



# **SELF STUDY REPORT**

**FOR**

**3<sup>rd</sup> CYCLE OF ACCREDITATION**

**M. G. SCIENCE INSTITUTE**

M G SCIENCE INSTITUTE, DADA SAHEB MAVLANKAR CAMPUS,  
NAVRANGPURA  
380009  
[www.mgscience.ac.in](http://www.mgscience.ac.in)

Submitted To

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

**BANGALORE**

**March 2020**

# 1. EXECUTIVE SUMMARY

---

## 1.1 INTRODUCTION

M. G. Science Institute is a grant-in-aid Institute managed by the Ahmedabad Education Society, established by the inspiration of Shri Sardar Vallabhbhai Patel. It imparts education based on CBCS system in ten UG and two PG programmes. It provides academic flexibility by offering various vocational, diploma and certificate courses like Biotechnology and Bio-, Geo and Chem-informatics. It is a recognized centre of IGNOU for B. Sc. and for various public exams.

The Institute has been accredited at 'A' grade twice, in 2007 and 2014. It has been recognized with UGC-CPE status and DBT Star Colleges Scheme. The Institute has 126th rank in NIRF and 4-star ranking in GSIRF. Of the distinguished educators including 40 doctorates, 10 Ph.D. guides, three have served as vice chancellors of different universities, many are members of Boards of Studies at the university which ensures bigger say in curriculum development.

The sprawling 19.3 acres campus has infrastructure like, large and airy classrooms, well-equipped laboratories, auditorium, computerized library, botanical garden, geological museum, facilities for sports and cultural activities, language lab and hostel.

E-governance is followed in all academic and administrative activities like admissions, accounts, administration and exams. The admission process is transparent and purely on merit basis. The Institute regularly conducts academic audit, API and feedbacks.

The Institute has entered into MOUs with reputed Institutes and Industry and has dynamic relationship with prominent research institutes like Institute of Plasma research, SAC-ISRO and PRL. There are outstanding research projects to the tune of rupees 206.37 lakhs and 105 publications along with 34 Books and book chapters.

The IQAC works with several active committees and cells of the college to achieve the mission of the Institute. Innovative researches like Soil-Health card for Government, Mushroom cultivation, E-tree tagging, etc. are unique projects for extension of knowledge. There is an active Students' Union, NSS, Eco-club, NCC and Alumni association.

The institute further needs to strengthen its network with industries and renowned institutions, initiate students' exchange program with other institutes in India and abroad and thus lead the Institute to newer heights of success.

### **Vision**

We, at M. G. Science Institute envisage to build a progressive learning community with scientific aptitude. We would set global standards to make our students scientifically and ethically stronger, and they, in turn, will serve the nation and human society to improve the quality of life.

### **Goals and Objectives**

- To inculcate in our students a high level of self – discipline and dignity of labour.
- To develop academic integrity.
- To encourage them for application of current technology.
- To make them experience shared governance.
- To introduce science and scientific development as an integrated aspect of the culture and tradition of our motherland.

## Mission

The mission of M.G. Science Institute is to be a centre of excellence in science education and research. We aim to impart quality science education with an emphasis on all round development of the students. It is our constant endeavour to promote creativity and learning for the benefit of community. The institute lays emphasis on discipline, quality and social responsibility.

## 1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

### Institutional Strength

The Institute has a **Proactive management** always in support of all activities. There is **well qualified, experienced and dedicated staff** with an average teaching experience of 21 years.

The education is **holistic and Value-based. CBCS curriculum** is being followed since 2011 in all the subjects. The teaching learning methodologies are distinct and student-centric.

The Institute has **State-of-the-art infrastructure** and there are ample facilities for '**Divyangjan**'. It provides **Quality education at affordable cost with emphasis on rural students**. The campus is clean and green and has been recognised as a 'HAND-PRINT CAMPUS' by UNEP through Centre for Environment Education.

**Research facility and projects** are of prime importance at the Institute. Student participation in **Extension activities, sports and cultural activities** is encouraged.

Hostel facility is also available for the students.

### Institutional Weakness

Just as we take pride in our Institutional strength, we acknowledge our weakness too.

The first and foremost among them is the **Staff vacancy**. Although 67 posts have been granted, currently, there are 53 faculties.

The Institute has under graduate studies in ten different science subjects, but there are two subjects with PG studying facility. There is a **need to introduce PG studies across all courses**.

The Institute puts an onus on research and project work but still there is **Limited consultancy and collaboration** as well as **Inadequate industry driven research**. There are 15 projects with the Institute but

despite that, there are not any patents, nor any filed for.

There is **limited provision for corporate training**, which is an essential aspect for placement. The Placement cell strives to fulfil this need.

There is a robust feedback mechanism in the Institute and feedbacks are taken from students and alumni regarding the Institute, teachers and syllabii. The Heads provide Feedback of ad-hoc staff. All these are analysed further to improve any necessary aspects. But, there is a need to take the **feedback from teachers**, which can help to improve the curriculum..

### **Institutional Opportunity**

There are a number of opportunities that the Institute wishes to explore in order to fulfil its vision and mission. The Institute wishes to join the **Skill India** movement by introducing programmes to enhance various skills. The institute has a representative for the **Start up India** branch of Gujarat University, GUSEC. Till date, many students have been made aware of this initiative and two students have received approval for their start-up project.

**Incubation for start-ups** may also be considered. But meanwhile, a MoU has been signed with the Incubation centre of the neighbouring L.M. College of pharmacy.

The Institute wishes to **increase the involvement of industry in Curriculum planning** and in **research activities**. Industry is the biggest source of placement for the science students and the inputs of Industry are an important way to prepare students for various jobs.

Enhanced research activities through Industry funded research is an opportunity the Institute wishes to explore.

Above all, looking at the fulfilment of our objectives, the Institute wishes to establish as Centre of Excellence.

Collaboration with other universities and colleges as well as research organizations is also an opportunity we wish to explore.

Our NSS unit is very active and the Institute wishes to boost community engagement of the students.

The Institute wishes to enhance the employability of students and earnest efforts are made for skill development.

There is now an opportunity to transform into an Autonomous college.

### **Institutional Challenge**

There are several challenges in the smooth functioning of the Institute. Rising operating cost is a major concern and proves to be a burden on the management. Since the vacancies are not filled, the management has to recruit ad-hoc faculty due to which there is immense financial burden on it.

Declining number of students interested to pursue pure sciences and declining number of students due to opening of many new government and private colleges.

## **1.3 CRITERIA WISE SUMMARY**

### **Curricular Aspects**

The College believes in realising the curricular aspects by defining Programme Outcomes, Programme Specific Outcomes and Course Outcomes that bring out the desired competencies expected. Programmes are relevant to local/ regional/ national and global developments. Curriculum review and development is done regularly to keep in pace with current trends in respective fields to meet the requirement of academia, industry/ profession and society. Feedback is obtained from students and employers and analyzed and placed before the Management. Thrust is on development of knowledge and skills through various programmes in the college in addition to value added courses. The college has diverse range of course options catering to a vast range of learners in terms of Core options, Elective options and Add-on courses, higher payment courses, some at both at UG and PG levels, others at only PG level.

Based on the student demands, the College has introduced the programmes like Nanoscience and finishing school. Compulsory interdisciplinary courses like Environmental Science are introduced for all BSc Programmes. Ample choices are offered to students by integrating CBCS and discipline specific, interdisciplinary/ multidisciplinary electives in curricula to meet students' interests and aspirations. Courses relevant to Professional Ethics, Human Values and Environment and Sustainability are integrated in different programmes. College has application oriented programmes through internship, projects, field work and so on.

### **Teaching-learning and Evaluation**

The College has created facility for physically disabled and 'Divyangjan' students for their safe movement and better learning. The college follows the rules and guidelines of the Gujarat University in admitting the students. Merit system is adhered in allotting the seats for students. Student-teacher ratio of 28:1 exemplifies the existence of knowledge centre for betterment of students. Students learn and gain knowledge in diverse ways such as class room teaching- both, traditional and ICT based; hands-on experience in laboratories, group discussions, field works, industrial visits, projects and seminars. The students are assessed continuously through various modes. The quick learners are motivated to participate in seminars and symposia as well as shoulder various responsibilities where as Remedial classes are conducted to assist slow learners.

The academic activities of the college are strictly adhered to the academic calendar covering admission, vacations and examinations. The PO and CO attainments are calculated based on the performance of the students at different assessment levels. Continuous assessment is done by internal tests and class tests, performance in practical, etc. Internal marks are kept on notice boards for students to check for any discrepancies. Results are made available to students online and the process is simple because of 100% automation followed in the examination section. The college has a total number of 53 full time and 7 ad-hoc teachers from all the departments. The library, computers, internet facility and net resource centre are student oriented.

### **Research, Innovations and Extension**

The College is committed to engage faculty members and students in research, innovation and extension activities. The College has research facility with necessary equipment and adequate space to accommodate research scholars. The College supports research activities through grant of seed money and total of Rs. 206.37 lakhs have been procured during the last five years. The institute has 15 research projects funded by UGC, DBT, SAC-ISRO and MoEF. A total of 105 research papers in Scopus, WoS and UGC recognized Journals have been published since 2014.

