## **Programme Outcome**

**R. N. A. R. College**, a constituent unit of **L. N. Mithila University** is a place where knowledge is served through a wide range of courses. The College offers courses in two streams-Arts and Science. The *Arts* stream includes courses in humanities and social sciences. The courses in this stream reveal to a student the nuances of being a human and the understanding of human society. Students are expected to gain life skills such as communication and gain a deeper sense of society around them. While the courses in humanities tend to enable students to appreciate characteristics of society through meanings, values, opinions, images and artefacts; social sciences aim to develop critical understanding of processes and mechanisms. The two branches- humanities and social sciences are held together by the elements of criticality and ethics.

The *Science* stream focuses on inculcating scientific temper among students through analytical thinking, reasoning and problem solving. Students are introduced to theoretical developments in respective disciplines and the gradualness of knowledge is presented to them. They are expected to understand the terminologies and concepts of the subjects along with theories at the end of their courses which are designed and aligned with industry standards and requirements. The College tries to bridge the industry-academia gap by providing students the exposure to state-of-the-art facilities having top-of-the-line equipment to fulfil their dreams in the field of research and technology. Qualified faculty share their valuable experiences and mentor students to choose their career path.

#### **Course Outcomes**

#### <u>Arts</u>

## B.A. English (Honours)

English literature offers a huge career prospect for students. Students can make their careers in various fields if they have completed their B.A. with English Literature.

- 1. Students can prepare for any competitive examinations since English language is common to all the examinations.
- 2. They have the option to be teachers and researchers after their post-graduation or relevant qualification for school teachers.
- 3. Students can pursue M.A. English and M.A. Linguistics.
- 4. They can become creative writers, poets, dramatists, novelists etc.
- 5. They can become content writers and editors in different publishing houses.
- 6. Students can make their careers in the field of journalism.
- 7. They can make their careers in the field of Translation and Interpretation. They can become translators, interpreters in both government and private sectors.
- 8. Students can join call centers and any multinational companies because of their fantastic communication skills.
- 9. Students can become language trainers /soft skill trainers in various organizations.

### **B.A. Hindi (Honours)**

हिंदी भाषा और साहित्य का अध्ययन एक गहन पठन पाठन की प्रक्रिया है। पढ़ने लिखने, विचार करने और किसी भी सिद्धांत और उसके व्यवहारिक पक्ष को समझने का भरपूर मौका इस क्षेत्र में मिलता है।

अंडरग्रेजुएट डिग्री कोर्स B.A हिंदीसाहित्य या B.A हिंदी (ऑनर्स) तीन सालका कोर्स है ,जो किसी भी स्ट्रीम में 12वीं कक्षा पूरा करने के बाद उपलब्ध है।हिंदीसाहित्य भाषा विज्ञान और समग्र हिंदी भाषा के अध्ययन पर केन्द्रित है। भारत में हिंदी राष्ट्र की 22 आधिकारिक भाषाओं में से एक है। पाठ्यक्रम के दौरान हम हिंदी भाषा , हिंदी लिपि और हिंदी साहित्य के इतिहास के बारे में जानकारी मिलती है जिसमें किवता, नाटक, उपन्यास, गद्य, निबंध, रचनात्मक लेखन, पटकथा लेखन और संवाद लेखन शामिल है। यदि हिंदी भाषा में हम डिग्री प्राप्त करते हैं तो यह करियर के कई विकल्पों को खोल देता है, जिसमें हम अपना एक सफल करियर बना सकते हैं। जैसे :-1) पत्रकारिता 2) सरकारी नौकरी 3) पटकथा लेखन 4) अनुवादक 5) इंटरप्रिटेशन 6) कंटेंट लेखन / संपादन 7) भाषण लेखन 8) आवाज़ सहयोगी 9) अध्यापन इत्यादि।

## **B.A. Maithili (Honours)**

Maithili enjoys the reputation of being one of the twenty-two official languages of India and prominent among spoken languages in Nepal. This local language of the Mithilanchal which comprises of the Northern Bihar and adjacent parts of Nepal; symbolises the traditions, culture and history of the area. Students of Maithili, thus not only study a language rather they are expected to understand the nuances of the socio-cultural life of the Mithilanchal- the land of evolution of Mīmāmsā and Nyaya. Maithili Honours Programme has eight papers to be studied in three years. In the first year of the Programme, students are introduced to Maithili Prose and Novels as part of their first paper and to Drama in the second paper. Next year, they study Modern Poetry and Critical Understanding of Poetry as their third and fourth papers respectively. The third and final year has four papers to be studied in detail. They are-Ancient Poetry, Prose and Essays, History of Maithili Literature, and Development of Language and Script. The courses aim at developing the written, spoken and reading skills of students along with critical understanding of literature. With an Honours Degree and deep learning of the language, students may choose their further study among linguistics, journalism, history, international relations etcetera. They will have career options in the fields of literature, bureaucracy, academics, journalism and various opportunities in the development sector.

