

PROSPECTUS

M.Sc. COURSE IN BIOTECHNOLOGY



CENTRE FOR BIOTECHNOLOGY
KOLHAN UNIVERSITY
CHAIBASA-833201
JHARKHAND

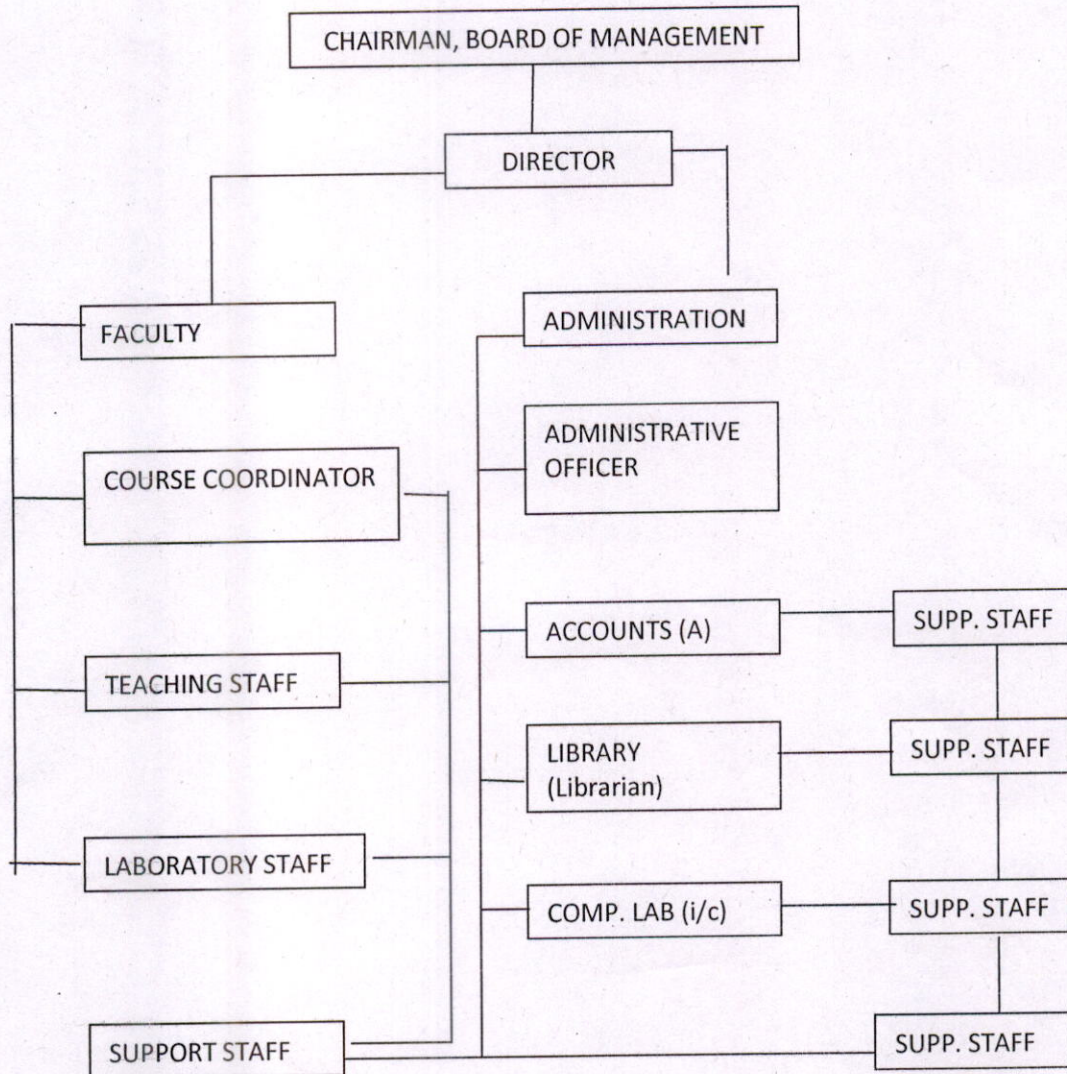
JOINT COLLABORATION OF
FACULTY OF SCIENCE, K.U.
&
TATA COLLEGE, CHAIBASA

B. Prasad
DEAN 6/09/21
FACULTY OF SCIENCE
KOLHAN UNIVERSITY
CHAIBASA

**CENTRE FOR BIOTECHNOLOGY
KOLHAN UNIVERSITY, CHAIBASA - 833201,
Jharkhand**

**JOINT COLLABORATION OF
FACULTY OF SCIENCE, K.U.
&
TATA COLLEGE, CHAIBASA**

ORGANISATIONAL STRUCTURE



ABOUT THE UNIVERSITY

The Kolhan University was established on 13 August 2009 with 14 Constituent Colleges and 12 Affiliated Colleges in geographical jurisdiction of East Singhbhum, West Singhbhum and Seraikela Kharswan District with more than 80,000 students strength. The University is situated in the tribal dominated region, with a vast and beautiful campus located at the headquarters of Kolhan Commissionaire of Jharkhand and is well connected with S. E. Rly and also well connected by road to the adjoining states of Bihar, West Bengal and Odisha.

