical databases. In practical students design relational database schema for a company with given constraints and run various queries using SQL.

Semester- III

Paper Code	Paper Code	Outcome

CC -1C	Operating Systems	Students get knowledge about various types of an operating system and the principles of operating system organization. They come to know about important functionalities of operating system like memory management, process management, scheduling etc. Students acquire basic concepts of shell scripting namely vi editor, system calls, pipes, functions, utility program. In practical they develop skill to write shell script to solve simple mathematical and logical problems.
SEC-1	Office Automation Tools	Students can create telephone directory, time-table, ordered list unordered list and various types of tables using Microsoft Word. Students develop skill to implement various mathematical and statistical formulas in MS excel. They also learn to plot different charts with given data. Using Microsoft Power Point students learn to create Power Point Slides with little bit of animation.

Semester- IV

Paper Code	Paper Code	Outcome
CC -1D	Computer System Architecture	Students get knowledge about fundamental units of computer architecture like combinational circuits, sequential circuits, computer registers, bus system etc. They come to know about CPU organization, input-output organization and assembly language concepts. In practical they develop skill to simulate register reference instructions, memory reference instructions with given instruction format.
SEC-2	HTML Programming	Students acquire knowledge about HTML programming elements like – links, images, tables and forms. They develop skill to create HTML documents that include paragraph, list, image, link, tables and various controls of a from.

Semester- V

Paper Code	Paper Code	Outcome
DSE -1A	Programming in Java	Students come to know Java programming fundamentals including JDK, decision making statement, looping statements. They get concept of Object-Oriented concepts like, class, object, Inheritance, Polymorphism, Overloading etc.

		They get introduced to some advanced topics like exception handling, file handling, applet programming. In practical they develop skill to solve problems using object-oriented approach with Java programming language.
SEC-3	MySQL/PL-SQL	Students get knowledge about various SQL statements, database objects and transaction control statements. In practical they get skilled to implement SQL statement that can be used to make views, indexes, cursor, triggers.

Semester- VI

Paper Code	Paper Code	Outcome
DSE -1B	Computer Networks	Students get to know about basic concepts of computer networks as well as overview of OSI reference model and TCP/IP protocol suite. They get knowledge about different layers of a network: Physical layer, data link layer, network layer, transport layer, application layer. They get introduced to network security. In practical they get skilled to simulate few basic algorithm and protocols of computer networks using Java.
SEC-4	PHP Programming	Students get knowledge about PHP programming fundamentals like: conditional events, loops, functions, array, regular expression and handling HTML. In practical they acquire skills to solve some mathematical and logical problems using PHP programming language.

Suri Vidyasagar College (Govt. Sponsored)

Suri, Birbhum. PIN- 731101, West Bengal

(Affiliated to the University of Burdwan &

Accredited by NAAC B^{++})

DEPARTMENT OF CHEMISTRY
SURI VIDYASAGA COLLEGE

Course outcome

***For Chemistry Honours Students* Course**	**Course prerequisite**	**Expected outcome**
CORE COURSE CC-1: ORGANIC CHEMISTRY-I	Elementary knowledge of bonding in organic molecules	Development of insight into molecular structure, physical properties and basic stereochemical aspects.
CORE COURSE CC -1: ORGANIC CHEMISTRY-I LAB	Acquaintance with common apparatus used in the laboratory	Acquisition of experimental knowledge in identification of organic compounds separation of mixture
CORE COURSE CC -2 PHYSICAL CHEMISTRY	Elementary knowledge about different mathematical functions and applications.	Basic idea about thermodynamics(1^{st} & 2^{nd} law),kinetic theory of gas and chemical kinetics
CORE COURSE CC -2 PHYSICAL CHEMISTRY-LAB	Acquaintance with common apparatus used in the laboratory	Acquisition of experimental knowledge of chemical kinetics, solubility and pH of the solution.
CORE COURSE CC -4 INORGANIC CHEMISTRY	Elementary knowledge about atom, periodic table and oxidation and reduction reaction	Development of insight into atomic structure, chemical periodicity, acid base reaction and redox reaction
CORE COURSE CC -4 INORGANIC CHEMISTRY-LAB	Acquaintance with common apparatus used in the laboratory	Quantitative estimation of metal ions mixture.
CORE COURSE CC- 4: ORGANIC CHEMISTRY-II	Elementary knowledge of bonding and reactivity	Familiarity with static stereochemistry kinetics, energetics mechanistic and stereochemical principles of substitution and elimination reactions
CORE COURSE CC-4: ORGANIC CHEMISTRY-II LAB	Acquaintance with common apparatus used in the laboratory	Acquisition of knowledge in preparation of organic compounds. •Purification of the prepared compound. • Characterization of the synthesized compound • Determination of yield of the product

CORE COURSE CC-5: PHYSICAL CHEMISTRY	Elementary knowledge about transport phenomenon, thermodynamics	Basic idea of transport properties of fluid, application of thermodynamics and postulates of quantum mechanics
CORE COURSE CC-5: PHYSICAL CHEMISTRY LAB	Acquaintance with common apparatus used in the laboratory	Acquisition of experimental knowledge of poiseuille equation. Partition coefficient and Ostwald dilution law
CORE COURSE CC -6 INORGANIC CHEMISTRY	Elementary knowledge about atomic structure	Basic idea about different kinds of bonding and radioactivity.
CORE COURSE CC -6 INORGANIC CHEMISTRY LAB	Acquaintance with common apparatus used in the laboratory	Quantitative estimation of different metal ions iodimetrically or iodometrically.
CORE COURSE CC-7: ORGANIC CHEMISTRY	Elementary knowledge of reactivity patterns	Introduction to functional group and reagent chemistry in terms of mechanistic and stereochemical aspects
CORE COURSE CC-7: ORGANIC CHEMISTRY-III LAB	Acquaintance with common apparatus used in the laboratory	Familiarity with identification of organic compound through systematic analysis
CORE COURSE SEC- 1: BASIC ANALYTICAL CHEMISTRTY	Elementary knowledge about mathematical data presentation	Basic idea about data sampling, analysis of soil, water, cosmetics and food products. Acquisition of Knowledge about chromatography and ion exchange.
CORE COURSE CC-8: PHYSICAL CHEMISTRY	Elementary knowledge about, thermodynamics.	Basic idea about phase rule, colligative properties, electrical properties about molecules and quantum chemistry.
CORE COURSE CC-8: PHYSICAL CHEMISTRY LAB	Acquaintance with common apparatus used in the laboratory	Experimental knowledge about solubility product, potentiometric titration and phase rule.
CORE COURSE CC-9: INORGANIC CHEMISTRY	Basic knowledge about Periodic table and bonding.	Acquisition of knowledge about metallurgy, coordination chemistry, S and P block elements and inorganic polymer.

