



SCHOOL OF LIFE SCIENCES

Pioneers in
Professional
Education



SARDAR BHAGWAN SINGH
UNIVERSITY

Established vide Uttarakhand Act 12 of 2018

www.sbsuniversity.edu.in

The Founder's Vision

Great founders make their vision seem inevitable



The founder of the University, Sardar Gurcharan Singh, was of a very strong belief that everything physically visible on mother earth other than nature's own creation is creation of man and everyman is endowed with the power and ability to create and further improve those creations and inventions. Thus, carrying

forward his philosophy, we at Sardar Bhagwan Singh University empower our students with the art of creativity; we inculcate in them the belief of achieving, creating and bettering themselves everyday. We inspire them to make continuous efforts for self-improvement.

Why Sardar Bhagwan Singh University ?

Sardar Bhagwan Singh University was established in 2018 vide Sardar Bhagwan Singh University Act, 2016 (Uttarakhand Act No. 12 of 2018) enacted by the Government of Uttarakhand as State Minority University. This Institution has been pioneer in biomedical education established as an affiliated Institute under HNB Garhwal University since 1994 and is the first and oldest self-financed Institution in Northern India imparting quality education.

Salient Features of the University

- Approved by All India Council of Technical Education, Pharmacy Council of India and Indian Association of Physiotherapists.
- Excellent Infrastructure, Hi-Tech labs with modern equipment.
- Faculty: Our main strength is strong faculty base. For effective & efficient learning the University maintains 1:15 Teacher Student ratio.
- Over 800 internationally placed alumni across the globe.
- Eighteen government sponsored research projects completed/in progress with a grant of approx. Rs. 2 crores from UCOST, DST and Ayush. Twenty-five scholars awarded Ph.D. and 10 are pursuing their Ph.D. Research.
- Merit Scholarships awarded to brilliant students.

Infrastructure

The University is spread over acres of manicured lawns and playgrounds with a total covered area of 1,75,000 sq. ft. allocated for academics and 1,40,000sq. ft. for support services.

The state of the art campus accommodates different academic blocks i.e. Baba Kharak Singh Block, Prof. Puran Singh Block, Biotechnology Block, MLT Block, Administrative Block and Guru Gobind Singh Block. Other Infrastructures are Central Library, Staff Quarters, Girls & Boys Hostels.

High-Tech Instrumentation & Laboratories

The academic block comprises of various departments with spacious lecture halls, and hi-tech experiment & research laboratories.

It is universally accepted that practical experience in every field of study is essential. All the Departments of the University are well equipped with State-of-the art infrastructure and modern equipment to cover the syllabus of each branch. Hands-on training, as the essential component, is imparted to the students to keep pace with modern technology. The campus has an array of computers distributed over different section of academic blocks with high servers to cater the needs of networking environment.

Hostels

Sardar Bhagwan Singh University offers separate boarding facilities (AC and Non AC rooms, with modern amenities) to more than 275 boys in Banda Bahadur Boys Hostel and 600 girls in Mata Gujri Girls Hostel with separate provision for Under Graduate and Post Graduate students.

Banda Bahadur Boys Hostel

Established in the year 1999, Banda Bahadur Boys Hostel has provided accommodation and mess facilities to more than 3000 boys. The hostel is well-equipped with facilities such as gym, airconditioned recreation room with home theatre, reading room, indoor sports infrastructure for inmates and attached outdoor playfield catering outdoor sports as football, volleyball, cricket, hand ball, etc. with sports coaches for all the games. Round the clock security is available to the inmates of the hostel.



Mata Gujri Girls Hostel

Established in the year 1994, Mata Gujri Girls Hostel has nestled more than 5000 girls with their precious moments of friendship and academic life. The hostel is well equipped with modern facilities such as Gym & Yoga Center, well-furnished study rooms, air conditioned recreation room with home theatre and indoor sports infrastructure. The hostel is managed by qualified and competent staff whose endeavor is to make students live a simple life with high moral values. The lush green and serene environment of the foundation campus provides soothing and calm state of mind. The girls are professionally equipped in all the social graces and life supporting skills of Finishing School to refine different sides of the personality.

Training and Placement Office

Training and Placement Office is intensely engaged in organizing on-campus and off-campus placement drives for students for further entries into suitable professions. Many reputed national and multinational companies visit our campus for recruitment because of quality education, research-based analytical teaching, excellent facilities and talented students. The University emphasizes on soft skill programs to prepare them for mock interviews, hone their communication skills, build confidence and inculcate awareness, for the overall development of their personalities.