10 Faculties are recognized as Ph.D guides. Till date 16 Ph.Ds, are awarded under the Gujarat University in the disciplines of Botany, Chemistry, Geology and Microbiology. The College follows Gujarat University regulations for Plagiarism prevention. Many faculties have published books and book chapters bearing ISBN. 34 books and book chapters have been published by faculty. A prestigious project of the Govt. of Gujarat, 'Soil health card' has been received four times in the last five years where teachers and students have worked together to make soil health card of 26419 soil samples and bringing in revenue of more than 23.41 Lakh rupees. Teachers are encouraged to pursue research or participate in FDPs. The College has received awards and recognition as well as support of various bodies for the extension activities organized by cultural, sports, NCC and NSS Units during last five years. The College has five functional MoUs with national/international institutions/universities/industries, corporate houses for academic and research collaborations.

### **Infrastructure and Learning Resources**

The College has state-of-the-art infrastructure and learning resources including ICT enabled classrooms, auditorium, well-equipped laboratories, computer labs, library and other support facilities. It has substantial infrastructure for sports and other extracurricular activities. The College has an automated library with more than 26000 books covering all disciplines, rare books, manuscripts and special reports and it has access to Learning Resources like e-journals, e-books, Infilbnet, Shodhganga, e-Shodhsindhu and databases.

Budget for infrastructure, library and other learning resources is earmarked annually based on the recommendations of respective committees and overall acceptance of the management. Over the last five years, the management has sanctioned and used Rs. 774.22 lakhs on infrastructure renovation and maintenance. The functioning and maintenance of IT resources, laboratory equipment and other physical facilities is also done regularly.

The college has student to computer ratio of 9:1 with 60 Mbps bandwidth for internet connection. PG classrooms and laboratories are equipped with ICT. High-end equipment is available for regular experiments/student projects and research. Other supporting facilities like hostel and playground are also provided by the college. The campus facilities are maintained through full-time staff appointed by the Management.

The administration is committed to effective and optimum use of its available infrastructure. Apart from the Management the College has three sources of funding for the development of infrastructure, viz. State Government, UGC and Donation from philanthropies. The Office has adequate number of computers, photocopiers and printers. The College has an auditorium with covered area of 169.82 Square meter having a seating capacity of 170 and is well equipped with all modern facilities. For security monitoring CCTV cameras are installed. The college has a botanical garden and biodiversity park which was developed with the seed-money of UNEP through CEE (Centre for Environment Education). There is a hassle-free parking for 30 cars and 300 two-wheelers.

## **Student Support and Progression**

The College supports students to apply for scholarships from Government and also freeships provided to the needful by the institution. Since 2014, an average of 24% and 0.28% of students have availed scholarships from government and freeships by the institution respectively. Guidance for competitive examinations, career counseling, soft skill development, remedial coaching, Language Lab and bridge courses are provided. Each department takes up remedial coaching for the reserved category students. Yoga, meditation and other life skills are imparted at the institute.

The grievances, sexual harassment complaints and any requests, in general is addressed by the Grievance Redressal Cell and Collegiate women's development cell(CWDC) through a transparent mechanism within seven days from the receipt of the complaint. There is an Anti-ragging Cell to curb ragging within the campus, if any. The Placement Cell is proactive and has organized several career guidance talks, skill development courses and campus drives to facilitate the placement of the students. The average placement rate is 3.29%. In last five years 39% of the students have opted for higher studies. The Institute promotes engagement of students in co-curricular and extracurricular activities through formation of Students' council. Members for the Student Council are selected through merit. Sports and cultural competitions both at the College and Inter collegiate levels are held annually. An average of 60 sports and cultural activities have been held during the last five years. The college has a functional alumni association - 'MAA' which has developed considerably and supports the institute academically and financially. Alumni contribution for the last five years amounts to more than Rs. 24 lakhs. The alumni meetings are hosted every year to create an opportunity for alumnus to meet and share knowledge with their friends and teachers. The alumni are actively involved in organizing events in the college and supporting the placement of the present students.

## **Governance, Leadership and Management**

The Vision, Mission, Goals and Objectives of the institution reflect the nature of governance and decision making bodies of the institution. Based on the suggestions of Academic advisory committee of the Ahmedabad Education Society, the College has developed a perspective plan for development which includes Teaching and learning; Research and development; Community engagement; Human resource planning and development; Industry interaction and Infrastructure augmentation. The Institution has adapted itself to e-governance. The administrative unit is completely automated. All notifications from management, to the Principal to the Heads and staff, are in e-mode including financial issues. There are students' what's-app groups within the department to communicate various important dates and notices.

Smooth functioning of any institution depends on the resolutions and implementation of the minutes discussed in the respective bodies/cells/committees. The College has constituted different cells and committees for the successful implementation of the resolutions. Not only this, the College provides both statutory and non-statutory welfare measures for the benefit of the faculty and the supporting staff. The faculty is constantly encouraged to adopt new and innovative approaches to facilitate teaching- learning process and to participate and organize Faculty development programs. To enhance the professional development of teaching and non-teaching staff the Institute organized several Conferences, Seminars, Workshops, FDP/Training programmes, Guest lecturers/Special lectures and deputation of faculty to attend seminars/ conferences/ workshops. Faculty are encouraged to undertake minor and major research projects and publish their findings in research journals.

Performance appraisal system of the staff includes - Student feedback, Peer feedback, Self-appraisal report. The Self-Appraisal Report (SAR) of all Non-teaching staff is taken from the heads of departments on annual basis

using structured questionnaire. Based on the performance and the feedback, the Principal takes personal interest in guiding them.

### **Institutional Values and Best Practices**

The College is highly conscious and firmly determined in addressing the issue of Gender equity and environmental issues judiciously. Energy conservation is given highest priority and LED bulbs are used to minimize its consumption. Observation of significant days related to environment like Environment Day, world wetland Day and Pollution Prevention Day and other days of important issues are done regularly in the College. Awareness programmes and rallies on AIDS, Seasonal Diseases, epidemics and saving of rivers/water resources are implemented. All waste from the laboratories and classrooms is tackled effectively. The women empowerment cell strengthens many initiatives of the college for women education and empowerment. The college has organized various programs to inculcate human values, patriotism and also to promote gender equity. The college through NSS and NCC has organized various programmes to address the local community and societal needs. The college adopts best practices in preparation of soil health cards for the Gujarat Government, Internal academic audit and E- tree tagging.

Medical Camps, blood donation camps, Swatchh Bharat and various awareness programmes are regularly practiced at the institute. The students are empowered through educational, co-curricular and extra-curricular activities to be better citizens and leaders in fast-changing contemporary world.



## 2. PROFILE

### 2.1 BASIC INFORMATION

Name and Address of the College	
Name	M. G. SCIENCE INSTITUTE
Address	M G Science Institute, Dada Saheb Mavlankar Campus, Navrangpura
City	Ahmedabad
State	Gujarat
Pin	380009
Website	<a href="http://www.mgscience.ac.in">www.mgscience.ac.in</a>

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	B. K. Jain	079-26302872	9426024656	079-2630024 2	info@mgscience.a c.in
Associate Professor	Alpana Shukla	079-26609759	9727716264	079-2630343 2	alpana.botany@gm ail.com

Status of the Institution	
Institution Status	Grant-in-aid

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	
Date of establishment of the college	16-06-1946

**University to which the college is affiliated/ or which governs the college (if it is a constituent college)**

State	University name	Document
Gujarat	Gujarat University	<a href="#">View Document</a>

**Details of UGC recognition**

Under Section	Date	View Document
2f of UGC	07-12-2005	<a href="#">View Document</a>
12B of UGC	07-12-2005	<a href="#">View Document</a>

**Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)**

Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
No contents				

**Details of autonomy**

Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	No
--	----

**Recognitions**

Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	Yes
If yes, date of recognition?	27-05-2016
Is the College recognized for its performance by any other governmental agency?	Yes
If yes, name of the agency	Department of Education Government of Gujarat
Date of recognition	20-02-2019

<b>Location and Area of Campus</b>				
<b>Campus Type</b>	<b>Address</b>	<b>Location*</b>	<b>Campus Area in Acres</b>	<b>Built up Area in sq.mts.</b>
Main campus area	M G Science Institute, Dada Saheb Mavlankar Campus, Navrangpura	Urban	19.3	1060

## 2.2 ACADEMIC INFORMATION

<b>Details of Programmes Offered by the College (Give Data for Current Academic year)</b>						
<b>Programme Level</b>	<b>Name of Programme/Course</b>	<b>Duration in Months</b>	<b>Entry Qualification</b>	<b>Medium of Instruction</b>	<b>Sanctioned Strength</b>	<b>No.of Students Admitted</b>
UG	BSc,Botany	36	HSC Science Stream	English	35	24
UG	BSc,Zoology	36	HSC Science Stream	English	34	34
UG	BSc,Physics	36	HSC Science Stream	English	70	39
UG	BSc,Chemistry	36	HSC Science Stream	English	160	126
UG	BSc,Mathematics	36	HSC Science Stream	English	36	36
UG	BSc,Statistics	36	HSC Science Stream	English	30	23
UG	BSc,Microbiology	36	HSC Science Stream	English	75	44
UG	BSc,Biochemistry	36	HSC Science Stream	English	55	47
UG	BSc,Electronics	36	HSC Science Stream	English	15	14
UG	BSc,Geology	36	HSC Science Stream	English	25	17
PG	MSc,Chemistry	24	UG Chemistry	English	90	90
PG	MSc,Geology	24	UG Geology	English	30	30