CORE COURSE CC-9: INORGANIC CHEMISTRY-LAB	Acquaintance with common apparatus used in the laboratory	Experimental knowledge about complexometric titration of some metal ions and preparation of some complex compounds.
CORE COURSE CC-10: ORGANIC CHEMISTRY-IV	Basic knowledge in reagents, reaction types and electromagnetic radiation	Familiarity with some organic name reactions synthetic strategy structure elucidation in terms of spectroscopic techniques
CORE COURSE CC-10: ORGANIC CHEMISTRY-IV LAB	Basic knowledge of handling burette and pipette	Understanding of the principles and experimental methods of the quantitative estimation of an organic compound
CORE COURSE CC-11: INORGANIC CHEMISTRY-V	Elementary knowledge about coordination chemistry and periodic table.	In depth understanding of coordination chemistry, study of transition elements, lanthanoids and actinoids
CORE COURSE CC-11: INORGANIC CHEMISTRY LAB-V	Basic knowledge about chromatography and spectrophotometer.	Understanding of the principles and experimental methods of separation of metal ions by chromatographic methods, gravimetric analysis and spectrophotometric studies.
CORE COURSE CC-12: ORGANIC CHEMISTRY-V	Elementary idea about writing reaction mechanism, drawing of molecular orbitals and basic stereochemical principles	Understanding of synthesis and reactivity of polynuclear hydrocarbons heterocyclics Carbohydrates Biomolecules Familiarity with static and dynamic stereochemistry of six membered rings Role of orbital symmetry in organic reactions
CORE COURSE CC-12: ORGANIC CHEMISTRY-V LAB	Basic knowledge of chromatography, chemical shift and coupling constants	Familiarity with Chromatographic separation of a mixture • Interpretation of IR and NMR spectra
CORE COURSE DSE-1: PHYSICAL CHEMISTRY-V	Elementary knowledge about crystals and thermodynamics.	Understanding of crystallography, statistical thermodynamics and polymers
CORE COURSE DSE-1: PHYSICAL CHEMISTRY-V LAB	Elementary knowledge about computer programming.	Acquisition of knowledge about computer programming.

CORE COURSE DSE-2: ANALYTICAL CHEMISTRY-V	Elementary idea about analytical method in chemistry.	Understanding of analytical chemistry, spectroscopy, thermogravimetry and different separation techniques.
CORE COURSE DSE-2: ANALYTICAL CHEMISTRY-V LAB	Elementary idea about different separation techniques.	Familiarity with different separation techniques (Chromatography, solvent extraction) and spectrophotometry.
CORE COURSE CC-13: INORGANIC CHEMISTRY-VI	Basic idea about organometalic and bioinorganic chemistry.	Understanding of organometalic chemistry, catalyst and bioinorganic chemistry.
CORE COURSE CC-13: INORGANIC CHEMISTRY-VI LAB	Elementary idea about qualitative inorganic chemistry	Qualitative semimicro analysis of different cationic and anionic radicals.
CORE COURSE CC-14: PHYSICAL CHEMISTRY-VI	Basic idea about spectroscopy	Acquisition of theoretical knowledge about different spectroscopy, photochemistry surface phenomenon and colloids.
CORE COURSE CC-14: PHYSICAL CHEMISTRY-VI LAB	Acquaintance with common apparatus used in the laboratory	Experimental knowledge about determination of surface tension, and use of spectrophotometer for verification of Lamberts Beer law and determination of pH.
DSE 3: GREEN CHEMISTRY	Elementary idea about the hazardous aspects of chemical processes and reactions	• Introduction to principle and applications of sustainable, environmentally benign chemistry
DSE 3: GREEN CHEMISTRY LAB	Elementary idea about environmental hazards	Introduction to Methodologies directed towards minimization of chemical hazards
For Chemistry General Students Course	**Course prerequisite**	**Expected outcome**
CEMG CORE COURSE CC-1A/GE1: Section A - INORGANIC CHEMISTRY I	Elementary idea about inorganic Chemistry.	Introduction to atomic structure, Chemical periodicity, acid base and Redox reaction
CEMG CORE COURSE CC-1A/GE1: Section B - INORGANIC CHEMISTRY LAB	Acquaintance with common apparatus used in the laboratory	Quantitative estimation of oxalic acid, iron, copper etc.
CEMG CORE COURSE CC-1B/GE1: Section B - ORGANIC CHEMISTRY I	Elementary knowledge of Organic chemistry.	Acquisition of theoretical knowledge about reaction Mechanism stereochemistry and aliphatic hydrocarbons.

CEMG CORE COURSE CC-1A/GE1: Section B - ORGANIC CHEMISTRY LAB	Acquaintance with common apparatus used in the laboratory	Familiarity with qualitative analysis of Single Solid Organic Compound
CEMG CORE COURSE CC-1B/GE2: Section B - ORGANIC CHEMISTRY II	Elementary knowledge of reactivity patterns	Introduction to states of matter, chemical kinetics, bonding and molecular structure, P-block elements.
CEMG CORE COURSE CC-1B/GE2: Section B - LAB	Acquaintance with common apparatus used in the laboratory	Acquisition of experimental knowledge in measurements of viscosity, surface tension and kinetics of some reactions. Qualitative analysis of different acid and basic radicals.
CEMG CORE COURSE CC-1C/GE3:		Introduction to chemical energetic, equilibria, organic functional groups.
CEMG CORE COURSE CC-1C/GE3: LAB	Acquaintance with common apparatus used in the laboratory	Acquisition of experimental knowledge in chemical energetic, equilibria and identification of pure organic compound.
CEMG CORE COURSE SEC-I		Introduction to analytical clinical biochemistry
CEMG CORE COURSE CC-1D		Introduction to phase equilibria, solutions, conductance electrochemistry and analytical and environmental chemistry
CEMG CORE COURSE CC-1D LAB	Acquaintance with common apparatus used in the laboratory	Acquisition of experimental knowledge in solutions, phase equilibria, conductance electrochemistry, analytical and environmental chemistry.
CEMG CORE COURSE SEC -2	Elementary idea about organic chemistry	Introduction to pharmaceutical chemistry.
CEMG CORE COURSE SEC-3	Basic idea of computer	Introduction to basic and application of computer in chemistry.
CEMG CORE COURSE DSE-1A	Elementary knowledge of inorganic chemistry.	Introduction to Transition metal& coordination chemistry, analytical industrial chemistry.
CEMG CORE COURSE DSE-1A LAB	Acquaintance with common apparatus used in the laboratory	Acquisition of experimental knowledge of quantitative estimation of different metal ions by Gravimetric and complexometric methods. Preparation of complexes and some analytical experiments.

CEMG CORE COURSE SEC -4	Elementary knowledge of organic, and Physical chemistry	Introduction to polymer chemistry
CEMG CORE COURSE DSE -1B	Elementary knowledge of organic chemistry.	Introduction to organic functional groups & industrial chemistry
CEMG CORE COURSE DSE -1B LAB	Acquaintance with common apparatus used in the laboratory	Preparation of some Organic Compounds and some experiments on industrial chemistry.

DEPARTMENT OF COMMERCE
SURI VIDYASAGAR COLLEGE

PROGRAMME OUTCOMES (w.e.f. 2017-18)

The College is affiliated to The University of Burdwan. Thus, the college follows the guidelines and syllabus prescribed by the Affiliated University.

PROGRAMME OUTCOME: COMMERCE

Enabling learners to acquire knowledge in Accounts, Commerce, Marketing, Management and Economics etc.
Enhancing decision making capacity at personal as well as professional level.
Developing communication skill to build self-confidence and preparing to face challenges in the corporate world.
Developing entrepreneurial skills to make enabled entrepreneurs.
Developing various managerial and accounting skills to prepare learners as per requirement of the industry for getting better professional opportunities.
Strengthening learners' ability in various fields of commerce and industry with a view to overall development.
At the end of their graduation programme learners become enough skilful in the arena of Commerce and Finance.

Program Specific Outcomes

The course helps the candidates to acquire knowledge in Financial Accounting, Cost Accounting, Management Accounting, Auditing, Taxation, Managerial Economics, Business and Corporate Law, E-Commerce, Entrepreneurship, Management and Business Communication etc.
Preparing learners to crack various professional examination like CA, CS, CMA, MBA etc.

