

FACULTY OF SCIENCE

PROSPECTUS AND ADMISSION GUIDELINES FOR UNDERGRADUATE PROGRAMME (2016)



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

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA

FACULTY OF SCIENCE

Faculty of Science is a constituent institution of The Maharaja Sayajirao University of Baroda under its direct management and control. Faculty began as an integral part of Baroda College which was founded by Late **His Highness Sir Sayajirao Gaekwad of Baroda** in the year 1881. He also started the Sayaji Jubilee Institute in 1933 and housed all science subjects under it. Foundation stone of Sayaji Jubilee institute was laid by Sir Daniel Rufus Isaacs, then Viceroy and Governor General of India in 1926. The efforts of establishing a Residential University at Baroda was initiated by Maharaja Sayajirao in 1908, but it became a reality only during the rule of Late His Highness Pratapsinhrao Gaekwad. The Maharaja Sayajirao University of Baroda came into existence on 30th April 1949. Through the constitution of the University all the science departments were reconstituted as Faculty of Science.

Since 1949, the faculty offers courses leading to B.Sc., M.Sc., and Ph.D. degrees in Botany, Chemistry, Geography, Geology, Mathematics, Physics, Statistics and Zoology. Later, Departments of Microbiology and Biochemistry were added, which offers postgraduate courses. In recent years, Department of Computer Applications and Environment Studies were added which offer courses in B. C. A., B.Sc., M.Sc., and Ph.D. degrees.

The Faculty of Science steadily made significant strides in various disciplines of science and attracted students from all over India and from other countries. It soon developed into a cosmopolitan center of education. The growth of the faculty thus amply complimented the pioneering efforts of the great visionary, Maharaja Sayajirao, who had taken great pains to improve science education.

B. Sc. (Honors) PROGRAMME

This is an undergraduate degree programme of three years (six semesters) duration and comprises of 144 credits. Each year will be divided into two semesters.

CREDIT SYSTEM

A student of B.Sc. (Hons.) Programme, under Choice Based Credit System, is required to choose three types of courses viz., Core (Principal and Subsidiary) courses, Elective courses and Foundation courses. Core (Principal) subject is the subject in which the student will be awarded B. Sc. (Hons.) degree after successfully earning 144 credits. A theory course requiring instructions of 1 hour per week per semester is considered as ONE CREDIT theory course. In case of practical course, ONE CREDIT requires 2 hours laboratory teaching per week per semester.

CREDIT DISTRIBUTION

Semester	Core courses		Elective	Foundation	Total
	Principal	Subsidiary			
I	8	8	4	4	24
II	8	8	4	4	24
III	8	8	4	4	24
IV	8	8	4	4	24
V	20	0	2	2	24
VI	24	0	0	0	24
Total	76	32	18	18	144
Grand Total	108		18	18	144

ELIGIBILITY CRITERIA

1. A candidate should have passed the qualifying examination with **A (Mathematics), B (Biology) or AB (Mathematics and Biology) group** from the Gujarat Higher Secondary Examination Board (GHSEB) or the Central Board of Secondary Education (CBSE) or the Council of Indian School Certificate Examination (ISC), National Institute of Open Schooling (NIOS) or an equivalent board.
2. A candidate who has passed the qualifying examination after appearing in the supplementary examination conducted by the GHSEB shall also be eligible for admission in the current academic year based on availability of seats. Their admission will be scheduled separately after their results are declared. Admission dates will be declared on the University website and news papers.
3. **The average of FOUR SEMESTER theory marks of three science subject only will be considered for eligibility. In case of other states where ANNUAL SYSTEM still exists, 12th std. marks of three science subject only will be considered for eligibility.**

For students of AB group, if they are desirous to take admission to A group subjects, they should fill up Mathematics, Chemistry and Physics theory marks in the application and those who are desirous to take admission to B group subjects should fill up Biology, Chemistry and Physics theory marks in the application.

4. **Minimum Eligibility marks for students of different categories** (four semester average of three science subjects theory):

Region	General	SC/ ST#	SEBC@	Physically Handicapped**
Vadodara District	40%	PASS	35%	37%
Other Districts of Gujarat	50%	PASS	45%	47%
Other States and Union Territories	60%	PASS	-----	57%

Certificate from Government of Gujarat Authority required. @ Non creamy layer certificate required, **A recent certificate of Civil Surgeon required. **(See details in Instructions to students)**