Apart from conventional courses in UG and PG level other technical courses like Medical/ Dental / Law / Management/ Education and various Vocational Courses are running under the University.

Kolhan University has well-furnished 24 departments with a team of dedicated and highly qualified faculty having long teaching and research experience.

The Kolhan University has many well equipped lecture galleries, large Auditorium with all latest educational infrastructures and it has an excellent Central library in separate building having well furnished reading rooms with a collection of about 12,000 books and journals as well as e-library facilities and also well connected with INFLIBNET facilities. Besides these, the university has departmental libraries with research standard books and journals of national and international repute.

Introduction of the Course:

Biology has long been engaged in commercializing for the benefit of mankind. During the last few decades Bio-technology has gained momentum in understanding the physiology of human beings, animals and plants. Appreciating its importance in agriculture, environmental science, pharmacology, pharmacognosy, medicine, veterinary, biochemistry, molecular biology, microbial genetics, dairy industries and industrial chemistry, the study of Bio-technology has been one of the prime considerations of the UGC. Viewing emphasis on job oriented courses in NEP-2020, this course is likely to generate employment opportunities in Jharkhand in the field of Tissue culture, Tribal traditional herbal medicines due to wide availability of traditional medicinal plants in Kolhan region.

The course "M.Sc. in Bio-Technology" is a joint collaboration of Faculty of Science (Zoology, Botany & Chemistry) of Kolhan University and Tata College, Chaibasa. The venue of the course is in Science Block of Tata College, Chaibasa. All basic amenities & infrastructure for the course is available in the College. The course is to run under Vocational mode in self-financing scheme.

Aims and Objectives:

Visualizing the immense significance of biotechnology, Kolhan University, Chaibasa decided to introduce M.Sc. course in Biotechnology in Vocational Mode under self financing scheme from the academic session 2021-22 with a view to enhance skilled human resource base and to generate potential for employment opportunities for the future generation in the interest of economic growth of the nation and Jharkhand in particular.

Career and Job prospects in Biotechnology:

After obtaining the M.Sc. Degree in Biotechnology students may obtain jobs in the following fields/areas:

Government institutes and organizations has openings in the Department of Biotechnology (DBT). Colleges of agriculture, dairy and horticulture also offers job opportunities to Biotechnology professionals.

- **Drug and pharmaceutical companies:** (Drug companies in biotechnology like Biocon, Novozyme, Novartis, FCI, Dabur, Ranbaxy, Hindustan Lever and Dr Reddy's Labs etc. that have their R & D units offer Biotechnology professionals with handsome pay-packages).
- **Dairy Industries :**
- **Public Funded Laboratories :**
- **Chemicals Industries :**
- **Biochemical Engineering :**
- **Genetic Engineering and Bioinformatics :**
- **Environment Control/Management :**
- **Waste Management :**
- **Clinical Bio-technology Jobs :**
- **Food Processing Industries :**
- **Bio-processing industries (Alcohol /Bio-fuel/ Paper etc.):**
- **Textile Industries :**

Centre For Higher Education / Study in the Field:

Institutes offering M.Phil / Ph.D in Biotechnology

- All India Institute of Medical Sciences (AIIMS)
- University of Allahabad, Allahabad
- Annamalai University, Tamil Nadu
- Banaras Hindu University, Varanasi
- Calicut University, Kerala
- Devi Ahilya Vishwavidyalaya, Indore
- Goa University, Goa
- Gulbarga University, Gulbarga
- Guru Jambheshwar University, Hisar
- Guru Nanak Dev University, Amritsar
- Himachal Pradesh University, Shimla
- University of Hyderabad, Hyderabad
- University of Jammu, Jammu
- Jawaharlal Nehru University, New Delhi
- Kumaun University, Nainital
- University of Lucknow, Lucknow
- MS University of Baroda, Vadodara
- Madurai Kamaraj University, Madurai
- University of Mysore, Mysore
- University of North Bengal, Siliguri
- Pondicherry University, Pondicherry
- University of Pune, Pune
- Punjabi University, Patiala
- R.T.M. Nagpur University, Nagpur
- Sardar Patel University, Gujarat
- Tezpur University, Tezpur (Assam)
- Thapar Institute of Engineering & Technology, Patiala
- Utkal University, Bhubaneswar
- Visva-Bharati University, Shantiniketan
- Indian Institute of Technology, Delhi / Kharagpur / Mumbai / Madras / Kanpur / Roorkee / Guwahati etc.
- National Dairy Research Institute, Karnal
- Amity Institute of Biotechnology, New Delhi
- SRM Institute of Science and Technology, Chennai

Faculty:

An efficient set of teachers of University Departments *i.e.*, Botany and Zoology, Chemistry, Physics, Mathematics/Statistics of Kolhan University are readily available. Other institutions/national laboratories, Medical colleges are available to cope with various dimension of biotechnology, for smooth running of the course. Centre for Biotechnology will have a Director, who will be responsible for the academic matters of the institute.

Facilities available at the Centre for Biotechnology:

The Centre for biotechnology will provide the following facilities to the admitted students.