**Position Details of Faculty & Staff in the College**

<b>Teaching Faculty</b>												
	<b>Professor</b>				<b>Associate Professor</b>				<b>Assistant Professor</b>			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	1				42				10			
Recruited	1	0	0	1	33	9	0	42	6	4	0	10
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			

<b>Non-Teaching Staff</b>				
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
Sanctioned by the UGC /University State Government				61
Recruited	13	5	0	18
Yet to Recruit				43
Sanctioned by the Management/Society or Other Authorized Bodies				37
Recruited	36	1	0	37
Yet to Recruit				0

<b>Technical Staff</b>				
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
Sanctioned by the UGC /University State Government				3
Recruited	3	0	0	3
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				0
Recruited	0	0	0	0
Yet to Recruit				0

**Qualification Details of the Teaching Staff**

<b>Permanent Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Male</b>	<b>Female</b>	<b>Others</b>	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	1	0	0	21	5	0	6	4	0	37
M.Phil.	0	0	0	2	1	0	1	1	0	5
PG	0	0	0	5	3	0	3	0	0	11

<b>Temporary Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

<b>Part Time Teachers</b>										
<b>Highest Qualification</b>	<b>Professor</b>			<b>Associate Professor</b>			<b>Assistant Professor</b>			<b>Total</b>
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

<b>Details of Visting/Guest Faculties</b>				
<b>Number of Visiting/Guest Faculty engaged with the college?</b>	<b>Male</b>	<b>Female</b>	<b>Others</b>	<b>Total</b>
		2	4	0

**Provide the Following Details of Students Enrolled in the College During the Current Academic Year**

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	0	3	0	0	3
	Female	0	2	2	0	4
	Others	0	0	0	0	0
PG	Male	0	0	0	0	0
	Female	0	0	0	0	0
	Others	0	0	0	0	0

**Provide the Following Details of Students admitted to the College During the last four Academic Years**

Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	34	42	35	64
	Female	32	41	26	36
	Others	0	0	0	0
ST	Male	29	21	34	46
	Female	47	27	24	34
	Others	0	0	0	0
OBC	Male	138	148	160	190
	Female	138	154	69	78
	Others	0	0	0	0
General	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Others	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Total		418	433	348	448

### 3. Extended Profile

#### 3.1 Program

Number of courses offered by the Institution across all programs during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
280	233	205	182	132
File Description			Document	
Institutional data prescribed format			<a href="#">View Document</a>	

Number of programs offered year-wise for last five years?

2018-19	2017-18	2016-17	2015-16	2014-15
12	12	12	12	12

#### 3.2 Students

Number of students year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
1528	1687	1540	1727	1619
File Description			Document	
Institutional data in prescribed format			<a href="#">View Document</a>	

Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
306	306	306	255	407
File Description			Document	
Institutional data in prescribed format			<a href="#">View Document</a>	

Number of outgoing / final year students year-wise during last five years



2018-19	2017-18	2016-17	2015-16	2014-15
430	575	660	524	814
File Description		Document		
Institutional data in prescribed format		<a href="#">View Document</a>		

### 3.3 Teachers

#### Number of full time teachers year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
53	54	55	59	59
File Description		Document		
Institutional data in prescribed format		<a href="#">View Document</a>		

#### Number of sanctioned posts year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
67	69	65	68	76
File Description		Document		
Institutional data in prescribed format		<a href="#">View Document</a>		

### 3.4 Institution

#### Total number of classrooms and seminar halls

**Response: 17**

#### Total Expenditure excluding salary year-wise during last five years ( INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
201.49	309.91	118.20	67.02	77.58

#### Number of Computers

**Response: 139**

## 4. Quality Indicator Framework(QIF)

### Criterion 1 - Curricular Aspects

#### 1.1 Curricular Planning and Implementation

##### 1.1.1 The Institution ensures effective curriculum delivery through a well planned and documented process

##### Response:

M. G. Science Institute is affiliated to the Gujarat University and it follows the University prescribed curriculum. Effective curriculum delivery is ensured through a well-planned and documented process:

- Prior to the commencement of each academic year the IQAC prepares annual academic calendar specifying available dates for significant activities to ensure proper teaching–learning process and continuous evaluation. This is displayed on the students', teachers, notice board & college website.
- Meeting is held in each department at the beginning of the academic year to discuss about the course distribution for the academic session. Based on the expertise of individual professor, the syllabus is allotted to them by the head of the department.
- Syllabus of each subject for the academic session is provided to the students. Teachers maintain personal record for effective academic planning, implementation and review of the curriculum.
- Theory & practical classes are held as per the time-table prepared by the time-table committee.
- Conventional classroom teaching is blended with reasonable use of ICT to make the teaching-learning process more learner-centric. Internet assisted learning, participative and experiential learning methods are used for effective curriculum delivery.
- Classroom teaching is supplemented with practical work in laboratories, seminars, workshops, special lectures, group discussions, departmental quiz, projects, group assignments, educational tours, field trips and industrial visits.
- Records of different activities are maintained by each department and information is provided to IQAC for documentation. These are included in the annual college magazine and also uploaded on the college website.
- Equal educational opportunities are provided to all learners, irrespective of gender or intelligence.
- The college central library provides teachers with necessary learning resources for effective delivery of curriculum. **The faculty members have been provided INFLIBNET facility for accessing 80,409 e-books and 3,828 e Journals in full text form.** In addition to the general library, departmental library has been set up in each department to enhance the in-depth knowledge of the students. Library related information are well documented.
- All internal examinations like class test, mid-term test, are conducted to check whether the students have acquired knowledge as outlined in the objectives of the curriculum. All examinations are conducted according to the academic calendar.
- Assignments of each subject are given to all the students to increase their academic skill. Remedial/special classes are conducted for low achievers. Advance learners are made to refer reference books and efforts are made by teachers to improve their performance. Record of the regular attendance, mark sheets and progress of the students are maintained and preserved by the respective departments. mentoring is done whenever necessary.

The college encourages faculty members to attend orientation/refresher courses, faculty development

programs, workshops and also to present papers in seminars and symposia. The students are also encouraged to attend/present papers in state and national level seminar/workshops. Photocopies of the Certificates of the above courses are provided by faculty members to IQAC for documentation.

File Description	Document
Upload Additional information	<a href="#">View Document</a>
Link for Additional information	<a href="#">View Document</a>

### 1.1.2 The institution adheres to the academic calendar including for the conduct of CIE

#### Response:

The college follows the Academic Calendar of the Gujarat University. The classes of B.Sc. third & fifth semester begin in the month of June and B.Sc. first semester commences in the month of July every year. The practicals for each semester are scheduled one week later. The B.Sc. fourth & sixth semester classes begin in the month of December and B.Sc. second semester commences in the month of January every year.

The total number of teaching days in a semester is at least 107 in the first term (odd semester) and 94 days (even semester) in the second term. Within two months from the commencement of the new session Class-Tests and midterm practical tests are scheduled to be held. It is as per the university academic time table. The Internal Assessment theory and practical exam dates and schedule are decided by the different internal exam committee for each semester for the different subject combinations. The decision regarding dates for conduct of assignments depends on completion of first year admissions, mid semester breaks, gazette holidays as well as other planned activities of the college such as the Student Festival, Founders' day, Annual day Sports day, etc.

In the odd semester the dates for the first assignment lies towards first week August while the internal exam is conducted in the second week September. The final exam for semester three and five beginning October is staggered and both practical and theory exams are completed within a month. Retest is taken in the first week of November.

In the even semester the internal exam dates are usually in the last week of February. The repeaters of earlier semesters are given a chance to clear their backlog in the first/second week of March. The university exams of semester four & six are conducted in last week of March and first week of April while the semester two exam is in the third week of April.

The dates of the internal assessment, assignments as well as dates by which the marks need to be submitted to the office are also informed by a notice/circular. These dates are adhered to during each semester. The results of the Mid-Term Tests are generally published within 10 days of the examination.

For the practical papers the CIE is conducted in almost all practical classes dependent on the nature of the practical. Journal is assessed regularly after each practical. Journal completion and the format of reporting results are taken for internal practical assessment. Dates for conducting/submission of assignment and

submission of marks are all displayed on notice boards by each department.

