

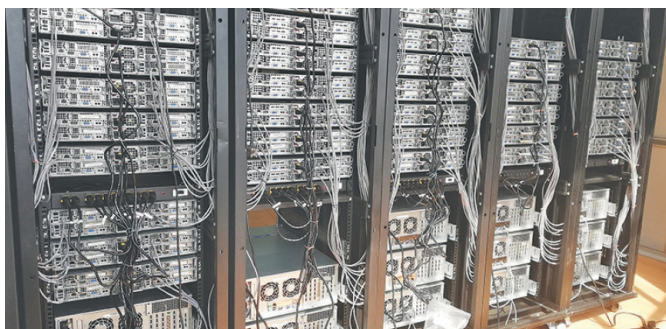
EVALUATION

At the end of each semester, students are awarded letter grades. Students need to maintain a CGPA of 2.0 in every semester in order to graduate.

Grade	A	A-	B+	B	B-	C+	C	C-	D	F
Grade Point	4	3.7	3.3	3.0	2.7	2.3	2.0	1.7	1.0	0
Marks	80-100	75-79	70-74	65-69	60-64	55-59	50-54	45-49	40-44	<40

FACILITIES

- Access to supercomputer for parallel computing.
- Well-equipped and multidisciplinary laboratories: Microbiology, Molecular Biology, Animal Cell Culture, Plant Tissue Culture, Immunology, Biochemistry, Bioinformatics, and Bio-process.
- Library with a vast collection of books and journals.
- Academic counseling and project supervision.
- Canteen, sports facilities, and clubs for extracurricular activities.
- Hostel facilities for students in need.



STUDENT CLUB

Our students are involved in various extra-curricular activities through Departmental Club KUBiC (Kathmandu University Biotechnology Creatives).

Various events carried out by KUBiC are:

- All Nepal Bio-tech Cup
- DNA Day Celebration
- Genesis: yearly life science event
- Departmental Bio-tech Cup



MESSAGE FROM THE COORDINATOR

Dear students,
Welcome to the Bioinformatics program at Kathmandu University. Get ready to explore the fascinating world of interdisciplinary sciences and unleash the potential of computational tools in understanding biological complexities. Together, let's embark on a journey of discovery, innovation, and career opportunities in the ever-evolving field of bioinformatics.



FOR DETAILED INFORMATION

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School of Science, KU.

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Facebook: <https://www.facebook.com/kubiotech>



KATHMANDU
UNIVERSITY

Quality Education for Leadership



Program Information 2023

DEPARTMENT OF BIOTECHNOLOGY

School of Science

BACHELOR OF SCIENCE IN BIOINFORMATICS



BIOLOGY



COMPUTER SCIENCE



MATHEMATICS



STATISTICS

www.ku.edu.np

KATHMANDU UNIVERSITY

Kathmandu University (KU) was established by the act of parliament of Nepal in November 1991, as an autonomous not-for-profit, non-governmental institution dedicated to maintaining high standards of academic excellence. Most of the technical and professional programs run at KU are first to be introduced in the country, with global recognition.

BIOINFORMATICS

Bioinformatics is a multidisciplinary field that merges biology, computer science, statistics, and information technology to analyze and interpret biological data. By leveraging computational tools and algorithms, it enables groundbreaking discoveries in genetics, genomics, and proteomics. The global market for bioinformatics is experiencing a rapid surge in demand due to advancements in high-throughput sequencing technologies, leading to an exponential growth in biological data and presenting both opportunities and challenges.

WHY BIOINFO AT KU?

The Bioinformatics program at KU, established in 2022, aims to bridge the gap between biology and computational sciences through a comprehensive curriculum. The program prepares graduates to leverage next-generation technologies effectively and stay up-to-date with advancements in the field. Graduates possess a diverse skill set that allows them to pursue careers in healthcare, pharmaceuticals, biotechnology, and research institutions. They excel in navigating next-generation technologies, health informatics, and data analysis in the rapidly evolving bioinformatics landscape.

KEY FEATURES OF THE PROGRAM

- Interdisciplinary expertise: Combining computer science, math, biology, physics, and chemistry for an interdisciplinary approach.
- Hands-on learning: Lab-based courses, practical projects, internships, and thesis development to prepare for jobs and research.
- Integration of diverse fields: Comprehensive understanding of computer science, math, biology, physics, and chemistry.
- Career readiness: Equipping students with theoretical knowledge and practical skills for diverse roles like bioinformatics analysts, computational biologists, and data scientists.



CAREER OPPORTUNITIES

- Bioinformatics user: Obtaining ethical approval, prepping samples, QA and data analysis, result interpretation
- Bioinformatics scientist: Obtaining test data sets from public resources, writing & testing algorithms, building & testing pipelines, writing papers, supervising
- Bioinformatics Engineer: Helpdesk support & user training, building & checking specification for platform, developing new data analysis algorithms, system administration, understanding user needs

MAJOR COURSES

- Genomics,
- Mathematical modeling,
- Machine Learning,
- Systems Biology,
- Molecular Phylogenetics,
- Algorithms in Bioinformatics.

To strengthen Bioinformatics, multidisciplinary courses are integrated in the following areas:

- Python Programming,
- Data structure and Algorithms,
- Database Management systems,
- Differential Equations,
- Multiple Projects

DURATION OF THE PROGRAM

The total duration of the program is eight semesters. Each year consists of two semesters.

ADMISSION ELIGIBILITY

10+2 level (or equivalent) with a minimum aggregate CGPA of 2.0 (50% in percentage scale), Should have passed in Physics, Chemistry and (Mathematics or Biology or Computer Science)

COST OF PROGRAM

Total cost of the program is Rs. 8,40,000* which can be paid in 16 installments.

* : subject to change as per KU rules and regulations.

SCHOLARSHIPS

- Each semester GPA merit based full tuition fee waiver scholarships per 30 students intake capacity,
- Need-based partial tuition fee waiver scholarships as per KU provision,
- Loan Scholarship.

Additional info at: sos.ku.edu.np