

Bijni College : Bijni
Program Outcome, Programme Specific Outcomes and Course Outcomes
Year 2019-20

BACHELOR OF ARTS

This Program is designed keeping in mind the need of the contemporary society and particularly the younger generation in achieving their goal of education as a means of self-development and empowerment. The program will cater to all the aspirations of nation- building on sound foundation of rational and scientific thoughts and ideas. It takes into account the methods of interaction between the scholars in disseminating both existing and emerging knowledge from both our conventional repertoire and new experiences. It will work as a link between the pre-university and post-graduate state of education. It will also guide the young minds towards new research and acquirement of skill for a suitable profession.

BACHELOR OF SCIENCE

This Program is designed keeping in mind the need of the contemporary society and particularly the younger generation in achieving their goal of education as a means of self-development and empowerment. The program will cater to all the aspirations of nation -building and service to humanity on sound foundation of rational and scientific thoughts and ideas. It takes into account the methods of interaction between the scholars in disseminating both existing and emerging knowledge from a highly diversified repertoire and new experiences with experiments. It will work as a link between the pre-university and post-graduate state of education. It will also guide the young minds towards new ground breaking research and acquirement of skill for a suitable profession.

MASTER OF ARTS

This Program is designed keeping in mind the need of the contemporary society and particularly the younger generation in achieving their goal of education as a means of self-development and empowerment. The program will cater to all the aspirations of nation-building on sound foundation of rational and scientific thoughts and exclusive ideas. It takes into account the methods of interaction between the scholars in disseminating both existing and emerging knowledge from both our conventional repertoire and new experiences. It will work as a scope of intense engagement of Scholarship to provide new paths of knowledge pursuit and better understanding of aesthetic expressions. It will also guide the young minds towards new research, knowledge creation and acquirement of skill for a suitable profession.

Programme Specific Outcomes and Course Outcomes for the year 2019-20

Programme Specific Outcome

Bachelor of Arts and Masters of Arts in Assamese

B.A in Assamese

- ❖ অসমীয়া প্রধান বিষয় হিচাপে লৈ স্নাতক পরীক্ষাত উত্তীর্ণ হলে ছাত্র-ছাত্রীয়ে পরবর্তী উচ্চ-শিক্ষাৰ বাবে আবেদন জনাব পাৰে। বিশেষকৈ LLB, B.ED, M.A , Mass Communication, Library Science, Journalism, Translation Studies & Comparative Literature, UPSC, APSC আদি বিষয় অধ্যয়নৰ বাবে আবেদন জনাবলৈ উপযুক্ত বুলি বিবেচিত হ'ব।
- ❖ অসমৰ ৰাজ্যভাষা যিহেতু অসমীয়া গতিকে এই ছাইৰ সকলো বিদ্যালয়ত অসমীয়া বিষয় থকাটো বাধ্যতামূলক। ছাত্র-ছাত্রীয়ে শিক্ষকতা বৃত্তিটোৰ লগত আবেদনৰ লগতে জড়িত হ'ব পাৰিব।
- ❖ দূৰদৰ্শন, ৰেডিঅ, বাতৰি কাকত আদিত বাতৰি পৰিৱেশন, সংবাদ প্ৰেৰণ, মান সম্পন্ন লিখনি প্ৰস্তুতকৰণ আদি কামৰ জৰিড়তে অৰ্থ উপাৰ্জনৰ ব্যৱস্থা কৰিব পাৰে।

M.A Course

- ❖ অসমীয়া বিষয়ত স্নাতকোত্তৰ উপাধি লাভ কৰা ছাত্র-ছাত্রীয়ে B.ED , MASS Com, Journalism আদি বিষয়ত পঢ়িবলৈ আগুৱাই যাব পাৰে।
- ❖ Norms থকা ছাত্র-ছাত্রীয়ে NET, SLET, JRF আদি পরীক্ষাত অৱতীর্ণ হৈ বিশ্ববিদ্যালয়, মহাবিদ্যালয় আদিত নিযুক্তি লাভৰ দুৱাৰ মুকলি কৰিব পাৰে, অসমীয়া ভাষা-সাহিত্য-সংস্কৃতিৰ অনাৱিষ্কৃত দিশবোৰৰ গৱেষণা কৰি নিজৰ জাতিক চহকী কৰিব পাৰে।
- ❖ গ্ৰন্থ সম্পাদনা, গ্ৰন্থ প্ৰণয়ন আদিৰ জৰিয়তে স্ব-নিয়োজনৰ বাট মুকলি কৰিব পাৰে।

Course Outcomes

Course		Name of the paper	Course Outcome
Core Course	1 st Semester	Paper ASM-HC-1016 অসমীয়া সাহিত্যৰ বুৰঞ্জী (চৰ্যাপদ-শংকৰী)	অসমীয়া ভাষা-সাহিত্যৰ প্ৰাচীনতা আৰু ঐতিহাসিক ক্ৰমবিকাশ জনাৰ লগতে অসমীয়া লিপিৰ ঐতিহ্য আৰু ক্ৰমবিকাশ অধ্যয়ন কৰিব পাৰিব।
	1 st Semester	Paper ASM-HC-1026 অসমীয়া সাহিত্যৰ বুৰঞ্জী (উত্তৰ শংকৰী যুগ-অৰুণোদয় যুগ)	উত্তৰ শংকৰী যুগৰ বিভিন্ন সাহিত্যিকৰ ৰচনা সম্বন্ধে জ্ঞান লাভ। অসমীয়া সাহিত্যৰ অৰুণোদয় যুগৰ বিষয়েও অৱগত হ'ব পাৰিব।
	2 nd Semes	Paper ASM-HC-2016 ভাষা-বিজ্ঞান পৰিচয়	ভাষাবিজ্ঞানৰ সম্পৰ্কে অৱগত হ'ব পাৰিব। ভাষাবিজ্ঞানৰ শ্ৰেণীবিভাজনৰ বিষয়ে জানিব পাৰিব।

		Paper ASM-2026	সাহিত্য-সমালোচনা	ৰস সন্দৰ্ভে ধাৰণা লাভ কৰিব পাৰিব। কবিতা , নাটক, চুটিগল্প আৰু উপন্যাসৰ বিষয়ে জনাত কাকতখনে সহায় কৰিব।
3 rd Semester		Paper 3.1	অসমীয়া ভাষা	অসমীয়া ভাষাৰ মূল বা ভাষাৰ ঐতিহাসিক গাঁথনি সম্পৰ্কে ধাৰণা লাভ। ভাৰতীয় আৰ্যভাষাৰ ক্ৰমবিকাশৰ ফলত অসমীয়া ভাষাৰ উৎপত্তি হোৱা বাবে ভাৰতীয় আৰ্যভাষাৰ বিষয়ে অসমীয়া ছাত্ৰ-ছাত্ৰীয়ে জানিব পাৰিব।
		Paper 3.2	শংকৰদেৱঃ বিশেষ লিখকৰ অধ্যয়ন)	মহাপুৰুষ শংকৰদেৱৰ অসমীয়া জাতীয় জীৱনলৈ আগবঢ়োৱা অৱদানৰ বিষয়ে জ্ঞান লাভ কৰিব পাৰিব।
4 th Semester		Paper 4.1	অসমীয়া ব্যাকৰণ	ভাষা এটাৰ ভিতৰুৱা গঠন প্ৰণালী জানিবলৈ ব্যাকৰণ অধ্যয়ন কৰা। ভাষাৰ গঠন ব্যাকৰণৰ জ্ঞানৰ দ্বাৰা স্পষ্ট ৰূপত বুজি পোৱাত সহায় কৰে।
		Paper 4.2	অসমীয়া জাতি আৰু সংস্কৃতিৰ পৰিচয়মূলক অধ্যয়ন	বৃহত্তৰ অসমীয়া জাতি গঠন প্ৰক্ৰিয়া আৰু ইয়াৰ পটভূমি সম্পৰ্কে জানিব পাৰিব। সংস্কৃতিৰ স্বৰূপ, লোকসংস্কৃতি , লোকচাৰাৰ আদিৰ বিষয়ে জনাৰ সুবিধা।
5 th Semester		Paper 5.1	পুৰণি অসমীয়া নাটক	প্ৰাচীন অসমীয়া নাটৰ উৎপত্তি, বিকাশ সম্বন্ধে ধাৰণা লাভ কৰিব পাৰিব। শংকৰদেৱ, মাধৱদেৱ আৰু শংকৰোত্তৰ নাটৰ বিষয়ে জানিব পাৰিব।
		Paper 5.2	পুৰণি অসমীয়া কথা সাহিত্য	অসমীয়া সাহিত্য কবিতা বা গীতৰ জৰিয়তে সৃষ্টি হলেও পৰৱৰ্তী কালত কথা বা গদ্যৰ ভাষাৰেও সাহিত্য ৰচিত হ'বলৈ ধৰে। পুৰণি অসমত গদ্যৰ আৰম্ভণি আৰু বিকাশৰ লগতে ভিন ভিন গদ্যকাৰৰ গদ্যৰীতিৰ বিষয়ে জানিব পাৰিব।
		Paper 5.3	(ব্ৰজবুলি গীতিগুচ্ছ) ব্ৰজবুলি সাহিত্যৰ অধ্যয়ন	এই কাকতৰ জৰিডতে ব্ৰজবুলি ভাষা – সাহিত্যৰ বিষয়ে পৰিচিত হ'ব। ভক্তি সাহিত্যৰ বিকাশত ব্ৰজবুলি সাহিত্যৰ অৱদানৰ বিষয়ে জ্ঞান লাভ কৰিব পাৰিব।
		Paper 5.4	পালি –প্ৰাকৃত সাহিত্য আৰু ব্যাকৰণ	প্ৰাচীন আৰু মধ্য ভাৰতীয় আৰ্যভাষাত ৰচিত হোৱা সাহিত্যৰ বিষয়ে জানিব পাৰিব। নব্য ভাৰতীয় আৰ্যভাষাৰ অসমীয়াত মধ্য ভাৰতীয় আৰ্যভাষা আৰু প্ৰাচীন ভাৰতীয় আৰ্যভাষাৰ ভালেমান বৈশিষ্ট্যৰ বিষয়ে জানিব পাৰিব।
		Paper 5.5	সাহিত্য সমালোচনা	প্ৰাচ্য-পাশ্চাত্য সাহিত্য সমালোচনাৰ বিভিন্ন ধাৰাৰ বিষয়ে অৱগত হ'ব পাৰিব। কবিতা, নাটক, চুটিগল্প আৰু উপন্যাসৰ বিষয়ে বিস্তৃত অধ্যয়ন কৰিব পাৰিব।
		Paper 5.6	ভাষাৰ স্বৰূপ	ভাষাই সমাজত জাতিৰ পৰিচয় দিয়ে। অসমীয়া ভাষাৰ নিজস্বতা বা স্বকীয়তাৰ গাঁথনিক ৰূপৰ ধাৰণাই ভাষাৰ ধাৰণা স্পষ্ট কৰে।
6 th Semeste		Paper 6.1	আধুনিক অসমীয়া নাটক	আধুনিক অসমীয়া নাটৰ উদ্ভৱ, বিকাশ সম্পৰ্কে অৱগত হ'ব পাৰিব। নাট্যকাৰ জ্যোতিপ্ৰসাদ আগৰবালাৰ নাটৰ বিষয়ে জ্ঞান লাভ কৰিব পাৰিব।

