

## DEPARTMENT OF **Biotechnology**



BIOTECHNOLOGY HAS LED TO ADVANCEMENTS  
IN MOST SCIENTIFIC FIELDS



# ABOUT KALINGA UNIVERSITY

Kalinga University, Raipur has emerged as a centre of excellence of higher education in Central India. Strategically located in the Smart City of New Raipur, this University has started carving a niche for itself in the education domain and is rising as a shining star on the horizon of quality education.

**About Raipur** - Raipur is the Capital of Chhattisgarh and New Raipur is the New Capital of Chhattisgarh in the making. New Raipur is the fourth planned city of India with wide roads and miles of greenery and is pollution free. It is the first integrated and smart city of the country. A cosmopolitan city which is also the hub of higher education hosts IIM, IIT, IIIT, National Law University, CIPET, NIT and AIIMS. In addition it also hosts most National and International Brands of Food and Retail Outlets.

**Establishment** - Established in 2013, this University has been able to win the confidence of over 12000 students. Meritorious students from all over the country and various foreign countries like Afghanistan, Angola, Bangladesh, Burundi, Cameroon, Congo, Gambia, Ghana, Ivory Coast, Kenya, Lesotho, Liberia, Malawi, Mosambique, Namibia, Nepal, Nigeria, Papua New Guinea, Rwanda, Somalia, South Korea, South Sudan, Sudan, Swaziland, Syria, Tanzania, Uganda, Zambia and Zimbabwe etc. have chosen this University for their education and career.

**Schools of Excellence** - Currently the University is serving the student community through various schools offering UG and PG programs namely Arts & Humanities, Biotechnology, Commerce & Management, UX Design, Engineering, Fashion Design, Information Technology, Interior Design, Journalism & Mass Communication, Law, Library Science, Pharmacy, Science, Education and Yoga. It also has a centre for Doctoral Research Programmes in various fields.

**Academics and Faculty** - All schools are headed by senior professors having excellent academic credentials and experience of teaching, publications and research. They are ably supported by the well qualified faculty members who come from top educational institutions and the Industry. Students also get an opportunity to learn from a distinguished panel of experts drawn from various industries, who regularly come for guest lectures.

**Infrastructure** - Kalinga boasts of World Class Infrastructure and student facilities with student centric approach. Highest attention is paid to hands on learning approach and students are encouraged to come up with innovative ideas for projects and practicals. The University has more than 75 laboratories and workshops, all well equipped with the latest, state of the art apparatus and tools. Special emphasis is given to the development of communication skills through the language lab. More than 1200 computers are available for the use of the students.

The Library has a collection of over 90,000 books and also offers digital content through membership of DELNET, National Digital Library and NPTEL. Various magazines and journals are available for the use of the faculty and students. Infrastructure consists of Student Hostel facilities, Green Acres, Canteen, Food Mess, Gymnasium, Fully Wi-fi Campus, ATM, Mini Market, Student hangout Areas, Sports Complex, Recreation Halls with Indoor Games and Music and recreation activities.

**Industry Orientation and Leadership** - Industry interaction is an integral part of the curriculum and industrial visits, internships on live projects and mentoring by the Industry leaders are regular features. The University has developed excellent connections with the top Industries of the region by taking memberships of leading industrial associations like Confederation of Indian Industries, PHD Chamber of Commerce and Industry, Federation of Indian Chamber of Commerce and Industry, Indian Importers Chamber of Commerce and Industry, etc. The University has an active chapter of Young Indians in which students get an opportunity to interact extensively with the Industry leaders and attend various corporate seminars and events.

**Life Changing Experience** - Kalinga is a Life Changing Experience where the focus is on over all development of students. NCC, NSS and various other clubs and societies offer opportunities to students to showcase their talent and learn under the guidance of experts. Music, Dance and Martial Arts trainers are available for the students. Coaches of different games and sports like Cricket, Football, Basketball, Volleyball and Athletics are also available for sharpening the skills of the students.



# DEPARTMENT OF BIOTECHNOLOGY

The Department of Biotechnology offers both Master's and Undergraduate programmes. The department is committed to the furtherance of the scientific enterprise through the establishment of a vigorous research programme, and to contribute to Post-graduate level academic programmes to cater to national requirements in basic science as well as agricultural and environmental applications.