Platforms to Pursue Hobbies

- NCC Boys & Girls: Our NCC cadets learn to take pride in themselves and their training also strengthens the spirit of being an Indian
- Cultural & Music Club
- Photography Club
- Creative Arts Society
- Debating Society
- Nature Club
- Publication & Creative Writing Society
- Dramatics Club
- Blood Donation & Health Sanitation Club
- Rotaract Club
- Sports & Athletics Club



A *World-class* Institution Awaits Great Minds

School of Life Sciences

Understanding life and its complex processes is the key to understand nature and its creativity. Life science, an interdisciplinary field, covers processes that comprise the minute chemical machinery inside the cell to broad scale of ecosystems and global climatic changes. It also includes the ultimate details about the composition of genes and DNA and these determine much of our innate capabilities and predispositions to different forms of behavior and illness.

Biotechnology along with Biochemistry and Microbiology represent a potential sector of economic growth, an important component in Indian national agenda. Sardar Bhagwan Singh University is committed to provide an in-depth and comprehensive knowledge in the field of Life sciences so as to empower the students with best academic and research practices for betterment of the society and surrounding environment.

One of the major schools of SBS University, the School of Life Sciences, which includes Biotechnology and Microbiology tries to develop an integral idea of life which embraces in its wide scope the past and the present with a vision on the future to achieve the ultimate goal of science, the human welfare.

The School of Life Sciences collaborates closely with the School of Agriculture and Forestry as the courses have collective relevance and fulfill the need for a common meeting ground for researchers from diverse fields of Life Sciences.



COURSES OFFERED

B.Sc. (Hons) Biotechnology

Duration: 3 years; No. of Seats: 60

Eligibility: 10+2 PCB Pass

B.Sc. (Hons) Microbiology

Duration: 3 years; No. of Seats: 60

Eligibility: 10+2 PCB Pass

M.Sc. Biotechnology

Duration: 2 years; No. of Seats: 30

Eligibility: Elig: B.Sc with atleast one subject biological sciences & min. 45% marks

M.Sc. Microbiology

Duration: 2 years; No. of Seats: 30

Eligibility: Elig: B.Sc with atleast one subject biological sciences & min. 45% marks

M.Sc. Biochemistry

Duration: 2 years; No. of Seats: 30

Eligibility: Elig: B.Sc with chemistry as one subject of biological sciences & min. 45% marks

Ph.D.

Biotechnology

Biochemistry

Microbiology

Elig: Masters Degree in relevant course of Life Sciences

Our Recruiters



DEPARTMENT OF MICROBIOLOGY

Established in 1996, the Department has made significant advancements in academics and research. It has the credit of training more than 400 microbiologists, who are now serving and found their niche in different private and public sector organizations all over the country and abroad. Others have made their careers in academics.

Our vision to provide the best possible academically-stimulating environment that enables students to be trained in science so as to advance scientific knowledge through the medium of Microbiology.

The mission of Microbiology Department is to:

- Provide programs composed of courses which are structured to equip students with a solid foundation in the field of Microbiology.
- Provide service to our institution, profession, and community.

DEPARTMENT OF BIOCHEMISTRY & BIOTECHNOLOGY

Since its inception from 2001, the Department evolved itself by imparting traditional wisdom with modern technology by developing academic programs at Under-graduate, Post-graduate and Ph.D. levels. The Department is growing exponentially in terms of academics, research acumen, and placements in both industry and research institutions. Over 400 well placed alumni are serving the academia & industry across the globe. Eighteen Ph.D.'s have been awarded and 7 are registered. Twelve government sponsored research projects have successfully been completed with a grant of Rs. 1.2 Crores from UCOST, AYUSH and DST. Two research scholars and one faculty has been awarded with prestigious "Young Scientist Award".

The mission of Biochemistry and Biotechnology Department is to:

- Give a broad base knowledge for the concept and principles of Biochemistry & Biotechnology.
- Provide opportunities for hands on experience in research oriented education, programming application skill in molecular biology, biotechnology and drug designing along with training in industry and services.
- New courses to be introduced in future for Bioinformatics, Nutrition and Dietetics, with emphasis on plant biotechnology, crop improvement, bioremediation, stress biology & aging etc.

PLACEMENTS

In last few years in companies such as Panacea Biotec, BCIL, J. Mitra, Avantor, GSK, Phycolin Technologies Pvt Ltd, Omics International, Allen Career Institute, Brindavan Beverages Pvt Ltd, Revlon Cosmetics, Engine Biosciences, Rapture Biotech, Dr Lal Path Labs, Ganga- Kaveri Seeds Pvt Ltd

SUMMER TRAINING for the students conducted in IIT Roorkee, BHU, National Herbs and Formulations, Zydus Cadilla, Regional Centre Biotechnology, Premium Nutraceuticals.