File Description	Document
Upload Additional information	<a href="#">View Document</a>
Link for Additional information	<a href="#">View Document</a>

**1.1.3 Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and/are represented on the following academic bodies during the last five years**

1. Academic council/BoS of Affiliating university
2. Setting of question papers for UG/PG programs
3. Design and Development of Curriculum for Add on/ certificate/ Diploma Courses
4. Assessment /evaluation process of the affiliating University

E. None of the above

D. Any 1 of the above

C. Any 2 of the above

B. Any 3 of the above

**Response:** A. All of the above

File Description	Document
Institutional data in prescribed format	<a href="#">View Document</a>
Details of participation of teachers in various bodies/activities provided as a response to the metric	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 1.2 Academic Flexibility

**1.2.1 Percentage of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented**

**Response:** 100

**1.2.1.1 Number of Programmes in which CBCS / Elective course system implemented.**

Response: 12

File Description	Document
Minutes of relevant Academic Council/ BOS meetings	<a href="#">View Document</a>
Institutional data in prescribed format	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**1.2.2 Number of Add on /Certificate programs offered during the last five years**

Response: 9

**1.2.2.1 How many Add on /Certificate programs are added within the last 5 years.**

2018-19	2017-18	2016-17	2015-16	2014-15
2	1	1	0	5

File Description	Document
List of Add on /Certificate programs	<a href="#">View Document</a>
Brochure or any other document relating to Add on /Certificate programs	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**1.2.3 Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years**

Response: 6.02

**1.2.3.1 Number of students enrolled in value added courses (beyond the curriculum) offered year-wise during last five years.**

2018-19	2017-18	2016-17	2015-16	2014-15
138	115	52	98	84

File Description	Document
Details of the students enrolled in Subjects related to certificate/Add-on programs	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 1.3 Curriculum Enrichment

### 1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics ,Gender, Human Values ,Environment and Sustainability into the Curriculum

#### Response:

M.G.Science Institute strives to inculcate high level of moral values and environmental consciousness in our students, which enables them to work as progressive individuals for developing sense of ethics and social responsibility especially towards environment and wellbeing of all forms of life. Our students participate with gusto in extra-curricular activities like youth festivals, blood donation camps, community services, tribal welfare, relief camps, literacy drives, research projects, sports activities and environmental activities which enhances their interpersonal skills and aids in their immense contribution towards socioeconomic and environmental sustainability thus fulfilling our mission of promoting learning for the benefit of community. As many faculty members are a part of Gujarat University Board of studies, they have been instrumental in suggesting new topics for elective papers which include Environmental Science, health & hygiene and the like.

**Health and Hygiene:** Physical health and well being are a primary concern at the institute. There is a compulsory elective paper for all Sem-III students, namely **Health and Hygiene**.

The institute has a full time sweeper and gardener to take care of cleaning the campus and nurturing the greenery of the campus. There is a systematic disposal of wastes in the institute. We further strive to enhance the awareness of students by organizing invited lectures on the same.

**Health Centre:** The Institute utilizes the University health center facility which is about a kilometer away. Also regular health checkups are undertaken on a compulsory basis for all the first year students which involve testing for Sickle cell Anemia and Thallesemia. The institute conducts self defense workshops for the girl students. Several interaction with doctors are arranged to address issues like stress, sleep, mental health and emotional detox.

#### Environment Consciousness:

Though it is in the midst of the city, our green campus provides the students with a pollution free zone for learning. Our Institute has some very old & rare plant species, medicinal trees, ornamental trees making it one of the greenest areas of the city and houses many rare species of birds and reptiles in the city. The campus is more eco-conscious and it is a plastic free zone which makes it a sought after place for morning walkers too. In our effort to develop the green campus, the staff and students have planted more than 5000 plants and have been maintaining them. As part of Handprint Challenge, students of Sem II, 2015 developed a green trail and biodiversity Park from grants received through UNEP and CEE. A very enthusiastic **Eco-club** –“Mitti” run by staff and students supervises and supports the theme of

Environmental preservation in the campus and educates and instils an environment conservation fervour amongst the students to save us from ill effects of Climate change & Global Warming.

In our strive to inculcate human values, and awareness for environmental sustainability as well as health issues, we run elective courses throughout various semesters, namely:

**Bioethics, Biodiversity and Environmental Science, Environmental biotechnology, Environmental Geology ,Cancer biology.**

File Description	Document
Upload the list and description of courses which address the Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 1.3.2 Average percentage of courses that include experiential learning through project work/field work/internship during last five years

Response: 5.16

#### 1.3.2.1 Number of courses that include experiential learning through project work/field work/internship year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
10	10	10	10	10

File Description	Document
Programme / Curriculum/ Syllabus of the courses	<a href="#">View Document</a>
MoU's with relevant organizations for these courses, if any Average percentage of courses that include experiential learning through project work/field work/internship	<a href="#">View Document</a>
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	<a href="#">View Document</a>

### 1.3.3 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year

**Response:** 10.93

### 1.3.3.1 Number of students undertaking project work/field work / internships

Response: 167

File Description	Document
List of programmes and number of students undertaking project work/field work/ /internships	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 1.4 Feedback System

**1.4.1 Institution obtains feedback on the syllabus and its transaction at the institution from the following stakeholders 1) Students 2)Teachers 3)Employers 4)Alumni**

**E. None of the above**

**D. Any 1 of the above**

**C. Any 2 of the above**

**B. Any 3 of the above**

**Response:** C. Any 2 of the above

File Description	Document
Any additional information (Upload)	<a href="#">View Document</a>
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management (Upload)	<a href="#">View Document</a>
URL for stakeholder feedback report	<a href="#">View Document</a>

**1.4.2 Feedback process of the Institution may be classified as follows: Options:**

1. Feedback collected, analysed and action taken and feedback available on website
2. Feedback collected, analysed and action has been taken
3. Feedback collected and analysed
4. Feedback collected
5. Feedback not collected

**E. Feedback not collected**

**D. Feedback collected**



**C. Feedback collected and analysed****B. Feedback collected, analysed and action has been taken**

**Response:** A. Feedback collected, analysed and action taken and feedback available on website

File Description	Document
Upload any additional information	<a href="#">View Document</a>
URL for feedback report	<a href="#">View Document</a>

N  
A  
A  
C

## Criterion 2 - Teaching-learning and Evaluation

### 2.1 Student Enrollment and Profile

#### 2.1.1 Average Enrolment percentage (Average of last five years)

**Response:** 90.1

##### 2.1.1.1 Number of students admitted year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
659	576	467	617	494

##### 2.1.1.2 Number of sanctioned seats year wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
625	625	625	520	830

#### File Description

#### Document

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

#### 2.1.2 Average percentage of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years ( exclusive of supernumerary seats)

**Response:** 86.2

##### 2.1.2.1 Number of actual students admitted from the reserved categories year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
313	306	193	282	224

File Description	Document
Average percentage of seats filled against seats reserved	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 2.2 Catering to Student Diversity

### 2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

#### Response:

The institute believes in equal opportunities to be given to the students and provides a common platform to all students initially. Although the Institute is situated in a city, many students from nearby towns and villages take admission over here in order to get better exposure in higher education. A discreet distinction is not made between advanced learners and slow learners but differences between students with respect to grasping power, memory and skill is observed. As early as possible, slow and advanced learners are identified from various activities like-

- orientation,
- counselling,
- performance in class tests and assignments,
- laboratory performance,
- participation in academic and curricular activities,
- and above all, faculty feedback

Informal Counseling sessions are arranged for slow learners and disadvantaged students. Remedial classes are conducted for such students to improve their overall performance. These classes are scheduled before the exams and are conducted without affecting the regular classes. Parent teacher meeting is conducted for those students who fail in end semester examinations or have a poor attendance. Many times the student may be skill oriented though with average proficiency. Such students are motivated to enhance their skills and capabilities yet not losing out on studies.

English Fluency Class and personality development sessions are conducted for all third year students to improve their communication skills and interpersonal skills.

Advanced learners are given a chance to further improve by assigning them syllabus topics of their interest to conduct presentations in the class. The institution encourages advanced learners to participate in competitions, workshops, e-courses etc. To motivate research-based learning among students, student projects and seminar participation are supported. They are also motivated to achieve top ranking in University exams. The Institute gives them recognition in the form of award/scholarship and certificates.

The advanced learners are inspired to appear for various competitive exams like UPSC, GPSC, JAM, IISc and JNU. For this they are enrolled by the Institute for crash courses conducted by the Gujarat State Biotechnology Mission, which gives them opportunity to interact with other bright students and get guidelines to prepare for such exams. The toppers are motivated to be a part of College Students' Council

and organize as well as participate in various college activities and also to represent the Institute in programs organized by others.

Students who have good academic record can choose one additional certificate courses run by the Institute. Enthusiastic students take up teaching during Teachers' Day celebration.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Past link for additional Information	<a href="#">View Document</a>

### 2.2.2 Student- Full time teacher ratio (Data for the latest completed academic year)

**Response:** 28.83

File Description	Document
Any additional information	<a href="#">View Document</a>

## 2.3 Teaching- Learning Process

### 2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

**Response:**

Teaching-learning is learner focused and learner centric at the Institute:

**Participative Techniques (PT):** Students play an active role during classes which are interactive in nature. Different and innovative practices such as brainstorming sessions, group discussions, seminars, antakshari of technical terms, projects, case studies and field surveys help the students to become pro-active in the classes. The students are asked to share their e-mail id and mobile numbers with the teachers and their peers so that a social network is established. Extra handouts/ reading materials are provided as encouragement to consult reference materials and websites.