Enabling learners to enter various positions in Accounting, Banking, Auditing, Taxation, Stock Agents, Teaching, Government Employment etc.
Learners can further move towards Masters in Commerce.
The broad curriculum covers various areas of commerce and accountancy which helps students to grasp practical and theoretical knowledge which in turn helps them in setting up their own business start-ups.
Students can pursue a career as a financial specialist as this course imparts in-depth understanding of the market as well as skills and competencies required for such jobs.
Students are able to explore several fields like investment and portfolio management, stock market, security analysis, mutual fund and capital market analysis etc. as their carrier opportunities.
The course seeks to develop professional skills in students and create a strong foundation in accounts, finance and ethics that will benefit themselves as well as society.

Semester Wise Course Outcome

Course: B.Com. (Honours)

Semester I

1. Environmental Studies

Makes students learn the role of environment and ecosystem.
Creates awareness about the relationship between population & environment.

2. Financial Accounting-I

To familiarise the students about the basic concept of Financial Accounting and to give basic knowledge about accounting process.

To facilitate the idea of measurement of business income providing practical exposer of Revenue, Depreciation and Inventories and also the preparation of financial statements of non-corporate business entities.

To make the students able to prepare the financial statements from incomplete records and of Non-profit organisation.

To make the students competent regarding the accounting procedures of Consignment and Joint Venture form of business and also to familiarise about the concept of Self-balancing and Sectional balancing ledger.

To provide practical exposer to the students for calculating the amount of Insurance Claim for loss of stock and loss of profit.

3. Business Management

To develop a basic knowledge about the concept of Management including evolution of Management Thought.

To facilitate the students about the importance of Planning and Decision-making process in a business organisation.

To make the students familiar about the concept and process of Organising.
To provide the knowledge to the students about the concept and process of Staffing, Motivation and leadership with the help of different theories developed in this connection.
To develop the knowledge about Control providing its concept, process, limitations and major techniques.

4. Micro Economics

To provide knowledge about Concepts of Revenue and Consumer Behaviour and the consumer's equilibrium.
To familiarise the students about production function and cost in the short run and in the long run.
To have a clear concept of Perfect Competition and its impact on taxes and subsidy.
To provide a basic knowledge about monopoly in short run and long run.
To provide an introductory knowledge about Monopolistic competition and Oligopoly.

Semester II

1. Communicative English

Providing knowledge about types and modes of communication.

Improving english speaking skills.

Enhancing reading skills.

Improving writing skills.

2. Cost Accounting

To familiarise the students about the concept of Cost and its classification and the difference between Cost Accounting and Financial Accounting.
To provide the idea of different techniques of controlling Material and Labour Cost.
To develop the knowledge about Overhead- their classification, allocation, apportionment and absorption.
To provide a detailed knowledge of different types of costing viz. Unit Costing, Job Costing, Batch Costing, Process Costing, Service Costing.
To develop a knowledge of book-keeping in Cost Accounting and its reconciliation with Financial Accounting.

3. Business Law

To provide an idea about general principles of Law of Contract.

To develop a knowledge about different specific contracts- Indemnity and Guarantee, Bailment, Agency.

To familiarise the students about the Sale of Goods Act, 1930.
To facilitate the students with the knowledge about the Partnership Act, 1932 and the Limited Liability Partnership Act, 2008.
To provide the students a knowledge about the Negotiable Instruments Act, 1881.

4. Macro Economics

To provide a basic knowledge about the concepts and variables of macro-economics.
To make the students able to understand about determination of Price and Output and introduction of money market.
To provide a knowledge about the theory of Investment- MEC and MEI theory.
To have a knowledge about the causes of rising and falling inflation and the trade-off between inflation and unemployment.
To provide a knowledge about Open Economy with the determination of exchange rates.

Semester III

1. Corporate Laws

To familiarise the students about the administration of Company Law in relation to various types of companies.
To make the students understand about Memorandum of association, Articles of association, prospectus of a company.
To have a knowledge about the management of a company and different aspects of company meetings.
To provide the knowledge about the provisions relating to payment of Dividend, Appointment of Company Auditor, concepts and modes of Winding Up of Company.
To provide the knowledge about the Depositories Act, 1996.

2. Income Tax Law and Practice

To familiarise the students with different terms under Income Tax Law such as Person, Assessee, Previous Year, Assessment Year, Residential Status, Tax Planning, Tax Management etc.
To make the students able to compute the income from Salaries, Income from House Property.
To make the students capable to calculate the income under the head Profits and Gains of Business and Profession, Capital Gains, Income from other sources.

To provide the students how to compute the Total Income and Tax Liability taking into consideration the deductions, Rebates and Reliefs.
To provide practical knowledge to the students relating to preparation of Income Tax Return, Filling of Returns.

3. Financial Accounting-II

To make the students familiar with Hire Purchase and Instalment Payment System including the recording of transactions in the books of Buyer and Seller allocating interest among the instalments and the entries for repossession of goods and also give a knowledge to the students about the Departmental accounts with inter-departmental transfer of goods at cost or at selling price.

To make the students capable to keep the accounts in respect of Inland Branches in different methods taking into consideration normal and abnormal losses

To make the students capable enough to keep the entries in respect Royalty in the books of lessee and lessor considering minimum rent, short-workings and recoupment and lapses of short-workings.
To provide the knowledge to the students in recording the entries in respect of dissolution of Partnership firm including the insolvency of one or more partners and also the different methods of Piecemeal Distribution.
To familiarise the students about the Balance Sheet of Banking and Non-Banking companies with a knowledge about Non-performing Assets.

4. E-Commerce

To familiarise the students about the meaning, nature, concept of e-commerce and also the different business models of E-commerce.

To provide the students knowledge about security and encryption in respect of E-commerce.

To facilitate the students about the IT Act, 2000 and Cyber-crimes.

Knowledge of different models and methods of E-payment System are provided to the students viz. Debit Card, Credit Card, payment gateways, online banking etc.

To provide the students the knowledge about on-line business transactions, on-line services, on-line shopping.

5. Indian Economy

To familiarise the students about the concept and measures of development and underdevelopment.

To provide the students the knowledge about the basic features of the Indian Economy at Independence.

To provide the students the Economic Reforms in India since 1991, New Industrial policy of 1991and its impact on industrial growth.

To make the students able to know about growth, development and structural change in different phases.

To provide the knowledge to the students about sectoral trends and issues, such as, Agricultural sector, Industry and Services Sector and Financial Sector.

Semester IV

1. Business Mathematics and Statistics

To give a basic idea to the students about Matrix Algebra and Determinants.
To develop a basic concept of Calculus.
To facilitate the students about the formulation of linear programming problem (LPP) including its graphical solution
To provide the students the knowledge of Statistical data and the measurement of Central Tendency, Mathematical Averages, Variance, Moments, Skewness and Kurtosis etc.
To familiarise the students regarding the Correlation and Regression Analysis.
To provide the students knowledge about Index Numbers and Time Series Analysis.

2. Fundamentals of Marketing Management

To familiarise the students nature, scope, importance and evolution of marketing and its different components.
To provide the students the knowledge about Consumer Behaviour and Marketing Research.
To develop the students with the knowledge about managing the product, its branding, packaging and labelling.
To facilitate the students about the knowledge of pricing the product and its distribution channels and physical distribution.
To provide the students the knowledge about the nature and importance of sales promotion.