	Paper 6.2	আধুনিক অসমীয়া কথা-সাহিত্য	অৰুণোদয় যুগৰ পৰা আধুনিক গদ্যৰ ক্ৰমবিকাশ আৰম্ভ হয় আৰু বৰ্তমান যুগত অসমীয়া গদ্যই এক বৈশিষ্ট্য পূৰ্ণ ৰূপ লাভ কৰিছে। আধুনিক গদ্যৰ বিষয়ে জানিব পাৰিব।
	Paper 6.3	আধুনিক ভাৰতীয় সাহিত্য অধ্যয়ন	আধুনিক ভাৰতীয় সাহিত্যৰ অধ্যয়নে ৰাষ্ট্ৰীয় ঐক্য স্থাপনত সহায় কৰে। সাহিত্যৰ তুলনামূলক অধ্যয়নৰ ক্ষেত্ৰত আধুনিক ভাৰতীয় সাহিত্য অধ্যয়নে সহায় কৰে। আধুনিক ভাৰতীয় সাহিত্যৰ অধ্যয়নে পাঠক-লেখকক অনুবাদ কাৰ্যত আগ্ৰহী কৰি তোলে।
	Paper 6.4	অসমীয়া চুটিগল্প আৰু উপন্যাস	অসমীয়া চুটিগল্প আৰু উপন্যাস সম্পৰ্কে ধাৰণা লাভ।
	Paper 6.5	ছন্দ-অলংকাৰ	ছন্দ-অলংকাৰ অধ্যয়নে কাব্যৰ দেহ – নিৰ্মাণৰ ক্ষেত্ৰত সহায় কৰে। কাব্য-সাহিত্যত ছন্দ অলংকাৰৰ প্ৰয়োগ সম্পৰ্কে জানিব পাৰিব।
	Paper 6.6	ভাষা বিজ্ঞানৰ পৰিচয়	ভাষাক বৈজ্ঞানিক দৃষ্টিৰে চালি-জাৰি চোৱাত সহায় কৰে। ভাষাৰ গঠনত উপভাষাৰ গুৰুত্বৰ বিষয়ে জানিব পাৰিব।

Bachelor of Arts in Bengali

Programme Specific Outcome

1. Students should be familiar with representative literary and cultural texts within a significant number of historical, political, geographical and cultural contexts.
2. Students should be able to apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres.
3. Students should be able to identify, analyse, interpret and describe the critical ideas, values and themes that appear in different literary texts.
4. Students should be able to write analytically in variety of formats including descriptive writing, research papers and reflective writing.
5. Students should be able to ethically gather and synthesize information's from a variety of written and electronic sources.
6. Students should be able to synchronise technology with literature.

Course Outcomes

Course		Name of the paper	Course Outcome
Core Course	1 st Semester	Paper BEN-HC-1016	Pre modern Literature-1 (Charyapad, Srikrishnakirtan, Vaishnava Padavali)
		Paper BEN-HC-1026	Pre modern Literature-2 (Vaishnava Padavali, Mangalkavya, Shaktapad)

2 nd Semester	Paper BEN- HC-2016	Bangla Bhasha Porichaya	As a student of literate, it is important to have an idea about Bengali linguistics, phonetics and word theory, through this paper students will gather knowledge on Bengali languages and Bengali phonetics.
	Paper BEN- HC-2026	Bangalir Sanskritik O Samajik porichaya	The purpose of this course is acquainting the students with the trajectory of social and cultural development of Bengalis from its inception to its colonial period. This course will create a comprehensive overview of the history of Bengali, Bengali public life and the identity of Bengali culture.
3 rd Semester	Paper 3.1	History of Bengali Literature (Old & Medieval Period)	In the course of developing that sequence has been created to fulfill the goal of gaining knowledge about the literary genres of the early and Middle Ages. students will have a clear idea about the pre-consciousness society.
	Paper 3.2	History of Bengali Literature (Modern Period)	The This paper helps the students to know the beginning of the modern era of Bengal in the nineteenth Century. The first introduction of Prose in Bengali literature is in the nineteenth Century. During this century various branches of literature emerged. Along with the development of Bengali prose, various genres of poetry, Novel, Drama and story have been described in this course. At the same time students will have a special idea about the contemporary period.
4 th Semester	Paper 4.1	History of Bengali Language, Chanda, Alankar.	As a student of literate, it is important to have an idea about Bangali linguistics, phonetics and word theory. Students of literature must have knowledge about the rhyme ornaments of poetry. This course acknowledges that need.
	Paper 4.2	Modern Bengali Poetry	The characteristics of modern poetry become clear to the students through the reading of modern poetry. At the same time, the difference between the poetry of the modern age and the poetry of the ancient and medieval period should be made clearer.
5 th Semester	Paper 5.1	Novel (Pollisamaj, TaKabi)	The beginning of the novel in Bengali literature in the modern era with the advent of prose literature. There are different categories of novels in which the importance of the novel as a social novel has been discussed. Sarat Chandra's novels are an invaluable resource in Bengali literature.
	Paper 5.2	Story (Ekushti bangle Golpo & Subodh ghoser shreshta Golpo)	Through this course students can learn in detail about modern story as well as modern complex psychology as seen in the story.
	Paper 5.3	Drama (Shajahan, Cheratar)	With the help of this paper the students will come to know about the history of dramas and the life sketches of the famous personalities related to drama and through drama, descriptions of family life and contemporary social life became clear through discussion of this unit.
	Paper 5.4	Vraman Sahitya (Palamou, Japanyatri)	Through the travel literature describes the way of life of a particular region. In fact, the importance of travel literature lies in the fact that a clear idea about the region will be formed among the students only through travel literature lessons without going to that region.
	Paper 5.5	Essay & other literature (Shakuntala, Panchatantra)	The contribution of Ishwar Chandra Vidyasagar in the beginning phase of modern age is undeniable .Vidyasagar's Shakuntala's character in prose literature ,but also in king Dushmata Shaakuntala's relationship with which a special conception of contemporary social life is formed .In notable article , Syed Mustafa Ali has stated the aspects of the society

				by highlighting the things that are known in a very simple way .In addition to this, he wanted to make the identity of the international people more clear by expressing himself in his own language in a simple way .
		Paper 5.6	Atirikta Gadya Sahitya (Kajjoli, Kamala Kanter Daptar)	In this course, special importance has been given to how to present the serious issues of the society in a light way. In fact, it can be said that it is a humorous essay.
6 th Semester		Paper 6.1	Rabindranath-1 (Drama-Raja, Kavya-Katha O Kahini)	A comprehensive idea about the poetry of world poet Rabindranath's Tagore as well as Drama was formed.
		Paper 6.2	Rabindranath-2 (Galpoguccha, Novel-Sesher Kavita)	Along with poetry, Rabindranath's fame in short stories and novels is enough. And with this the psychological side of Rabindranath has been discussed in detail so that it becomes clear from the description of this course.
		Paper 6.3	Literary Criticism (Kavyajigyasha-Atul Chandra Gupta, Samalochonar Katha-Asit Kumar Bandhapadhyaya)	The important of having knowledge of Indian poetry is discussed in course. In fact, within the curriculum, students will develop a sense of poetry and taste. Criticism is also necessary in this paper to gain knowledge about different branches of literature. Literary criticism essays are incomplete if they do not have proper knowledge about the style of criticism. Students will be able to acquire basic knowledge about criticism to meet this goal.
		Paper 6.4	Pratibeshi Sahitya (Karengor Ligiri-Jyotiprasad Agarwala, Cha Mon Aat Gunth-Fakirmohan Senapoti)	With the help of this paper the students to knowing who is in Bengali literature, a basic idea about contemporary Indian literature, especially Assamese, Oriya text will be formed. This course will actually create a comparative study and interest among the students.
		Paper 6.5	Bengali Literature of Assam (Gunodharer Ashukh-Pradyut Chakraborty, Harano Din Harano Manush-Sujit Chaudhury)	Through this paper students will learn about some features that are a part of modern-day drama. There are so many types it's hard to say. Through this course, students have developed a profound idea about the writer's life style and how he has portrayed the events of the past through his memories.
		Paper 6.6	Assignment (20 Century, Story/ Novel/ Poem)	This paper is completely practical, skill-based and related to project works.

Bachelor of Arts and Masters of Arts in Bodo

Programme Specific Outcome

B.A. Course

- Bodo is another major subject of Bijni College under Bodoland University (formerly under Gauhati University). In Bodo Honours course includes on language, literature and culture, where the students pass out with Bodo Honours they can apply for higher education. They will be able to apply the course L.L.B., B.Ed., M.A., Mass Communication, Library Science, Journalism, Translation Studies, Comparative Literature and linguistics, MSW, Sociology, Women study etc.
- Bodo is Associate official Language of Assam and it is one of the mediums of instruction in Bodo populated areas of Assam. In this area, the Bodo language is popular among them in communication as Lingua-Franca and medium of instructions. Students having Bodo may apply for the job of teacher.

- The pass out students having Bodo honours may engage in T.V. Channels, Radio and Newspapers as reporter or journalist after taking journalism course.
- After taking B.A. degree having Bodo honours they may become social activists, political leader, leaders of NGOs even they may engage in Bodo Language learning Centre, in business, in agriculture or farmer etc.
- They can participate in same competitive examinations where applicable passing out of B.A. having Bodo subject.

