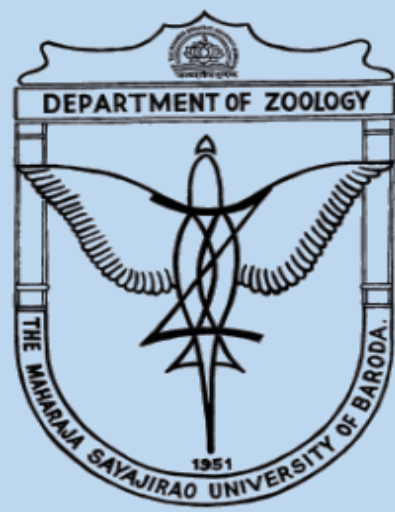




DEPARTMENT OF ZOOLOGY

FACULTY OF SCIENCE



M.Sc Zoology Prospectus and Admission Guidelines 2021 (onwards)



Prof. Dolly Kumar
Head, Department of Zoology

Prof. Haribhai R. Kataria
Dean, Faculty of Science

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA
VADODARA-390002, GUJARAT, INDIA



H. H. Maharaja Sayajirao Gaekwad-III

MISSION STATEMENT

Vision and mission as perceived by H. H. Maharaja Sayajirao Gaekwad-III

“The progress of a nation requires that its people should be educated. Knowledge is a necessity of man. It instills in him a desire to question and to investigate, which leads him on the path of progress. Education, in the broadest sense, must be spread everywhere.

Progress can only be achieved by the spread of education. Cooperation is necessary to achieve any worthy end and this readiness to cooperate will not be found in people if they are not educated

THE DEPARTMENT OF ZOOLOGY

Preface

The Department of Zoology began its glorious existence in 1951 with Prof. J. C. George as founder head (1951-1967). Prof. R. V. Shah (1967-1983), Prof. P. M. Ambadkar (1983-1990), Prof. B. Pilo (1990-1998), Prof. A. V. Ramachandran (1998-2002), Prof. (Miss) M. V. Asnani (2003-2005) and Prof. P. C. Mankodi (2013-2019) built the department as successive heads. Presently the department is headed by Prof. Dolly Kumar.

Foreword from the Head of the Department

The department of Zoology has an impeccable history with eminent faculty who were stalwarts in classical zoology. The syllabus, teaching methods and research approaches to date, have always been crafted with utmost care to be at par with the peer educational fraternity. The present day curriculum is a fine balance of Classical zoology, Applied biology and field oriented studies. Indulging oneself in learnings at our department shall definitely be a purposeful experience.

Awards through the funding agencies, include DRS in 1982 and later continued as DSA from 1992-2003. Further recognition of research activities resulted into funding through COSIST and FIST Programs. Department also received Infra structure development grant under UGC-BSR scheme. Various funding agencies like UGC, ICAR, DST-SERB, DBT, MoES, GSBTM, GBB etc. has provided funds for several research projects. The Department puts together all of its expertise and resources to always deliver the best to its students.



Prof. Dolly Kumar
Head, Department of Zoology



PROGRAMME DETAILS

➤ MASTER OF SCIENCE IN ZOOLOGY	
TITLE OF THE COURSE	M.Sc. ZOOLOGY
LEVEL	POST GRADUATE
DURATION	2 YEARS (4 semesters)
ADMISSION BY OPEN TEST	YES
SANCTIONED INTAKE	36
REGULAR/PART-TIME	REGULAR
GRANT IN AID/HIGHER PAYMENT	GRANT IN AID
ELIGIBILITY	SEE in ADMISSION PROCEDURE

MSc Zoology - Course Details

MSC Previous- SEMESTER I

- **ZOL2101:** BIOPHYSICAL PRINCIPLES IN ANIMAL FORM AND FUNCTIONS
- **ZOL2102:** PHYSIOLOGICAL CHEMISTRY
- **ZOL2103:** QUANTITATIVE BIOLOGY AND RESEARCH METHODOLOGY
- **ZOL2104:** CELL BIOLOGY

