



DEPARTMENT OF ZOOLOGY

DBT STAR STATUS



MIRANDA HOUSE



ABOUT THE DEPARTMENT



Courses Department of Zoology was established in 1973. Courses offered by the Department include **B.Sc. (H) Zoology, B.Sc. Life Sciences, M.Sc. Zoology and Ph. D. Zoology**. There are 16 faculty members and 9 support staff.

An **Add-on Course on Medical Biotechnology** is offered since 2007. This self-financed 72-hr Certificate Course is taught by distinguished scientists from various research institutes such as AIIMS, ICGB, IGIB, NII, VPCI, ICPO, ICMR, DBT, ACBR and DU.

The Department also offers a 50-hr self-financed **Add-on Course on Bioinformatics and *in silico* medicine** in collaboration with Department of Botany, MH, since 2014. Eminent scientists and expert resource persons from ICGB, IGIB, RCB, NIT, JNU, DTU and DU are associated with this course.

Collaborative Programmes *Science Setu*, in collaboration with NII, has been initiated in 2015 to bridge the gap between teaching and research at an early stage of student nurturing to motivate them to pursue science as a career.

Research Centres 1. **CSIR Open Source Drug Discovery Centre**: Since 2010, CSIR has provided funding establishing OSDD Center for Research Projects which were carried out at DSKC, MH for the OSDD drug and vaccine discovery program. 2. **DSKC BioScience Research Laboratory**: A faculty member, Dr. S. Sharma is recognized by BRS, Faculty of Science for supervision of Ph. D. students.

The Department Society, *Synapse* A vibrant society that organizes several events such as panel discussions, special lectures, field trips and workshops throughout the year. Every year society releases its annual magazine, *Evolvere..the unfolding* with creative expressions from students, faculty and lab staff.



COURSE STRUCTURE

FIRST YEAR	SEMESTER I	CORE COURSES <ul style="list-style-type: none"> Non-chordates I: Protista to Pseudocoelomates Perspectives in Ecology 	Ability Enhancement Compulsory Course <ul style="list-style-type: none"> English Communication 	Generic Elective 1
	SEMESTER II	CORE COURSES <ul style="list-style-type: none"> Non-chordates II: Coelomates Cell Biology 	Ability Enhancement Compulsory Course <ul style="list-style-type: none"> Environmental Science 	Generic Elective 2
SECOND YEAR	SEMESTER III	CORE COURSES <ul style="list-style-type: none"> Diversity of Chordates Physiology: Controlling and Coordinating systems Fundamentals of Biochemistry 	Skill Enhancement Course <ul style="list-style-type: none"> Medical Diagnostics 	Generic Elective 3
	SEMESTER IV	CORE COURSES <ul style="list-style-type: none"> Comparative Anatomy of Vertebrates Physiology: Life Sustaining Systems Biochemistry of Metabolic processes 	Skill Enhancement Course <ul style="list-style-type: none"> Sericulture 	Generic Elective 4
THIRD YEAR	SEMESTER V	CORE COURSES <ul style="list-style-type: none"> Molecular Biology Principles of Genetics 	Discipline Specific Elective 1 Discipline Specific Elective 2	
	SEMESTER VI	CORE COURSES <ul style="list-style-type: none"> Developmental Biology Evolutionary Biology 	Discipline Specific Elective 3 Discipline Specific Elective 4	

- Department of Zoology also coordinates courses taught to students of **B.Sc. Life Sciences** along with Department of Botany.
- In addition, we also offer Biology I and Biology II (optional papers) to **B. El. Ed.** Students.

FACILITIES



Classrooms/laboratories with ICT facility

All the laboratories and lecture rooms are WiFi enabled and are equipped with LCD projection system. A visualizer with a projector for overhead projection of books and an Image Projection System for microscopy is also available.

Departmental library

It has 400 books and 50 e-books.

Museum

The museum has a repository of well-labeled vertebrate and invertebrate specimens, slides, histological sections, insects, skulls and bones.

Undergraduate Laboratories

- Morphology, Ecology and Animal Behavior
- Physiology, Biochemistry, Cell and Molecular Biology

These laboratories are well-equipped with laminar flow hood, shaker incubator, spectrophotometer, centrifuges, microtome and binocular microscopes.