M.A. Course

- After pass out M.A. degree in Bodo subject the students may admit in B.Ed., Mass Communication, journalism, L.L.B., Tourism, etc. courses.
- The pass out students having norms may apply for teaching job after completion NET, SLET for Colleges and Universities. NET completed students having JRF can apply for Doctoral research work with scholarship and pass out without JRF may apply for Doctoral degree with self-finance. The research work may be done for the purpose of upliftment of Bodo language, literature and culture.
- After passing out they may engage in publication of books, printing- press work for self-employed.
- After taking master degree in Bodo they may become social activities, political leader, farmer, businessman etc.
- They can appear in same competitive examinations where applicable.

Course Outcomes

Course		Name of the paper	Course Outcome	
Core Course	1 st Semester	BOD-HC-1016	History of Bodo literature (Early Period)	In this paper students will study about the history of Bodo literature (Early Period). Students are expected to know the contribution of missionary and different magazine like Bibar and post Bibar on Bodo literature
		BOD-HC-1026	Literary Criticism (Western)	This paper helps the students to know about the western literature and its criticism, like poetry, drama, novel, short- story, prose literature etc.
	2 nd Semester	BOD-HC-2016	History of Bodo Literature (Modern Period, 1952-2015)	Through this paper students will be able to study the trends and development of Modern Bodo literature from 1952 to 2015.
		BOD-HC-2026	literary Criticism (Eastern)	In this paper students will study about the theory and concept of eastern literature and its elements like Rasa, Chanda, Alankara
	3 rd Semester	Paper 3.1	Bodo poetry (up to 1951)	Through this paper students will be able to study the trends of old Bodo Poems from beginning to 1951, and will study the poems, like- angni khwina, thwinay, zakhangdw etc.
		Paper 3.2	Modern Bodo Poetry (from 1952 to 2005)	Through this paper students will be able to study the trends of Modern Bodo Poems from 1952 to 2005. It will study about the different poems like- abwi, amen, ziu swinay etc.

	4 th Semester	Paper 4.1	Introduction to Language and Linguistics	In this paper students will come to know about the basic concept of Language and Linguistics and its different branches like phonology, morphology and syntax.
		Paper 4.2	Structure of Bodo language	This paper help to know about the structure of Bodo language. There are included phonology, morphology and syntactic etc.
	5 th Semester	Paper 5.1	Introduction to Culture	Through this paper students will be able to know the concept of culture including folklore and its parts.
		Paper 5.2	Cultural History of the Bodos	This paper helps the students to know specially about the Bodo Society and their folk-culture and fairs and festivals.
		Paper 5.3	Textual analysis of Bodo Drama of the early period	Through this paper student will study about the different drama of Bodo (of the early period) and they will be study specific dramas like- Dwrswn Jwhwlao, Obongni phao and Dukhashri
		Paper 5.4	Textual analysis of Bodo Drama of the Modern period	Through this paper student will study about the growth of modern Bodo drama and they will be study specific dramas like- Mingmani Simang, Sigun Raza, Mwnabilini Hangma.
		Paper 5.5	Bodo Non-fictional Prose	In this paper student will study about the background of prose literature of Bodo and they will be study about the different Bodo prose, like- Boroni Rao, Bwisagu, Subung mahariao Khana phwthainay, Boro harimu and etc.
		Paper 5.6	Fiction	In this paper student will study about the background of fiction literature of Bodo and they will be study about the social pictures and characterize of the specific Bodo novels and short-stories.
	6 th Semester	Paper 6.1	Indian literature	Through this paper the students will be able to know literature of Indian, especially Assamese, Bangla and Hindi.
		Paper 6.2	Western Literature	It is the paper of the western literature of the old and modern poetry and drama. This paper will be helping the students to know about wester literature.
		Paper 6.3	Western Literature	It is the paper of the western literature of the Novel and Short-Story. This paper will be helping the students to know about wester literature.
		Paper 6.4	Bodo language	In this paper the students will be able to know about the origin, development of the Bodo language, and their characters, linguistics impact, language variation.
		Paper 6.5	Cognate language of the Bodo	It is the paper of the Bodo group of languages. Through this paper the students will come to know about their common feature of this group. This paper also helps the students to compare the phonology, morphology and vocabulary of the Bodo group of languages.
		Paper 6.6		

Bachelor of Arts in Economics

- On completion of graduation in Economics a student gets the opportunity to take admission in MA, MBA. Moreover, the students can get admitted in different courses like B.Ed., LLB, MSW, Library Science, Mass Communication etc.
- The students after completing graduation in Economics, gets competitive skills for cracking examinations of Banking, All India Economics Service, Statistical Service, Insurance, UPSC, APSC. Additionally, the economics graduates get comparative advantage for most of the state and central government jobs in every category. Students completing graduation in the subject also gets preference in marketing jobs.
- As the Subject is common in Arts, Science and Commerce and only Arts Stream is the major contributor in total number of graduates, employment opportunities for teaching jobs are comparatively higher for the students.
- The programme grooms the students for avenues of self-employment as the basic economic understanding after completion of the course helps students to undertake economic activity in small scale industry, tourism industry, hospitality sector etc.

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	Paper ECO-HC-1016	Introductory Micro Economics	This paper is designed to expose the students to the basic. The course will illustrate how micro economic concepts can be applied to analysis real life situations.
		Paper ECO-HC-1026	Mathematical Methods for Economics 1	The objective of this paper is to transmit the body of basic mathematics that enable the study of economic theory at the under graduate level.
	2 nd Semester	Paper ECO-HC-2016	Introductory Macro Economics	The paper aims to introduce the students to the basic concepts of macroeconomics.
		Paper ECO-HC-2026	Mathematical Methods for Economics 2	The objective of this paper which is a sequence of last semester paper is to transmit the body of basic mathematics that enable the study of economic theory at the under graduate level.
	3 rd Semester	Paper M 304	Elementary Mathematics for Economics	The paper helps students to know basic mathematical tools which will be applied in economics.
		Paper M 305	The Monetary System	The paper emphasizes on working of money, banking and financial system.
	4 th Semester	Paper M 404	Mathematical Application for Economics	This paper helps students to apply mathematical tools in economics
		Paper M 405	Introduction to Development Economics	The paper gives knowledge about important areas and theories of economic development
	5 th Semester	Paper M 501	Elements of Public Finance	This paper helps students to know the basic concepts of public finance.
		Paper M 502	Basic Statistics	This paper helps student to learn basic statistical tools for application in economics

		Paper M 503	Introduction to Environmental Economics	This paper helps student to grow basic concepts of environmental economics
		Paper M 504	International Trade and Policy	The paper gives deeper knowledge about theories of international trade and relevant concepts.
		Paper M 505	History of Economic Thought 1	The students are exposed to basic issues of economic thought
		Paper M 506	Development Policy and the Indian Economy	The paper acquaints with basic issues of Indian Economy such as agriculture, industry, poverty etc.
	6 th Semester	Paper M 601	Public Economics	This paper helps student to have a deep insight into some key issues of public finance like taxation, budge, fiscal policy etc.
		Paper M 602	Applied Statistics	The paper helps students to know more advance statistical tools which are applied in economics.
		Paper M 603	Economics of Natural Resources and Sustainable Development	The paper helps students to know about developmental aspects which are linked with environmental issues and sustainability.
		Paper M 604	International Economics	The paper helps to gather more knowledge about international issues like economic integration, balance of payment, foreign exchange market and international institutions.
		Paper M 605	History of Economic Thought 2	The students are acquainted with the famous schools of thought, Keynesian economics and Indian economic thoughts.
		Paper M 606	Planning for Development; India and the North-East	The students are exposed to the concepts of economic planning of India and Nort-East.
	General Course	1 st Semester	Paper E-101	Elementary Micro Economics
2 nd Semester		Paper E-201	Introductory Macro Economics	The students will be exposed to the basic ideas of national income accounting, theory of employment, inflation.
3 rd Semester		Paper E-303	Money Banking and Finance	The paper emphasises on working of money, banking and financial system.
4 th Semester		Paper E-403	Indian Economy with Issues of North East	The students are exposed to the concepts of national income, agriculture, industry of India and Nort-East.
5 th Semester		Paper E-503	Public Finance	This paper helps students to know the basic concepts of public finance.
		Paper E- 504	Introduction to Growth and Development Economics	The paper gives knowledge about important areas and theories of economic development
6 th Semester		Paper E-603	International Economics	The paper gives deeper knowledge about theories of international trade and relevant concepts.
		Paper E-604	Planning and Development in India	The paper gives knowledge of decentralised planning, foreign investment, poverty alleviation programmes etc.

Bachelor of Arts in Education

- Education is one of the basic disciplines in the category of social sciences. After completion of BA degree in education the learner can apply for higher education such as, MA, LLB, B.Ed., Mass Communication, Library science, Journalism, sociologist, psychologist etc.
- As education is the basic discipline of social sciences, the learner, graduate with this subject can apply for the post of teachers also.
- The present course is designed in such a way that it can explore the possibility of getting the job for a graduate student in various government and private organizations.

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	EDU-HC-1016	Principles of Education	Acquaint the students with the sound principle, concept of education, Curriculum, Democracy, Discipline and freedom
		EDU-HC-1026,	Psychological foundation and laboratory practical	Make the students understand the relationship between education and psychology.
	2 nd Semester	EDU-HC-2016-	Philosophical and sociological foundation of education	Know the concept of Philosophy and sociology and its relationship with Education.
		EDU-HC-2026-	Development of Education in India-1	Describe the education in ancient India and analyse the education system during British period.
	3 rd Semester	Paper 3.01	Emerging issues in Education	Make the students acquaint with major emerging issues national, state and local
		Paper 3.02	Measurement and evaluation in Education	Enable the students to understand the concept of measurement and evaluation in education
	4 th Semester	Paper 4.01	Educational Technology	To enable the students to understand the concept, scope and objective of Educational Technology along with the different types of Educational Technology.
		Paper 4.02	Environmental and population Education	To enable the students to understand the scope, concept and importance of Environmental Education and various programme of environmental and population education at different levels of Education.
	5 th Semester	Paper 5.01	Philosophy of Education	To make the students understand how philosophical ideas influenced educational ideas.
		Paper 5.02	Guidance And Counseling	Help the students to understand the concept, need and importance of Guidance and counseling
		Paper 5.03	Teacher Education	To develop understanding about the different policies and practices and quality assurance in Teacher Education along with the needs and importance of in-service training programme.
		Paper 5.04	Teaching-learning method and Pedagogy	Develops the understanding about the various methods, maxims and devices of teaching.
		Paper 5.05	Statistics in Education	Develop the basic concept of statistics, Normal probability curve etc.
		Paper 5.06	Practical Paper	
	6 th Semester	Paper 6.01	Developmental Psychology	Enable the students to understand the basic concept relating to development of various stages of life.
		Paper 6.02	Continuing Education and Distance Education	Enable the students to understand the concept of continuing education and its relevance to the changing society along with the different form of instructional strategies in distance mod of learning.