#### **B.A. Sanskrit (Honours)**

संस्कृत विश्व की प्राचीन भाषाओं में से एक है जिसके ज्ञान से हम अपने आपको गौरवान्वित महसूस करते हैं संस्कृत के अध्याय, अध्ययन एवं अध्यापन से हमें वेद पुराण उपनिषद आदि का ज्ञान प्राप्त होता है आधुनिक युग में संस्कृत विषय का वर्तमान पाठ्यक्रम में महत्वपूर्ण स्थान दिया गया है भारत के कई राज्यों में तो संस्कृत विषय अनिवार्य रूप से अध्ययन करना आवश्यक माना गया है संस्कृत विषय के अध्ययन द्वारा प्राप्त ज्ञान हमें समाज में सम्मानित होने का मौका प्राप्त होता है संस्कृत विषय के अध्ययन से हम भारत सरकार के रक्षा विभाग में धर्मगुरु के पद को प्राप्त कर सकते हैं महाविद्यालयों एवं विश्वविद्यालयों में व्याख्याता स्तर के पद को प्राप्त कर सकते हैं तथा विद्यालयों में शिक्षक बन सकते हैं आज यह आवश्यक है कि यदि हमें अपनी संस्कृत को बचाना है तो संस्कृत का अध्ययन नितांत

आवश्यक होता है संस्कृत विषय को पढ़ने से हमें प्राचीन साहित्य ग्रंथ उपनिषद आदि में जो महत्वपूर्ण ज्ञान छुपा है उसे हमें रूबरू होने का मौका प्राप्त होता है

#### **B.A. Urdu (Honours)**

Urdu is one of the popular and official languages of India. The purpose of B.A Urdu Honours Programme is to make the students conversant with the rich tradition of Urdu language and literature. With the help of the course students develop their ability to read and understand the text critically in relation to their historical and socio- cultural context. Students also develop their ability to translate Urdu into other languages.

After the completion of the Programme, students may go for higher studies in the language (PG and above) and translation studies. They also become eligible for careers in Urdu journalism, professional writings in the media world. They may also opt careers in the field of Translation. They also have options for administrative and academic path ways for future.

#### **B.A.** Economics (Honours)

Economics has been the most popular discipline among Social Sciences. The discipline itself is a fine blend of theoretical understanding and practical exposure. Students are expected to understand economic changes around them and being able to explain the functioning of the economic systems. They are expected to understand choice and decision making in general and in the sphere of economic life in particular. They are expected to understand economic terminologies such as Gross Domestic Product, Economic Growth, Inflation etcetera with their implications. The course aims at training them to evaluate policies. Students are expected to be able to differentiate between Micro and Macro issues with respect to policies and choices. While students are exposed to specific issues and theories in respective papers, the Programme enables them to understand the functioning of national and international institutions with respect to political economy and international relations. Students are also exposed to analytical skills through statistics and mathematical economics in the final year of the programme along with optional courses on Industrial Economics and Business Organisations. The Programme also takes into account the local requirements and necessities with the inclusion of courses on Rural Economy as optional course and the Economy of Bihar as part of the Indian Economy course.

An Economics graduate is in demand for quantitative and analytical skills which help in policy communication and business analytics. The course gives them foundation to embark upon professional courses related to data science, policy studies and development practice. The course prepares students for careers in the discipline and related services with government departments and private organisations.

#### **B.A.** History (Honours)

The discipline of history offers a variety of courses at the undergraduate level ranging from Indian history, world history, history of societies, polities, cultures, religions, economies, languages, arts etc.

Some general skills that one develops after taking a degree in History:

- Critical thinking and reasoning which hone the analytical skills of students.
- Ability to construct an argument and communicate findings in a clear and persuasive manner, both orally and in writing.
- Intellectual rigor and independence, including the ability to conduct detailed research.
- Capacity to think objectively and approach problems and new situations with an open mind.
- Capacity to think chronologically itself is a trait that helps in comprehending any theme or issue within their clear chronological context.