Research Facilities

The Department has dedicated facilities for DBT, DST, CSIR and DU funded projects:

- DSKC BioSciences Research Laboratory
- Textile Technology Laboratory housed in Entomology Room
- Biotechnology and Immunology Laboratory
- DSKC Undergraduate Research Laboratory

These are advanced instrumentation laboratories with animal cell culture facility, PCR machine, real time PCR machine, inverted phase contrast microscope, transilluminator, padding mangle, -20° freezer, -80° freezer, millipore water filtration system, among other basic instruments.

Other facilities

Library & Computer facility; Zoology Store; Preparation Room; Faculty Rooms



INNOVATIVE TEACHING LEARNING PROCESS

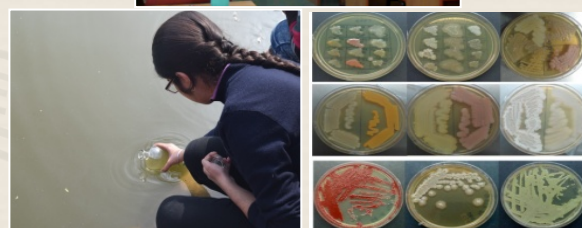
E-Museum Digitization of specimens, histological sections, Developmental Biology and Cell Biology slides for detailing and ease of observation has been created through imaging system and mobile photography.



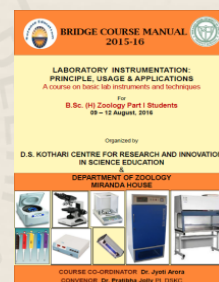
E-Poster Presentations In class room teaching, colloquium and seminars, E-poster presentations by students are encouraged.



Field-based Research Projects Learning in the field is emphasized through field based research projects on topics such as Metagenomics and Limnology.



Bridge Course Every year, students of first year are given special training to acquaint them with laboratory instruments, techniques and bio-safety protocols.



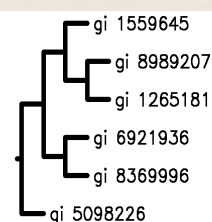
Motivational Talks Students are motivated towards science by interactions with eminent scientists such as Satyajit Rath (NII), Prof. D. N. Rao (AIIMS), Prof. Y Singh (IGIB). Students are also encouraged to attend special lectures such as Cell Press-TNQ India Distinguished Lectureship and CSIR open day to know recent advances in the field.



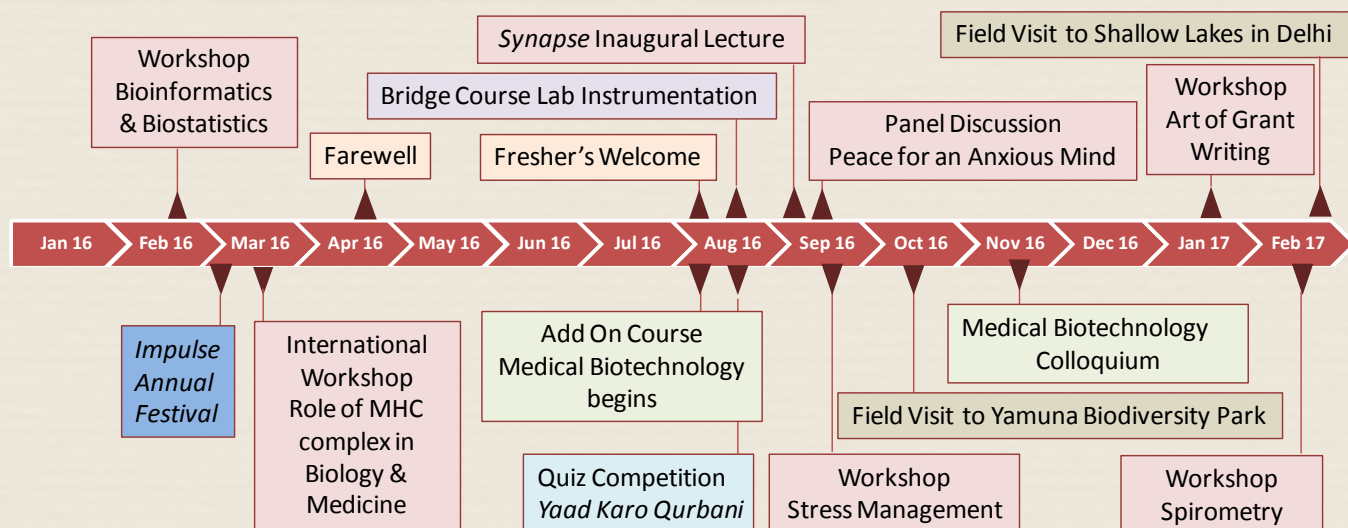
Educational Visits Every semester, visit to renowned institutions, specialized laboratories and conservations sites such as Aravali Biodiversity Park are being organized.



