# DEPARTMENT OF MICROBIOLOGY AND BIOTECHNOLOGY CENTRE

## **FACULTY OF SCIENCE**

M. Sc. in Microbiology M.Sc. in Biotechnology Prospectus and Admission Guidelines 2021(onwards)







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 thebroadest sense, must be spread everywhere.

Progress can only be achieved by the spread ofeducation.

Cooperation is necessary to achieveany worthy end and this readiness to cooperate will not be found in people if they are not educated.

#### Message from the HOD's desk

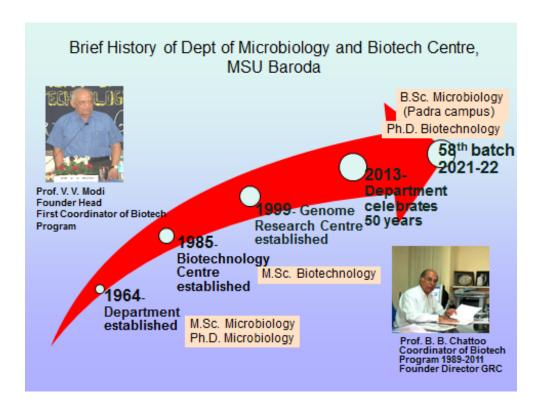
Microbiology and Biotechnology are important disciplines of Biology and highly skilled professionals in these fields are in demand in various sectors of Industry and academia. The department of Microbiology and Biotechnology Centre located at the Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara provides a vibrant environment with a state of art facilities and highly qualified faculty. The department works with the objective of imparting students the excitements and challenges in the field. Both the Master's Programs are interwoven with common as well as unique features and provide students all round development to excel in their future careers. I welcome you to become part of the Department and together, we will partake in contributing to your success.



Prof G. Archana, Head, Department of Microbiology and Biotechnology Centre

#### About the Department of Microbiology

The Department of Microbiology was established in Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat in 1964 and has been offering Master's in Microbiology and Ph.D. in Microbiology since then. Since 1985-86, it has received the status of Biotechnology Centre and since then Biotechnology training programme was started which offers M.Sc. degree in Biotechnology to students admitted by the centralized admission test conducted by The Department of Biotechnology, Govt of India. Both courses continue to be very popular, attracting brilliant students from all over the country.



#### **Courses offered:**

- M. Sc. (Microbiology) (Since 1964)
- M. Sc. (Biotechnology) (Through GATB earlier CEEB)(Since 1985)
- Ph. D. (Microbiology) (Since 1964)
- Ph.D. (Biotechnology) (Since 2017)
- B.Sc. Microbiology 2020 (M.K. Amin College, Padra, High Payment)(Since2020)

## **PROGRAMMES OFFERED**

Title of the Program	M.Sc. (Microbiology)	
Title of the Program	IVI.3C. (IVIICIODIOIOGY)	
Level	Post-Graduation	
Duration	2 years	
Admission by	Open test	
Regular/Part-time	Regular	
Sanctioned intake	25 seats	
Grant-in-aid/ Higher Payment	Grant-in-aid (20 seats) Higher Payment (5 seats)	
Eligibility	SEE IN ADMISSION PROCEDURE	
Title of the Program	M.Sc. Biotechnology	
Level	Post-Graduation	
Duration	2 years	
Admission by	Graduate Aptitude test – Biotechnology (GAT-B)	
	(conducted by RCB)- https://rcb.res.in/DBTPG/	
Regular/Part-time	Regular	
Sanctioned intake	30 seats	
Grant-in-aid/ Higher Payment	Grant-in-aid (DBT supported)	
Eligibility	Students who have cleared GAT-B examination can file an online application. Admissions are based on merit of GAT-B. For confirmed admission; student should have minimum eligibility at qualifying exam mentioned in Admission Procedure.	