- 1 Library: The Central library of Kolhan University has sufficient stock of books on biotechnology, biochemistry, immunology, genetic engineering, computational biology, enzymology, microbial genetic and related discipline for both teaching as well as research.
- 2 Laboratories: The University has well-equipped laboratories for related disciplines of biotechnology, to conduct experiments for the course.
- 3 Computers: Computer facility is available.
- 4 Conference Room: The University has a well furnished conference room for holding seminar/ symposia/ conferences/ group discussions.
- 5 Sports Facilities: University has well maintained large playgrounds for football, volleyball, basketball, cricket along with indoor games.

Brief Regulations:

Admission: The admission to M.Sc. biotechnology, course will be made strictly on merit, based on a written entrance test of 75 marks, followed by viva-voce of 25 marks, taken together.

Eligibility: The minimum qualification for appearing at the entrance test is any of the following criteria:

- a) A graduate with Chemistry, Botany, Zoology having Hons, degree in any of these subjects.

- b) A graduate with Hons. degree in Biochemistry/ Biotechnology/ Microbiology/ Industrial microbiology/ Bioinformatics.
- c) An M.B.B.S./B.V.Sc/ Pharmacy/ Agriculture degree from a recognized university/ institute established by law.
- d) A candidate who has obtained at least 50% marks in aggregate at the graduate level shall be eligible for appearing at the entrance test of Biotechnology; however this limitation is relaxable to 45% for SC/ST/OBC and Women candidates.

Entrance Test:

The Entrance Test will cover written examination of multiple-choice objective type questions carrying 75 marks followed by viva-voce of 25 marks.

The test will cover the disciplines such as Biology, Chemistry, and an elementary knowledge of computer. The duration of written test shall be of 90 minutes.

Only those candidates will be called for viva-voce who qualifies at the entrance test. The cut off marks would be decided by the managing committee, based on student's performance.

Reservations:

Reservations of seats to SC/ST/OBC/EBC/BCW/Women will be as per rules of Jharkhand State applicable for Kolhan University. In case sufficient number of candidates is not available under reserved category, the vacant seats will be offered to the candidates belonging to General category.

Intake Capacity:

The total number of seats available for admission to this course will be 40 (Forty) including both general and reserved categories and 10% additional seats for BPL and Girls students. However, there would be five, NRI/PIO in addition to the sanctioned strength. The minimum number of students to run the course in a session is 10 (ten).

Fee Structure per annum(two semesters):

The fee structure per annum will be as follows: (Except Examination & Registration Fee):

(a) Admission Fee	-	Rs. 2,000/-
(b) Tuition Fee	-	Rs. 12,500/-
(c) Laboratory Charges	-	Rs. 11,500/-
(d) Library Charges	-	Rs. 2,000/-
(e) Miscellaneous Charges	-	Rs. 2,000/-
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Total Rs.	-	Rs. 30,000/-
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In addition to the above annual fees students will have to pay Refundable Cautionmoney of Rs.1000/- at the time of admission of the course .

Duration and Examination:

The M.Sc. Degree course in Biotechnology will be of Two Academic Years comprising four (4) semesters and the medium of instruction will be English. Each Semester will have five papers consisting of Theory, Practical, Dissertations/Projects and Mid Semester Internal Examinations. Students of other universities admitted to this course have to be registered with Kolhan University, Chaibasa.

Discipline:

Students admitted to this course are supposed to follow the instructions of discipline as laid down by the institute in order to facilitate smooth functioning. Students have to follow the rules and regulations of the college with reference to R U letter No. RU/I/452-509/08 according to the Hon'ble Supreme Court of India orders. If anybody is found ragging in the University, immediate strict action will be taken according to the relevant regulations.

Attendance:

Each student has to register a minimum of 75% attendance in both theory and practical classes separately, failing which he/she will not be allowed to appear at the university examination. Attendance is also compulsory in Terminal examinations, Quiz tests and Seminars.

Mode of Payment:

All payment is to be made through demand draft in favor of Director, Centre For Biotechnology, Chaibasa, payable at Chaibasa.

Pattern of questions in the University Exams:

In all Theory Papers -Eight (8) questions will be set from the entire prescribed syllabus consisting of long answer type, short answer type and multiple choice type questions. Out of eight questions, the first question will be compulsory consisting of multiple choice types of total 10 marks. Candidate will be required to answer four (4) questions from the remaining 7 questions of total 60 marks each question having 15 marks.

Prospectus:

Prospectus with Application Form for admission to M.Sc. Biotechnology Course Kolhan University, Chaibasa will be available on payment of Rs./- 500/- (Rupees Five Hundred only) through DD/banker's cheque in favors of Director, Centre For Biotechnology payable at Chaibasa.

Syllabus:

As Kolhan University has implemented CBCS curriculum which has 5 papers in each semesters for its all P.G. Courses, taking into this consideration, for the M.Sc. (Bio-tech) courses, the syllabus of B. H. U. Varanasi, a Central University has been adopted with approx. 30% alteration, which is in the similar patterns of Kolhan University requirements for M.Sc. Courses in CBCS Pattern.