3. Computer Applications in Business

To familiarise the students about Word Processing and to make them able to print the documents.
To make the students able to prepare Presentations with the help of Slides, Tables, Images, Animation etc.
To provide the students knowledge about Spreadsheet and its Business Applications.
To familiarise the students with Computerised Accounting System by using any popular accounting software.

To provide the students knowledge about Database Management System using MS Access.

4. Entrepreneurship

To familiarise the students about the knowledge of Entrepreneurship- its meaning, elements, determinants and importance.
To provide the students knowledge about different Entrepreneurship- Micro, Small and Medium and also Women Entrepreneurship.
To make the students understand that Government and Institutions have a vital role in the development of Entrepreneurship.
To make the students able to prepare project report and to conduct feasibility studies.
To provide the students knowledge of mobilising the resources for start-up.

5. Fundamentals of Human Resource Management

To give an introductory knowledge about Human Resource Management, its concept, nature, scope and functions.

To provide the students knowledge about acquisition of Human Resource with proper job analysis, recruitment, selection, placement and promotion.

To make the students aware about the importance of the training and development of the employees by different methods.

To provide the students knowledge about the performance appraisal of the employees in different methods.

To make the students able to know how human resource be maintained.

Semester V

1. Financial Accounting-III

To familiarise the students about the process of issue, forfeiture and re-issue of shares, process of issue of Rights and Bonus shares
To provide the students the knowledge about the preparation of Final Accounts of a Company as per Schedule III.
To make the students able to calculate the value of Goodwill of a business and also to calculate the value of shares of a company.
To provide the students the knowledge about the concepts and accounting treatment of Amalgamation of companies.

To make the students able to prepare the Consolidated Balance Sheet in the books of Holding Company.

2. Auditing

To familiarise the students with the basic principles and techniques of Auditing with the special emphasis on Internal Check, Internal Control and Internal Audit.
To provide knowledge to the students regarding Company Audit including the required qualifications, rights and duties, remuneration, removal of a Company Auditor.
To enable the students to prepare Audit Report and Audit Certificate.
Audit of different institutions are discussed with the students so that they will able to do audit of such institutions Viz. Educational, Library, Hospital, Club, Gram Panchayat etc.
To provide knowledge about special areas of audit, such as, Cost Audit, Management Audit, Tax Audit, Social Audit, Environmental Audit etc.
To familiarise the students about the Investigation and its meaning, features, purpose with the principles and duties of investigators.

3. Management Accounting (Alternative-1)

To introduce the students with basic knowledge of Management Accounting comparing it with Financial Accounting and Cost Accounting.
To familiarise the students with Accounting Ratios with its meaning, objectives, advantages and limitations. To provide knowledge about the concepts of fund and the technique of preparation of Cash Flow Statement.
To have a clear concept regarding Budget and Budgetary Control with its merits and limitations.
To provide the knowledge to the students about Standard Costing and Variance Analysis with respect to Material and Labour.
To familiarise the students about Marginal Costing and Decision Making including CVP Analysis and Break-Even Analysis.

4. Fundamentals of Banking and Insurance (Alternative-2)

To have a basic idea about Banking System in India to the students
To provide knowledge about cheques, its rules of crossing and endorsement.
To familiarise the students about the Banking Lending and different principles to be followed in this respect.
To introduce the students about the knowledge of Internet Banking and different modern techniques in this respect , such as, Mobile Banking, NEFT, RTGS, ECS etc.
To provide knowledge to the students about insurance with the concept of risks and its types.

5. Indian Financial System (Alternative-1)

To provide the students a basic knowledge about Financial System and its Components.

To provide knowledge about the functions, organisation and instruments of Money Market and Capital Market.
To familiarise the students about Mutual Funds and NBFCs with their role in Capital Market development.
To have a knowledge about Financial Services Industry including Marchant banking.
To provide a basic knowledge about Leasing and Hire-purchase including Housing finance and Venture capital finance.

6. Advertising (Alternative-2)

To provide a basic knowledge about Advertising as a tool of communication, its meaning, nature and importance.
To familiarise the students about the importance of media decisions in advertising, factors influencing media choice, media selection, media scheduling.
To provide a sound knowledge about the message development in advertising.
To give knowledge to the students so that they can measure the effectiveness of advertisement.
To provide knowledge in respect of role, type and selection of advertising agency with its social, ethical and legal aspects in India.

Semester VI

1. Fundamentals of Financial Management

To impart the knowledge about the meaning, objective and scope of Financial Management.
To provide the students knowledge about Sources of Finance, Cost of Capital and Capital Structure Analysis.
To have the knowledge about Capital Budgeting Decision- its meaning, importance and different methods.
To provide the students knowledge about working capital management and its importance.
To familiarise the students about the importance of Dividend Decisions with some popular model in this respect.

2. Indirect Tax Law

To familiarise the students about the evolution of Indirect Taxes and different aspects of GST- its framework, Rationality, Structure, Network and mechanism.
To make the students understand about Levy of GST, Taxable event, Classification of Goods and Services etc.
To provide the students regarding time and valuation of Supply in respect of GST Law.
To make the students able to calculate the input tax credit and payment of GST.
To familiarise the students about basic concepts of Customs Law and the computation of Customs Duties.

3. Fundamentals of Investment (Alternative-1)

To understand the concept, characteristics and objectives of different types of investment in the market.
To understand the concept, features and types of bonds and their yield and risks.
To provide the knowledge about different approaches to Equity Analysis.
To make the students be able to manage a portfolio in respect of Risk and Return.
To make the students understand about the concept, importance of Investors' Protection.

4. Business Tax Procedures and Management (Alternative-2)

To familiarise the students about TDS, returns, certificates and the interest payable by the assessee.
To provide the students knowledge about assessment, re-assessment, rectification of mistakes with the preparation of filing appeals.
To impart the students with the knowledge about Tax administration, Penalties and Prosecutions.
To provide the students the knowledge about Tax clearance certificate, general anti-avoidance rule.
To make the students able to understand ICT and Tax System and also about TAN and TIN.

5. International Business (Alternative-1)

To familiarise the students about importance of International Business and the effect of globalisation on it.

To provide the knowledge about the different theories of International Trade.

To impart the knowledge about different International Organisation, such as, WTO, UNCTAD, IMF, ASEAN and SAARC.

To provide the students knowledge about developments and issues in International Business.

To provide the students knowledge regarding foreign trade promotion measures and organisations in India.

6. Project Work (Alternative-2)

Provides learning experience to students.

Provides opportunity to students to synthesize practical knowledge from various areas of learning.

To familiarise the students about research methodology.

To make them able to collect primary data and secondary data.
To make them able to use different statistical measurement.

Course: B.Com (General)

Semester I

1. Environmental Studies

Makes students learn the role of environment and ecosystem.
Creates awareness about the relationship between population & environment.

2. Financial Accounting-I

To familiarise the students about the basic concept of Financial Accounting and to give basic knowledge about accounting process.
To facilitate the idea of measurement of business income providing practical exposer of Revenue, Depreciation and Inventories and also the preparation of financial statements of non-corporate business entities.
To make the students able to prepare the financial statements from incomplete records and of Non-profit organisation.
To make the students competent regarding the accounting procedures of Consignment and Joint Venture form of business.
To familiarise the students about the concept of Self-balancing and Sectional balancing ledger and Sale on Approval Basis.

3. Business Management

To develop a basic knowledge about the concept of Management including evolution of Management Thought.
To facilitate the students about the importance of Planning and Decision-making process in a business organisation.
To make the students familiar about the concept and process of Organising including Delegation of authority.
To provide the knowledge to the students about the concept and process of Staffing, Motivation and leadership with the help of different theories developed in this connection.
To develop the knowledge about Control providing its concept, process, limitations and major techniques.