5. **Government of Gujarat rules for the reservation quota will be observed in admission** for SC/ ST/ SEBC/ Physically handicapped/ Defence persons/ Sports person etc.
6. Allocation of seats for the students from Vadodara district, other districts of Gujarat and from other states of India will be as per the University rules.
7. In case of students with second or more attempts, **2% marks per attempt will be deducted** from four semester average of three science subjects theory marks.
8. Those students who have more than ONE year of gap should produce **an affidavit by a notary** stating actual reasons of their gap and whether they were enrolled in any course programme in this or any other university. This should be attached with the application at the time of Admission.
9. There will be **NO** requirement for minimum percentage of marks in the qualifying examination in case of scheduled castes (SC) and scheduled tribes (ST) students. However, **SC and ST students should have passed the qualifying examination.**
10. The students of **Gujarat state only** will be considered for Socially and Economically Backward Classes (SEBC) category.
11. **The SC and ST students of other than Gujarat state should produce a certificate, at the time of admission, from competent authority of Government of Gujarat stating that the caste/ tribe is recognized under SC/ ST category in Gujarat also.**

ADMISSION PROCEDURE

- Spot admission will be granted to the eligible candidates.** The merit list may be displayed on the website of the University and at the Faculty of Science office after closing of the online application submission however, students are required to report for On the Spot admission as per the schedule given below:

Program for On the Spot Admission to FY BSc (Hons) 2016-17

Day and Date	Reporting Time	Percentage of Four Semester Average of Science Theory Subjects Only	Category	HSC Passes from
Wednesday 15-06-2016	9.00 am	75% and Above	SC/ST/SEBC/GEN	V/G/OG
	11.00 am	70% to 74.9%		
	2.00 pm	68% to 69.9%		
Thursday 16-06-2016	9.00 am	65% to 67.9%	SC/ST/SEBC/GEN	V/G/OG
	11.00 am	62% to 64.9%		
	2.00 pm	60% to 61.9%		
Friday 17-06-2016	9.00 am	58% to 59.9%	SC/ST/SEBC/GEN	V/G
	11.00 am	55% to 57.9%		
	2.00 pm	52% to 54.9%		
Saturday 18-06-2016	9.00 am	50% to 51.9%	SC/ST/SEBC/ GEN	V/G
	11.00 am	48% to 49.9%	SC/ST/ SEBC from V/ G . GEN from Vadodara Only	
	2.00 pm	45% to 47.9%		
Monday 20-06-2016	9.00 am	42% to 44.9%	SC/ST/SEBC/GEN	V
	11.00 am	40% to 41.9%		
	2.00 pm	Remaining Eligible SEBC Students (up to 35% marks)	SEBC	V
Tuesday 21-06-2016	11.00 am	Remaining Eligible SC/ ST students (12 th std Pass)	SC/ ST	V/ G/OG
	2.00 pm	Remaining Eligible SC/ ST students (12 th std Pass)	SC/ ST	V/ G/OG

SC: Schedule Caste, ST: Schedule Tribe, SEBC: Socially and Economically backward Class, GEN: General, V: Vadodara District, G: Other Districts of Gujarat and OG: Outside Gujarat.

- Students can initiate the form filling process however, **should incorporate required marks after the declaration of results and then only SUBMIT the form.** Please visit the M S university website for details about last date of submitting the online forms and the application form fees.

3. **Counselling/ guidance will be available to the candidates** on the day of admission before taking admission. The students and parents are encouraged to consult Heads/ teachers of various departments beforehand for further details.
4. **On the basis of their subject group in H.S.C.** (i.e. A, B or AB) candidate has to select three types of courses namely: a) Core (Principal and Subsidiary), b) Elective and c) Foundation.
5. Core courses are selected in the form of Core (Principal Subject) and Core (Subsidiary Subject). **Core (Principal) is the subject in which the B.Sc. (honors) degree will be awarded.**
6. Core (Subsidiary) is an allied subject which student will learn for first four semesters. Each of the Principal/Subsidiary subjects consists of a set of predefined courses.
7. Candidate is also required to select one Elective course of 4 credits and 2 Foundation courses of 2 credits each (other than principal and subsidiary subject) per semester till fourth semester (refer Tables 1 and 2).
8. Allotment of subject will be based on the availability of the seats in the respective subject/course purely on merit of the result of qualifying examination. Candidate has to take new foundation courses from the pool in each Semester.
9. **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.**
10. 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.

SUBJECT SELECTION

A student will choose Core (Principal & Subsidiary) subjects from possible combinations listed in Tables 1 & 2. **Course selections should be in such a way that none of the subject of courses is repeated in whole selection.** For example:

Group A subjects:

- Students who take **Chemistry** as core (Principal) Subject can opt for any one core (Subsidiary) subject from: Geology / Mathematics / Physics.
- Students who take **Mathematics** as core (Principal) Subject can opt for any one core (Subsidiary) subject from: Chemistry / Physics / Statistics.
- Students who take **Physics** or **Statistics** as core (Principal) Subject can opt **ONLY** Mathematics as core (Subsidiary) subject.
- Students who take **Geography** or **Geology** as core (Principal) Subject can opt for any one core (Subsidiary) subject from: Physics / Mathematics / Chemistry / Geology or Geography.