With the knowledge of history, students further may diversify their career and opt for these fields: Teaching, Research, Politics, Journalism, Media, Performing Arts, International Relations, Administration, Social Work, Law, Management, Policy Making, and Human Resource Development

## **B.A.** Geography (Honours)

The subject matter of geography has a combined nature of science and arts disciplines, that brings together the physical and human dimensions of the world. Geography is the study of Earth's landscapes, people, places and environment. Study of Geography helps us all to be more socially and environmentally sensitive and responsible citizens.

The discipline of Geography offers a variety of courses in India and abroad after graduation from this Institution such as- M.A. in Geography, M.Sc. in Geography, M.A. in Geoinformatic, M.Sc. in Geology, Diploma in GIS and Remote Sensing, M.Sc. in Applied Geography, M.A. in Disaster Management, and research in these areas.

Apart from regular job opportunities in the Banking sector, Defence sector, Civil Services, Railways, Academics etcetera; students of geography will have specialised career opportunities such as- Surveyor, Town Planner, Climate Change Analyst, Environment Consultant, Tourism officer, Transport Planner, Cartographer, Meteorologist etcetera.

## **B.A.** Philosophy (Honours)

दर्शनशास्त्र एक व्यावहारिक एवम् उपयोगी विषय है और इसके आधार पर विविध क्षेत्रों में भविष्य की संभावनाएं तलाशी जा सकती है।यही इस विषय की सबसे महत्वपूर्ण खूबी कही जा सकती है।खासतौर पर ऐसे विकल्पों में धार्मिक इंस्ट्रक्टर,टीचिंग,रिसर्च,मिशनरी, न्यायिक क्षेत्र,मीडियाकर्मी,आलोचक, पुरातत्विवद एवं फिलोसॉफिकल काउंसलर आदि के रूप रोजगार प्राप्त किया जा सकता है।यदि लेखन में रूचि है तो पब्लिशिंग हाउस में भी काम के मौके तलाशे जा सकते हैं। इसके अलावा कई प्रतियोगी परीक्षाओं में भी विषय के रूप में दर्शनशास्त्र को अपनाने वाले युवाओं की संख्या अधिक है। प्रतियोगी परीक्षार्थी के लिए दर्शनशास्त्र विषय बहुत उपयोगी है। लॉजिक के अध्ययन से रिजनिंग के प्रश्न आसानी से हल किए जा सकते हैं। इस विषय का पाठ्यक्रम संक्षिप्त, चिंतन और तर्क प्रधान होने के कारण इसमें बहुत रटना नही पड़ता है और कम समय में इसे समझकर तैयार किया जा सकता है।इस कारण सिविल सेवा (संघ और राज्य) की मुख्य परीक्षा में वैकल्पिक विषय के रूप में दर्शनशास्त्र काफी लोकप्रिय है। विदेशी विश्वविद्यालयों में दर्शनशास्त्र के विद्वानों को शोध और अन्य प्रकार की रिसर्च के लिए फैलोशिप बड़े पैमाने पर उपलब्ध कराया जाता है।

वर्तमान में दर्शनशास्त्र की एक नई शाखा व्यवहारिक दर्शनशास्त्र का भी विकास हुआ है जिसमें पर्यावरणीय नीति शास्त्र, प्रौद्योगिकी दर्शन, विज्ञान दर्शन, बायोमेडिकल एथिक्स,प्रोफेशनल एथिक्स, एडिमिनिस्ट्रेटिव एथिक्स,बिजनेस एथिक्स,मीडिया एथिक्स, लॉ एथिक्स आदि विषयों को सम्मिलित किया गया है। इससे रोजगार के नए अवसरों का सृजन हुआ है।

दर्शनशास्त्र के क्षेत्र में रोजगार के अवसरों की बात करें तो विभिन्न राज्यों के इंटरमीडिएट स्तर के विद्यालयों, महाविद्यालयों, विश्वविद्यालयों, आईआईटी, आई आई एम व शिक्षक प्रशिक्षण महाविद्यालयों जैसे संस्थानों में फिलॉसफी के शिक्षकों की मांग रहती है। इसके अतिरिक्त बहुराष्ट्रीय कंपनियों में एच आर के रूप में ,लाइफ स्किल ट्रेनर के रूप में ,स्पिरिचुअल या लाइफ मैनेजमेंट काउंसलर के रूप में रिलेशनशिप काउंसलर के रूप में तथा बिजनेस एथिक्स एडवाइजर के रूप में भी रोजगार के अवसर उपलब्ध हो रहे हैं।