	Paper 6.03	Special Education	Help the students to know about the different issues, educational provisions support services of special children.
	Paper 6.04	Guidance And Counseling	Help the students to understand the concept, need and importance of Guidance and counseling
	Paper 6.05	Educational Management and Administration	Provide knowledge on educational supervisions, institutional planning and educational administrative structure of India in genera and Assam in particular.
	Paper 6.06	Project	The learner will be able to know how to prepare a project report.

Bachelor of Arts in English

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	ENG-HC-1016	Indian Classical Literature	An encouragement to think laterally about literatures of the world, and the possibility of cultural exchange.
		ENG-HC-1026	European Classical Literature.	An acquaintance with the enriching literary tradition of classical writing in Europe through the study of representative texts belonging to the classical period.
	2 nd Semester	ENG-HC-2016	Indian Writing in English	Develop familiarity with the issues of politics of language and gender, nationalism and modernity pertaining to pre and post- independence India that have been responsible for the emergence of Indian English literature.
		ENG-HC-2026	British Poetry and Drama: 14 th to 17 th Centuries.	Develop familiarity with the two major forms in British literature from the 14 th to the 17 th centuries – poetry and drama. An acquaintance with the seminal issues and preoccupations of the writers and their ages as reflected in these texts.
	3 rd Semester	Paper 3.1	The Social and Literary Contexts: The Victorian World.	An acquaintance with the contexts of the English literary tradition as it develops in the Victorian age.
		Paper 3.2	Victorian Poetry and Fiction.	Familiarity with the poetry that is characteristic of the Victorian period – forms like the dramatic monologue, the love poems, pre-Raphaelite experiments and the beginnings of modern poetic experience in Hopkins. Also, familiarity with the great Victorian fiction.
	4 th Semester	Paper 4.1	The Social and Literary Context: Modernism and After.	An acquaintance with the circumstances that shaped the process of literary production from the 20 th century to the present.
		Paper 4.2	English Poetry and Fiction: Modernism and After.	Familiarity with a selection of the poetry and fiction of the modern and postmodern eras that is representative of important trends, critical shifts and formal experimentation.

5 th Semester	Paper 5.1	Modern Drama I	Introduction to 20 th century English and European drama.
	Paper 5.2	Modern Drama II	Study of the impact of contemporary philosophy, ideas and art movements like existentialism, expressionism, impressionism, Marxism and the Absurd in Modern drama.
	Paper 5.3	The Essay in English: Addison to Dickens.	Introduction to the literary form of the essay through a selection of representative texts from the 18 th and 19 th centuries.
	Paper 5.4	The Essay in English: The 20 th Century.	Introduction to developments in the genre of the essay in the 20 th century.
	Paper 5.5	Life Writing: Biographies, Memoirs and Letters.	Study of the element of 'story' in the exemplary 'histories' and the material conditions under which the loftiest works are written.
	Paper 5.6	Women's Writing	An acquaintance with a body of literature that has emerged with growing feminist awareness of women's lives and their representation.
6 th Semester	Paper 6.1	Literary Criticism	An acquaintance with some of the key ideas of Western literary criticism from Graeco-Roman antiquity to the modern period.
	Paper 6.2	20 th Century Criticism and Theory	Introduction to key ideas and texts that will familiarize students with the intellectual shifts in the reading of culture, language and literature in the 20 th century.
	Paper 6.3	Nature	Learning the process through which language and literature – as manifestations of culture – are produced by the interconnections between both nature and culture.
	Paper 6.4	Western Mythology: Introducing Classical & Judeo-Christian Myth.	Introduction to the study of Classical and Judeo-Christian Myth and their recurrence in later social, historical, cultural and literary contexts.
	Paper 6.5	Linguistics and Sociolinguistics	An acquaintance with Linguistics as the scientific study of language and familiarity with its different branches as well as its key concepts.
	Paper 6.6	History of the English Language	An acquaintance with the development of the English language from the Middle English period and the various influences which have contributed to make it what it is today.

Bachelor of Arts in History

History is one of the most respected and most valuable Academic subjects. It is one of the beneficial subjects for students as also in professional education. To know the origin of society, culture, tradition and chronology one should know its history. History is an unending dialogue between the past and the present. The study of History led to develop an understanding of the world; to become a more rounded person, understand the identity and culture, to inspire, to learn from mistakes and to develop transferrable skills; to understand the present-day issues, to understand the process of change over time. From History one can learn political intelligence;

moral values, builds good citizenship learn from the past and notice clear warning signs and improve the personal growth.

After completing graduation in History one can try for jobs in various Competitive Examinations. The subject History specially the Modern History is included in almost in every competitive examination. Eligible for various Government jobs in the institutions just as museums, Archaeological survey of India and also engage in teaching jobs of Various Institutions and other administrative jobs etc.

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	Paper C.1	Introduction to History	In this Paper the students will learn about the objectives of History its Nature and Scope. They will also learn different schools of History for example Indian Historiography, Medieval Historiography, and Chinese Historiography etc.
		Paper C.2	History of India (Earliest to 300CE)	In this Paper the students will learn about the Indian History of Ancient times from Pre-History to Arrival of Bactrian Greeks, Scytho-Parthians and Kushanas. The Paper includes the great rulers of India and its Socio-Economic Condition and its Architecture and Culture.
	2 nd Semester	Paper C.2	History of India (C 300 to 1206 CE)	This paper gives idea about the Golden period of India i.e the Gupta period its glorious past. The reign of Deccan to its downfall are highlighted in this paper.
		Paper C.4	Rise of Modern West	In this Paper the students will learn about the transition of feudalism to capitalisms, Renaissance and Reformation movement, and emergence of state system and also industrial revolution of Europe.
	3 rd Semester	Paper - 305	India Under the Turko-Afghans	After the completion of this paper, the students will able to explore the sources of medieval India and able to understand the map of central Asia and its invasion in India.
		Paper -306	History of Assam (5 th century AD to 1228)	This paper will give a general outline of the history of Assam from the earliest times to the advent of Ahoms in the 13 th century.
	4 th Semester	Paper -407	India Under the Muhgals	This paper gives highlights from the establishment of Mughal dynasty in India. It also gives an idea about the socio-economic condition Mughal period. And also, about the religious movement of that particular period.
		Paper -408	History of Europe (1453-1789)	In this Paper the students will learn about the transition of feudalism to capitalisms, Renaissance and Reformation movement, emergence of state system and also industrial revolution of Europe
	5 th Semester	Paper 509	India under the East India company	After the completion of this course, the students will be able to relate the circumstances leading to the consolidation of colonial rule over India and their consequences

6 th Semester	Paper 510	History of Assam (1228-1826)	On completion of this paper students will be able to identify major stages of developments in the political, social and cultural history of Assam
	Paper 511	History of Europe (1789-1870)	After the completion of this course, the students will be able to analyze the Historical development in Europe between 1789-1870). As the Course structure of this paper focuses on the Democratic and Socialist foundations Modern Europe.
	Paper 512	History of science and technology in pre-colonial period.	After the completion of this course the students will learn about the art of writing History and also about the science and technology in History in the pre-colonial period.
	Paper 513	History of Great Britain (1485-1820)	On completion of this paper the students will be able to learn about the Britain and able the analyse the reason behind the world War I and World War II.
	Paper 514	History of China (1839-1949)	This paper gives a glimpse about the political condition and social condition of China and also highlights their communication with the outer World.
	Paper 601	India under the Crown	At the Completion of the Course the learners will be able to analyze the course British Colonial exploitation, the social mobilization during the British period.
	Paper- 616	History of Assam (1826-1947)	At the Completion of the Course, the learner will be able to analyze the course of British Colonial exploitation, the Socio Mobilization during the given period.
	Paper-617	History of Europe (1871-1947)	After the completion of this course, the students will be able to analyze the Historical development in Europe between 1871 to 1947. As the Course structure of this paper focuses on the Democratic and Socialist foundations Modern Europe
	Paper-618	World since 1947	This paper is based on the set up of organization in the whole world. The students will understand how the organization is set up and also about the different wars which took place in the worlds.
	Paper-619	History of Japan (1853-1941)	After the completion of this paper the students will learn about the history of Japan their culture, tradition and mercantilism and also their diplomatic relation with other country.
	Paper-620	Project	On the completion of this paper the students will learn research methodology, documentation and the art of writing history.

Bachelor of Arts in Philosophy

Programme Specific Outcome

1. This field helps Proper understanding of any kind of situation through logical and rational thinking.
2. This field develops the knowledge of Proper understanding of the nature of life and society.
3. This area will help the students to develop the moral consciousness which enables the students to become complete human beings.

4. This area also helps to build overall awareness about rights and duties towards environment. The students become conscious of the environmental issues and try to take initiative towards environmental protection.
5. This field encourage engaging in higher studies and research work.