#### **COURSE STRUCTURE**

## M.Sc. Microbiology:

Sr. No.	Subject	Credits (Hours/week)	Exam Marks
	SEMESTER 1		ı
1.	MBY2101C01 General Microbiology, Systematics and Diversity	3	100
2.	MBY2102C02 Immunology	3	100
3.	MBY2103C03 Biochemistry-I :-	3	100
4.	MBY2104C04 Genetic Engineering :-	3	100
5.	MBY2105C05 Environmental Microbiology	3	100
6.	MBY2106C06 Practical-I	8	100
	Total	23	600
	SEMESTER 2	1	1
1.	MBY2201C01 Bioanalytical Techniques and Biostatistics	3	100
2.	MBY2202C02 Medical Microbiology	3	100
3.	MBY2203C03 Biochemistry-II	3	100
4.	MBY2204C04Molecular Biology-I	3	100
5.	MBY2205C05 Microbial Ecology, Food and Dairy Microbiology	3	100
6.	MBY2206C06 Practical-II	7	100
7.	MBY2207C07 Seminar-I	2	50
8.	MBY2208C08 Dissertation-I	2	50
	Total	26	700
	SEMESTER 3		I
1.	MBYxxxx Molecular Biology-II	3	100
2.	MBYxxxx Biochemical Engineering and Fermentation Technology	3	100
3.	MBYxxxx Cell Biology and Enzymology-I	3	100
4.	MBYxxxx Genomics, Proteomics and Bioinformatics	3	100
5.	MBYxxxx Microbial and Mendelian Genetics	3	100
6.	MBYxxxx Seminar-II	2	50
7.	MBYxxxx Dissertation-II Dissertation	2	50
8.	MBYxxxx Practical-III	6	100
	Total	25	700

SEMESTER 4				
1.	MBYxxxx Cell Biology and Enzymology-II 3 100			
2.	MBYxxxx Microbial Physiology, Molecular	3	100	
	Pathogenesis, IPR and Nanobiotechnology			
3.	MBYxxxx Microbial differentiation and	3	100	
	Adaptation			
4.	MBYxxxx Seminar-III	2	50	
5.	MBYxxxx Viva 2 50			
6.	MBYxxxx Dissertation-III	7	100	
7.	MBYxxxx Practical-IV	4	50	
8.	ELECTIVE	2	50	
	MBYxxxx			
	Microbial Technology			
	MBYxxxx			
	IPR,Metagenomics,Research Methodology			
and Scientific Communication				
	Total	26	600	

## M.Sc. Biotechnology:

Sr. No.	Subject	Credits (Hours/week)	Exam	
			Marks	
	SEMESTER 1			
7.	BTY2101C01 General Microbiology	3	100	
8.	BTY2102C02 Immunology	3	100	
9.	BTY2103C03 Biochemistry-I :-	3	100	
10.	BTY2104C04 Genetic Engineering :-	3	100	
11.	BTY2105C05 Environmental Biotechnology	3	100	
12.	12. BTY2106C06 Practical-I:-		100	
Total		23	600	
	SEMESTER 2			
9.	BTY2201C01 Bioanalytical Techniques and Biostatistics	3	100	
10.	BTY2202C02 Medical Microbiology	3	100	
11.	BTY2203C03 Biochemistry-II	3	100	
12.	BTY2204C04Molecular Biology-I	3	100	
13.	BTY2205C05 Microbial Ecology, Food and Dairy Microbiology	3	100	
14.	ELECTIVE BTY2208C08Clinical Immunology & Vaccinology/ BTY2209C08Nanobiotechnology	2	50	