**Pragmatic Learning (PL):** Experimental learning is provided to students to augment their theoretical knowledge. There are well equipped laboratories with necessary equipment where students perform the experiments which are in tune with the theory syllabi. Students are encouraged to take up model making/Charts/projects/field studies based on their syllabi and special interest. Hands-on training is given regularly to promote understanding.

**Digitalized Learning (DM):** Digitalized Learning methods such as classrooms with LCD projectors are used. Several support systems like the library, and computer resource centre are developed with sophisticated licensed software that expand the learning environment. Students use variety of e-resources such as You Tube Channels, e-text books, webinars, e-journals etc. The campus is Wi-Fi enabled and all IT

facilities are frequently upgraded.

**Experimental learning:** This is mainly encouraged for students of PG programmes. Students of M.Sc. Chemistry regularly intern with industries to enhance learning.

The need to level proficiencies and offer appropriate help for holistic development is consciously understood. The high achievers are encouraged to employ their full potential by enrolling in summer schools, research projects, vocational courses or going for competitive examinations and enhancing soft skills. The low achievers are given special remedial coaching. This enables the high achievers to reach excellence and the slow learners to reach the minimum qualifying level. The evidence of success of this practice is seen in better results, more regular attendance, increased participation in co-curricular activities and better discipline.

**Student Assistance (SA):** Mentoring System for students is followed to assist students in day-to-day learning. Tutor-ward meetings are conducted to provide individualized attention and to assist students in all fronts, be it psychological or social or economic. Mentoring helps students to understand their subject and scope, increase their confidence and, in general, minimize drop-outs through personal counselling.

**Other Programmes (OP):** For all round development and learning, students engage in various clubs/forums such as NSS, NCC, Sports, Cultural Club, Eco Club, etc. Some students also volunteer with the Students' Union to help in organizing different events and understand their hidden potential in developing leadership skills, event management and interpersonal skills.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Link for additional information	<a href="#">View Document</a>

### 2.3.2 Teachers use ICT enabled tools for effective teaching-learning process.

#### Response:

The last few years have been rewarding as, in keeping with the times, the college has strengthened its infrastructure and all ICT facilities thus realigning its teaching-learning programmes. The entire staff makes judicious use of ICT enabled teaching resources and E-resources

The college has good learning resources including ICT enabled classrooms, decentralized computer laboratories and auditorium in which seminars are regularly conducted. The teachers & students have direct access to the Language laboratory, Embedded system laboratory, COP (career oriented program) laboratory. This digital infrastructure has given the additional boost for the college to remain on the leading edge as knowledge based community and in leveraging e-resources.

The college is now focused on how best to utilize and disperse these resources and provide the full potential of connectivity offered by the National Knowledge Network and INFLIBNET to all the students and faculty. NaMo Wi-Fi enables the entire campus with 50 Mbps bandwidth, thus stimulating active

learning environment and facilitating 'learning anytime anywhere' possible. In an effort to increase e-learning resources, the college students have been issued Tablets at subsidized price by the government in 2017- 2018 and 2018-2019 where 508 and 535 students were benefitted respectively.

Faculty increasingly make discerning use of LCD and OHP for making lessons, projects, seminars, workshops and practicals more interesting, interactive and understandable. Lessons available from the other best institutions in the form of PowerPoint presentations, Webinars, Podcasts, YouTube Videos, etc., are also used for curriculum enrichment. This has helped to complement and supplement the existing courses. Google classroom usage by some departments help to be in touch with students, provide an interactive approach to learning and making it student centric. Gradually but steadily, the college community has started using apps like Google Calendar, Google drive and Google Docs to effectively organize teaching-learning process. The college has organized/ facilitated several training programmes for faculty members to familiarize them with the use of computers, generic and specific software, and IT tools.

The college office is facilitated with LAN and software like ERP which helps in smooth administrative activities. There is an attempt to develop a very strong hardware and software backbone.

The Library is partially automated with Integrated Library Management System (Soul 2.0Software), which houses a sufficient number of books in all disciplines, the collection of rare book-editions, e books and e-journals etc.(N-List) The library provides easy access to digital knowledge resources. All housekeeping operations of the library are computerized. D space software for repository, Online Public Access Catalogue (OPAC), is available in the library. Reminders of overdue books are sent through email. Library organizes orientation sessions for students to make it student-friendly. The library catalogue is available on library website in PDF format.

The college has established Annual Maintenance Contracts for the computers with a reputed firm.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Provide link for webpage describing the ICT enabled tools for effective teaching-learning process	<a href="#">View Document</a>

### 2.3.3 Ratio of mentor to students for academic and other related issues (Data for the latest completed academic year )

**Response:** 28.83

#### 2.3.3.1 Number of mentors

**Response:** 53

File Description	Document
Upload year wise, number of students enrolled and full time teachers on roll.	<a href="#">View Document</a>
mentor/mentee ratio	<a href="#">View Document</a>
Circulars pertaining to assigning mentors to mentees	<a href="#">View Document</a>

## 2.4 Teacher Profile and Quality

### 2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 81.28

File Description	Document
Year wise full time teachers and sanctioned posts for 5years(Data Template)	<a href="#">View Document</a>
List of the faculty members authenticated by the Head of HEI	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 2.4.2 Average percentage of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

Response: 62.06

#### 2.4.2.1 Number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. year wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
37	37	34	33	32

File Description	Document
List of number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. and number of full time teachers for 5 years (Data Template)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest

completed academic year in number of years)

**Response:** 20.96

#### 2.4.3.1 Total experience of full-time teachers

Response: 1111

File Description	Document
List of Teachers including their PAN, designation, dept and experience details(Data Template)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 2.5 Evaluation Process and Reforms

### 2.5.1 Mechanism of internal assessment is transparent and robust in terms of frequency and mode

**Response:**

The Institution believes in transparency in all its activities, be it academic, curricular or extra-curricular. The Orientation program held at the beginning of every academic year apprises students and their parents about all activities, career prospects and code of conduct at the Institute in general. Moreover, the orientation program also appraises students of the exam process, evaluation process as well as presence of grievance redressal cell, Womens' development cell and anti-ragging cell and their functioning at the college.

The Institute ensures that all students are aware of the University as well as the Internal exam procedures through the teachers and the college web site.

Guidelines for internal assessments of theory and practical are prepared as per the University norms and are made available to all faculty. The weightage of marks in Core compulsory subject is 70% from External University exam and 30% from the continuous Internal evaluation. Within the internal 30marks, 5 marks are allotted for presence and rest from continuous evaluation. The marking pattern is conveyed to all students through departmental notice boards and explained in detail through skeleton papers, so that students stay aware.

There is a dedicated Examination committee which plans the internal exam schedule as well as conduction of exams as per university calendar. The internal assessment mechanism is robust in terms of variety and faculty members have flexibility in deciding on the kind continuous comprehensive evaluation methods like, student seminars, literature survey, class tests, multiple choice questions, internal test or projects, so that creativity is encouraged.

After the exams, the assessment is promptly done by the respective faculty, answer sheets/assignments are shared with students for discussion regarding further improvement.

Dates for the theory and practical tests/submission of assignments, projects, etc. are notified on the college notice boards and announced by faculty in the respective classes. Absenteeism due to ill health and



participation in extra-curricular activities is considered and extra classes are arranged in a planned fashion. Later, extra test is also given if necessary.

After the exams, the assessment is promptly done by the respective faculty, answer sheets/assignments are shared with students for discussion regarding further improvement.

The internal assessment mark sheets of both, theory & practicals are prepared with utmost care and prominently displayed on the notice boards of each department. Students scrutinize their marks and are free to raise any doubts or grievances regarding their marks, within a stipulated time.

The institution has an effective mechanism for timely and satisfactory redressal of grievances pertaining to internal marks. The Institute follows the University norms for gracing of marks. Moreover, if a student has represented the college at state or national level in sports or cultural activities, are given incentives in internal marks. The final mark sheets are sent to the University and also displayed on the notice boards for the benefit of the students.

File Description	Document
Any additional information	<a href="#">View Document</a>

### **2.5.2 Mechanism to deal with internal/external examination related grievances is transparent, time-bound and efficient**

#### **Response:**

Internal examination related grievances are dealt with in a timely, efficient and transparent manner.

Once the internal mark sheets are prepared, they are checked with utmost care and prominently displayed on the notice boards. In case of any clarification or discrepancy, students can approach the concerned teacher directly to submit a written application. In every department the faculty-in-charge addresses all grievances related to various classes. The doubt and enquiries of the students regarding the pattern of optimal answers are clarified by the examiners. If there is any error in the assessment, corrections are duly made by the examiner and the corrected marks are officially posted against the name of the concerned student. The same is also corrected in the office record.

Attendance is an integral part of the internal assessment. The department head & the concerned staff member at the college level sorts out issues related to attendance and internal assessments and promptly resolves the mistakes/errors. The teachers in the College compensate attendance as per University guidelines for those students who participate on behalf of the Institute in various college programmes and extracurricular activities. If the student does not improve in the attendance or lacks discipline, a letter is sent from the office by registered post for a parent teacher meeting.