OPTIONAL SUBJECTS

- **ZOL2105:** AVIAN BIOLOGY AND WILDLIFE BIOLOGY – I
- **ZOL2106:** FISHERIES AND AQUACULTURE – I
- **ZOL2107:** GENERAL AND APPLIED ENTOMOLOGY – I
- **ZOL2108:** GENERAL AND APPLIED TOXICOLOGY – I

PRACTICAL

- **ZOL2109:** PRACTICAL - I: BIOPHYSICAL PRINCIPLES AND QUANTITATIVE BIOLOGY
- **ZOL2110:** PRACTICAL - II: PHYSIOLOGICAL CHEMISTRY
- **ZOL2111:** PRACTICAL - III: CELL BIOLOGY

OPTIONAL PRACTICAL

- **ZOL2112:** AVIAN BIOLOGY & WILDLIFE BIOLOGY – I
- **ZOL2113:** FISHERIES AND AQUACULTURE – I
- **ZOL2114:** GENERAL AND APPLIED ENTOMOLOGY – I
- **ZOL2115:** GENERAL AND APPLIED TOXICOLOGY-I
- **ZOL2116:** SEMINAR

MSC Previous- SEMESTER II

- **ZOL2201:** MOLECULAR BIOLOGY
- **ZOL2202:** GENETICS
- **ZOL2203:** ENVIRONMENTAL BIOLOGY
- **ZOL2204:** INSTRUMENTATION AND TECHNIQUES IN BIOLOGY

OPTIONAL SUBJECT

- **ZOL2205:** AVIAN BIOLOGY AND WILDLIFE BIOLOGY – II
- **ZOL2206:** FISHERIES AND AQUACULTURE – II
- **ZOL2207:** GENERAL AND APPLIED ENTOMOLOGY – II
- **ZOL2208:** GENERAL AND APPLIED TOXICOLOGY – II

PRACTICAL

- **ZOL2209:** PRACTICAL - I: GENETICS
- **ZOL2210:** PRACTICAL - II: ENVIRONMENTAL BIOLOGY
- **ZOL2211:** PRACTICAL - III: MOLECULAR BIOLOGY AND INSTRUMENTATION

OPTIONAL PRACTICAL

- **ZOL2205:** AVIAN BIOLOGY & WILDLIFE BIOLOGY – II
- **ZOL2206:** FISHERIES AND AQUACULTURE – II
- **ZOL2207:** GENERAL AND APPLIED ENTOMOLOGY – II
- **ZOL2208:** GENERAL AND APPLIED TOXICOLOGY – II

MSc Zoology - Course Details

MSC Final SEMESTER III

- **ZOL2301:** ANIMAL PHYLOGENY
- **ZOL2302:** ETHOLOGY AND EVOLUTIONARY BIOLOGY
- **ZOL2303:** ENDOCRINOLOGY
- **ZOL2304:** IMMUNOLOGY

PRACTICAL

- **ZOL2305:** PRACTICAL - I: ANIMAL PHYLOGENY, ETHOLOGY AND EVOLUTIONARY BIOLOGY
- **ZOL2306:** PRACTICAL - II: ENDOCRINOLOGY
- **ZOL2307:** PRACTICAL - III: IMMUNOLOGY

OPTIONAL SUBJECT

- **ZOL2308:** AVIAN BIOLOGY AND WILDLIFE BIOLOGY – III
- **ZOL2309:** FISHERIES AND AQUACULTURE – III
- **ZOL2310:** GENERAL AND APPLIED ENTOMOLOGY – III
- **ZOL2311:** GENERAL AND APPLIED TOXICOLOGY – III

OPTIONAL PRACTICAL

- **ZOL2312:** AVIAN BIOLOGY AND WILDLIFE BIOLOGY – III
- **ZOL2313:** FISHERIES AND AQUACULTURE – III
- **ZOL2314:** GENERAL AND APPLIED ENTOMOLOGY – III
- **ZOL2315:** GENERAL AND APPLIED TOXICOLOGY – III
- **ZOL2317:** PRACTICAL V: PROJECT PROPOSAL WRITING AND PRESENTATION
- **ZOL2318:** SEMINAR

