

# RAIDIGHI COLLEGE



Learning outcome from different Departments/Disciplines

Raidighi College is affiliated to University of Calcutta. At present, the College offers undergraduate Honours and General courses in Humanities (B.A. in English, Bengali, History, Geography, Political Science, Education) and Science (B.Sc. in Mathematics, Physics, Zoology, Microbiology, Food and Nutrition, Chemistry and Botany). It also offers B.A. General courses in Sanskrit, Philosophy and Physical Education.

**Program outcomes ~ B.A. & B.Sc. -----** The value of a college degree is universally recognized in our society today. A B.A. degree is a liberal arts degree which encompasses social science, languages and humanities. It provides the students with general knowledge in a wide variety of subjects and further equips the students with the abilities of critical thinking, reasoning and a better way of expressing themselves, all of which help in securing employments. A Bachelor of Science degree is a more specialized degree in technical or science related fields and inspires deep analytical comprehension, and innovative thinking. The best part of pursuing a degree in B.Sc. today is great employment opportunities in the field of research and development sector, as our government is taking a keen interest in developing the same. When it comes to selecting a B.A. or a B.Sc. degree, neither is better on its own merits. A student must decide a career path depending on his/her talents and inclinations.

#### **Outcomes of subjects offered in our college:**

The Department of Bengali runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. As per the Syllabi of the courses, approved by the University of Calcutta, the dept. offers both Core Courses and General Elective Courses, and also offers Ability Enhancement Compulsory Courses (AECC) in Bengali language to all undergraduate students of the college. The students are expected to acquire the knowledge of Bengali grammar, know about the history of Bengali literature and at the same time they will be familiar with the cultural history of Bengal through various texts of eminent writers. In the CBCS syllabus, a special importance has been given on expertise development with Skill Enhancement Course (SEC). Such emphasis will increase the possibility of employment in media houses, teaching, theatre, cinema, press etc., apart from other general service sectors. It will also induce interest in further higher education including research. This will, in turn, improve their scope in job market.

The Department of English runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. As per the Syllabi of the courses, approved by the University of Calcutta, the dept. offers both Core Courses and General Elective Courses, and also offers Ability Enhancement Compulsory Courses (AECC) in English language to all undergraduate students of the college.

At Raidighi College, the undergraduate course of study in English literature intends to offer the students a fair idea about the trends in British Literature, primarily. With students coming mostly as first generation learners and from rural interiors, it seems challenging at first to inculcate within them the unmistakable sense of urbanity that comes with the linguistic paradigm of British Literature. However, beyond that, throughout the three years, the department tries to do justice to the broader name it comes under --- 'humanities'. More than practical utility, a course on literature comes with a promise to provide an insight into the finer humanitarian values of the world, and nourish the scope of

creative faculty and imagination in the young minds. In time, if a student is able to get into this scheme of things, the course transcends beyond literary boundaries and plays its part in making the students better, compassionate citizens.

Besides, on practical grounds, English, being a language of official purpose, prepares the students for various scopes of employment through competitive examinations, keeping them at par with the formal trends and practices of the world. A thorough reading of English literature in the undergraduate course also opens up scopes for higher studies for the students to pursue, and join the fields of research and teaching.

The **Department of History**, founded in 1995, runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. As per the Syllabi of the courses, approved by the University of Calcutta, the dept. offers both Core Courses and General Elective Courses. History enables us to develop better understanding of the people and society we find ourselves in. Understanding of historical events and trends helps us to develop a much greater appreciation for current events. Data from the past often guide us to figure out why complex societies behave in a particular fashion. Past paves the way for present and future. Students are expected to acquire sound knowledge of multiple cultures, general chronology of human existence, and be able to recognise the diversity, complexity and moral dilemmas inherent in the study of History which will enable them to better judge current day scenarios. Field excursions and tours provide better understanding of the subject topics. Areas of employment include civil service, all kinds of NGOs, research and the media, tourism, heritage consultancy and preservation, museum, libraries and archives etc. It will also stimulate interest in further higher education including research. Many of our ex-students have completed Masters degree, a few have cleared NET/SET and are engaged in research, while many others have enrolled in B.Ed. and are serving in schools, colleges or in public or private sectors. On a special note, it should be mentioned that in collaboration with Jadavpur University, the dept. plans to initiate Sundarban Study Centre to engage in a research-based academic journey to better understand and appreciate the cultural and social history of this region, with involvement of faculty and students of the college.