Teachers go beyond the classroom and give full support to ensure that students do not suffer and their grievances are promptly and transparently solved. Weightage is assigned for the overall development of students like for behavioral aspects, independent learning, communication skills, etc.

At the University level: In case of University results, the student has to apply for reassessment and reevaluation. The process is governed by Gujarat University Ordinances. The administrative office of the college guides the students about the process. The process is transparent, time-bound and efficient and is also explained on the Gujarat University website.

For errors like the mark sheets indicating erroneously that the student was absent, the college promptly sends the duly certified attendance sheet to assist in locating marks in exam branch and correcting discrepancies.

File Description	Document
Any additional information	<a href="#">View Document</a>

## 2.6 Student Performance and Learning Outcomes

**2.6.1 Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.**

### Response:

Programme outcomes, Programme specific outcomes (PSO) and course outcomes based on the course designed by the University for all programs are uploaded on the website of the institute. The outcomes are explained to the students during the counselling meeting when they come for the admission and before the beginning of each semester. Also, the Principal, in his orientation address to all newly admitted first year students, discusses the attributes, vision and mission of the institute in the induction programme.

Each department of the institute has clearly stated the Course details and its outcomes in the syllabus of their respective course on the website. Learning outcomes are well defined. As a science college theory as well as practicals are given importance. Many faculty members are proactive in curriculum design as they are a part of University board of studies for different science subjects. Teaching is planned in such a way that the desired outcomes are fulfilled at the end of each semester. The faculty articulates the learning objectives and expected outcomes effectively and makes sure it meets the requirements of the program in totality. Students are motivated towards course outcome throughout the programme by the course teacher.

Lectures by Alumni of various departments are arranged which give the students an opportunity to interact with them and learn more about the outcomes of their courses. This helps to ignite interest and appreciate the course being learnt and its relevance to the industry, research and society.

Alumni share their achievements and their experience in related fields which motivate students to integrate the different disciplines of science. PSO of all subjects are reflected through career options available to the students.

The feedback forms provided to final year students gives them an opportunity to state their comment or improvement required in the course and to be reconsidered by the individual departments.

File Description	Document
Upload COs for all Programmes (exemplars from Glossary)	<a href="#">View Document</a>
Past link for Additional information	<a href="#">View Document</a>

### 2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

#### Response:

The realization of the vision, mission and objectives of the Institute form the crux of all activities., the foremost being attainment of COs, PSOs and POs. The programme outcomes are assessed directly and indirectly to identify the extent to which they are attained and achieved.

For the evaluation of the various outcomes, their attainment is necessary. Resources like libraries, laboratories, ICT, and activities such as field work, industrial visits, student projects, workshops/symposia/seminars/ etc., are adopted for effective course delivery and student learning.

The Institute uses elaborate Evaluation contexts like, Class-room Dynamics, Mid-term/End-term Examinations, Projects/Field Visits/Internships, Co- and Extra-curricular exercises, Out-reach Activities, etc. student seminars, science fair, talks and workshops, Literature survey and presentation/participation in seminars and symposia, etc. are a part to monitor student progress and learning outcome.

Discipline and values are an important aspect at the Institute. The institution keeps a track record of attendance of student during each semester. Mentoring of irregular students is done and teacher- guardian meet is organised if required. Feedback of the Institute is also sought from the students.

The evaluation of contents includes knowledge kinetics, comprehension capabilities, application abundance, analytic abilities, synthesis Sensibilities and evaluation excellences.

**Feedback Evaluation:** Feedbacks regarding syllabi and teaching are collected from final year students each year. These enable the final year students to give their inputs on teaching learning methods, merits, limitations and constraints of the prescribed curriculum as well as teaching methodology. The Institute evaluates and analyses these feedbacks.

**Result evaluation:** Performance of the student in semester end exams is the best measure to evaluate the program outcomes as well as course outcomes. At the end of every semester assessment and evaluation is carried out as per the guidelines provided by the university for a direct and comprehensive evaluation of Attainment of Programme outcomes, Programme specific outcomes and course outcomes by the students. The Institute has an average pass percent of more than 85%, which reflects the Institute performance in attaining the programme and course outcomes. The institution keeps a track record of attendance of student during each semester. Teacher guardian meet if required, to keep a track of student progress and his attendance.

**Evaluation through student progression:** One of the chief evaluation measures for attainment of programme and course outcomes is students' progression to higher education and their placement. More than 50% students opt for higher education whereas some do choose to work. The students have found

placement at reputed industry like Zydus-Cadilla, Amul and Uttam dairy, TCS, Sun Pharma, etc. which is a source of satisfaction as far as attainment of programme outcomes and the overall vision and mission is concerned

**Self-evaluation and analyses:** Programme outcome is greatly dependent on the performance of teachers. Self-evaluation is the best way to evaluate all programme as well as course outcomes. Each and every faculty fills an API form and attends a meeting with the Academic advisor of the Management, to analyze and evaluate their strengths and weaknesses.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

### 2.6.3 Average pass percentage of Students during last five years

**Response:** 72.16

#### 2.6.3.1 Number of final year students who passed the university examination year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
346	469	444	380	480

#### 2.6.3.2 Number of final year students who appeared for the university examination year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
430	575	660	524	814

File Description	Document
Upload list of Programmes and number of students passed and appeared in the final year examination (Data Template)	<a href="#">View Document</a>
Upload any additional information	<a href="#">View Document</a>
Paste link for the annual report	<a href="#">View Document</a>

## 2.7 Student Satisfaction Survey

**2.7.1 Online student satisfaction survey regarding teaching learning process****Response: 3.5**

<b>File Description</b>	<b>Document</b>
Upload database of all currently enrolled students (Data Template)	<a href="#">View Document</a>

NAAC

## Criterion 3 - Research, Innovations and Extension

### 3.1 Resource Mobilization for Research

**3.1.1 Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)**

**Response:** 206.37

**3.1.1.1 Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)**

2018-19	2017-18	2016-17	2015-16	2014-15
0	37.74	120.73	11.90	36.00

**File Description**

**Document**

List of endowments / projects with details of grants

[View Document](#)

e-copies of the grant award letters for sponsored research projects / endowments

[View Document](#)

**3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)**

**Response:** 18.87

**3.1.2.1 Number of teachers recognized as research guides**

**Response:** 10

**File Description**

**Document**

Institutional data in prescribed format

[View Document](#)

Any additional information

[View Document](#)

**3.1.3 Percentage of departments having Research projects funded by government and non government agencies during the last five years**

**Response:** 18

**3.1.3.1 Number of departments having Research projects funded by government and non-government agencies during the last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
0	2	2	3	2

### 3.1.3.2 Number of departments offering academic programmes

2018-19	2017-18	2016-17	2015-16	2014-15
10	10	10	10	10

File Description	Document
Supporting document from Funding Agency	<a href="#">View Document</a>
List of research projects and funding details	<a href="#">View Document</a>
Paste link to funding agency website	<a href="#">View Document</a>

## 3.2 Innovation Ecosystem

### 3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

#### Response:

Research and Innovation have been an integral part of the Institute since its establishment. The principals and leaders have themselves been at the helm of many a research projects. Although the Institute is primarily for Undergraduate studies, the students are always inspired to take up some research projects and present their work in regional, state level or National symposia. The faculties have research projects in collaboration with Government bodies like SAC-ISRO, GMDC, etc. or private research organizations like BVPatel PERD Institute. The Institute has further created an ecosystem for research and innovation by developing linkages with reputed institutes like LM College of Pharmacy, Centre for Environment Education, etc. The Institute has an MOU with L M College of Pharmacy, Ahmedabad, which has Atal Incubation Centre associated with business start ups. Students are taken for visit to such centres so that they may be inspired towards innovation. The Students are also encouraged to carry out literature surveys on current topics, which forms the basis for knowledge transfer and innovation.

Students from Microbiology & Biochemistry Departments participated for four years in the “Satvik Food Festival” from 2014 to 2017 organized by SRISTI, an NGO led by Professor Anil Gupta, IIM, Ahmedabad and member of National Innovation Foundation. Through this, the students learnt innovative and useful ways of food technology for societal benefit. This activity has served to help entrepreneurial aspect also. One of the student participants has set up a business of Microbial Nutraceutical foods under “Kavak Nutraceuticals LLP” & has registered it with Ministry of Corporate Affairs, Government of India.

A novel hands-on training titled “Hands-on training on biodegradation of waste & its conversion into value added product(s)” was carried out by the Institute. Here around 180 students from various universities of Gujarat participated in the program & were trained in mushroom cultivation using argo-waste.

A very promising initiative has been taken by the Chemistry department in Soil testing where students are trained to analyze soil samples obtained from all over Gujarat State; this initiative not only imparts skills and proficiency to the students but also creates an immense database on soil quality. This work has been performed for the Agriculture Department of the Government of Gujarat to prepare, ‘Soil Health card’.

Students of Botany department designed a biodiversity park and won the ‘Handprint challenge’ amongst 35 Asian teams to receive prize money from UNEP through CEE. The biodiversity park is now fully functioning with a green trail and students volunteer to guide various school and college students who visit.