MSC Final SEMESTER IV

ZOL2401: DEVELOPMENTAL BIOLOGY

ZOL2402: PHYSIOLOGY OF MAMMALIAN SYSTEMS

ZOL2403: ANIMAL BIOTECHNOLOGY

ZOL2404: BIODIVERSITY AND CONSERVATION BIOLOGY

PRACTICAL

ZOL2405: PRACTICAL - I: DEVELOPMENTAL BIOLOGY

ZOL2406: PRACTICAL - II: PHYSIOLOGY OF MAMMALIAN SYSTEMS

ZOL2407: PRACTICAL - III: ANIMAL BIOTECHNOLOGY AND CONSERVATION BIOLOGY

OPTIONAL SUBJECT

- **ZOL2408:** AVIAN BIOLOGY AND WILDLIFE BIOLOGY IV
- **ZOL2409:** FISHERIES AND AQUACULTURE – IV
- **ZOL2410:** GENERAL AND APPLIED ENTOMOLOGY – IV
- **ZOL2411:** GENERAL AND APPLIED TOXICOLOGY – IV

OPTIONAL PRACTICAL

- **ZOL2413:** DISSERTATION
- **ZOL2414:** PRACTICAL - IV - ANIMAL HANDLING AND DATA ANALYSIS
- **ZOL2415:** VIVA VOCE

Field-based M.Sc. Practicals includes visits to Zoological Parks, Aquaria, Dairy Farm, Poultry Farm, Aquaculture center, Wetlands, grasslands, coastal areas and other ecosystems. Also trips are made to relevant industrial labs, Animal house facilities.

ADMISSION PROCEDURE

The application form is to be filled online only. A student willing to apply for more than one MSc Program should submit separate application for each and **the application form fee in such cases will have to be paid separately for each course/program.** The students who have applied and fulfill the criteria of **minimum qualifications for eligibility** can appear in the entrance examination. **A written Entrance Test will be conducted for deciding admission to each programme. The admissions will be strictly based on the merit of marks obtained in written Entrance Test.**

INTAKE CAPACITY: 36 SEATS

ELIGIBILITY CRITERIA

The admission is based on the merit of entrance test only. To appear in entrance test, following eligibility criteria is to be fulfilled:

1. A student with B. Sc. or an equivalent degree (10+2+3 pattern of education) in the relevant subject from a university in any state or Union Territory of India or a global University/ Education Institution recognized by The Maharaja Sayajirao University of Baroda is eligible. The minimum marks/ grade points in qualifying examination shall be as follows:

i. **For general category candidates**

50% or equivalent grade points (considering all the three years).

ii. **For SC/ST candidates**

Must have passed qualifying examination.

iii. **For SEBC candidates**

45% or equivalent grade points for applicants from Gujarat and 50 % or equivalent grade points for applicants from other states and Union Territories in India.

2. Candidates who have appeared for final year of the qualifying examination may also apply and appear in the Entrance Test. However, their admission will be confirmed only on the submitting original marksheet of the qualifying examination and fulfillment of eligibility requirement, at the time of Admission

CRITERIA FOR CASTE-WISE RESERVATION AND OTHER QUOTA

Government of Gujarat rules for the reservation quota will be applied: SC: 7%, ST: 15%, SEBC: 27%, General: 51%. All original certificates should be produced at the time of document verification and admission.

If any relevant certificate is not produced at the time of admission, the student will NOT be considered for particular reservation category.

A student, irrespective of her/his reservation category, for admission, will be first considered for GENERAL category.