The **Department of Geography** runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. Geography, as the discipline that bridges the Humanities and Science streams plays important role to cope up with the contemporary nature's freaky incidents. The domain of geographical knowledge helps the learners to react with the nature in eco-friendly way, to utilize the natural resources in a sustainable manner. The discipline helps the scholar to interact with the society keeping their emotion in mind. The future prospects of the discipline of geography are remarkable. Especially, after the introduction of the geo-informatics and geo-spatial science in the field of geography, it has become one of the mother subjects of all modern social sciences. The learners can gain expertise in the field of Disaster Management like coastal management, river bank management, environmental management etc., all of which have high job prospects. In addition, students can pursue further higher studies and research, take up teaching jobs, appear for competitive examinations, gain employment as Geographical Information Systems officer or get a job in tourism industry, can become cartographer, environmental consultant, regional surveyor, nature conservation officer, etc.

The **Department of Education** runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. Learning outcomes include expertise in sociological, philosophical, psychological foundations of education, understanding of educational organization, management and planning, proficiency in guidance and counselling, learning about the use of technology in education and knowledge of inclusive education. They also become familiar with concepts of human rights education, peace and value education. There is also a special stress on women education and empowerment.

There is vast scope for students of this discipline, but it needs hard work and patience. Students can appear for UPSC civil services, other competitive exams, can look for job opportunities in law, IT, banking sectors or opt for further higher education and research, engage in teaching, or join NGOs. They may also seek jobs in career guidance, education psychology, market and policy research, publishing houses, media, etc. Some of the subject specific job positions are---- community education officer, education administrator, therapists, school teachers, teaching assistants, museum education officer, career advisors, public relation journalists, etc. Average annual salary expected at starting is between 4 to 5 lakh rupees. The students can have a profound effect on community and society as they are specially trained in life skills.

Learning Outcome & Scope of **Political Science** for UG students: The department runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. Politics or Political Science as Greek regarded as “Master of all Sciences” taught in various universities all over the World. Opting Political Science at undergraduate level is quite interesting for those who make career in academics, civil services, & media. Concepts like State, Human Rights, Citizenship, Nation, Liberalism, Governance, etc are some of the widely readable terminologies in newspaper & magazine. This subject is very popular in West Bengal due to its vibrant course structure initiated by University of Calcutta. Most of the CU affiliated colleges, such as our Raidighi College have its Undergraduate Programme in Political Science. In every academic year, majority of students opted Political Science among Social Sciences discipline. Our students showed a keen interest in Bengal politics & governance, Bengal party’s politics, Panchayat election, debates at Legislative Assembly, powers & positions of Chief Minister, relationship between Central & States government etc. Taking participation in Youth Parliamentary Contest, survey in Gram Panchayat, Blocks, & Polling stations are some of the outcome of our UG programme in Political Science. Our newly CBCS inculcate writing enhancement skill in our students through Tutorial Presentation. It helps our student’s zeal of learning and understanding the subject in depth. Students of our college need a formal career counselling workshop with external experts in Political Science, though this type of career guidance is also provided during classes on assigned course paper. But, for general understanding of future prospects, it must be mentioned that this subject is not only confined to Academic & Research. There are lot of career opportunities in this subject e.g; it helps in preparation of civil services, state govt. services, and various staff selection commission exams. One can also have a career in media & journalism, in NGOs, Law firms, legislative research programme, as content writers in various publishing houses. They can work as research associate in various research organisations, governmental bodies, philanthropic organisations and lastly at United Nations.