Software & Web-Portals Online as well as offline software are an integral part of the curriculum e.g. Phylip, Primer, MEGA, BLAST, Clustal W, Swiss Prot and other portals like NCBI, EMBL to name a few.



EVENTS



Inaugural lecture:
Gynaecological Concerns in Young Adults by Dr. Tripti Sharan.
Panel discussion:
Peace for an Anxious Mind.
Dr. Avneet Kaur.

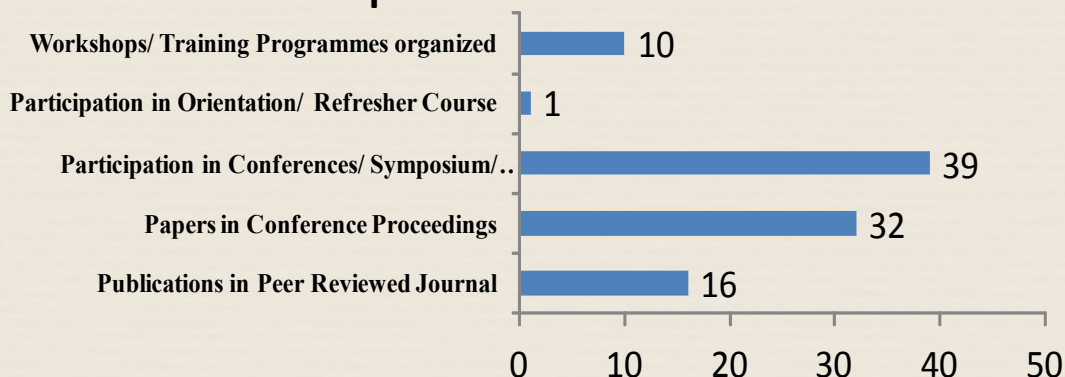
Technology Information, Forecastin & Assessment Council TIFAC-DST at IIT Delhi. Second Prize in Extempore Speech Competition on theme: **Impact of Exponential Technologies on Future of Human Species.**



WORKSHOPS AND EDUCATION TRIPS

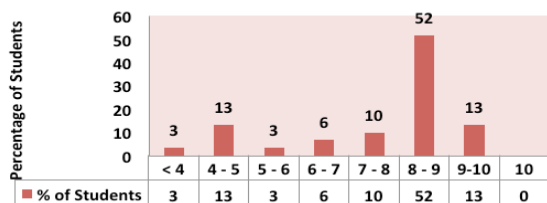


Departmental Activities 2016-17



RESULT ANALYSIS

BSc (H) Zoology CBCS (I Yr I Sem)



I year(CBCS)

- 74% above 7 points
- 3% below 4 points

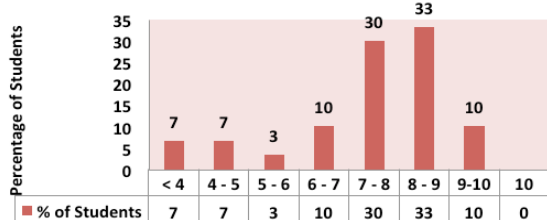
II year(CBCS)

- 73% above 7 points
- 7% below 4 points

III year (TYUP)