योग और ध्यान की प्रक्रियाएं भी दर्शनशास्त्र के ही अंग है। इस क्षेत्र में भी काउंसलर योग, मेडिटेशन ट्रेनर के रूप में ,रोजगार के अवसर उपलब्ध है। यह विषय कला ,विज्ञान और वाणिज्य तीनों संकाय के छात्रों के लिए उपयोगी और रोचक है। दर्शनशास्त्र स्वतंत्र और मौलिक चिंतन और लेखन क्षमता के विकास के साथ साथ जीवन मूल्यों के संवर्धन पर भी ध्यान देता है। जिससे देश के नागरिक अच्छे अध्यापक ,लेखक, विचारक, राजनेता ,कानून विद ,उद्यमी और लोक सेवक बन सकते हैं।

# **B.A. Psychology (Honours)**

Students with graduation in Psychology might find many opportunities and career options the private and public sector. They may pursue a Diploma in Counselling and Guidance after their graduation to be able to work in Schools, Colleges, Hospitals and Non-Government Organisations as a counsellor. Similarly, after a PG Diploma in Clinical Psychology, they would find opportunities to work as a clinical psychologist in private and public sector hospitals, industrial and other organizations. Psychology offers specialisations in various areas such as Human Resource Development, Education, Health, Sports, Forensic, Industrial & organizational, and Community psychology. An undergraduate programme in Psychology is intended to motivate and prepare students for higher studies to take up different roles in their work and community life.

#### Science

## **B.Sc. Botany (Honours)**

Botany is one of the oldest and fascinating branches of Natural Sciences. After completing B. Sc. (H) in Botany, various opportunities are available for students. They can opt for higher studies in the areas of Biotechnology, Biochemistry, Molecular Biology, Microbiology, Environmental Science etcetera along with the parent discipline of Botany. An Honours Degree in Botany will help students in choosing from specialised job opportunities such as Botanical/Project/Lab/Field/Scientific Assistants in institutes of reputation such as Botanical Survey of India (BSI), National Institute of Oceanography (NIO), Indian Agricultural Research Institute (IARI), Indian Council of Forestry Research and Education (ICFRE) etcetera. With higher education, students will find senior positions in these institutes and other academic organisations. Furthermore, students can opt their career as Ranger and Forest Officer. Other regular career options in administration and academics remain available to them. In Private Sector Botany (H) students have variety of options. They can work as Environmental Consultant, Nursery Manager, Green House Manager, Plant Biochemist, Farming Consultant, Park Ranger etc.

## **B.Sc.** Chemistry (Honours)

B. Sc. (H) in Chemistry is unique and leading course designed to encourage aspiring students to pursue an undergraduate program that will challenge their critical thinking, give practical exposure and prepare them for other rewarding professional careers.

## Pattern of the Syllabus

- B. Sc. (H) chemistry provide a backbone in all the traditional branches of physical, inorganic, organic chemistry.
- **B.** Sc.-I: There will be the introduction to fundamental aspects of general and physical, Inorganic and Organic chemistry. Students will learn the laboratory and practical techniques needed for the later years of the course. Students may develop his skill on applied chemistry as well.
- **B. Sc.-II:** Physical, Inorganic and Organic chemistry are taught in this year. The experimental works are continued throughout the session to develop the theoretical knowledge and practical as well. Additional topics covering chemistry of consumer products, thermodynamics, electrochemistry, coordination chemistry, carbohydrate chemistry and catalysis chemistry will help the students to enhance their skills in the field of chemistry.
- **B. Sc.-III:** Students will undertake more advanced study of the inorganic, physical and organic chemistry quantum mechanics, Chemical kinetics, electrochemistry, surface chemistry, thermodynamics, coordination chemistry, bio-inorganic, synthetic name reactions and reagents, heterocyclic chemistry, colour and dyes, chemistry of polymers and chemistry of synthetic drugs keeping the experimental study parallel use in industry.

## **Syllabus as Industry Demands**

The course has been designed to have insight in almost all the aspects of chemistry and to build a solid foundation in the subject to choose a career in industry/academics or research. Also, the course provides a good measure of flexibility and gives choices to select electives.