Students can expect an academically rigorous and interdisciplinary environment and significant emphasis on laboratory work, emphasizing original, creative thinking and research. To foster student learning several initiatives are taken beyond classroom teaching. These include workshops, talks, paper presentations and field trips.

## BIOTECHNOLOGY STREAM

If you have interest in both Biology and Technology then Biotechnology stream is ideal for you. It combines biological sciences with engineering technologies to manipulate living organisms and biological systems to produce products that advances healthcare, medicine, agriculture, food, pharmaceuticals and environment control.

Biotechnology can be classified into two broad categories: R&D in Biological Sciences and Industrial Processes. The biological sciences aspect deals with research and development in areas such as Microbiology, Cell Biology, Genetics, Molecular Biology etc. The industrial processes aspect deals with the production of drugs, vaccines, biofuels and pharmaceuticals on an industrial scale using biochemical processes and techniques. Some of the best innovations and developments that have come out of Biotechnology and allied fields are: genomic sequencing technology, natural alternatives to pesticides, production of biofuels and developments in stem cells technology. Biotechnology is one of the cutting-edge areas that is fast gaining prominence with important applications to health, environment, and sustainable living. The recent COVID-19 pandemic has increased awareness about Biotechnology and its applications in improvement of diagnostic procedures and PPE (Personal Protective Equipment), the development of vaccines or drugs, from therapeutics and antivirals to new types of diagnostic kits.



## PROGRAMS & ELIGIBILITY

S.No	Program	Duration	Mode	Eligibility
01.	Bachelor of Science (B. Sc.) Biotechnology	4 Years	Semester	10+2 with relevant subjects
02.	Master of Science (M. Sc.) Biotechnology	2 Years	Semester	B.Sc. with relevant subjects

**Note:** -Post completion of 4 years, student will be awarded a Bachelor's Degree (Honours/Honours with Research).

- Student will be eligible to pursue a Ph.D. (Doctor of Philosophy) after completing the 4-year Honours/Honours with Research program (with a minimum score of 75% marks), without the need for a 2-year PG program.
- Post completion of 4 years, student will be eligible to complete Post Graduation (PG) in one year.



## CAREER OPTIONS

### Some Employment Options in Biotechnology are :

- Agricultural Engineer
- Animal Science
- Biochemist
- Biomedical Engineer
- Biophysicist
- Botany Specialist
- Business Management
- Clinical Research
- Environmental Science
- Epidemiologist
- Food Science
- Forensic Science
- Government
- Laboratory
- Manufacturing
- Microbiologist
- Pharmaceutical Drugs
- Project Management
- Quality Assurance/Regulatory Affairs
- Research and Development
- Sales and Technical Support
- Soil Scientist
- Teaching
- Validation Technician

## BIOTECHNOLOGY COMPANIES - INDIA

- Biocon
- Bharat Serums and Vaccines
- Dr Reddy's Laboratories
- GlaxoSmithKline Pharmaceuticals Ltd.
- Indian Immunologicals Ltd.
- Novozymes
- Panacea Biotech Ltd.
- Rasi Seeds (P) Ltd.
- Serum Institute of India
- Shantha Biotechnics Ltd.
- Transasia Bio-Medicals
- Wockhardt Ltd.

## BIOTECHNOLOGY COMPANIES - ABROAD

- AstraZeneca - UK
- Bayer - Germany
- Merck & Co. - USA
- Novartis - Switzerland
- Novo Nordisk - Denmark
- Pfizer - USA
- Roche - Switzerland
- Sanofi - France

## APPROVALS & ASSOCIATIONS



**Call :** +91-9907252100 (For Indian Students)

+91-7470783000 (For International Students)

**Campus :** Kalinga University, Kotni, Near Mantralaya Naya Raipur – 492101,

Chhattisgarh, India.

**City Office :** 1st Floor, SLT Water Front, Opp. Telibandha Talab, Raipur - 492001.

**Bhilai Office :** 111, Khichariya Complex, Near Hotel Grand Dhillon, Nehru Nagar, Bhilai, 490020.

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