Funded Research Projects (Completed)

1. *Generation of somatic hybrids of gold rush (Yarsha gumba) and establishment of highly efficient cell culture based bioreactor system* (Rs. 5 Lac) funded by DST- Uttarakhand Council of Science & Technology (UCOST) Uttarakhand, Dehradun. Principal investigator : Dr. Santosh K. Singh

2. *Assessment of the population of Angelica glauca in natural habitat and conservation of these endangered medicinal herbs through micro propagation and elite germplasm* (Sanctioned grant Rs. 5.4 lac) Funded by DST UCOST Uttarakhand Dehradun Principal investigator: Dr. Sanjay Gupta, Co-Investigators- Dr. V.S. Jadon, Dr. Barkha Kamal

3. *Identification of novel pharmaceuticals from cyanobacteria from high altitude origin and development of DNA based biosensor* (Rs. 5.40 Lac) funded by Uttarakhand State Biotechnology Department (USBD), Uttarakhand, Dehradun. Principal investigator : Dr. R.N. Singh, Co-Investigator: Dr. Santosh K. Singh

4. *Assessment of bacterial diversity of the Gangetic river system of Uttarakhand using molecular approaches* (Rs.7.15 Lac) Funded by Uttarakhand State Council for Science & Technology. Principal Investigator: Dr. Dr. Piyush Pandey

5. *Environmental restoration using plant- microbe interaction: Rhizo remediation* (Rs. 4.95 Lac) Funded by Ministry of Environment and Forest, Govt. Of India G.B. Pant Institute of Himlayan Environment & Development. Principal Investigator : Dr. Piyush Pandey

6. *Assessment of genetic analysis of Allium sp. And Fagopyrum sp. by molecular markers* (Rs. 12.67 Lac) funded by DST-Uttarakhand Council of Science & Technology (UCOST), Uttarakhand, Dehradun. Principal Investigator : Dr. Sanjay Gupta, Co-Investigator: Dr. V.S. Jadon

7. *Bioconversion of agro-waste for production of bio-fuels* (Rs. 3.25 Lac) funded by DST, Uttarakhand Council of Science & Technology, Uttarakhand, Dehradun. Principal Investigator: Dr. Sanjay Gupta

8. *In vitro rapid mass multiplication and their germplasm conservation of some medicinal plants* (Rs. 10 Lac) Funded by DST- Uttarakhand Council of Science & Technology (UCOST) Uttarakhand, Dehradun. Principal Investigator: Dr. V.S. Jadon, Co-Investigator : Dr. Sanjay Gupta & Dr. Barkha Kamal

9. *Assessment of seed components and genetic polymorphism in Phaseolus vulgaris of Uttarakhand* funded by Uttarakhand State Council for Science & Technology, Dehradun. (Rs. 7.92 Lac). Principal Investigator: Dr. Aradhana, Co-Investigator: Dr. V.S. Jadon

10. *Bioprospecting for novel antimicrobials and industrials and industrially important enzymes from microbial isolates in Uttarakhand Himalayas* (Rs. 10.75 Lac) funded by DST- Uttarakhand State Council for Science & Technology, Dehradun, Himalayas. Principal Investigator: Dr. Balvinder Singh, Co- Investigator Dr. D. Ghosh

11. *An Investigation of antioxidant, hepatoprotective and antimicrobial plant bioactive from Uttarakhand Himalayas* (Rs.3.44 Lac) funded by- DST Uttarakhand State Council for Science & Technology, Dehradun, Principal Investigator : Ms. Namrata Ghildiyal, Co- Investigator, Dr. Balvinder Singh

12. *Evaluation of selected medicinal plants of Uttarakhand as potent antioxidant and inhibitor of 3-Hydroxy-3-Methyl-Glutaryl-Coenzyme A (HMG-CoA) reductase enzymatic activity: An In Vitro and In Vivo Study.* Uttarakhand State Biotechnology Department, Government of Uttarakhand. Principal Investigator : Dr. Amir Khan, Co- Investigator: Dr. R.N. Singh

13. *Searching potential metabolites from actinomycetes active against drug resistance bacterial pathogens* (Rs. 12.79 Lac) funded by Uttarakhand Council of Science & Technology (UCOST) Uttarakhand, Dehradun. Principal Investigator: Dr. G.R.S. Bisht. Co-Investigator -Dr. Yogesh K. Negi

Laboratory Features

The School of Life Science has seven States-of-art-laboratories with latest instruments which cater the need of experimentation in frontier areas.