- a. The **SC and ST students of other than the Gujarat state** should produce a certificate from competent authority of Government of Gujarat if their original certificate DO NOT indicate that their caste / Tribe is recognised under such category in Gujarat also.
- b. The **SEBC category** are required to produce a valid **non creamy layer certificate** from competent authority .
- c. There will be **10 %** supernumerary seat **(additional seats over and above the total number of seats)** reservation of the total seats for **Economically Weaker Sections (EWS)**. Within this 10% quota, **33%** seats shall be further sub-reserved for female students belonging to the same Economically Weaker Sections.
- d. **Reservation for physically disabled students: 5%** seats of the total seats (to be included under each different category with in the limit of total reservation under a particular reservation category like SC/ST/SEBC/GEN) are reserved for the persons with benchmark disability in accordance with the provisions of the section 32 of the rights of persons with Disabilities ACT, 2016. They should produce a **current/recent year certificate of Civil Surgeon** stating the type of disability, **extent (%) of disability and state (Progressive/ non-progressive)** of disability. Only those students who have **minimum 40% disability** are eligible to be considered for the reservation.
- e. **Reservation for Defence & Ex/In- Servicemen: 1%** seats of the total seats (to be included under each different category with in the limit of total reservation under a particular reservation category like SC/ST/SEBC/GEN) are reserved for wards of Defence & Ex/In-Servicemen.

CRITERIA FOR CASTE-WISE RESERVATION AND OTHER QUOTA

- f. **Reservation for Kashmiri Migrants: 1% supernumerary seat reservation quota** (Additional seats, NOT included under each different category with in the limit of total reservation under a particular reservation category like SC/ST/SEBC/GEN).
- g. **Advantage to Sports Persons: Please note that the benefit to sports persons is granted ONLY if the student has participated/ awarded medals in State level or higher level competitions.**
- Students who participated at State level: 3% marks to be added to their eligibility marks
 - Students who won medal at State level or participated at National level: 5% marks to be added to their eligibility marks
- Students who have won medal at National level or participated / won medal at International level: to be granted Direct admission.
- h. **Reservation for wards of MSU Staff: 01% supernumerary seat reservation quota** (Additional seats, NOT included under each different category with in the limit of total reservation under a particular reservation category like SC/ST/SEBC/GEN) only in Regular Payment Fee Category for the wards of the permanent or temporary employees of The Maharaja Sayajirao University of Baroda. They should produce relevant documents at the time of admission.
- i. If the seats remain vacant after stipulated admission rounds in the SC or ST reservation categories, then these seats can be interchanged among SC and ST.
- j. After granting admission to all the students of any reserve category on respective reserve seats, if the reserved category seats remain vacant then these seats shall be transferred to General (Unreserved) category seats.

Supernumerary seats which remain vacant shall NOT be transferred to any other category.

**Admission Fees is to be paid through online mode only.
CASH/CHEQUE OR ANY OTHER MODE OF TRANSACTION NOT ACCEPTED**

INSTRUCTIONS TO THE CANDIDATES

1. The admissions will be strictly based on the merit. Just fulfilling the eligibility criteria DOES NOT GUARANTEE admission.
2. The admission to the course is PURELY TEMPORARY and subjected to various scrutiny till the unique Permanent Registration Number (PRN) of the candidate is generated.
3. If the information provided by the candidate is incorrect or if any unfair practice is followed or the candidate is unable to submit any of the required certificates in the stipulated time period, his/ her admission is liable to cancellation.
4. **Maintenance of Stipulated Attendance of Students (Ordinance 183)** The following shall be the minimum attendance necessary:
 - a. In a semester an overall attendance of **at least 75%** of the number of lectures delivered and tutorials, seminars etc. arranged in all subjects, provided the total attendance in each of the subjects offered is **at least 60%**.
 - b. In a semester an overall attendance of **at least 80%** of the days allotted for practical classes and laboratory work in each subject.
5. **General rules governing the conduct of students in the university:**
 - i. A student must do nothing either inside or outside the University that will interfere with
 - ii. its orderly working and discipline.
 - ii. This comprehensive rule covers most cases that are likely to arise. It forbids:
 - a. Impolite or unseemly behaviour in classroom or University premises during working hours of the College and the Faculty.
 - b. Attempt to persuade other students to abstain themselves from regular classes.
 - c. Damage to or defacement of University furniture, fittings and property.
 - d. Disobedience of notifications or instructions issued by the Principals/Deans/Heads of the Departments and Members of the staff duly authorized.
 - iii. As per UGC regulation, stipulated attendance (Ordinance 183) is required for permitting students to appear for final examination. If unavoidably absent on account of health, urgent private affairs or other reasons, they must be prepared to state the exact reason for absence.
 - iv. Students are expected to behave with courtesy towards the members of the staff, their fellow students and all visitors to the Institution.
 - v. Sexual harassment will lead to severe punishments like suspension, rustication from the University / College/ Institution. Disciplinary action is as prescribed under The M. S. University of Baroda rules.