15.	BTY2206C06 Practical-II	7	100
16.	BTY2207C07 Seminar-I	2	50
	Total	26	700
	SEMESTER 3		
9.	BTYxxxx Molecular Biology-II	3	100
10.	BTYxxxx Biochemical Engineering and	3	100
	Fermentation Technology		
11.	BTYxxxx Cell Biology and Enzymology-I	3	100
12.	BTYxxxx Genomics, Proteomics and Bioinformatics	3	100
13.	BTYxxxx Eukaryotic Genetics	3	100
14.	ELECTIVE: BTYXXXX Pharmaceutical	2	50
	Biotechnology/		
	Nanobiotechnology		
15.	BTYxxxx Seminar-II	2	50
16.	BTYxxxx Dissertation-I	2	50
17.	BTYxxxx Practical-III	6	100
	Total	27	750
	SEMESTER 4		
9.	BTYxxxx Cancer Biology and Enzymology	3	100
10.	BTYxxxx Drug Discovery, Molecular	3	100
	Medicine, Regulatory affairs		
11.	BTYxxxx Seminar-III (Project Proposal)	2	50
12.	BTYxxxx Viva	2	50
13.	BTYxxxx Dissertation-III	12	200
14.	BTYxxxx Industrial training	2	50
	Total	24	550

### **Faculty Members and Research Areas**



Prof. G Archana, Head, Department of Microbiology

Plant Beneficial Microbes, Soil bacterial diversity, Probiotics



**Prof. Sanjay Ingle** 

Biocontrol of Pests, Endophytes of medicinal plants, malarial parasites



Prof. Anuradha Nerurkar

Microbial Biosurfactants, Bacterial Biofilms, Biocontrol of plant pathogens



Dr. Pranav Vyas,

**Water Microbiology** 



Prof. Devarshi Gajjar, Coordinator Biotechnology

Bacterial and fungal pathogenesis, antimicrobial resistance



Dr. Ratika Srivastava

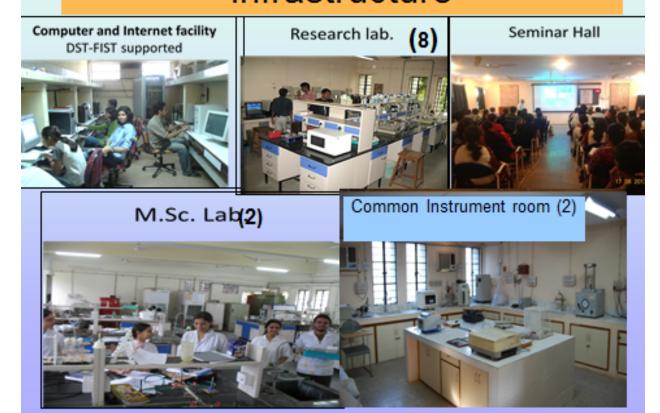
Cancer biology, Immunology, therapeutics



**Dr Nandita Baxi** 

Microbial Polymer Production, Bacterial degradation of Xenobiotics

## Infrastructure



# Notable alumni

Ph.D (1982)



C. S. Nautiyal Ex-Director, NBRL Lucknow

Ph.D (1969)



**AuturMatoo** Retd. Research plant physiologist USDA Maryland, USA

M.Sc. (1985)



Dipankar Nandi Professor **IISC** Bangalore

Ph.D (1979)



Satya Dandekar Prof. & Chair, UC-Davis, USA

M.Sc. (1985)



Tushar Vaidya Scientist CCMB, Hyderabad

M.Sc. (1984)



Venu Raman Johns Hopkins, School La Trobe Institute. of Medicine, USA

M.Sc. (1986)



Utpal Tatu Professor **IISC** Bangalore

Ph.D (1991)



Hamsa Puthakath Australia

## Alumni (M.Sc. Biotechnology)

M.Sc. 1999



ASSOCIATE PROFESSOR,
UNIVERSITY of WISCONSIN-MADISON

M.Sc. 1980



Dr. Agam P Singh Senior Scientist, NII, Delhi

M.Sc. 2000



Dr. Kavita Babu, Associate Professor ISSER Mohali

M.Sc. 1987



Prof. Prashant Phale **IIT Bombay** 

M.Sc 1998



Subhankar Roy-Barman Assistant Professor, NIT, Durgapur, W.B.