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	Paper 1.1	Indian Philosophy	In this paper students will learn the basis of Indian Philosophy such as Vedas, Upanisads and Bhagavad-gita. Also learn non-vadic system of Indian philosophy- Carvaka, Buddha and Jaina. In these three systems include epistemological, metaphysical and ethical discussion which will help students to find out the structure of own part.
		Paper 1.2	Logic-I	In this paper students will learn about main concept of logic such as proposition, Argument, Deduction and Induction. Again, students identify about Aristotelian logic, Venn Diagram and set notation.
	2 nd Semester	Paper 2.1	Greek Philosophy	In this paper students will learn mainly pre-Socrates philosophy and their views regarding ultimate staff in this universe. Also, from Socrates to Aristotle conception of virtue, knowledge, matter and form, causality etc.
		Paper 2.2	Logic-II	In this paper students will learn about symbolic logic and find out the differences between symbolic logic and Aristotelian logic. Again, students will learn rules of validity by which students find out whether an argument is valid or not.
	3 rd Semester	Paper -305	Indian Philosophy	In this paper students will know about various systems of Non-vadic systems of Indian Philosophy.
		Paper -306	History of Modern Western Philosophy	This paper helps students to know about various western philosophers such as Descartes, Spinoza, Leibnitz.
	4 th Semester	Paper -407	Indian Philosophy	In this paper students will know about various systems of Vadic systems of Indian Philosophy
		Paper -408	History of Modern Western Philosophy	This paper helps students to know about various western philosophers such as Locke, Berkeley Hume, Kant.
	5 th Semester	Paper 509	Greek Philosophy	In this paper students will find about early Greek Philosophers such as Thales, Pythagoras, Heraklites etc. and their views regarding primary staff of this universe.
		Paper 510	Contemporary Indian Philosophy	In this paper students will know about the philosophical concept of different great Indian philosopher like, Aurobindo, Vivekananda, Tagore, Radhakrishnan
		Paper 511	Contemporary Western Philosophy	With the help of this paper the students will come to know about the concept of analytical philosophy. They are also study the different contemporary western philosophers like Russel, Moore, Wittgenstein and Ryle.
		Paper 512	Ethics	This paper includes the necessity of morality in society and students will improve their moral behaviour in their life. It also introduced the different types of ethics like,

6 th Semester				Meta ethics, practical ethics and normative ethic which are important in our present-day society.
	Paper 513	Philosophy of Religion		This paper helps students to know about the origin of religion. The paper also introduced the students about the concept of foundation of religious belief, reason, revelation, faith and mysticism.
	Paper 514	Social Philosophy		Through this paper, the students will be able to know about different vital issues relating to society. Through this paper students understands the concepts like, Terrorism, Globalization, Feminism, Marxism and Class struggle.
	Paper 601	Greek Philosophy		This paper will help the students to gain knowledge about the Greek philosophy. This paper includes the philosophers like, Socrates, Plato and Aristotle.
	Paper- 616	Contemporary Indian Philosophy		This paper will help to increase the knowledge about the Gandhian philosophy. Through this paper student will learn about the Gandhian concept of Non-Violence, Truth, God, Religion, Satyagraha and Sarvodya.
	Paper-617	Contemporary Western Philosophy		This paper will help to increase the knowledge about the concept of existentialism. This paper focuses the importance of human existence. Students understand the philosophical concepts of Kiekegard, Nietzsche, Husserl and Sartre.
	Paper-618	Ethics		With the help of this paper the students will know about the Kants ethical theory, Gitas niskama karma, Moores indifinability, Ayers emotivism, various theories of punishment and Law of karma.
	Paper-619	Philosophy of Religion		Through this paper students will learn about the Ottos idea of Holy, argument for the existence of God and Philosophy of Sankardeva.
	Paper-620	Social Philosophy		This paper is completely based on project. Through this paper students get the knowledge about how to prepare a project paper in the academic purpose.

Bachelor of Arts in Political Science

PROGRAMME SPECIFIC OUTCOME

Political Science is one of the basic and leading disciplines in the category of social sciences. It helps to know the political system and the political scenario from the national to the international level. Among the other social sciences political science is one of the interesting and most demanding subjects among the students. The course enables to the students to update about the day-to-day political issues and create scientific temperament and analysis to the learners. The course paves the way for higher studies and research in different levels. The students can explore their knowledge in most specific branches of political science like public administration, international relations, sociology, peace studies, women studies, human rights etc. from the various higher educational institutions. Doing further higher studies one can also carry research and innovative study and can enrich the field of the study of political science.

The course is designed in such a way that it can explore the possibility of getting skill development, career option and jobs and help to appearing in competitive examinations in various governmental, private and non- governmental organizations. After graduating B.A. in political

science, the students can take admission in higher education like L.L.B, M.A. in political science, sociology, public administration, women study, peace study, north east study, international relations etc.

- After completing graduation in political science one can acquire the ability to assess the statistical argument, analytical skills and the ability to work on political case studies.
- As a career option after completing graduation in political science the students can seek a career in civil service, journalism, law, academicians, media, human right activists, social worker etc.
- Moreover, the students can engage in various profession like professor in different higher educational institutions, political analyst, public relation specialist, political campaign stuff, policy analyst etc.

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	POL-HC-1016	Understanding Political Theory	The paper introduces the students to the idea of political theory, its history and approaches, and assessment of its critical and contemporary trends. It also designed to reconcile political theory and practice through reflections on the idea and the practice related to democracy.
		POL-HC-1026	Constitutional Government and Democracy in India	The paper acquaints students with the constitutional design of state structures and institutions, and their actual working. The course stretches the embodiment of some conflict in constitutional provisions and show how liberty, justice etc have played out in political practice.
	2 nd Semester	POL-HC-2016	Political Theory- Concepts and Debates	It helps the student familiarize with the basic normative concept of political theory. It also introduces the students to the important debates in the subject.
		POL-HC-2026	Political Processes in India	The course maps the working of modern institutions premised on the existence of the individual society. It also familiarizes students with the working of the Indian state, paying attention to the contradictory dynamics of modern state power.
	3 rd Semester	Paper 1	International Relations –I	The paper helps to know the students about the concept, evolution, nature, scope and approaches of international relations. This paper also helps us to know the great events of the 20 th century in international arena like first world war, second world war and cold war.
		Paper 2	Public Administration- I	This paper gives us the knowledge to the students about concepts, scope, importance, growth and recent trends of public administration. More than that it helps to know the various administrative theories, principles of organization and structure of organization.
	4 th Semester	Paper 1	International Relations –II	The paper teaches us the basic concept of foreign policy, diplomacy and non-alignment movement in international field. It gives us the knowledge of the formation, objectives,

				role of United nations and its millennium development goals. This paper also gives us the knowledge about security and disarmament and nuclear non-proliferation. More than that it introduces among the students about global economy and the role of IMF, World Bank, WTO and the impact of globalization.	
		Paper 2	Public Administration- II	The paper helps us to know about the personal administration, financial administration, development administration, citizen and administration.	
	5 th Semester		Paper 1	Western Political Thinkers	This paper helps us to know the Greek political thinkers like Plato, Aristotle, medieval and early modern thinkers like Augustine, Machiavelli, the contractualist like Hobbes, Locke, Rousseau and Marxian political thought.
			Paper 2	Select Constitutions- I	Through this paper student can learn the constitution and constitutionalism it meaning, concept and importance. This paper also helps us to know about the constitutional structure of United Kingdom and united states of America.
			Paper 3b	General Sociology- I	The paper helps t know about the meaning, definition, growth and scope of sociology, methods of sociology, some basic concepts of sociology and social stratification, caste, class and gender.
			Paper 4a	Contemporary Political Issues	The paper gives us the knowledge of environmental issues, terrorist activities, human development and security, issues of gender and concept of gender development index and gender budgeting.
			Paper 5b	Political Sociology- I	By this paper students can know the emergence, definition, nature and utility of Political Sociology. It helps us to know the basic concepts of political culture, socialization and political mobility.
			Paper 6b	Human Rights	The paper enlight us the basic concept of human rights, its meaning, nature, importance and classifications. It gives us the knowledge of approaches and perspectives of human rights. It also explains the role of UNO and NGOs for the protection of human rights.
				Paper 1	Indian Political Thinkers
	6 th Semester		Paper 2	Select Constitutions- II	By this paper students can learn the constitutional structure and the government of China and Switzerland.
			Paper 3D	Geneal Sociology- II	The paper helps us to know the basic concept of general sociology like culture, social control, social change and socialization.
			Paper 4C	Contemporary Political Ideologies	The paper helps us to know the concept of new liberalism, feminism, religious fundamentalism and multiculturalism.
			Paper 5D	Political Sociology-II	The paper teaches us the elite theories of political power, political change, political development and bureaucracy, society and politics.
		Paper 6D	Human Rights in India	The paper discusses original development of human rights in India, institutional mechanism for protection of human	

				rights, emerging issues of human rights and human rights of vulnerable groups.
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Bachelor of Science in Botany

Programme Specific Outcome

B.Sc. Botany course deals with the scientific study of the plants, algae and fungi. It broadly revolves around the aspects of plants including the growth, structure, reproduction, metabolism, diseases, physiology and chemical properties of the plants and plant anatomy in general. The course is a vast combination of studying from the basic cell structure to the workings and metabolism of plants on higher levels including their evolution. The course is very accurately structured as mostly all the theory-based papers are accompanied by practical sessions. These 3 years course also provides a hands-on experience to the students in understanding the scientific concepts through practical knowledge.

Some of the benefits of pursuing a BSc Botany course are:

- Students gain skills and knowledge, which they can apply to do the botanical research and findings in areas such as Agriculture, Forestry, Horticulture, Plant Breeding, etc
- A graduate of BSc Botany can contribute to the environmental Conservation and genetic modification of plants.
- These graduates have diverse job opportunities in both government and private sector jobs with amole jobs rules offered to them.
- National Chemical Laboratory, Indian Institute of Ecology, Wildlife Conservation Society, etc. are some of the top recruiters to work with.

After completing BSc Botany, a student may go for a Master's Degree or a career in the R&D (Research and Development) sector.

Course Outcomes

Course		Name of the paper	Course Outcome
Major Course	1 st Semester	Paper 1.1	Phycology and Microbiology
		Paper 1.2	Biomolecules and cell Biology
	2 nd Semester	Paper 2.1	Mycology and Phytopathology

In this paper, students will study about the primary producers i.e. algae. They will also study about the microorganisms that are invisible to our naked eye, but are of great importance.

This paper helps the students to know about the biological molecules like carbohydrates, lipids etc. that are produced by cells and living organisms. Students will also learn about the structures of cells, DNA, RNA, Nucleus and different cell organelles.

In this paper, students will study about the plant group fungus, their structures, their association with other organisms etc. They will also study about various diseases in plants caused by pathogens and environmental conditions.