INSTRUCTIONS TO THE CANDIDATES

- vi. Ragging is prohibited on MSU Campus, ragging is a criminal offence and is liable to severe punishment, including suspension, rustication and imprisonment.
- vii. Compulsory Thalassemia Blood Screening: Thalassemia blood testing is made compulsory by Government of Gujarat. Final Eligibility of any student for admission to any course to this University will be granted ONLY after she/ he submits report of the Thalassemia blood screening. Students are encouraged to get the test done and submit the report at the time of Admission. Those students who already have a Thalassemia Test Report done earlier, need not get it done again. They can submit copy of earlier report.

GRADE POINT SYSTEM

A system comprising of 7 grade points (4 to 10) will be followed for evaluating a candidate in every course. Both mid-semester and end-semester exams are counted for final grade points.

Grade Points	Description	Percentage of Marks	Division/Grade	Range
10	Outstanding	90% - 99%	First / O	Above 9.01
9	Excellent	80% - 89%	First / A	8.01 – 9.00
8	Very Good	70% - 79%	First / B	7.01 – 8.00
7	Good	60% - 69%	First / C	6.01 – 7.00
6	Fair	50% - 59%	Second /D	5.01 – 6.00
5	Average	40% - 49%	Pass / E	4.01 – 5.00
4 – 0	Dropped	Below 40%	F	Below 4.00

CGPA	Class
CGPA < 4	Fail
4 = CGPA < 5	Pass Class
5 = CGPA < 6	2nd Class
6 = CGPA < 7	1st Class
CGPA ≥ 7	Distinction

$$\text{Grade Point Average} = \frac{\sum (\text{Credit} \times \text{Grade Point})}{\text{Total Credits}}$$

AWARD OF CLASS

Marks-sheets of semester I to III of M. Sc. will simply indicate result as either Pass or Fail or ATKT but not the class which will be indicated in the last Semester mark sheet.

Cumulative Grade Point Average (CGPA) is computed as:

$$\text{CGPA} = \frac{\sum (\text{Semester credits} \times \text{GPA})}{\text{Total Semester Credits}}$$

The sum is taken over from Sem-I to Sem-IV for M. Sc.

CRITERION FOR M.Sc. DEGREE AWARD

For obtaining M.Sc. degree in any subject, a candidate has to earn minimum 100 credits in all during the programme.

Website: www.msubaroda.ac.in

FACULTY DETAILS

The faculty members of the Department of Zoology are experienced, well qualified and trained in reputed Institutes in India and abroad. Each of them have a good track record in terms of research and publications.

TEACHING FACULTY DESIGNATION

Dr. P.C. Mankodi	Professor
Dr. Dolly Kumar	Professor & Head
Dr. Pragna H Parikh	Professor
Dr. Geeta S Padate	Professor
Dr. Kauresh D Vachhrajani	Professor
Dr. B. Suresh	Professor
Dr. Vihas Vasu	Professor
Dr. Prakash Pillai	Assistant Professor
Dr. Hetal Roy	Assistant Professor
Dr. Ranjithsinh Devkar	Assistant Professor
Dr. U. K. Gowri Kumari	Assistant Professor