M.Sc. 2010



Dr Vivek Singh, Scientist LVPEI

## **Students Achievements**

Number of students placed through campus Interviews			
	Dr.Reddy's  Zytex Healthineers  SIEMENS Healthineers  PHARMA		
2017-18	2018-19	2019-20	2020-21
9 (Micro)	(Micro) 10(Micro) 14(Micro		
13(Biotech)	3(Biotech) 12(Biotech)		

Number of students clearing National Level exams (2019-21 batch)		
2019-2021 Micro	2019-2021 BT	
GATE -6	<u>GATE 11</u>	
TIFR 6	<u>TIFR 6</u>	
MSU PET 1	CSIR NET 1	
NET JRF 1	NET LS 2	
NRT LS 1	ACTREC 3	

#### **Some Recent Publications from the Department:**

- **1.** Gangavarapu, S., Kumar, K., Shah, A. P., Maurya, D. M., Sharma, A., Chamyal, L. S., & **Archana, G**. (2021). Geochemical characteristics control potential microbial activity in exposed Late Quaternary alluvial deposits. *Pedobiologia*, 150747.
- **2.** Vora, S. M., Joshi, P., Belwalkar, M., & **Archana, G**. (2021). Root exudates influence chemotaxis and colonization of diverse plant growth promoting rhizobacteria in the pigeon pea-maize intercropping system. *Rhizosphere*, *18*, 100331.
- **3.** Shah, A. P., & **Archana, G.** (2021). Evaluation of bacterial strains isolated from Late Quaternary alluvial sediments spanning~ 28 m in depth for heavy metal tolerance and Cr (VI) removal ability. *International Microbiology*, 1-14. 4.. Swati N. Madhu1, Savitri Sharma2, **Devarshi U Gajjar**. Identification of Proteases: Carboxypeptidase and Aminopeptidase as Putative Virulence Factors of Fusarium solani Species Complex. The Open Microbiology Journal. 2020. (14) 266-277.
- 5.Som j.lakhani, Siddhi k chavan, Rashmi mahajan, **Devarshi u Gajjar**. Molecular Identification of Fungi causing Superficial Mycoses. International Jr. of Pharmaceutical Research 13 (1), 3509-3520. 2021.
- 6.Upadhyay Shivam U, Chavan Siddhi K, **Gajjar Devarshi U**, Upadhyay Umeshkumar M, Patel Jayvadan K, Nanoparticles laden In situ gel for sustained drug release after topical ocular administration. Journal of Drug Delivery Science and Technology, 57,2020,101736.
- 7. Shobha V, Mohan A, Malini AV, Chopra P, Karunanithi P, Subramani Thulasingam S, Selvam S, Deyati A, **Srivastava R,** Basavanthappa S, Lemos N, Sunitha SM, Mazumder Tagore D, Anand A, Pant S, Jayaswal V, Ramarao M, Dudhgaonkar S. Identification and stratification of systemic lupus erythematosus patients into two transcriptionally distinct clusters based on IFN-I signature. Lupus. 2021 Jan 26:961203321990107. PMID: 33497307.
- 8. Christopher P Mussari, Dharmpal S Dodd, Ratna Kumar Sreekantha, Laxman Pasunoori, Honghe Wan, Shana L Posy, David Critton, Stefan Ruepp, Murali Subramanian, Andrew Watson, Paul Davies, Gary L Schieven, Luisa M Salter-Cid, **Ratika Srivastava**, Debarati Mazumder Tagore, Shailesh Dudhgaonkar, Michael A Poss, Percy H Carter, Alaric J Dyckman. Discovery of Potent and Orally Bioavailable Small Molecule Antagonists of Toll-like Receptors 7/8/9 (TLR7/8/9). ACS Med Chem Lett. 2020 Jul 29;11(9):1751-1758.
- 9. Singh, A.A., Singh, A.K. & **Nerurkar, A.** Disrupting the quorum sensing mediated virulence in soft rot causing Pectobacterium carotovorum by marine sponge associated Bacillus sp. OA10. World J Microbiol Biotechnol 37, 5 (2021).
- 10. **Anuradha Nerurkar**, Roshni J. Patel, Upendra D. Patel Moving bed biofilm reactor developed with special microbial seed for denitrification of high nitrate containing wastewater World Journal of Microbiology and Biotechnology accepted 2021 March
- 11. Anoop Markande and **Anuradha Nerurkar**"Analysis of nutritional factors influencing the biosynthesis of amyloid bioemulsifier BE-AM1 applicable in food industry" Journal of microbiology, biotechnology and food sciences Accepted March 2021