The syllabus very well covers the areas like water chemistry, consumer products-soaps, detergents, shampoos, skin preparations, polymer chemistry, drugs, industrially important chemicals- gases used in dusters, alkali's, fertilizers, pigments which are in demand in the industry.

# Future Scope of B. Sc. (H) Chemistry

Graduates from this course will be better prepared to understand the new environment-friendly systems and can understand the processes that the chemical industry is adopting. After doing B. Sc. Chemistry, one can go for M. Sc. in Chemistry or take up various jobs and take up internships to prepare for industry level entries. Some of the jobs are as follows:

- Analytical Chemist
- Bio-medical Chemist
- Chemical Engineering Associate
- Industrial Research Scientist
- Lab Chemist
- Materials Technologist
- Production Chemist
- Production Officer
- Quality Controller
- R&D Director
- Research & Development Manager
- Safety Health and Environment Specialist

## After Finishing the Degree (B.Sc. H.)

The employment areas for the B. Sc. Chemistry graduates include pharmaceutical industries, chemical manufacturers, forensic science department, plastic industries, agrochemical industries, etc. Apart from these, they are also recruited in other fields such as oil, gas and power sectors and even in defence services.

The B.Sc. chemistry graduates have many options for their higher studies like master's degree in the same. Some of the higher study options after B.Sc. Chemistry (H) are:

#### M.Sc. in

- > Chemistry,
- ➤ Analytical Chemistry,
- > Drug Chemistry,
- > Organic Chemistry,
- ➤ Inorganic Chemistry,
- > Pharmaceutical Chemistry,
- ➤ Physical & Materials Chemistry,
- Master of Business Administration (MBA) etc.

Certification courses can also be one option for the B.Sc. Chemistry graduates is e.g. Post-Graduate Diploma in Analytical Chemistry (PGDAC).

## **B.Sc. Mathematics (Honours)**

Undergraduate programme in BSc Mathematics in LNMU covers all the sections which are prerequisite to study advance Mathematics. It also covers the topics required for interdisciplinary works. Students who complete the course will

- 1. Understand how mathematics acts as a language for other branches of sciences.
- 2. Be able to perform basic computations in higher mathematics.
- 3. Develop proof reading skill.
- 4. Able to write basic proofs.
- **5.** Use mathematical ideas to model real world problems.

## **B.Sc. Physics (Honours)**

Physics is a fascinating branch of science that nurtures the primary knowledge for scientific advancement of research and technology both.

B.Sc. (Hons.) Physics programme provides a strong base for students in fundamental knowledge in physics courses.

After completing B.Sc.(H) in Physics, various opportunities are available for the candidate: -

- They can apply for higher education, i.e., M.Sc. in Physics
- They can also apply for integrated courses like M.Sc.-PhD, M.Sc.-M. Tech through entrance tests conducted by various government organisations.
- There are a number of job opportunities available for a B.Sc. Physics graduate
- Lab Assistant
- Research Associate
- Assistant Scientist
- Technician
- Radiologist Assistant etc.

#### **B.Sc. Zoology (Honours)**

Zoology is one of the prestigious branches of biology. Its study provides the deeper knowledge in fields such as evolution, embryology, structure, habits, habitats, existing and extinct species in the animal kingdom. It also gives the knowledge of how animals interact with each other in the ecosystem as well as their interaction with the ecosystem.

B.Sc. Zoology (Honours) is a three-year degree course. B.Sc. Part I consists of units such as Animal Diversity (Invertebrates & vertebrates), Environmental Biology, Animal behaviour and Developmental biology. B.Sc. Part II consists of units such as Reproductive Biology, Biometry and cell Biology. B.Sc. Part III consists of units such as Biochemistry, Physiology, Endocrinology, Evolution, Zoogeography, Medical Zoology and Economic Zoology.

Study Options after B.Sc. Zoology (Honours)

1) B.Ed. for Teaching 2) Masters in Interdisciplinary and Allied disciplines such as M.Sc. in Biotechnology, Biochemistry, Biomedical, Microbiology, Biomedical Engineering, Medical Physiology, Health Care Science etc. 3) After Masters in these fields or in Zoology, one can go ahead in academics and pursue research or seek opportunities in industry. Furthermore, Zoology Graduates can work as – 1) Zookeeper 2) Researcher 3) Lab technician 4) Teacher 5) Lecturer/Professor 6) Nature Conservation Officer etc