THRUST AREAS OF RESEARCH

Animal Diversity, Systematics & Ecology

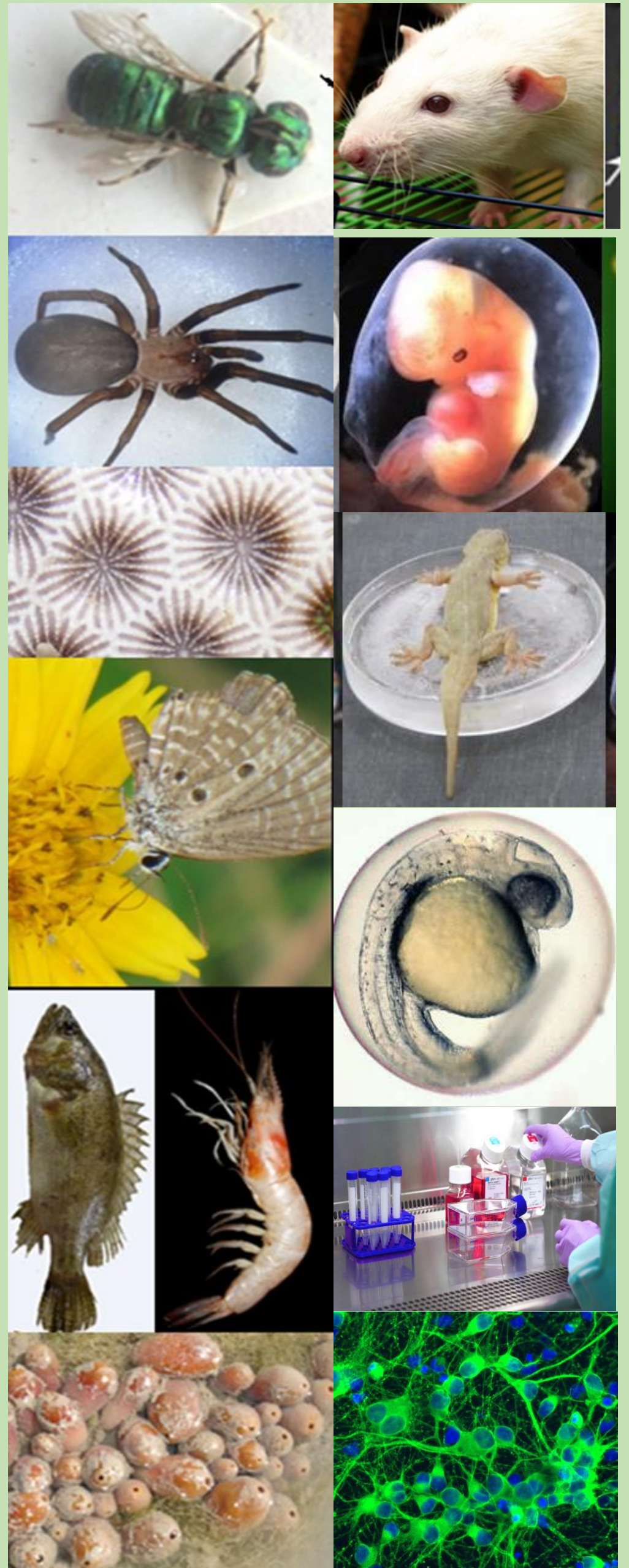
Development, Regeneration & Toxicology

Genomics & Systems Biology

Nutrition & Cancer Biology

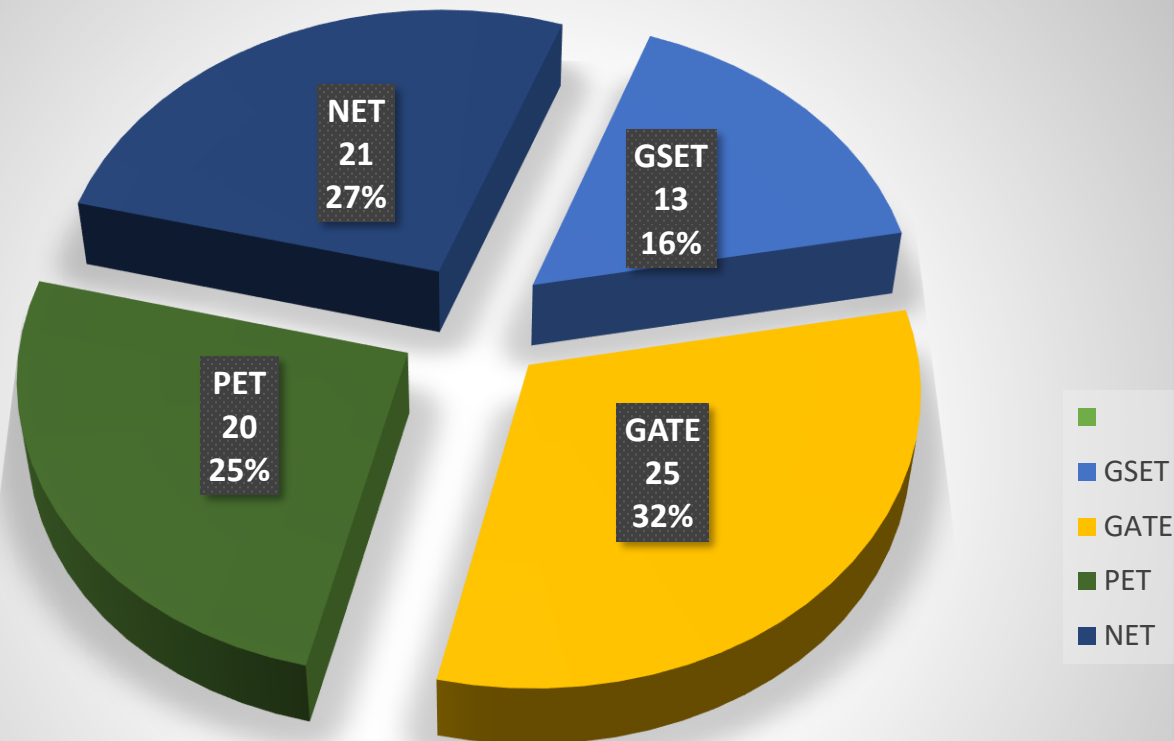
Metabolic Physiology, Endocrinology & Disease Biology