		Paper 2.2	Archegoniate	This paper will help the students to know about higher taxonomic plants that are also called embryophytes and the female sexual organ structure called archegonia which is present in all those plants.
	3 rd Semester	Paper 3.1	Ecology, Plant Geography, Evolution	This paper will help the students to study about the environment in which the plants live in, the climatic factors, the vegetation, edaphic factors and also the plant species distribution on the earth.
		Paper 3.2	Instrumentation and Laboratory Techniques	This paper will help the students to study about different instruments used for research and practical purpose in Botany. For e.g., Laminar air flow, autoclave, camera lucida etc.
4 th Semester		Paper 4.1	Morphology, Palynology, Embryology of Angiosperms	In this paper, the students will study about the diverse, highest and most evolved flowering plants called Angiosperms and their families. This paper will help the students to study about pollination, self-pollination and cross pollination and the fertilization that takes place in flowering plants.
		Paper 4.2	Plant Taxonomy	This paper will help the students to study about the kinds of organisms, identifying and grouping those organisms into different categories and also studying the relationship among those organisms
5 th Semester		Paper 5.1	Microbiology and Immunology	This paper will help the students to study about the microscopic organism called Microbes and their importance and diseases caused by those organisms. Study of immune system is also done in this paper.
		Paper 5.2	Plant Pathology and Lichen.	This paper will help the students to study about various diseases in plants caused by pathogens and environmental conditions. The association of fungal and algae called lichen is also studied here.
		Paper 5.3	Cytogenetics, Plant Breeding and Biometrics	This paper will help the students to study about heredity, genes and genetic variation of different organisms. Pedigree analysis and chromosomal diseases are also studied in this paper. Crossing techniques of plants for various characters are also studied here.
		Paper 5.4	Applied Botany	In this paper, the students will study about the relationship between plants and people. The use of plants as commercial crops, in medicines, food and various other products.
		Paper 5.5	Practical paper	
		Paper 5.6	Practical paper	
6 th Semester		Paper 6.1	Molecular Biology and Plant Biochemistry	This paper will help the students to study about the physical and chemical events of photosynthesis, respiration and the synthesis and degradation of organic compounds. They will also learn about the biological molecules like carbohydrates, lipids etc.
		Paper 6.2	Bioinformatics, Computer Applications and Biotechnology	This paper will help the students to study about the use of plants in technology for different purposes like genetic engineering, production of genetically modified crops, tissue culture techniques and also about computer-based database searching and retrievals.
		Paper 6.3	Plant Physiology	This paper will help the students to study the plant function and behavior, encompassing all the dynamic processes of growth, metabolism, reproduction, defense and communication which helps the plants to be alive
		Paper 6.4	Plant Resource Utilization	This paper will help the students to study about the different industry that uses plants for its Timber, Beverages, Leguminous Plant resources, Fibers etc.
		Paper 6.5	Practical paper	

		Paper 6.6	Practical paper	
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Bachelor of Science in Chemistry

Programme Specific Outcome

1. To provide laboratory experience to the students by performing experiments based on topics taught in theory.
2. To understand the basic facts and concepts in chemistry.
3. To understand the importance of chemistry in daily life.
4. To develop a better understanding and reasoning of facts.
5. To impart knowledge of general chemistry covering all the aspects viz, inorganic, organic, physical and analytical chemistry of the level expected from an undergraduate in chemistry.
6. To develop as independent thinkers and be able to work with others demonstrating leadership and collaborative skills.

Course Outcomes

Course		Name of the paper	Course Outcome
Major Course	1 st Semester	Paper-CHE-HC-1014	Inorganic Chemistry-1 On successful completion of this paper students would have clear understanding of the concepts related to atomic and molecular structure, chemical bonding, periodic properties and redox behaviour of chemical species. Students will also have hands on experience of standard solution preparation in different concentration units and learn volumetric estimation through acid-base and redox reactions.
		Paper-CHE-HC-1024	Physical Chemistry-I In this paper in gaseous state unit the students will learn the kinetic theory of gases, ideal and real gases. In liquid state unit, the students are expected to learn the qualitative treatment of the structure of liquid along with the physical properties of liquid, viz, vapour pressure, surface tension and viscosity. In the solid-state unit, they will be introduced to the elementary idea of symmetry which will be useful to understand solid state chemistry and group theory in some higher courses. In this unit the students will also learn the basic solid state chemistry application of x-ray crystallography for the determination of some very simple crystal structures. The students will also learn another important topic “ionic equilibria” in this course. Students will also have hands on experience of measurements of surface tension, viscosity, indexing of a given powder diffraction pattern of a cubic crystalline system, pH metry.

	2 nd Semester	Paper-CHE-HC-2014	Organic Chemistry-I	In this paper students will be able to identify different classes of organic compounds, their reactivities and mechanisms along with stereo chemical aspects. Students will also have hands on experience of purification of organic compounds by crystallization and determination of their melting points, effect of impurities on the melting point, determination of boiling point of liquid compounds and use of chromatography to separate different mixtures.
		Paper-CHE-HC-2024	Physical Chemistry-II	In this paper the students are expected to learn laws of thermodynamics, thermochemistry, thermodynamic functions, relations between thermodynamic properties, Gibbs Helmholtz equation, Maxwell relations etc. Moreover, the students are expected to learn partial molar quantities, chemical equilibrium, solutions and colligative properties. After completion of this course, the students will be able to understand the chemical systems from thermodynamic point of view. Students will also have hands on experience of determination of heat capacity of a calorimeter for different volumes, determination of heat capacity of the calorimeter and enthalpy of neutralization of hydrochloric acid with sodium hydroxide, calculation of the enthalpy of ionization of ethanoic acid, determination of heat capacity of the calorimeter and integral enthalpy solution of salts, determination of basicity/proticity of a polyprotic acid by the thermochemical method, determination of enthalpy of hydration of copper sulphate, study of the solubility of benzoic acid in water and determination of ΔH .
	3 rd Semester	Paper-M-301	Inorganic Chemistry	Gives a theoretical understanding about the basic constituents of matter-atoms, ions and molecules in terms of their electronic structure and reactivity. This also develops a basic quantum chemistry concept on structure and bonding. Students will be able to write electronic configuration of any element and draw the Lewis structure. They will be able to calculate the percentage ionic character of a covalent bond.
		Paper-M-302	Inorganic Chemistry	After completion of this course students will be able to identify or determine the shape of a molecule by using VSEPR theory. They will be able to use the molecular orbital theory for homonuclear and heteronuclear diatomic molecules. The students will also have the basic idea of ionic bonding. They will be able to calculate the Lattice energy of ionic solids by using Born-Haber Cycle.
		Paper-M-303	Practical chemistry	After completion of this course students will be able to analyze the inorganic sample qualitatively. This will help students to work in some laboratory and find the chemical composition of an unknown inorganic compound or mixture.
	4 th Semester	Paper-M-401	Inorganic Chemistry	This course provides provide familiarity to students with periodic behaviour of s and p block elements related to their electronic structure and their reactivity. Periodic properties

5 th Semester			like electronegativity, electron affinity, catenation properties etc. are discussed with respect to group 1, 2 and 13-17 groups of periodic tables.
	Paper-M-402	Inorganic Chemistry	In this paper the students will learn about the variety of compounds of the main group elements including oxides, hydrides, nitrides, interhalogens, noble gases and inorganic polymers. In the transition metal chemistry unit students will find the basic idea of coordination chemistry like nomenclature, structure and bonding of coordination compounds.
	Paper-M-403	Practical Chemistry	After completion of this course students will be able to determine the water of crystallization of green vitriol, hardness of water by EDTA titration and preparation of many inorganic compounds.
	Paper-M-501	Quantum Chemistry	This course gives the introduction to quantum chemistry. The black body radiation and photoelectric effect, Compton effect are explained to give an idea of the origin of quantum mechanics. Schrodinger equation is discussed for one dimensional and three-dimensional boxes. Further students will have an idea on Schrodinger equation for hydrogen molecular ion by using Born-Oppenheimer approximation. In this paper students will be able to understand the Valence bond theory and molecular orbital theory on the basis of wave function. They will be able to calculate the energy of the MOs and learn to write the term symbols of diatomic molecules.
	Paper-M-502	Physical Chemistry	After completion of this course, the students are expected to understand about the collision theory, activated complex theory, molecular beam techniques for studying fast reaction etc. In photochemistry chapter they will learn about various photochemical processes like Fluorescence, Phosphorescence, chemi and bio luminescence etc. In phase equilibrium chapter the students will expected to learn phase Rule and its application in some specific system. In surface chemistry they will learn about adsorption, BET and catalytic activity of a surface.
	Paper-M-503	Organic Chemistry	In this course different types of molecular rearrangements are discussed in detail. Different oxidizing and reducing agents used in organic reactions along with their mechanism are also included. Students will be able to learn different types of pericyclic reactions. They will also learn about synthesis, reactivities, structures and mechanisms of polynuclear aromatics, nitro and amino compounds, organo S and organo P compounds, active methylene compounds and heterocyclic compounds.
	Paper-M-504	Inorganic Chemistry	After completion of this course the students will learn about symmetry operation and point group identification of inorganic complexes. The students will learn about the advanced theory of bonding in coordination chemistry, i.e., crystal field theory and molecular orbital theory. They will

				also acquire preliminary idea on organometallic chemistry. Biological role of metal in terms of oxygen transport and medicine are also included and students will have a basic idea on those topics.
		Paper-M-505	Practical Chemistry	This course teaches students to separate the inorganic ions from a mixture and analyze them quantitatively. The basic principle of chromatographic separating techniques is provided in this course and students will learn how to separate metal ions by paper chromatography.
		Paper-M-506	Practical Chemistry	After completion of this course students will be able to learn preparation of different organic compounds and organic quantitative analysis.
6 th Semester		Paper-M-601	Spectroscopy	After completion of this course students will be able to learn basic principles of electronic, rotational and vibrational spectroscopy and could be able to interpret the spectra for a simple molecule. In addition, they will be able to identify the number of signals of a given sample and draw the pattern for both NMR and ESR as spin resonance spectroscopy i.e., NMR and ESR are included in this paper. Mass spectroscopy is also included which gives the idea about molecular ion peak, base peaks etc.
		Paper-M-602	Physical Chemistry	After completion of this course students will get the elementary idea of crystal symmetry which is useful for advanced group theory. They will also learn about the conductivity of solids. They will have a preliminary idea on polymer chemistry and will be able to correlate the classical and quantum mechanics. Students will be able to familiar with the application of statistical thermodynamics for calculation of heat capacity, residual entropy and equilibrium constants. They will know about the accuracy and precision, standard deviation etc. which are very important in quantitative analysis.
		Paper-M-603	Organic Chemistry	This course is designed to understand Theory of photochemistry. This course also introduces students to different types of polymers, bioenergetics, biopolymers, nucleic acids, amino acids, enzymes. The primary objective of this course is to introduce students to the natural products which include terpenoids and alkaloids. This course also includes fundamentals of drug design and development process, drugs for various diseases available in market, their mode of action and side effects.
		Paper-M-604	Inorganic Chemistry	After completion of this course students will be able to identify the electronic spectra of a transition metal complex. This course also deals with the basic bioinorganic chemistry such as photosynthesis, respiration and nitrogen fixation. Students will also learn about nuclear chemistry and electronic configuration, oxidation states, lanthanide contraction and magnetic properties of lanthanides and actinides.