**Department of Physics:** The department runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system.

Under the present CBCS curriculum of UG Physics programme, the students are expected to have the following expertise by the end of the degree program:

As the present CBCS syllabus has invoked a lot of application based knowledge area, such as current programming language: Python, scientific writing editor: Latex, etc., students should demonstrate an understanding of core knowledge in physics, with ready to be a part in academic, research, or IT based industries, with proficiency in language (skill enhancement course) communication.

Students would be able to demonstrate written and oral communication skills in communicating physics-related topics.

Students would be able to design and conduct an experiment or series of experiments, demonstrating their understanding of the scientific methods and processes. Students should demonstrate an understanding of the analytical methods required to interpret and analyze results and draw conclusions as supported by their data.

Students should demonstrate proficiency in the acquisition of data using a variety of laboratory instruments and in the analysis and interpretation of such data.

Students could utilize a wide range of printed and electronic resources and information technologies to support their research on physical systems and present those results in the context of the current understanding of physical phenomena.

Students would be able to demonstrate understanding of the applications of numerical techniques for modeling physical systems for which analytical methods are inappropriate or of limited utility.

Students will demonstrate a thorough understanding of the analytical approach to modeling of physical phenomena.

Students will demonstrate an understanding of the impact of physics and science on society.

**Department of Chemistry:** The department runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. Chemistry serves as the fundamental science on which the understanding of other interdisciplinary and allied subjects is dependent. A detailed knowledge of Chemistry is very important in daily life as also in the study of various Physical and Biological Sciences. The Department of Chemistry at Raidighi College runs both Honours and General courses in Undergraduate Chemistry. Students get hands on experience in handling chemicals and instruments and learn to carry out both qualitative and quantitative experiments in Organic, Inorganic, Physical and Analytical Chemistry. A correlation of theoretical studies and their implementation in the laboratory helps students to get the true essence of the subject. Chemistry as a subject is a mine of opportunities. A B.Sc. Chemistry graduate has future prospects both in academia as well as industry. A student after completing B.Sc. in Chemistry can opt for higher education like M.Sc. in Chemistry, Drug Chemistry, Organic Chemistry, Inorganic Chemistry, Analytical Chemistry, Pharmaceutical Chemistry, Physical & Materials Chemistry, Food Chemistry, Biochemistry, Biotechnology, Environmental Chemistry, etc. Alternatively, if one chooses to be employed immediately after graduation, the scope of employment for a B.Sc. Chemistry graduate include sectors such as pharmaceutical industries, chemical manufacturers, forensic science department, plastic industries, agrochemical industries, etc. Apart from these, Chemistry graduates are also recruited in other fields such as oil, gas and power sectors and even in defence services. B.Sc. Chemistry candidates can also

pursue their career in the field of technical writing. In our Department we try to reach out to students via interactive theoretical sessions followed by proper exposure in the practical sessions which would prepare them for application based Chemistry courses and jobs in future. Faculties are exposed to research and current developments in the field of Chemistry and are thus well suited to mentor and guide students in the path of rewarding professional careers.

The **Department of Mathematics** runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. The subject inculcates in students an inherent ability to calculate and critically reason both concrete and abstract problems. It helps develop analytical thought, logical understanding and problem solving skills and teaches students how to organize, analyze and interpret data. It stimulates interest in further higher education including research and help students sit for various all-India examinations. It also opens up job opportunities in Bank and Insurance Companies and other industries, apart from in academics.

**Department of Food & Nutrition:** The Department of Food & Nutrition, Raidighi College came into existence in the year 2007, offering both Honours and General Courses. This discipline was introduced keeping in mind its widespread applicability and utility. Food & Nutrition is a multidisciplinary science which involves food, nutrients, its metabolism within the body and its manifestation on health. A sound knowledge of Food Chemistry, Nutritional Biochemistry, Food Microbiology and Human Physiology is required for comprehending this course; and thus the syllabus is the composite of these subjects and many others as well.

This subject has got a broad spectrum of scopes and opportunities as it is linked with optimising quality of lives of people. Food & Nutrition is a young science which is taught in many schools and colleges, and so Academic field and higher education is always open for the students. They can integrate knowledge and skills gained through their studies and disseminate the information further to implement nutritional principles that will aid in making wise choices regarding food and lifestyle practices.