Students of most departments are encouraged to read, understand and present review works as well.

Thus, the Institute has a robust ecosystem of research and innovation.

File Description	Document
Upload any additional information	<a href="#">View Document</a>

### 3.2.2 Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the last five years

**Response:** 25

#### 3.2.2.1 Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
6	6	0	1	12

File Description	Document
Report of the event	<a href="#">View Document</a>
List of workshops/seminars during last 5 years	<a href="#">View Document</a>

### 3.3 Research Publications and Awards

#### 3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years

**Response:** 1.8



**3.3.1.1 How many Ph.Ds registered per eligible teacher within last five years**

Response: 18

**3.3.1.2 Number of teachers recognized as guides during the last five years**

Response: 10

File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
URL to the research page on HEI website	<a href="#">View Document</a>

**3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the last five years**

Response: 0.43

**3.3.2.1 Number of research papers in the Journals notified on UGC website during the last five years.**

2018-19	2017-18	2016-17	2015-16	2014-15
06	06	06	04	02

File Description	Document
List of research papers by title, author, department, name and year of publication	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years**

Response: 0.59

**3.3.3.1 Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year-wise during last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
9	9	5	5	5

File Description	Document
List books and chapters edited volumes/ books published	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 3.4 Extension Activities

**3.4.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.**

**Response:**

The academic aspect is just one element of education. For the holistic development of the students, extra-curricular and co-curricular activities form an equally important part of learning. That's why we offer experiences that go beyond the classroom, giving the students opportunity to develop key life skills. In fulfillment of the vision and mission, the Institute sees to it that students, the future citizens of India, are sensitized towards social issues and always strive for the betterment of the society.

The Institute has a NSS cell comprising of 100 students who work under the guidance of NSS convener.

The NSS activities include special camps at nearby villages, blood donation, visits to old age homes, supporting victims of natural calamities, guest lectures- Interaction and discussion, organizing rally for raising awareness towards various issues, putting up street plays and garbas to raise environmental awareness, traffic awareness, visits to jail and tying rakhi to the inmates, etc.

- Environmental awareness is of great importance as clean and green surroundings lead to healthier humans. Students are sensitized to environmental issues to ensure the continued health of the ecosystems. To make the surroundings green and reduce pollution the institute frequently organizes Tree Plantation and students pledge to nurture trees.

Yet another annual programme is "Blood Donation Camp" which is organized every year in collaboration with the Indian Red Cross Society and "Shri Humad Samaj Pragati Sangh", Ahmedabad. This Samaj actively helps students to be sensitized to this noble gesture and distributes various gifts to motivate students to donate blood.

Also, institute frequently organizes general awareness programs on: Organ donation, traffic awareness, swachhhta, voting awareness, a program on AIDS awareness and presentation, suicide prevention awareness, BHIM app awareness, etc.

Caring and respecting our elders is an important value and students of the Institute visit Old Age Homes to spend quality time with the Elderly. The student groups are encouraged to participate in NSS camps at villages so as to be aware of village life.

At times of national catastrophes, the students actively engage to help the victims and their families.

These activities sensitize the students towards societal issues and teach them to be compassionate and proactive.

Many students take up jobs with NGOs and environmental organizations and make this their career.

- In addition to all above, institute organizes extension activities in sensitizing students to social issues like Beti Bachavo, Beti Padhavo, women empowerment, paint on trees, Health check-ups, Gandhi Jayanti celebration, etc. round the year.
- Student volunteers are also involved in social activities like clothes distribution amongst the needy people in surrounding slum areas, Rakhi collection for Indian Army at Siachin and Rally for Ori-Rubela Vaccine.
- More than 500 students of institute held a silent rally in the University area on the attack in Pulwama on 18th February, 2019. The event was covered by Sandesh News TV channel.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

### 3.4.2 Number of awards and recognitions received for extension activities from government/ government recognised bodies during the last five years

Response: 0

#### 3.4.2.1 Total number of awards and recognition received for extension activities from Government/ Government recognised bodies year-wise during the last five years.

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

File Description	Document
Number of awards for extension activities in last 5 year	<a href="#">View Document</a>

### 3.4.3 Number of extension and outreach Programmes conducted by the institution through NSS/ NCC/ Red Cross/ YRC etc., ( including the programmes such as Swachh Bharat, AIDS awareness, Gender issues etc. ) and / or those organised in collaboration with industry, community and NGOs during the last five years.

**Response: 63****3.4.3.1 Number of extension and outreach Programmes conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
15	17	12	11	8

File Description	Document
Reports of the event organized	<a href="#">View Document</a>
Number of extension and outreach Programmes conducted with industry, community etc for the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.4.4 Average percentage of students participating in extension activities at 3.4.3. above during last five years****Response: 33.28****3.4.4.1 Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
410	406	640	840	410

File Description	Document
Report of the event	<a href="#">View Document</a>
Average percentage of students participating in extension activities with Govt or NGO etc	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.5 Collaboration****3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/**

**internship per year****Response:** 19**3.5.1.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year-wise during the last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
14	1	1	1	2

<b>File Description</b>	<b>Document</b>
e-copies of related Document	<a href="#">View Document</a>
Details of Collaborative activities with institutions/industries for research, Faculty exchange, Student exchange/ internship	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**3.5.2 Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the last five years****Response:** 5**3.5.2.1 Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
01	02	01	0	01

<b>File Description</b>	<b>Document</b>
e-Copies of the MoUs with institution/ industry/corporate houses	<a href="#">View Document</a>
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## Criterion 4 - Infrastructure and Learning Resources

### 4.1 Physical Facilities

**4.1.1 The Institution has adequate infrastructure and physical facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc.**

**Response:**

Since its inception in the year **1946**, M.G. Science Institute has taken the role of a torchbearer in spreading scientific temper all across Gujarat. In this institute, the legendary scientist Dr. Vikram Sarabhai set up Physical Research Laboratory.

With a total area of 19.3 acres, infrastructure at the institute is its big forte. Large and airy classrooms, well-equipped laboratories, enriched library, auditorium, partially computerized library, hostel for boys and girls, AES sports complex, botanical garden, canteen and parking facilities, ladies' rooms, water coolers, etc. Specific offices are designated for IQAC, Sports, NCC, CWDC, Student's Union and Placement Cell activities. There are 148 computers (Desktops & laptops) in the institute for students and faculty. There are museums, botanical garden, herbarium and all other necessary facilities for teaching-learning.

The infrastructure of the institute has been upgraded in the last 8-9 years under the grants received from various schemes i) DBT Star College scheme (2011-2016), ii) UGC-CPE (2016 onwards), iii) Institutional charges from various research projects iv) KCG (Knowledge Consortium of Gujarat), v) the AES management for overall renovation of building and campus, etc.

All the departments possess projectors and internet connection which enable them to deliver lectures with great felicity. The faculties at the Institute use modern teaching aids like LCD, overhead projectors, videos, charts and various scientific models for making the teaching and learning process live and illustrative. The NAMO Wi-Fi has been installed in the institute and commissioned from **29.11.2018** and available to all students and faculty free of cost.

**The infrastructure facilities are:**

1. Class rooms: 16 –with LCD projectors
2. Laboratories: 21 well equipped (many have LCD projectors)
3. Central Library (more than 25000 books; with SOUL 2.0, D Space, computers and WiFi)
4. One auditorium with audio visual facility (200 seating capacity).
5. English Language Lab (24 Computers)
6. COP Computer laboratory with internet facility: 1
7. A laboratory with 20 Computers having **PASW SPSS 18** Licensed software in the Statistics department
8. A laboratory with 10 Computers having **MatLab** Licensed software in the Mathematics department
9. **ENVI** and **IGiS** Licensed software for Remote sensing data analysis and GIS in the Botany department.
10. Plant Tissue Culture lab in Botany department
11. Animal Tissue Culture lab in Zoology department
12. Instrument Lab in Chemistry department
13. Instrument Lab in Microbiology department

14. Zoology Museum
15. Botany Herbarium with floras of various regions.
16. Geological Museum
17. Fully equipped Laboratory for embedded system
18. RO Drinking water facility
19. Hostel for Boys and Girls
20. Ladies Room with wash rooms: 2 (one with sanitary napkin incinerator)
21. Staff Ladies wash rooms: 2
22. Gents wash rooms (1 staff; 4 for students)
23. CCTV, Speaker and LCD Projectors
24. As per the norms of Fire and Emergency Services, Ahmedabad Municipal Corporation, 48 Fire extinguishers have been installed in the Institute building.
25. Spacious parking facility
26. Spacious AES Sports Complex
27. Gymkhana for indoor games
28. Biodiversity Park developed from grants of UNEP through CEE
29. Electronics Computer Laboratory 1

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 4.1.2 The Institution has adequate facilities for cultural activities, sports, games (indoor, outdoor), gymnasium, yoga etc.

##### Response:

The Institution has adequate facilities for sports, games (indoor, outdoor), gymnasium, etc. and cultural activities.