		Paper-M-605	Practical Chemistry	This paper includes different physical chemistry experiments like determination of viscosity co-efficient, surface tension of a liquid, molecular mass of a volatile liquid by Victor Meyer's Method, specific rotation of an optically active substance by polarometric method etc. There are many experiments related to chemical kinetics. Conductometric titration and potentiometric titration are also included in this paper.
		Paper-M-606	Project Works	This course is introduced to make the students familiar with the research methodology. Students will be able to do project work on known problems after completion of this course. They will learn how to write a project report and will be skilled in writing the proposal, literature review, objective, methodology, results, discussion, conclusion and references. This is very important for the students to carry forward their career in research and development.

Bachelor of Science in Mathematics

Programme Specific Outcome

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	Paper-M104	Algebra And Trigonometry	This course will enable the students to Learn Relations, group, complex numbers, Hyperbolic functions, Polynomial equation, Matrix and its operations etc.
		Paper-M105	Calculus	In this course students will learn derivatives, partial differentiation, Eulers's Theorem, Tangents and normal, curvature, asymptotes, singular points, curve tracing etc.
	2 nd Semester	Paper-M204	Co-Ordinate Geometry	This course will enable the students to Learn transformation of co-ordinate axes, parabola, tangent, normal, plane, straight line, sphere, cone and cylinder, ellipsoid etc.
		Paper-M205	Differential Equation	In this course students will learn Ordinary differential equation & its order, linear ODE, Bernoulli's equation, simultaneous LDE, Partial differential equation etc.
	3 rd Semester	Paper-M304	Abstract Algebra	In these students will learn homomorphism, rings and fields, automorphism, conjugation, ring homomorphism, Euclidean rings, polynomial rings etc.
		Paper-305	Linear Algebra and vector	In these students will learn sums of subspaces, linear transformation and rank nullity theorem of matrices, eigenvalue, eigenvector, cayley Hamilton theorem etc.
	4 th Semester	Paper-404	Real Analysis	In these students will learn characterization of real numbers, open & closed set, bounded-unbounded sequence, infinite series, convergence, divergence, sequential continuity, Drichlet theorem etc.

		Paper-405	Mechanics	In these students will learn Parallel forces, couples, centre of gravity, stable and unstable equilibrium, force, velocity, acceleration, Kepler's laws etc.
5 th Semester		Paper-M501	Real and complex Analysis	In these students will learn Young and Schwarz's theorem, Riemann integral, improper integral, limit & continuity of complex variable, stereographic projection, rectifiable curves etc.
		Paper-M502	Topology	In these students will learn metric space, Cauchy sequence, dense subset, Baire's category theorem, compactness, topological space, Banach space, Inner product space etc.
		Paper-M503	Spherical trigonometry and Astronomy	In these students will learn section of sphere by a plane, spherical triangles, standard celestial sphere, planetary motion, geocentric parallax etc.
		Paper-M504	Rigid Dynamics	In this course students will learn moments and products of inertia, D'Alembert's principle, motion about fixed axis, conservation of momentum and energy etc.
		Paper-M505	Probability	In this course students will learn sample space, conditional probability, Bay's theorem, random variables, distributions, pdf, expectation, covariance, moment generating function etc.
		Paper-M506	Optimization theory	In this course students will learn partitioning of matrices, general linear programming problems, simplex method, principle of duality, transportation and assignments etc.
6 th Semester		Paper-M601	Hydrostatics	In these students will learn Pressure equation, lines of force, fluids, equilibrium of floating body, curves of buoyancy, Gas law, adiabatic expansion etc.
		Paper-M602	Numerical Analysis	In these students will learn normalized floating-point representation of real numbers, calculus of finite difference, numerical differentiation and integration, transcendental equation etc.
		Paper-M603	Computer Programming in C	In these students will learn introduction to CPU, OS, data types, Logical & bitwise operator, L value and R value, conditional statements, functions etc.
		Paper-M604	Discrete Mathematics	In this course students will learn Divisibility theory, congruences, residual system, Diophantine equation, number theoretic function, propositional calculus, Boolean algebra etc.
		Paper-M605	Graph and Combinatorics	In this course students will learn elementary combinatorics, varieties of graphs, walks and connectedness, block, bridges, line connectivity, travessavility etc.
		Paper-M606	Project	

Bachelor of Science in Physics

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	PHY-HC-1016 THEORY (CBCS)	Mathematical Physics I Students will be able to understand vector and its applications in various fields of Physics, differential equations and its applications, different coordinate systems, concept of probability and error.	
		PHY-HC-1016 LAB	Students will learn about the basics of computer programming using python and how to analyze numerical and solve problems in Physics using computational physics.	
		PHY-HC-1026 THEORY (CBCS)	Mechanics On successful completion of the course students will be able understand about the fundamentals of dynamics, work and energy, Elastic and inelastic collisions, moment of inertia, motion under central force, simple harmonic oscillations, special theory of relativity	
		PHY-HC-1026 LAB	Students will able to measure the length, diameter, volume using screw gauge, slide caliper, value of g using bar pendulum and Kater's pendulum, moment of inertia of flywheel, height of building using sextant and their theoretical knowledge will be cleared after going through these experiments.	
	2 nd Semester	PHY-HC-2016 THEORY (CBCS)	Electrical and Magnetism	Students will be able to understand electric and magnetic fields in matter, magnetic properties of matter, electromagnetic induction, and applications of Kirchoff's law in different circuits, applications of different network theorem in electrical circuits.
		PHY-HC-2016 LAB		After the completion of this practical paper, the students will learn about the use a Multimeter for measuring Resistances, AC and DC Voltages, DC Current, Capacitances, and Checking electrical fuses, study the characteristics of a series RC Circuit, determination of an unknown Low Resistance using Potentiometer, determination of self-inductance of a coil by Anderson's bridge
		PHY-HC-2026 THEORY (CBCS)	Waves & Optics	After successful completion of this course, students will acquire knowledge on superposition of harmonic oscillations, Superposition of Two Perpendicular Harmonic Oscillations, interference and interferometer, diffraction, holography, wave optics.
		PHY-HC-2026 LAB		Students will able to determine wavelength of sodium light using Fresnel Biprism, study Lissajous Figures in the laboratory.

3 rd Semester	Paper-M-301	Mathematical Methods-III	The students will learn about the matrices, Properties of matrices, Transpose matrix, complex conjugate matrix, Eigenvalue problems, Cayley-Hamilton Theorem, Diagonalization of matrices.
		ELECTROSTATICS	Students will be able to understand about the electric fields due to wire, ring, disc, Gauss's law and its applications, electrostatic boundary conditions.
	Paper-M-302	Current Electricity	Students will get the knowledge about current density, Ohm's law, Kirchhoff's laws and its applications, electromagnetic induction, direct current and alternating current and its application in electrical circuits.
		Magnetostatics	Students will know about the Biot Savart's law in magnetism, its applications in calculation of magnetic field due to straight conductor, circular coil, solenoid and also about the Ampere's circuital law and its applications.
	Paper-M-303		Students will know how to determine the horizontal component of earth's magnetic field using deflection and vibration magnetometer, the current flowing through an external circuit using potentiometer, compare the values of two given low resistances using a potentiometer, determine the internal resistance of a given cell using a potentiometer
4 th Semester	PAPER: 401	Mathematical Methods-IV	Students will know about Second order linear differential equations, series method of solutions (Frobenius), Legendre's differential equations and probability theory.
		Introduction To Computer and Computer Programming	Students will learn about the computer organization and its functional units. Students will learn the basics of C programming language and its application in the solving of numerical physics.
	PAPER: 402	Wave Optics	Students will learn about the interference, diffraction and polarization
		Special Theory of Relativity	After completion of this course, the students will know basics of Formulation of Special Theory of Relativity and Relativistic Kinematics and Relativistic Momentum and Energy, Space-time.
	PAPER: 403		Students will be able to determine the focal length of two lenses and their combination by displacement method, to study the variation in liquid column height with diameter of capillary tube and determine the surface tension of the liquid and to determine the value of acceleration due to gravity using Kater's Pendulum in the laboratory.
5 th Semester	PAPER: 501	Mathematical Methods - V	Students will acquire the concept of complex algebra, Analytic function of a complex variable, Series expansion like Taylor and Laurent series and their simple applications
		Classical Mechanics	The concept of central force system and Application of central force problem to motion under inverse square force field will be known to students.