- Central Laboratory is equipped with Laminar air flow, Laboratory Fermenter, Thermal Cycler, Gel Documentation Unit, Microfuge, UV- Vis spectrophotometer, Deep Freezer (-20° C & -80°C), GLC, HPLC, ELISA Reader, Bioflo 110 Bioreactor, etc.

- Biochemistry lab has equipments like Spectrophotometer, Hybridization Ovens, Cryostat, Electoblotter, Incubator, Oven, Digestion Apparatus, Micro-Kjeldahl Apparatus, Soxhlet Apparatus, Water Baths, Magnetic Stirrers, Hot Plates, pH Meters.

- Biotechnology lab is equipped with Laminar Air Flow, Autoclave, Refrigerated Centrifuge, Electronic Balance, UV-Vis Spectrophotometer, Gel Documentation Unit, Bio-Photometer, Microscopes and Thermal Cycler.

- Microbiology/Plant Pathology laboratory has equipment like Laminar Air Flow, Autoclave, Micro-Centrifuge, Refrigerated Centrifuge, Anaerobic Jars, BOD Incubator, Orbital Rotary Shaker, Rota Vaporizer, Deep Freezers (-20° C & -80°C), Binocular & Trinocular Microscopes.

- Plant tissue culture facility among other has temperature & humidity - controlled plant growth chamber & inoculation chamber.

Library & Learning Centre

The University prides itself on an impressive collection of over 30,000 textbooks, reference books periodicals on relevant subjects. The library subscribes to 21 national & international research journals and 30 periodicals, and newspapers. The Library also houses a high speed internet café.



Admission Procedure

Admission Procedure Admissions to all courses of the University are done on the basis of merit of last qualifying examination. For more details please visit our website www.sbsuniversity.edu.in.

How to apply: Candidates can apply for admission by filling out the online application form available on the University website or scan the QR code. The application form requires personal & academic details along with scanned copies of relevant document to be uploaded.

Application fee: Application processing charges of Rs 1580/- can be paid through any online payment mode. For further details and fast track spot admission contact admission helpline.

OTHER COURSES OFFERED

SCHOOL OF PHARMACEUTICAL SCIENCES

M. Pharm. (Approved by AICTE & PCI)

B. Pharm. (Approved by AICTE & PCI)

B. Pharm. (Lateral Entry)

D. Pharm. (Approved by PCI)

SCHOOL OF ALLIED HEALTH SCIENCES

B. Physiotherapy (Approved by IAP)

B.Sc. Medical Microbiology

B.Sc. Medical Lab Technology Pathology

M. Physiotherapy (Neuro, Ortho, Sports)

M.Sc. Medical Lab Technology (Pathology)

SCHOOL OF APPLIED CHEMISTRY & BASIC SCIENCES

B. Sc. (Hons) Chemistry

B.Sc. PCM/CBZ

M.Sc. Chemistry

M.Sc. Pharmaceutical Chemistry

SCHOOL OF AGRICULTURE & FORESTRY

B. Sc. (Hons) Agriculture

B.Sc. (Hons) Horticulture

DEPARTMENT OF MANAGEMENT

B.Com (Hons)

Ph.D. PROGRAM

Ph.D. Programs offered in Pharmacy, Allied Health, Life & Basic Sciences



FACULTY BASE

Dr. Nidhi S. Belwal
Associate Professor & Incharge
Department of Microbiology

Dr. Santosh Kumar Karn, M.Sc. Ph.D. (Biotechnology)
Associate Professor & Incharge
(Department of Biotechnology & Biochemistry)

Dr. Deepanshu Rana,
M.Sc. & Ph.D. in Microbiology
Assistant Professor

Dr. Nikki Nautiyal, M.Sc. (Biotechnology),
Ph.D. (Genetics & Plant Breeding)
Assistant Professor

Dr. Deepanshu Rana,
M.Sc. & Ph.D. in Microbiology
Assistant Professor

Dr. Rakesh Matura M.Sc. (Biotechnology),
Ph.D. (Biotechnology)
Assistant Professor

Dr. Supriya Vaish,
M.Sc & Ph.D. in Microbiology
Assistant Professor

Ms. Garima Singh, M. Sc. (Zoology), M. Phil.
(Avian-Chronobiology),
Ph. D. (Ornithology-Avian acoustics)
Assistant Professor

Dr. Madhulika Esther Prasad
M.Sc. (Biology), Ph.D. (Biotechnology)
Assistant Professor

Dr. Kartik Uniyal M.Sc. (Biotechnology),
Ph.D. (Forest Biotechnology)
Assistant Professor