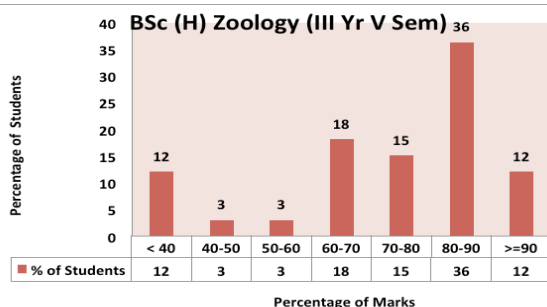
- 64% above 70 %
- 12 % below 40%

BSc (H) Zoology CBCS (II Yr III Sem)



Remedial measures to improve performance

- Build up confidence among underperformers by frequent mentor-mentee interactions
- Provide additional learning resources
- Formative assessment through tests and presentations to improve performance



AWARDS & RECOGNITION

- **DS Kothari Baseline Science Award, 2016-17:** Ms. Asima Abidi, B.Sc. (H) Zoology III year.
- Ms. Udita Bansal **worked in Kanha National Park**, Madhya Pradesh, under program by Wildlife Institute of India, Dehradun **studying ungulate behaviour and their habitat ecology**.
- **Summer Research Fellowship** awarded to Ms. Asima Abidi by INSA-IAS-NASI at IIT Bombay.
- **First prize in poster presentation** to Arshia Bhat, Avni Gupta and Bhavya Sirohi in National seminar, Dept. of Science and Technology at Kalindi College, University of Delhi.
- Ms. Asima Abidi secured **Second position in Extempore** organized on Impact of Exponential Technologies on future of Human Species organized by TIFAC in **IIT Delhi**.
- Ms. Bindu Vats and Ms. Komal Ahlawat secured **1st prize in Inter-college Netball**; 1st prize in Erobern (MH) basketball and net ball; 1st prize in Institute of Home Economics in basketball; 2nd position in KMC in basketball.
- Ms. Anju Panghal won **Silver medal in inter-college 5km walk organized by Delhi Sports Council**; Gold medal in fresher's cross country organized by Dept. of Physical Education, MH.
- Ms. Udita Bansal participated in the **Summer Visiting Research Programme** in the School of Biology at **IISER**, Thiruvananthapuram. Kerala
- Ms. Shruti Acharya, Ms. Kanika Anabh, Ms. Garvita Goyal **presented a talk at Gandhi Bhawan** about the overwintering strategies of mosquitoes with Dr.Vimal Thareja.
- Many students received **Book Grant scholarship from UGC**.

FACULTY PROFILE



NISHA VASHISHTA
M.Phil, Ph.D.
Specialization:
Physiology



REKHA KUMARI
Ph.D.
Specialization:
Environmental Biotechnology



JYOTI ARORA
M.Phil, Ph.D.
Specialization:
Limnology



SADHNA SHARMA
Ph.D.
Specialization:
Molecular Immunology



ANJANA SINGHA
M.Phil, Ph.D. (On Lien)
Specialization:
Entomology



MONIKA SHARMA
Ph.D.
Specialization:
Molecular Immunology



SIMRAN JIT
Ph.D.
Specialization:
Environmental Biotechnology



POOJA SUMAN
Ph.D.
Specialization:
Environmental Toxicology



RICHA MISRA
Ph.D.
Specialization:
Tuberculosis Biology



ANIL KUMAR
M.Phil, Ph.D.
Specialization:
Cancer Biology



DEEPAK
Ph.D.
Specialization:
Nanobiotechnology



VINEET GIRDHARWAL
M.Sc.
Specialization:
Fish Biology

SUPPORT STAFF



RAKESH KUMAR
RAMESH SHARMA
SANJAY DUTT

UDAY CHAUDHARY
MUKESH MANIK
DAAN SINGH

SURESH PRAJAPATI
PUNEET RANGA
KULDEEP SINGH



Picture Credits:

Front Cover, Front Inside, Back Inside: **Ms. Udita Bansal**, B. Sc. (H) Zoology, III year

Back Cover: **Ms. Udita Bansal**, B. Sc. (H) Zoology, III year

Ms. Priya Hansda, B. Sc. (H) Zoology, III year

Ms. Kanika Anabh, B. Sc. (H) Zoology, II year

Compilation of Brochure: **Dr. Jyoti Arora, Dr. Simran Jit, Dr. Richa Misra**



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