Cellular & Molecular Neuroscience

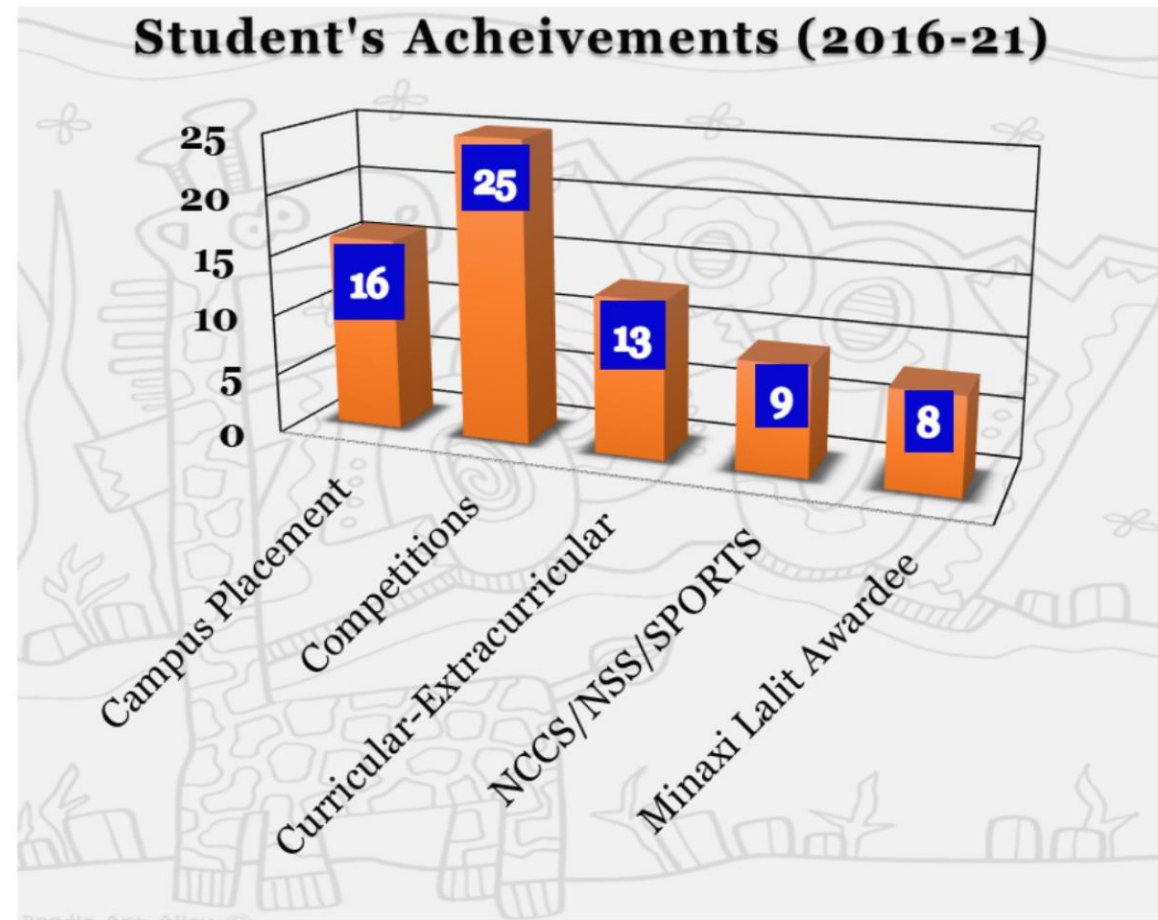


STUDENTS' ACHIEVEMENTS AND ACTIVITIES

Our students at the UG, PG and research levels, cleared various National competitive exams. They also participate in various national and international conferences, conduct and participated in various activities favoring wildlife conservation and seek knowledge in the field.



Competitive Exams cleared by students
2016-21



FACILITIES AVAILABLE

The Department of Zoology has spacious well ventilated classrooms with LCD projectors, museums with an outstanding collection of various animal models, specimen, fossils and an osteology section; well facilitated library, seminar room, research laboratories, Wi-Fi and LAN facility and Water Cooler with RO facility.



OUTSTANDING ALUMINI

Prof. Ramesh Goyal
Vice Chancellor,
Delhi Pharmaceutical Sciences & Research University, Delhi



Dr Vinay Bhargav, Divisional Forest Officer, Pithoragarh



Wg Cdr Anil Kumar Yadav
Senior Flight Operations Inspector (Aeroplane)
DGCA, the Indian Civil Aviation Regulator



Dr. Smriti Iyengar
Program Director at NINDS/NIH, Bethesda, Maryland, U.S.A.



Dr Manju Siliwal
Women Scientist - DST, Wildlife Institute of India
Dehradun, Uttarakhand, India



FACULTY ADMINISTRATION

The M. S. University of Baroda Admission Portal:
admission@msubaroda.ac.in

The information contained herein is for general guidelines only.

For further information contact Faculty Administration:

Prof. Haribhai Kataria
Dean, Faculty of Science
E-mail: dean-science@msubaroda.ac.in

Dr. R N Jadeja: Dean of Students
E-mail: deanstudents-science@msubaroda.ac.in

Ms. Shilpa Gupta: Dean of Sports
E-mail: deansports-science@msubaroda.ac.in

Dr. Rupal Shah, Dr. Dharmendra Shah: Teacher Supervisors
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Dr. M N Srinivas: Coordinator, Sir C V Raman Block
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Office Superintendent: Mr. K M Damor
Ph: 0265 2795329 (office)
Mob: 8141332160 (during office hours only)



The full-blown lotus growing out of the lake symbolises the emergence of the mind and its triumph over matter. The flame rising from the center of the lotus is the flame of the human knowledge, spreading light and learning for the coming generations. The motto inscribed below the lotus defines the purpose and existence of life which is love of beauty, goodness and intellectual curiosity."

महाराजा सयाजीराव विश्वविद्यालय गीत

अमे वडोदराना विद्यापीठना सपना सारवनारा
अमे ज्योत जलावी सृष्टी नवली सहसा सर्जनहारा.

अमे गगमकुसुम कर धरनारा
अमे मगन मगन थई फरनारा
अगन बाथ अमे भरनारा
अमे दैन्यतिमिरने हरनारा.

श्री सयाजी विद्यापीठना ज्ञानदीपने धरनारा
सत्यं शिवं सुन्दरम् नो मंत्र अनंतर भणनारा.

श्री सयाजी विद्यापीठना



**Admissions open for Gujarat's leading State University
The Maharaja Sayajirao University of Baroda
For details visit
admission.msubaroda.ac.in**

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