4. English Language

It helps to understand the distinctness of human language.
It help to understand the varieties of human language.
It helps to understand the difference between declarative and expressive forms of language.
It helps to understand the collocation of words and phrases.

Semester II

1. Communicative English

Providing knowledge about types and modes of communication.
Improving english speaking skills.
Enhancing reading skills.
Improving writing skills.

2. Principles of Economics

To provide knowledge about Concepts of Demand-Supply Framework & Equilibrium and Consumer Theory.
To familiarise the students about production function and cost in the short run and in the long run.
To have a clear concept of different markets viz. Perfect Competition, Monopoly, Monopolistic Competition, Monopsony and Oligopoly.
To provide a basic knowledge about Income distribution and Factor Pricing.
To provide an introductory knowledge about some selected Macro-economic principles and the causes and effect of Inflation.

3. Business Law

To provide an idea about general principles of Law of Contract.
To develop a knowledge about different specific contracts- Indemnity and Guarantee, Bailment, Agency.
To familiarise the students about the Sale of Goods Act, 1930.
To facilitate the students with the knowledge about the Partnership Act, 1932 and the Limited Liability Partnership Act, 2008.
To provide the students a knowledge about the Negotiable Instruments Act, 1881.

4. Cost Accounting-I

To familiarise the students about the concept of Cost and its classification and the difference between Cost Accounting and Financial Accounting.
To provide the idea of different techniques of controlling Material Cost.
To provide the idea of different techniques of controlling Labour Cost.

To develop the knowledge about Overhead- their classification, allocation, apportionment and absorption.
To provide a detailed knowledge about costs at different levels and treatment of certain items of costing.

Semester III

1. Corporate Laws

To familiarise the students about the administration of Company Law in relation to various types of companies.
To make the students understand about Memorandum of association, Articles of association, prospectus of a company.
To have a knowledge about the management of a company and different aspects of company meetings.
To provide the knowledge about the provisions relating to payment of Dividend, Appointment of Company Auditor, concepts and modes of Winding Up of Company.
To provide the knowledge about the Depositories Act, 1996,

2. Income Tax Law and Practice

To familiarise the students with different terms under Income Tax Law such as Person, Assessee, Previous Year, Assessment Year, Residential Status, Tax Planning, Tax Management etc.
To make the students able to compute the income from Salaries, Income from House Property.
To make the students capable to calculate the income under the head Profits and Gains of Business and Profession, Capital Gains, Income from other sources.
To provide the students how to compute the Total Income and Tax Liability taking into consideration the deductions, Rebates and Reliefs.
To provide practical knowledge to the students relating to preparation of Income Tax Return, Filling of Returns.

3. Business Communication

It helps to have a basic concept about the use of Plain Language and Figurative Language in colloquial speech, in writing as well as in literature.
It helps to understand how language is used as a medium of expressing emotions.
It helps to differentiate between everyday commonly used language and the striking or attractive language used in literature.
It gives a fair idea about ambiguity and the significance of its presence in human language.

4. E-Commerce

To familiarise the students about the meaning, nature, concept of e-commerce and also the different business models of E-commerce.
To provide the students knowledge about security and encryption in respect of E-commerce.
To facilitate the students about the IT Act, 2000 and Cyber-crimes.
Knowledge of different models and methods of E-payment System are provided to the students viz. Debit Card, Credit Card, payment gateways, online banking etc.
To provide the students the knowledge about on-line business transactions, on-line services, on-line shopping.

Semester IV

1. Financial Accounting-II

To make the students familiar with Hire Purchase and Instalment Payment System including the recording of transactions in the books of Buyer and Seller allocating interest among the instalments and the entries for repossession of goods.

To provide a knowledge to the students about the Departmental accounts with inter-departmental transfer of goods at cost or at selling price.

To make the students capable to keep the accounts in respect of Inland Branches in different methods taking into consideration normal and abnormal losses

To make the students capable enough to keep the entries in respect Royalty in the books of lessee and lessor considering minimum rent, short-workings and recoupment and lapses of short-workings.

To provide the knowledge to the students in recording the entries in respect of dissolution of Partnership firm including the insolvency of one or more partners and also the different methods of Piecemeal Distribution.

2. Cost Accounting-II

To familiarise the students about the method of Job Costing and Contract Costing.
To provide the students about the method of Process Costing including the concept of Joint Product and By Product.
To familiarise the students about the basic concept and problems of service costing (Transportation).
To impart the students with the knowledge about Marginal Costing and Decision Making.
To make the students able to book keeping in Cost Accounting and to reconcile it with Financial Accounting.

3. Computer Applications in Business

To familiarise the students about Word Processing and to make them able to print the documents.
To make the students able to prepare Presentations with the help of Slides, Tables, Images, Animation etc.
To provide the students knowledge about Spreadsheet and its Business Applications.
To familiarise the students with Computerised Accounting System by using any popular accounting software.
To provide the students knowledge about Database Management System using MS Access.

4. Entrepreneurship

To familiarise the students about the knowledge of Entrepreneurship- its meaning, elements, determinants and importance.
To provide the students knowledge about different Entrepreneurship- Micro, Small and Medium and also Women Entrepreneurship.
To make the students understand that Government and Institutions have a vital role in the development of Entrepreneurship.
To make the students able to prepare project report and to conduct feasibility studies.
To provide the students knowledge of mobilising the resources for start-up.

Semester V

1. Financial Accounting-III

To familiarise the students about the process of issue, forfeiture and re-issue of shares, process of issue of Rights and Bonus shares
To provide the students the knowledge about the preparation of Final Accounts of a Company as per Schedule III.
To provide the students the knowledge about the concepts and accounting treatment of Amalgamation of companies.
To make the students able to prepare the Consolidated Balance Sheet in the books of Holding Company.
To provide the students knowledge about difference between Balance Sheet of Banking and Non-Banking companies with an idea of Non-performing assets (NPA).

2. Auditing

To familiarise the students with the basic principles and techniques of Auditing with the special emphasis on Internal Check, Internal Control and Internal Audit.
To provide knowledge to the students regarding Company Audit including the required qualifications, rights and duties, remuneration, removal of a Company Auditor.
To enable the students to prepare Audit Report and Audit Certificate.

Audit of different institutions are discussed with the students so that they will able to do audit of such institutions Viz. Educational, Library, Hospital, Club, Gram Panchayat etc.
To provide knowledge about special areas of audit, such as, Cost Audit, Management Audit, Tax Audit, Social Audit, Environmental Audit etc.

3. Management Accounting (Alternative-1)

To introduce the students with basic knowledge of Management Accounting comparing it with Financial Accounting and Cost Accounting.
To familiarise the students with Accounting Ratios with its meaning, objectives, advantages and limitations.
To provide knowledge about the concepts of fund and the technique of preparation of Cash Flow Statement.
To have a clear concept regarding Budget and Budgetary Control with its merits and limitations.
To provide the knowledge to the students about Standard Costing and Variance Analysis with respect to Material and Labour.

4. Fundamentals of Marketing Management (Alternative-2)

To familiarise the students about the concept of marketing, service marketing and online marketing.
To provide the students the knowledge about Consumer Behaviour and Marketing Research.
To make the students understand about branding, packaging and labelling of product.
To provide a sound knowledge about pricing and distributing the product.
To give a clear conception about the promotion of the product through advertising, personal selling etc.