Malnutrition is one of the major problems that our country is facing from several decades. This subject will make students capable of assessing the nutritional status of people and thus can actively participate in malnutrition intervention programs and advocate in policy making to promote health and wellbeing throughout the nation.

Therapeutic diet is a core component of this subject which involves modifying normal diet in diseased conditions to provide relief and to augment health. Therapeutic nutrition plays a colossal role in the prevention and treatment of degenerative diseases like cardiovascular diseases, Cancer, Diabetes Mellitus and Obesity etc. Hospitals, Health sectors and Food industries appoint Dieticians, Nutritional Counsellors, Health Trainers where the students of Food & Nutrition can contribute a lot.

We all are aware of the medicinal and curative properties of Food and Nutrients. Several research areas are still unexplored in the field of this science. Newer concepts like nutraceuticals, functional foods, nutrigenomics etc are emerging that is making this a subject of huge demand which will increase manifolds in future.

**Microbiology** was introduced in the UG curriculum of the University of Calcutta in the year 1997 as a job-oriented inter-disciplinary course, keeping in mind the high demand of microbiologists at that time in a wide arena like health sector, dairy industry, processed food and beverages industry, pharmaceutical industry, animal husbandry as well as in agriculture and Biotechnological industries, apart from academic sector. However, the trend started to shift as most of the students graduating from this discipline chose higher education, including research, as their career path. Accordingly, the syllabus taught under the UG course has been moulded quite a few numbers of times to serve this dual objective of a job centric education as well as to cater the needs of an aspiring academician. The recent introduction of the CBCS curriculum has seen some much needed modifications such as introduction of a few skill based learning courses to make it more job centred. The Department of Microbiology in Raidighi College runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. Students are expected to acquire a sound understanding of the structural and functional characteristics of different microorganisms and their crucial role in bio-geo-chemical cycles, in health, in industry, in environmental issues and their potential use in genetics. This will enable them to effectively utilize the knowledge of microorganisms to develop sustainable solutions to many current problems faced by humans.

Course outcome for B.Sc. with **Department of Botany**: The department runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system.

**Programme Outcome:**

1. Apply the knowledge of biology to make scientific queries and enhance the comprehension potential.
2. Convey and practice social, environmental and biological ethics.
3. Insist the significance of conserving a clean environment for perpetuation and sustainable development.
4. Study incessantly by self to cope with growing competition for higher studies and employment.

**Programme specific outcome:**

- Educate students in and around Raidighi, a prime area of Sunderban, about plant science.
- Inculcate strong fundamentals on modern and classical aspects of Botany.
- Build life skills in Edible mushroom cultivation, biofertilizer production, greenhouse maintenance and seed technology through value-added courses.
- Create platform for higher studies in Botany.
- Facilitate students to take-up successful career in Botany.

**SEMESTER –I**

Course Title: 1. Phycology and microbiology (BOT-A-CC1-1 Th & P) and Mycology and Phytopathology (BOT-A-CC1-2 Th & P)

On Completion of this Course students will be able:

- To understand the ultra structure and dynamism of cells of bacteria and viruses.
- To acquire the knowledge about general characteristics, morphology and reproduction and economic importance of algae, fungi and lichen.
- To know about various plant diseases and their control measures
- To understand life cycles of different algal species.

**SEMESTER –II**

Course Title: 1. Plant anatomy (BOT-A-CC-2-3 TH & P ) and Mycology and Phytopathology (BOT-A-CC-2-4 TH & P)

On Completion of this Course students will be able:

- To gain knowledge of plant cells, tissues and their functions and make connections between plant anatomy and the other major disciplines of biology.
- To get knowledge about classification, mode of reproduction and detailed study of evolution of sporophytes in bryophytes.
- To understand the phylogeny from Bryophytes- pteridophytes- Gymnosperm
- To gain knowledge about life cycles of pteridophytes and gymnospermus plants.