Group B Subjects:

- Students who take **Botany** as core (Principal) Subject can opt for any one core (Subsidiary) subject from: Chemistry / Geology / Zoology.
- Students who take **Chemistry** as core (Principal) Subject can opt for any one core (Subsidiary) subject from: Botany / Physics / Zoology.
- Students who take **Geography** or **Geology** as core (Principal) Subject can opt for any one core (Subsidiary) subject from: Botany / Zoology / Geology (or) Geography.
- Students who take **Zoology** as core (Principal) Subject can opt for any one core (Subsidiary) subject from: Botany / Chemistry / Geology.
- Students who take **Physics** as core (Principal) Subject can opt **ONLY** Mathematics as Elective subject.

Group AB Subjects:

- Student can opt for any of the core (Principal and Subsidiary) subjects as exemplified above.

CHANGE OF SUBJECT

- **Interchange between Principal and Subsidiary subjects is permissible** at the beginning of the 3rd semester, provided the seats are available at the end of 2nd semester.
- If any elective or foundation course is having less than 20 students, it will not be offered. Student has to select another one.
- Biochemistry / Microbiology will be offered as elective courses to Chemistry / Botany / Zoology core (Prin.) subject students in 3rd and 4th semester only to limited students on the basis of 1st and 2nd semester core credit points.

Total number of seats available in Grants-In-Aid and Higher Payment categories

Sr. No.	SUBJECT	Grant-In-Aid Seats	Higher Payment Seats
1	Botany	120	120
2	Chemistry	120	120
3	Geography	120	120
4	Geology	120	120
5	Mathematics	240	120
6	Physics	120	120
7	Statistics	120	120
8	Zoology	120	120
Total		1080	960
Grand Total		2040	

Table 1: Courses Offered in A group or AB group (with Mathematics) subjects:

Core Subjects		Elective	Foundation
Principal (any one Subject) 8 Credits	Subsidiary (any one Subject) 8 Credits	Any one subject 4 Credits	Any combination of two courses of 2 credits each, total 4 credits
Chemistry	Mathematics Physics Geology	Mathematics Physics Geology Geography Statistics	a. Disaster Management and Foundation in Management b. Radiation Physics and Physical Education
Geography	Geology Physics Mathematics Statistics Chemistry	Physics Chemistry Statistics Mathematics Geology	
Geology	Physics Geography Chemistry Mathematics	Geography Physics Statistics Mathematics	
Mathematics	Chemistry Physics Statistics	Physics Chemistry Economics Statistics Geology Geography	
Physics	Mathematics	Chemistry Statistics Geology Geography	
Statistics	Mathematics	Physics Economics	

Table 2: Courses Offered in B group or AB group (with Biology) subjects:

Core Subjects		Elective	Foundation
Principal (any one Subject) 8 Credits	Subsidiary (any one Subject) 8 Credits	Any one subject 4 Credits	Any combination of two courses of 2 credits each, total 4 credits
Botany	Chemistry Zoology Geology Geography	Geology Zoology Chemistry Physics Statistics Geography	a. Communication skill and Environmental Science b. Foundation in Management and Physical Education
Chemistry	Botany Zoology Physics Geology	Zoology Botany Physics Geography	
Geography	Botany Zoology Geology Chemistry	Zoology Botany Physics Geology Chemistry	
Geology	Botany Zoology Geography Chemistry	Botany Zoology Geography	
Physics	Chemistry Botany Zoology	Mathematics	
Zoology	Botany Chemistry Geology Geography	Chemistry Botany Physics Statistics Geography	

FEE STRUCTURE (For Semester I and II):

Last year's fees were as follows:

For Grant-In-Aid Seats:

Girls: Rs. 6280.00 per annum

Boys: Rs. 7480.00 per annum

For Higher Payment Seats:

Girls and Boys: 38980.00 per annum

Fee is subject to revision by the University time to time.