5. Indian Financial System (Alternative-1)

To provide the students a basic knowledge about Financial System and its Components.

To provide knowledge about the functions, organisation and instruments of Money Market and Capital Market.

To familiarise the students about Commercial Banking, Mutual Funds and NBFCs with their role in Capital Market development.

To have a knowledge about Financial Services Industry including Marchant banking.
To provide a basic knowledge about Leasing and Hire-purchase including Housing finance and Venture capital finance.

6. Fundamentals of Human Resource Management (Alternative-2)

To give an introductory knowledge about Human Resource Management, its concept, nature, scope and functions.
To provide the students knowledge about acquisition of Human Resource with proper job analysis, recruitment, selection, placement and promotion.

To make the students aware about the importance of the training and development of the employees by different methods.
To provide the students knowledge about the performance appraisal of the employees in different methods.
To make the students able to know how human resource be maintained.

Semester VI

1. Personal Selling and Salesmanship

To familiarise the students with the introductory knowledge of Personal selling.
To provide the students the concept and dynamic nature of motivation.
To impart the knowledge regarding selling process to the students including pre-approach, approach, presentation and demonstration.
To make the students able to prepare reports, sales manual, order book, cash memo etc.

2. Business Mathematics and Statistics

To give a basic idea to the students about Matrix Algebra and Determinants.
To develop a basic concept of differential Calculus.
To provide the students the knowledge of Statistical data and the measurement of Central Tendency, Mathematical Averages, Variance and Standard Deviation etc.
To familiarise the students regarding the Correlation and Regression Analysis.
To provide the students knowledge about Index Numbers and Time Series Analysis.

3. Fundamentals of Investment (Alternative-1)

To understand the concept, characteristics and objectives of different types of investment in the market.
To understand the concept, features and types of bonds and their yield and risks.
To provide the knowledge about different approaches to Equity Analysis.
To make the students be able to manage a portfolio in respect of Risk and Return.
To make the students understand about the concept, importance of Investors' Protection.

4. Indirect Tax Law (Alternative-2)

To familiarise the students about the evolution of Indirect Taxes and different aspects of GST- its framework, Rationality, Structure, Network and mechanism.
To make the students understand about Levy of GST, Taxable event, Classification of Goods and Services etc.
To provide the students regarding time and valuation of Supply in respect of GST Law.
To make the students able to calculate the input tax credit and payment of GST.
To familiarise the students about basic concepts of Customs Law and the computation of Customs Duties.

5. International Business (Alternative-1)

To familiarise the students about importance of International Business and the effect of globalisation on it.
To provide the knowledge about the different theories of International Trade.
To impart the knowledge about different International Organisation, such as, WTO, UNCTAD, IMF, ASEAN and SAARC.
To provide the students knowledge about developments and issues in International Business.
To provide the students knowledge regarding foreign trade promotion measures and organisations in India.

6. Fundamentals Financial Management (Alternative-2)

To impart the knowledge about the meaning, objective and scope of Financial Management.
To provide the students knowledge about Sources of Finance, Cost of Capital and Capital Structure Analysis.
To have the knowledge about Capital Budgeting Decision- its meaning, importance and different methods.
To provide the students knowledge about working capital management and its importance.
To familiarise the students about the importance of Dividend Decisions with some popular model in this respect.

SURI VIDYASAGAR COLLEGE
DEPARTMENT OF COMMERCE

PROGRAMME OUTCOMES (2014-15 to 2018-19)

The College is affiliated to The University of Burdwan. Thus, the college follows the guidelines and syllabus prescribed by the Affiliated University.

PROGRAMME OUTCOME: COMMERCE

Enabling learners to acquire knowledge in Accounts, Commerce, Marketing, Management and Economics etc.
Enhancing decision making capacity at personal as well as professional level.
Developing communication skill to build self-confidence and preparing to face challenges in the corporate world.
Developing entrepreneurial skills to make enabled entrepreneurs.
Developing various managerial and accounting skills to prepare learners as per requirement of the industry for getting better professional opportunities.

Strengthening learners' ability in various fields of commerce and industry with a view to overall development.
At the end of their graduation programme learners become enough skilful in the arena of Commerce and Finance.

Program Specific Outcomes

The course helps the candidates to acquire knowledge in Financial Accounting, Cost Accounting, Management Accounting, Auditing, Taxation, Managerial Economics, Business and Corporate Law, E-Commerce, Entrepreneurship, Management and Business Communication etc.
Preparing learners to crack various professional examination like CA, CS, CMA, MBA etc.
Enabling learners to enter various positions in Accounting, Banking, Auditing, Taxation, Stock Agents, Teaching, Government Employment etc.
Learners can further move towards Masters in Commerce.
The broad curriculum covers various areas of commerce and accountancy which helps students to grasp practical and theoretical knowledge which in turn helps them in setting up their own business start-ups.
Students can pursue a career as a financial specialist as this course imparts in-depth understanding of the market as well as skills and competencies required for such jobs.
Students are able to explore several fields like investment and portfolio management, stock market, security analysis, mutual fund and capital market analysis etc. as their carrier opportunities.
The course seeks to develop professional skills in students and create a strong foundation in accounts, finance and ethics that will benefit themselves as well as society.

Course Outcome

Course: B.Com. (Honours)

Part I

1. Financial Accounting

To familiarise the students about the basic concept of Financial Accounting and to give basic knowledge about accounting process.
To facilitate the idea of preparation of Bank Reconciliation Statement, Accounting for Bills of Exchange, Depreciation Accounting and Accounting for Bad and Doubtful Debts.
To make the students able to prepare the financial statements from incomplete records and of non-profit organisation.
To make the students competent regarding the accounting procedures of Consignment and Joint Venture form of business and also to familiarise about the concept of Self-balancing and Sectional-balancing ledger.

To provide practical exposer to the students for preparation of final accounts.
To provide practical exposer to the students for calculating the amount of Insurance Claim for loss of stock and loss of profit.

To make the students familiar with Hire Purchase and Instalment Payment System including the recording of transactions in the books of Buyer and Seller allocating interest among the instalments and the entries for repossession of goods.

To make the students capable to keep the accounts in respect of Inland Branches in different methods taking into consideration normal and abnormal losses and also give a knowledge to the students about the Departmental accounts with inter-departmental transfer of goods at cost or at selling price.

To make the students capable enough to keep the entries in respect Royalty in the books of lessee and lessor considering minimum rent, short-workings and recoupment and lapses of short-workings.

To provide the knowledge to the students in recording the entries in respect of partnership firm with dissolution of Partnership firm including the insolvency of one or more partners and also the different methods of Piecemeal Distribution.

To familiarise the students about Investment Account, Packages and Container Account, Voyage Account and Goods on Sale or Return Account.

2. Business Mathematics and Statistics

To familiarise the students with the basic mathematical knowledge of Algebra – A.P. G.P. Series, Indices, Logarithms.

To give a basic idea to the students about Matrix Algebra and Set Theory.

To familiarise with Permutations, Combinations and Binomial Theorem.

To develop a basic concept of Differential and Integral Calculus.

Students are able to familiarize with the basic concepts of statistics.

Students are provided with the knowledge and practical exposure on calculation of the measure of Central Tendency.

Students are provided with the knowledge and practical exposure on calculation of the measure of Dispersion, Moments, Skewness and Kurtosis.

Students are provided with the knowledge and practical exposure on calculation of the Correlation and Regression analysis.

Equips the students with proper understanding of Index Numbers, Time Series Analysis and Elements of Probability Theory.