### **SEMESTER –III**

Course Title: Palaeobotany & Palynology (BOT-A-CC-3-5 TH & P ), Reproductive biology of angiosperms (BOT-A-CC-3-6 TH & P )and plant systematics and (BOT-A-CC-3-7 TH & P)

On Completion of this Course students will be able:

- To explain about fossils and fossilization and understand about geological time scale.
- To know the structure and development of monocot and dicot embryos.
- To assimilate adequate knowledge in understanding about plant systematic.
- To gain proficiency in the use of keys and identification manuals for identifying any unknown plants to species level.

### **SEMESTER –IV**

Course Title: Plant geography, ecology and evolution (BOT-A-CC-4-8 TH & P), Economic Botany (BOT-A-CC-4-9 TH & P) and Genetics (BOT-A-CC-4-10 TH & P)

- To gain the proficient knowledge about phytogeography.
- To understand ecological relationships between organisms and their environment.
- To interpret the concept of lemarkism, Darwinism and natural selection.
- To competent in gathering information about genetics.
- To acquire skill about Economic Botany.

### **SEMESTER –V**

Course Title: Cell & Molecular Biology (BOT-A-CC-5-11 TH & P), Biochemistry (BOT-A-CC-5-12TH & P)

- Students being taught about ultrastructure of cell and molecular biology
- To focuses on exploration of molecular basis of plant life.
- To absorb conceptual knowledge in understanding about biochemistry.