B. Sc. EVALUTION SCHEME

A. Theory : There will be mid-semester and end-semester examinations

1. All mid-semester exam of B. Sc. Courses will be conducted by respective departments. However, they will be centrally coordinated by the faculty examination cell.
2. Mid-semester marks will have 30% weightage and will be carried forward in case of ATKT while End-semester marks will have 70% weightage. The marks obtained in mid & end semester examination will be taken into account for deciding the final grade of the course.
3. Examination papers will contain 40% objective questions and 60% subjective questions

B. All Practical courses will have continuous evaluation

GRADE POINT SYSTEM

A system comprising of 7 grade points (4 to 10) is followed for evaluating students in every course as shown below. 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

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

AWARD OF CLASS: Marks-sheets of semester I to V will not indicate a class. It will simply indicate a result as either Pass or Dropped.

CGPA	Class
CGPA < 4	Dropped
4 > CGPA ≤ 5	Pass Class
5 > CGPA ≤ 6	2 nd Class
6 > CGPA ≤ 7	1 st Class
CGPA > 7	Distinction

Where Cumulative Grade point Average (CGPA) is computed as
CGPA = $\sum (\text{Semester credits} \times \text{GPA}) / \text{Total Semester Credits}$
Here the sum is taken over from semester-I to semester-VI

CRITERION FOR B. Sc. (HONORS) DEGREE AWARD

For obtaining B. Sc. (honors) degree in any subject, a candidate has to earn 144 credits in all during the B. Sc. Programme consisting of six semesters.

INSTRUCTIONS TO THE APPLICANTS

1. No correspondence will be entertained in the matter of admission.
2. A copy of the **online submitted and duly signed application form** (available from website <http://www.msubaroda.ac.in> or <http://msub.digitaluniversity.ac.in>) needs to be produced at the time of the spot admission.
3. Self attested copies of the following certificates should be attached with the application:
 - i. H. S. C. (12th Science) or equivalent mark sheet
 - ii. School Leaving Certificate/ Transfer Certificate (for the proof of birth date)
 - iii. Attempt Certificate
 - iv. Provisional Eligibility certificate from the M S University of Baroda (for the students from other than Gujarat state)
 - v. SC/ ST caste certificate/SEBC caste and non creamy layer certificate / physically handicap/ Defense person/ sports person certificate, as applicable, from competent authority.
4. The **SC and ST students of other than Gujarat state** should produce a certificate from competent authority of Government of Gujarat **stating that their caste/ tribe is recognised under SC/ ST category in Gujarat state also.** **Otherwise they will NOT be considered under this category for admission.**
5. The students of **SEBC category** are required to produce **non creamy layer certificate** from competent authority of Government of Gujarat. **Otherwise they will NOT be considered under this category for admission.**
6. The **physically handicapped** student should produce a **recent 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 relaxation in eligibility criteria.
7. The **sports persons** who have participated at **State/ National/ International level** should **authenticate their certificates from the Director, Physical Education Faculty, University Pavilion, The Maharaja Sayajirao University of Baroda, Vadodara.** **They will be granted relaxation in eligibility criteria only if their certificates are approved and validated.**

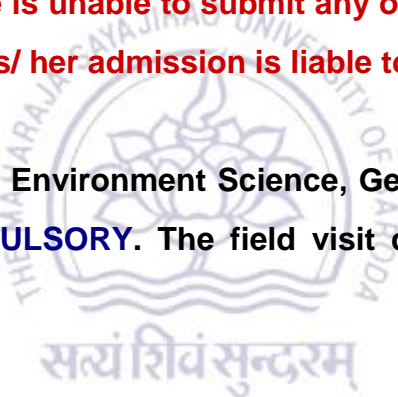
Note: All original documents are to be produced while securing admission; the original documents will be retained by the University till the enrolment of the candidate and generation of unique PRN.

The “Competent authority of Government of Gujarat” means:

For SC/ST students: **ANY ONE** of (a) The Collector, (b) The Prant Officer, (c) The Mamlatdar, (d) The Mahalkari from Gujarat, (e) The Director of Social Welfare Officer.

For SEBC students: **ANY ONE** of (a) The Collector, (b) The District Development Officer, (c) The Dy. Collector/ The Asstt Collector, (d) The Dy. District Development Officer, (e) The Mamlatdar, (f) The Taluka Development Officer, (g) The Mahalkari from Gujarat, (h) The Director of Social Welfare, (i) The District Social Welfare Officer.

8. **The admissions will be strictly based on the merit.** Just fulfilling the eligibility criteria **DOES NOT GUARANTEE** a student to be considered for admission.
9. The admission to the course is **PURELY TEMPORARY** and subjected to various scrutiny till the unique Permanent Registration Number of the candidate is generated.
10. **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.**
11. For subjects like Botany, Environment Science, Geography, Geology and Zoology **FIELD VISITS** are **COMPULSORY**. The field visit duration in Sem V / Sem VI is generally 5-10 days.



Note: The information contained in this prospectus is for general guideline only and is subject to change from time to time by the University

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“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