3. Economics Principles and Indian Economic Problems

To provide knowledge about consumer behaviour, demand and supply of goods and the concept of equilibrium.

To familiarise the students about production function and cost in the short run and in the long run.

To have a clear concept of different markets viz. Perfect Competition, Monopoly, and Oligopoly etc.

To provide a basic knowledge about Income Distribution and Factor Pricing.

To provide knowledge about national income, money and banking, international trade and public finance.

To provide an introductory knowledge about basic issues of Indian Economic problems.

To know about the basic features of Indian agriculture and industrial policy.

Understanding the objectives, achievements and failure of planning.

To know about monetary system, foreign trade and public finance.

4. Management Theory

To develop a basic knowledge about the concept of Management including evolution of Management Thought.

To facilitate the students about the importance of Planning and Decision-making process in a business organisation.

To make the students familiar about the concept and process of Organising.

To provide the knowledge to the students about the concept and process of Staffing, Motivation and leadership with the help of different theories developed in these connection.

To develop the knowledge about Controlling providing its concept, process, limitations and major techniques.

To provide basic ideas of human resource management and marketing management.

5. M.I.L.

Enhances the comprehension skills through the works of M.K. Gandhi, Alpha of Plough and Sir J. Arthur Thomson.

Improves the non-literary writing skills.

Develops the creative writing skills.

Improves grammar and vocabulary skills.

6. English

Improves analytical skills through the essays of G. B. Shaw and Stephen Leacock.

Familiarizes with the genre of short story through the works of R. K. Narayan, James Thurber and Katherine Mansfield.

Enhances grammar and vocabulary skills.

Develops writing skills.

Part II

1. Business Economics and Basics of Indian Financial System

Introduces the students with Demand Analysis, Theory of Production and Theory of Cost.

Develops understanding of Organizational Goal, Linear Programming, Theory of Games and Decision Theory.

Introduces the students with financial system.

Familiarizes the students with money and Indian banking system.

Makes the students aware about money market and capital market.

Creates an understanding of financial services such as merchant banking services and credit rating services.

2. Cost Accounting

Introduces the students with the basic concepts of cost, costing and cost accounting and providing knowledge of different elements of cost, preparation of cost sheet with the concept of cost ascertainment and cost control.
Making the idea of material control and inventory control with different pricing methods.

Developing the knowledge of labour cost and its control along with system of wage payments and incentives.
Understanding the classification, allocation, apportionment and absorption of overhead along with accounting and control of different types of overheads.
Introduces the concept of book keeping in cost accounting.
To develop knowledge among the students in respect of Job Costing and Batch Costing and how to prepare a Job Cost Sheet and how to calculate Economic Batch Quantity.
To familiarize the students about the different aspects of Contract Costing viz. Progress payments, Retention money, Escalation Clause etc. and how to prepare Contract Account to estimate the profit or loss of incomplete contract.
To provide knowledge about Process Costing including Joint Products and By Products.
Enables students to acquire the knowledge of Standard Costing and Budgetary Control.
To provide a primary knowledge about Marginal Costing including Cost-volume- profit Analysis, Break-even analysis, Margin of safety and Angle of Incidence.

3. Entrepreneurship Development and Business Communication

To introduce the basic concepts of entrepreneurship.
To provide knowledge about different forms of entrepreneurship.
To enable the learners to understand the laws relating to intellectual properties and the entrepreneur.
To aware the students about financing of new and existing ventures.
To equip the students about writing of business plan/project planning, preparation of project report and conducting feasibility studies.
To give an idea to the students about institutional supports to the entrepreneurs.
To provide an in-depth knowledge about business communications.

4. Accounting Theory and Auditing

Introduces the students with the basic ideas of accounting theory such as accounting principles, measurement of accounting income, different aspect of capital, valuation of assets and liabilities etc.
To give an idea about financial statements and accounting standard.
To familiarise the students with the basic features, principles and techniques of Auditing with the special emphasis on Internal Check, Internal Control and Internal Audit.
To provide knowledge to the students regarding Company Audit including the required qualifications, rights and duties, remuneration, removal of a Company Auditor.
To enable the students to prepare Audit Report and Audit Certificate.
Audit of different institutions are discussed with the students so that they will able to do audit of such institutions Viz. Club, Hospital, Cinema, Library, Educational institution, Hotel and restaurant, Transport company.

5. Business Regulatory Frameworks

Develops the knowledge of The Indian Contract Act, 1872.
Equips with the concept and knowledge of The Negotiable Instrument Act,1881
Familiarizes the students with the Sale of Goods Act, 1930.
Helps the students to know about FEMA, 1999 and Competition Act, 2002.
Equips the students with proper knowledge about Consumer Protection Act.
Provides in-depth knowledge about company law.

6. Business Environment and Business Ethics

To develop knowledge among the students in respect of business environment, physical environment, economic environment, financial and legal environment, technological environment, social and cultural environment, and political environment.
To familiarise the students about the different aspects of business ethics.

Part III

1. Taxation (Direct and Indirect)

To provide basic knowledge about Income Tax Act and to familiarise the students with different terms in respect income tax including Scope of Total Income, Residential Status and Exempt Income etc.
To make the students able to compute the income under the head of Salaries.
To make the students capable to calculate the income under the head House Property.
To provide the knowledge in respect of income from Profits and Gains of Business or Profession.
To create understanding about Capital Gain and Income from Other Sources.
To familiarize the students with different deductions from Gross Total Income and calculation of Relief u/s 89.
The students are enabled with the knowledge of tax planning.
Familiarise with different types of filling of income tax return and use of PAN.
To make the students familiar with the Agricultural Income and Dividend Income in the context of Income Tax.

To make understand the basic concepts of Central Sales Tax and West Bengal Value Added Tax.

2. Computer Applications in Business

Introduces the students to the basics of computer.

Makes the students familiar with number system and binary arithmetic and logic gates.

Enables the students with internet and its applications.

Introduces the students with hardware, software, operating system and flow chart.

Introduces the students with MIS.

Familiarises the students with E-commerce and Internet.

Giving practical knowledge in respect of word processing, spreadsheet and its applications and programming under a RDBMS environment.

3. Corporate Accounting and Auditing

To have a clear idea to the students about Company Accounts including Final Accounts of Companies, Underwriting of Shares and Debenture and Profit Prior to Incorporation.
To provide knowledge about Reconstruction of Companies.
To familiarise the students about preparation of Consolidated Balance-Sheet as per AS21.
To introduce the students to Double Account System.
To provide knowledge to the students about accounting for Liquidation of Companies and Valuation of Goodwill and Shares.
To familiarise the students with the Statutory Audit and Statutory Auditors.
To provide knowledge to the students regarding Company Audit including Revenue Audit and Special Audit.
To enable the students to prepare Audit Report and to know about different types of audit.
To introduce the students with Cost Audit.
To provide knowledge about Cost Audit and Professional Ethics.

4. Management Accounting and Financial Management

To introduce the students with basic knowledge of Management Accounting comparing it with Financial Accounting and Cost Accounting.
To make the students aware about Financial Statements Analysis.
To familiarise the students with Accounting Ratios with its meaning, objectives, advantages and limitations.
To provide knowledge about the preparation of Fund Flow Statement and Cash Flow Statement.

To provide introduction to financial management.

To make the students aware about different sources of finance.

To make them understand different aspects of cost of capital and capital structures.

To provide knowledge about different aspects of capital budgeting decision.

To enable them to understand working capital management in details.