6 th Semester	PAPER: 502	Atomic Physics	Students will know about Positive rays and their analysis, spectrograph, Bainbridge mass spectrograph, Rutherford's nuclear atom model, alpha scattering expt; deduction of the scattering formula, atomic spectra, X-rays, Scattering of light.
	PAPER: 503	Quantum Mechanics	After the completion of this course, the students will learn about development of quantum mechanics in light of Black body radiation, failure of classical idea, Matter wave, Complimentary principle of Neils Bohr, Heisenberg's Uncertainty Principle, Wave function and its probabilistic interpretation as probability amplitude, Introduction to operator formalism, Dynamical variable as operator.
		Astro Physics	Will have the concept of stellar co-ordinate system, distance measurement and stellar classification.
	PAPER: 504	Electronics	On successful completion of this subject, students will learn about the basics of both analog and digital electronics. Students will know about the semiconductor diodes and its applications in designing rectifier circuits, transistors and its application as amplifier, different types of feedback systems in electronics circuit design, oscillators etc.
	PAPER: 505		Students will know to how to find the maximum velocity of the electron using photocell, planks constant, Stefan's constant in the laboratory.
	PAPER: 506		Students will learn how to design the electronic circuit using different electronic components using breadboard.
	PAPER: 601	Nuclear Physics	Students will learn about nuclear forces and Stability of Nuclei, Know the formation of nucleus and their binding energy, alpha decay, beta decay, different nuclear models, nuclear reactions, accelerators.
	PAPER: 602	Mathematical Methods – VI	Students will gain the knowledge of tensors, Rules for combination of tensors, kronecker delta.
		Solid State Physics	The students will get to know about the structure of a solid and also the concept of the magnetic properties of matter.
	PAPER: 603	Modern Optics	Students will get knowledge about the basic of laser and its technology, holography, optical fibres and their application, Optical components & Spectrographs
		Electromagnetic Theory	Students will able to understand the electromagnetic field equation in integral and differential form, electromagnetic wave equation, velocity of electromagnetic wave, Monochromatic plane wave equation in free space and conducting medium.
	PAPER: 604	Statistical Mechanics	Statistical system, and its coordinates, specification of a state in statistical mechanics, different types of statistics- Maxwell-Boltzmann (MB), Bose Einstein (BE) and Fermi-Dirac (FD) Statistics

		Principles of Programming Concepts and C Programming	On successful completion of this course, the students will learn about C programming and its implementation in the problems of physics.
	PAPER: 605		Students will learn about the study variation of potential drop with frequency across the inductor, capacitor and non-inductive resistor of a series LCR circuit for an ac signal and hence find the resonant frequency. Compare it with theoretical value, know to determine the Q- factor of a series resonance circuit containing L C and R for three different values of R.
	PAPER: 606		Students will learn to generate the Fibonacci series, arrange the numbers in ascending as well as in descending order, how to find the roots of quadratic equations using C programming language in computer laboratory.

Bachelor of Science in Zoology

Programme Specific Outcome

Zoology is one of the basic disciplines under Life Sciences. It provides a wide-spectrum knowledge of living environment and nature to inculcate biological science. The knowledge of morphology, anatomy, physiology, taxonomy, systematics, ecology, biotechnology, behaviour, biodiversity, conservation of life promotes the social responsibility and encourage the students to participate in various community-based activities. It helps in creating scientific temper by interlinking both physical and chemical science and nurtures appreciation for nature recognising the essential roles to emphasize biological literacy in teaching and outreach activities.

Regarding the course pattern, it is sufficient enough to procedure strong foundation of students to understand life in this living world including habitat, biotic and abiotic factors associated with life. It covers with a wide range of applicability of the subject as a source of livelihood. The course enables student to achieve life skill and to make the world more sustainable for all the creatures living in this planet.

The concept of subject included within the course helps students to pursue higher studies and research at different levels. The baseline knowledge of both invertebrates and vertebrates including the subjects like cell biology, genetics, molecular biology, physiology, immunology, embryology, entomology, ecology, microbiology make students potent enough for searching out their research areas.

The subjects like computational biology, biostatistics and biotechnology in undergraduate level makes enable students to think and more skilled to pave their path in advance biological researches. By studying zoology even in undergraduate level students often get scope to choose career opportunities in becoming entrepreneur in the fields of fisheries, sericulture, apiculture, veterinary science, poultry farming etc. The present course curriculum is designed as joint oriented

course for undergraduate student to generate employment opportunities in the organizations of Government and Private sector.

Course Outcomes

Course		Name of the paper	Course Outcome	
Major Course	1 st Semester	ZOO-HC-1016 Theory	Non-chordates 1: Protista to Pseudocoelomates	Students will be able to understand about invertebrates and acquired the knowledge on Protista, Parazoa, Metazoan, Porifera, Cnidaria, Ctenophora, Platyhelminthes and Nematelminths including microscopic organisms. Students will also be acquainted with different parasitic organisms, disease causing microbes, mode of infection and remedial measures.
		ZOO-HC-1016 LAB		Students will learn about the practical knowledge of microorganisms, parasites, helminths and mode of infection to human and other animals. They will learn about microscopic slides preparation and culture method of microbes.
	2 nd Semester	ZOO-HC-1026 Theory	Principles of Ecology	Students will be able to study the habitats of different organisms since the ecology is the science of organisms in their habitat. They will be able to learn different environmental aspects related to organisms and help them to enhance their skill on fields activities.
		ZOO-HC-1026 LAB		Students will be able to gain confident with practical knowledge on habitats of different organisms by surveying and through field visit. Population density, Shannon-Weiner diversity index, community studies, aquatic ecosystem, Phytoplankton, Zooplankton, P ^H , DO, free CO ₂ , turbidity etc. will be applicable for higher studies and research-oriented activities.
	3 rd Semester	Paper-M-301	Comparative Anatomy and Histology	Students will learn about the anatomy of vertebrates, heart, aortic arches, succession of kidney, organs of hearing and balancing, thyroid, respiratory system, anatomy of brain, organization of cells and different tissues, basic principles of fixation and staining, properties of dye, use of mordants and metachromatic dyes and histological staining of biomolecules.
		Paper-M-302	Cell Biology	Students will learn about diversity of cell size and shape, cell theory, prokaryotic and eukaryotic cells, protoplasm, plasma membrane, chromosome, cell division, cell cycle, ultra-structure of cell organelles, mitochondria, cytoskeleton, microtubules and microfilaments, cilia and flagella.
		Paper-M-303	Practical	Students will know how to study the different types of cells, staining technique of nucleus and nucleolus, preparation of solutions, fixatives, buffers, preparation of histological

			slides and permanent slides which will help in higher studies.
4 th Semester	Paper-M-401	Developmental Biology	Students will know about developmental biology, aim and scope, gametogenesis, fertilization, parthenogenesis, types of egg, cellular dynamics, organizers, inductions, fate map construction, organogenesis, development of chick embryo, extra embryonic membrane in birds, mammals and different types of placentas.
	Paper-M-402	Genetics	Students will learn about the back cross and test cross, varieties of gene expression, linkage mechanism, types of crossing over, sex determination, genetic diseases in man, nucleic acids, chromosomes, mutations, genetic code, protein synthesis, regulation of gene expression, recombination in virus and bacteria, mitochondrial DNA, human karyotype, human genome and cytogenetic effects of radiation.
	Paper-M-403	Practical	Students will able to prepare the slides of different types of cells in onion root tip and tadpole tail, polytene chromosome in salivary glands of drosophila, sex chromatin in buccal epithelium.
5 th Semester	Paper-M-501	Animal Physiology	Students will learn about nutrition, heart and circulation, respiration, body fluids, excretion, nerve physiology, chemistry of muscle contraction, nerve, neuromuscular coordination, muscle and osmoregulation in vertebrates which will help students for higher studies and in research activities.
	Paper-M-502	Biochemistry and Bioenergetics	Students will learn about the biochemistry of chemical foundation of biology, p^H , p^k , biological significance of carbohydrates, proteins, lipid, macromolecular complexes, plasma membrane, enzymes, oxidation and biosynthesis of fatty acid, ornithine cycle, laws of thermodynamics, mitochondrial electron transport system, metabolism etc
	Paper-M-503	Endocrinology & Immunology	Student will learn about endocrine systems, classification of hormone, mechanism of hormone action, hormonal control, vitamin D and calcium, basic immunological concepts, immune system, function of antibodies, antigen, immunization, hyper immunity, allergy which will enhance the basic knowledge of human body.
	Paper-M-504	Biological Techniques and Biostatistics	Students will learn about principles and uses of analytical instruments, p^H meter, colorimeter, spectrophotometer, centrifuge, microscopes, chromatography, microtomy, cryopreservation of egg and sperms, use of radioisotope in biology, autoradiography. Statistics in biology, sampling techniques, correlation and regression analysis, t-test, chi square test, use of computer in biology, utility of biostatistics, standard deviation, standard error, graphical presentation of data which will help in higher studies.
	Paper-M-505	Physiology	In laboratory students will learn osmosis, blood group determination, RBC and WBC count, haemin crystal

			preparation, urine test which will help to gain enough confident.
	Paper-M-506	Biochemistry and Endocrinology	Students will learn biochemical estimation of glucose, total protein, total lipids, amino acid, enzyme activity, estimation of lemon ascorbic acid, vitamin A, polysaccharides which enhance to gain medical and clinical knowledge of the subject concern.
6 th Semester	Paper-M-601	Animal Behavior	Students will learn about the ethology, behavior pattern, homing behavior, genetic basis of behavior, neural and hormonal control of behavior, circadian rhythm which will help in higher studies.
	Paper-M-602	Evolution and Adaptation	Students will learn about evolution, origin of life, evidence of organic evolution, theories of organic evolution, Darwinism and Neo Darwinism, Lamarckism and Neo Lamarckism, germplasm theory, mutation theory, synthetic theory, concept of micro, macro and mega evolution, phylogeny of horse, evolution of man, origin of birds, speciation, zoo-geography, factors of animal distribution, geological time scales, fossils, principles of adaptation, types of adaptation, adaptive radiation of mammals, cryptic and warning coloration and mimicry which will help to gain deep knowledge.
	Paper-M-603	Economic Zoology	Students will enable to get comprehensive knowledge about sericulture, apiculture, aquaculture, lac culture, pest and pest management which will help to make skill enough and enhance basic economic ideas.
	Paper-M-604	Biotechnology, Bioinformatics and Computer application	Students will learn basic concept in genetic engineering, DNA, enzymology of genetic engineering, tissue culture, media preparation and sterilization, cell culture, cell harvesting methods, cloning, gene libraries, cDNA, mRNA, isolation, gene transfer in animal, operating system DOS, WINDOWS, UNIX, programming using C++, computer aided techniques for data presentation which will help further in higher studies and research activities.
	Paper-M-605	Economic Zoology	In laboratory students will learn about the identification of different varieties of silkworms, larval and adult stages, life history of honey bee, important pest of paddy, jute, tea, stored grain, cane sugar, and vegetables, commercially important fish identification, slide preparation of pollen basket of honey bee, pituitary of fish which will help to gather enough skill in these field and make confident.
	Paper-M-606	Project	Students will learn to study field oriented practical knowledge, data collection, data presentation, report writing, design of project, prospect of project, vision, social responsibility, work efficiency by doing the project work which will help in research.