- 12. Jaswinder Kaur Saini and **Sanjay Ingle**. Antiplasmodial activity of extracts and characterization of the most active extract from Commiphora wightii: A data deficient medicinal plant. World journal of pharmaceutical research 10(1): 1517-1529(2021).
- 13. Dave A and **Ingle S**. Optimization of fermentation conditions for enhanced antifungal metabolite production by streptomyces sp. s-9 isolated from pigeon pea rhizosphere. International Journal of Biology, Pharmacy and Allied Sciences 9(1): 2483-2495(2020)

Come, be a part of the Legacy.....



#### ADMISSION PROCEDURE (FOR MSc MICROBIOLOGY)

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: 25(GIA+HP)** 

# 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. <u>For general category candidates</u>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.

#### ADMISSION PROCEDURE (FOR MSc BIOTECHNOLOGY)

The application form is to be filled online only. **Application for** M.Sc. Biotechnology will open only after the merit list of **GAT-B exam is declared.** Students in the GAT-B Merit list can apply for M.Sc. Biotechnology Program and should submit separate application form. The application form fee in Biotechnology will be nominal (Rs 50/-). A merit list of the students who have applied at MSU and fulfill the criteria of minimum qualifications for eligibility will be prepared and confirmed admission will be given as per the list. The admissions will be strictly based on the merit of marks obtained in GAT-B Entrance Test and the category wise provided by Regional Center merit list Biotechnology(RCB).

**INTAKE CAPACITY: 30 seats** 

#### **ELIGIBILITY CRITERIA**

The admission is based on the merit of only GAT-B entrance exam.

#### 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 <u>first considered for GENERAL category</u>.

- 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 (<u>additional seats over and above the total number of seats</u>) reservation of the total seats for <u>Economically Weaker Sections</u> (<u>EWS</u>). 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 <a href="current/recent">current/recent</a> year certificate of Civil Surgeon stating the type of disability, extent (%) of disability and and another type 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.
- 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.
  - i. Students who participated at State level: **3%** marks to be added to their eligibility marks
  - ii. 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 thereserved 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 withits 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.
- 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.

	Description	Percentag	Division/Gr	Range
Grade		е	ade	
Points		of Marks		
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	F NYP	Below 4.00
		40%	Sh.	1

CGPA	Class
CGPA < 4	Fail
4 = CGPA < 5	<b>Pass Class</b>
5 = CGPA < 6	2nd Class
6 = CGPA < 7	1St Class
CGPA ≥ 7	Distinction

Grade Point Average = ∑ (Credit X Grade Point) / 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: CGPA =  $\sum$  (Semester credits X GPA) / 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

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: <a href="mailto:deansports-science@msubaroda.ac.in">deansports-science@msubaroda.ac.in</a>

Dr. Rupal Shah, Dr. Dharmendra Shah: Teacher Supervisors E-mail: <u>ts-science@msubaroda.ac.in</u>

Dr. M N Srinivas: Coordinator, Sir C V Raman Block E-mail: unitcordinator-science@msubaroda.ac.in

Ms. Bharati M Pamnani: CBCS Coordinator E-mail: cbcscoordinator-science@msubaroda.ac.in

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.

Leonar 42011