5. Environmental Studies

Makes the students aware about the role of environment, ecosystem and ecology.
Creates awareness about the biodiversity and its conservation.
Makes the students aware about the environmental pollution and its management.
Gives an idea about social issues and environment.
Creates awareness about the relationship between human population & environment.

Course: B.Com (General)

Part I

1. Economics Principles and Indian Economic Problems

To provide knowledge about consumer behaviour, demand and supply of goods and the concept of equilibrium.
To familiarise the students about production function and cost in the short run and in the long run.
To have a clear concept of different markets viz. Perfect Competition, Monopoly, and Oligopoly etc.
To provide a basic knowledge about income distribution and factor pricing.
To provide knowledge about national income, money and banking, international trade and public finance.
To provide an introductory knowledge about basic issues of Indian Economic problems.
To know about the basic features of Indian agriculture and industrial policy.
Understanding the objectives, achievements and failure of planning.
To know about monetary system, foreign trade and public finance.

2. Management Theory

To develop a basic knowledge about the concept of Management including evolution of Management Thought.

To facilitate the students about the importance of Planning and Decision-making process in a business organisation.
To make the students familiar about the concept and process of Organising.
To provide the knowledge to the students about the concept and process of Staffing, Motivation and leadership with the help of different theories developed in these connection.
To develop the knowledge about Controlling providing its concept, process, limitations and major techniques.
To provide basic ideas of human resource management and marketing management.

3. Financial Accounting

To familiarise the students about the basic concept of Financial Accounting and to give basic knowledge about accounting process.
To facilitate the idea of preparation of Bank Reconciliation Statement, Accounting for Bill of exchange, Depreciation Accounting, Accounting for Bad and Doubtful Debts and also the preparation of financial statements.
To make the students able to prepare the financial statements from incomplete records and of Non-profit organisation.
To make the students competent regarding the accounting procedures of Consignment and Joint Venture form of business and also to familiarise with the concept of Self-balancing and Sectional- balancing ledger.
To provide practical exposer to the students for preparation of final accounts and partnership accounts.

4. MIL

Enhances the comprehension skills through the works of M.K. Gandhi, Alpha of Plough and Sir J. Arthur Thomson.

Improves the non-literary writing skills.

Develops the creative writing skills.

Improves grammar and vocabulary skills.

5. English

Improves analytical skills through the essays of G. B. Shaw and Stephen Leacock.

Familiarizes with the genre of short story through the works of R. K. Narayan, James Thurber and Katherine Mansfield.

Enhances grammar and vocabulary skills.

Develops writing skills.

Part II

1. Entrepreneurship Development and Business Communication

To introduce the basic concepts of entrepreneurship.
To provide knowledge about different forms of entrepreneurship.
To enable the learners to understand the laws relating to intellectual properties and the entrepreneur.
To aware the students about financing of new and existing ventures.
To equip the students about writing of business plan/project planning, preparation of project report and conducting feasibility studies.
To give an idea to the students about institutional supports to the entrepreneurs.
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2. Accounting Theory and Auditing

Introduces the students with basic ideas of accounting theory such as accounting principles, measurement of accounting income, different aspect of capital, valuation of assets and liabilities etc.
To give an idea about financial statements and accounting standard.
To familiarise the students with the basic features, principles and techniques of Auditing with the special emphasis on Internal Check, Internal Control and Internal Audit.
To provide knowledge to the students regarding Company Audit including the required qualifications, rights and duties, remuneration, removal of a Company Auditor.
To enable the students to prepare Audit Report and Audit Certificate.
Audit of different institutions are discussed with the students so that they will able to do audit of such institutions Viz. Club, Hospital, Cinema, Library, Educational institution, Hotel and restaurant, Transport company.

3. Cost Accounting

Introduces the students with the basic concepts of cost, costing and cost accounting and providing knowledge of different elements of cost, preparation of cost sheet with the concept of cost ascertainment and cost control.
Making the idea of material control and inventory control with different pricing methods.

Developing the knowledge of labour cost and its control along with system of wage payments and incentives.
Understanding the classification, allocation, apportionment and absorption of overhead along with accounting and control of different types of overheads.
Introduces the concept of book keeping in cost accounting.
To develop knowledge among the students in respect of Job Costing and Batch Costing and how to prepare a Job Cost Sheet and how to calculate Economic Batch Quantity.
To familiarize the students about the different aspects of Contract Costing viz. Progress payments, Retention money, Escalation Clause etc. and how to prepare Contract Account to estimate the profit or loss of incomplete contract.
To provide a primary knowledge about Marginal Costing including Cost-volume-profit Analysis, Break-even analysis, Margin of safety, angle of incidence.

4. Business Regulatory Frameworks

Develops the knowledge of The Indian Contract Act, 1872.
Equips with the concept and knowledge of The Negotiable Instrument Act,1881
Familiarizes the students with the Sale of Goods Act, 1930.
Helps the students to know about FEMA, 1999 and Competition Act, 2002.
Equips the students with proper knowledge about Consumer Protection Act.
Provides in-depth knowledge about Company Law.

5. Business Environment and Business Ethics

To develop knowledge among the students in respect of business environment, physical environment, economic environment, financial and legal environment, technological environment, social and cultural environment, and political environment.
To familiarise the students about the different aspects of business ethics.

6. Business Mathematics and Statistics

To familiarise the students with the basic mathematical knowledge of Algebra – A.P. and G.P. Series, Indices and Logarithms.
To give a basic idea of compound interest and annuities.
To develop a basic concept of complex number.
To make the students able to know Permutation and Combination Theorem and Binomial Theorem.
Students are able to familiarize with the basic concepts of statistics.
Students are provided with the knowledge and practical exposure on calculation of the measure of Central Tendency.
Students are provided with the knowledge and practical exposure on calculation of the measure of Dispersion.

Students are provided with the knowledge and practical exposure on calculation of the Correlation and Regression analysis.

Equips the students with proper understanding of Index Numbers and Time Series Analysis.

Part III

1. Taxation (Direct and Indirect)

To provide basic knowledge about Income Tax Act and to familiarise the students with different terms in respect income tax including Scope of Total Income, Residential Status and Exempt Income etc.
To make the students familiar with the term Agricultural Income in the context of Income Tax Act and its importance.
To make the students able to compute the income under the head of Salaries.
To make the students capable to calculate the income under the head House Property.
To provide knowledge in respect of income from Profits and Gains of Business or Profession.
To familiar the students with different deductions from Gross Total Income and calculation of Relief u/s 89.
The students are enabled with the knowledge of tax planning.
Familiarise with different types of filling of income tax return.
To make understand to the students about the basic concepts of Central Sales Tax and West Bengal Value Added Tax.

2. Computer Applications in Business

Introduces the students to the basics of computer.
Makes the students familiar with number system and binary arithmetic and logic gates.
Enables the students with internet and its applications.
Introduces the students with hardware, software and operating system.
Introduces the students with MIS.
Familiarise the students with E-commerce and Internet.
Giving practical knowledge in respect of word processing, spreadsheet and its applications and programming under a RDBMS environment.

3. Banking and Insurance

To have a basic idea about banking system in India to the students.
To provide knowledge about banking sector reforms in India.
To familiarise the students about practical banking.
To introduce the students with the knowledge of life insurance and general insurance.
To provide knowledge to the students about reforms in insurance sector.

4. Environmental Studies

Makes the students aware about the role of environment, ecosystem and ecology.
Creates awareness about the biodiversity and its conservation.
Makes the students aware about the environmental pollution and its management.
Gives an idea about social issues and environment.
Creates awareness about the relationship between human population & environment.