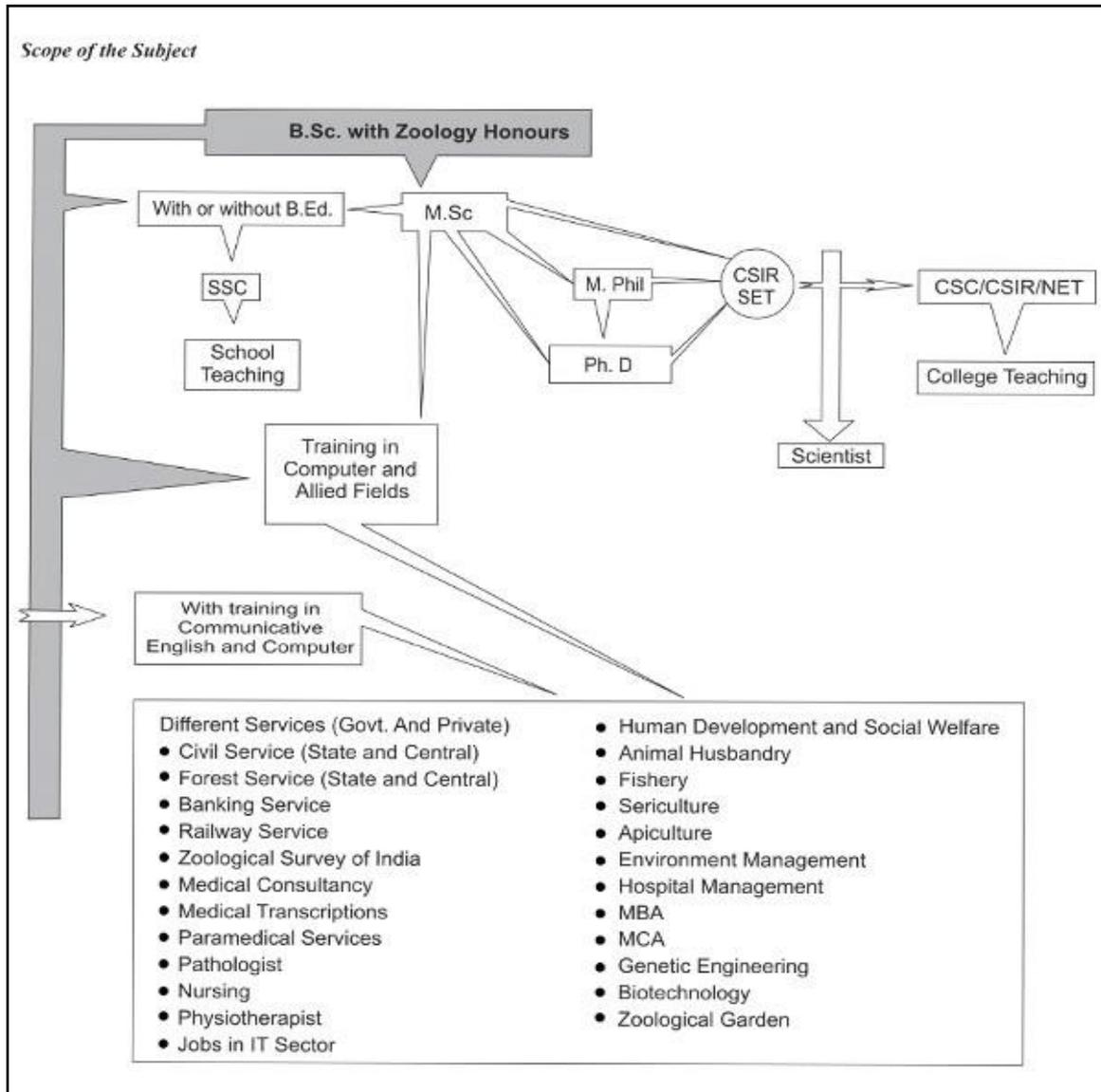
### **SEMESTER –VI**

Course Title: Plant Physiology (BOT-A-CC-6-13 TH & P), Plant Metabolism (BOT-A-CC-6-14TH & P)

- To acquire skill in understanding about plant Physiology.
- To gather knowledge about plant metabolism.

The Department of Zoology runs Undergraduate Honours and General Courses under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. Zoology is a broad field that includes studying animals in their natural habitats to assess behaviours, living conditions and interactions with other wildlife and teaches students the importance of conservation. Some diseases and health problems involve processes that can only be studied in a living organism and students learn how animal models are vital to medical research when it is

impractical or unethical to do human trials. They also learn to monitor animal health to prevent animal disease outbreaks and produce healthy livestock as it is vital to the economy and safety of the country's food supply. Study of food chains and life cycles teaches students the relationship among the various organisms and our inter-dependence. They will be able to comprehend how descent with modification has shaped animal morphology, physiology, life history, and behaviour and explain how organisms function at the level of the gene, genome, cell, tissue, organ and organ-system. They will also get an insight into the intricate relationship between adaptation and evolution and understand how these offer the only scientific explanation for the unity and diversity of life on earth.



The **Department of Sanskrit** runs Undergraduate General Course under the Choice-Based Credit System (CBCS) introduced in 2018-19 session and ongoing 1+1+1 system. Students of **Sanskrit** will be able to read, understand, write and speak Sanskrit. They would acquire a sound knowledge of Sanskrit grammar, literature, history of literature, Vedic literature, different Sashtras and inscriptions. They will also acquire the initial knowledge of ancient Indian civilisation, Indian

philosophy and culture through Sanskrit texts. The discipline opens up job prospects in educational institutes, employment opportunities as manuscriptologist, linguist, translator, in library, in museums, in tourism etc. Students can also opt to go for further higher studies and research or sit for competitive examinations.

The Department of Physical Education aims to provide its students with learning experiences that enable them to develop the knowledge, motivation and competence to live a physically active life. It teaches them about human anatomy and physiology and the essence of fitness.

A career in **Physical Education** can lead students to a wide range of career options; from being a part of the chosen sport, health clubs, sports good manufacturer, marketing, commentator, sports journalism, trainer, physical education teacher in educational institutes, therapist, sports manager, and many other similar options.

The Department of Philosophy has a curriculum that primarily imbibes a deep and reflective awareness about the world and understanding of reality as discussed in Indian and Western tradition to equip them with a comprehensive world- view. The discipline also instills moral values amidst students making them aware about social issues, obligations and rights helping them comprehend the meaning of life and its duties. It improves critical thinking, logical analysis, problem-solving skills. The students can pursue further higher studies, take up research or teaching as profession, become writers, sit for competitive examinations, etc.