The The institute has a newly renovated auditorium with a capacity of more than 150 students. There is also a bigger auditorium in the vicinity (GMDC auditorium under the Management) where annual functions and seminars may be organized. Some rooms are allotted also for co-curricular activities.

The Institute had a sports complex with facility for indoor games as well as some gym equipment. This is now being used by the Ahmedabad Uni. run by the Ahmedabad Education society. The AES has already allocated separate land for the construction of a new sports complex in the Institute campus and for this grants from RUSA have been already received. Work will soon begin.

Currently, the institute has access to the AES sports Complex (as the institute is managed by AES) which has a separate ground for football, basketball, volleyball, cricket, a 400m track and necessary equipment for weight-lifting, and for field and track events. It also has facilities for table tennis. The in-house auditorium is used for all the major activities like cultural programs, college cultural festival, annual day, annual light music program, yoga training, etc.

There is a sports room with adequate furniture for storage of sports equipment. The college also has indoor sports facility like chess, carom, etc.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 4.1.3 Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc. (Data for the latest completed academic year)

**Response:** 100

##### 4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 17

File Description	Document
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	<a href="#">View Document</a>
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 4.1.4 Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years(INR in Lakhs)

**Response:** 0

##### 4.1.4.1 Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

File Description	Document
Upload Details of budget allocation, excluding salary during the last five years (Data Template)	<a href="#">View Document</a>

## 4.2 Library as a Learning Resource



#### 4.2.1 Library is automated using Integrated Library Management System (ILMS)

##### Response:

M. G. Science Institute has a well maintained spacious central library facility with more than 26578 books. It also subscribes to various science journals (around 25), a large number of magazines and leading newspapers. It has been registered with N-LIST (Inflibnet) since 21-04-2011, and the same is available to registered staff of the institute. As the institute is having 2F & 12B recognition from UGC, it automatically has access to eShodhSindhu, e-journals, Shodhganga, etc. provided through N-LIST membership. The library is partially digitalized by bar-coding the books through the UGC-CPE grants. Library is using **SOUL 2.0** and **DSpace** software (purchased from INFLIBNET) to keep track of the access to the books, issue, and updating of the stock. **DSpace** is an open source repository software package typically used for creating open access repositories for scholarly and/or published digital content. It serves the specific need as a digital archives system, focused on the long-term storage, access and preservation of digital content.

The computers in the library are linked with the internet. As the college was established in 1946, it has hundreds of text books, novels (Gujarati & English), and other useful resources that can be considered rare.

- Name of the ILMS software: **SOUL 2.0** and **DSpace**
- Nature of automation – partial automation
- Version- 2.0 (Latest)
- Year of Automation: **SOUL 2.0** (3.2.2016) **DSpace** (29.10.2018)
- Registered with Inflibnet

Software for University Libraries (**SOUL2.0**) is designed and developed by the INFLIBNET Centre based on requirements of college and university libraries.

- State-of-the-art integrated library management software
- User-friendly software developed to work under client-server environment.
- Compliant to international standards for bibliographic formats, networking and circulation protocols.
- Designed for latest versions of MS-SQL and MySQL (or any other popular RDBMS).
- Compliant to international standards such as MARC 21 bibliographic format,
- Unicode based Universal Character Sets for multilingual bibliographic records and
- NCIP 2.0 based protocols for electronic surveillance and control.

There are five Computer terminals for students and faculty.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for Additional Information	<a href="#">View Document</a>

#### 4.2.2 The institution has subscription for the following e-resources

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases
- 6.Remote access to e-resources

E. None of the above

D. Any 1 of the above

C. Any 2 of the above

B. Any 3 of the above

**Response:** A. Any 4 or more of the above

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Details of subscriptions like e-journals, e-ShodhSindhu, Shodhganga Membership , Remote access to library resources, Web interface etc (Data Template)	<a href="#">View Document</a>

#### 4.2.3 Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

**Response:** 3.32

##### 4.2.3.1 Annual expenditure of purchase of books/e-books and subscription to journals/e-journals year wise during last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
12.14	1.38	0.66	0.38	2.05

File Description	Document
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the last five years (Data Template)	<a href="#">View Document</a>
Audited statements of accounts	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

#### 4.2.4 Percentage per day usage of library by teachers and students during the last completed academic year

**Response:** 5.82

4.2.4.1 Number of teachers and students using library per day over last one year

Response: 92

File Description	Document
Details of library usage by teachers and students	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 4.3 IT Infrastructure

#### 4.3.1 Institution frequently updates its IT facilities including Wi-Fi

**Response:**

The Institute has upgraded its IT facilities including Wi-Fi from time to time as per the needs and requirements. It has upgraded the internet connection bandwidth from 8 Mbps upto 2017 to 50 Mbps, with campus Wi-Fi facility.

The college has updated its IT facilities by increasing the number of computers, printers, scanners, interactive LCD projectors, copier machines, licensed softwares.

Number of computers with individual configurations (Intel i3, Dual Processor with 2-4 GB RAM and 250 GB to 500 GB HDD) have been added.

The Institute has several computer labs, with licensed softwares and the students as well as the faculty and non-teaching administrative staff has access to it and sharpen their knowledge and skills in IT.

A LAN facility with Windows 2003 and 2007 servers forms the backbone of the computer centre. The computer centre is equipped with different computing software like Windows, Linux and almost all software tools like MATLAB version 2010-11, IBM SPSS, SGL (GIS), etc.

The mathematics lab is upgraded with new versions of the MATLAB software. Earlier, MW-MATLAB &

MW-SYMBOLIC MATH TOOLBOX (997331) version 2011 with 2 users was procured under DBT Star college scheme. Now 5 more users and latest version (2017-18) are added under the UGC-CPE scheme grants. Several freewares like R, Python, Sci-lab, etc. are downloaded and installed in the labs.

**IBM SPSS Advanced Statistics, IBM SPSS Regression analysis** soft-wares have been purchased and installed in the Statistics Department Computer lab. **DBT supported SPSS (Base18) has now been upgraded to IBM SPSS (Base 25.0)** under the UGC-CPE scheme.

The Botany department has procured **ENVI & IGiS** softwares, for interdisciplinary research and project work in remote sensing applications. **ENVI is an image analyzing software, IGiS** software, having advanced tools for GIS data conversion, analysis and visualization is designed totally in-house by Scientists of Space Applications Center and is the most popular software for students and researchers.

- Vision SmartLink Networking Pvt. Ltd provided 6/8 Mbps speed internet connectivity to all departments and office until 2017-18. This was upgraded to **50 mbps leased line in 2018-19.**
- **QuickHeal** packages have been purchased and installed in most of the computer systems to ensure security and protection of the computers.
- Free internet through Namo **Wi-Fi** by the Gujarat government
- Each department is connected with 50Mbps broad band line to prepare computer aided teaching and learning material, for the students to sharpen the computer skills and for support and guidance for taking up the projects.
- Uploading and sharing e-resources facility is also made available for the teachers and the students.
- Each class rooms are equipped with LCD projectors and two computer laboratories have smart projector board; which is extensively used for presentations, seminars and interactive sessions.
- Many staff members are connected with Alumni and students on the social sites for various information related to academia.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 4.3.2 Student - Computer ratio (Data for the latest completed academic year)

**Response:** 10.99

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Student – computer ratio	<a href="#">View Document</a>

#### 4.3.3 Bandwidth of internet connection in the Institution

**E. < 05 MBPS**

**D. 05 MBPS – 10 MBPS**

**C. 10 MBPS – 30 MBPS**

**B. 30 MBPS – 50 MBPS**

**Response:** A. 750 MBPS

File Description	Document
Upload any additional Information	<a href="#">View Document</a>
Details of available bandwidth of internet connection in the Institution	<a href="#">View Document</a>

#### 4.4 Maintenance of Campus Infrastructure

**4.4.1 Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years(INR in Lakhs)**

**Response:** 60.23

**4.4.1.1 Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year-wise during the last five years (INR in lakhs)**

2018-19	2017-18	2016-17	2015-16	2014-15
152.27	262.98	77.84	23.22	31.21

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)	<a href="#">View Document</a>
Audited statements of accounts	<a href="#">View Document</a>

**4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.**

**Response:**

M. G. Science Institute has been managed effectively under the able guidance of the Ahmedabad Education Society (AES) since 1946. AES is one of the largest academic trusts in Gujarat, providing

quality education from kindergarten to post graduation. It has 25 institutions under its umbrella catering to over 10,000 college students and 3,000 school children.

AES provides capital expenditure necessary to run M. G. Science Institute and recently sanctioned 5 crore rupees for up-gradation of physical infrastructure and all types of maintenance of the institute without altering any external physical structure of the institute. The Building and Infrastructure Committee of the institute along with AES looks after the renovation of building and approval of proposals regarding improvements of facilities in the institute. This committee also maintains infrastructure facilities and equipment of the institute.

- The major equipment like desktops, air conditioners, CCTV, water coolers, RO systems are serviced regularly and most are under annual maintenance contract. Dead Stock is maintained annually.
- Various laboratories, library and sports facilities are maintained under the supervision of the concerned Faculty-in-Charge.
- Being a science college the various departments have lab assistant(s) who takes care of the laboratory equipments on daily basis, preparation of media & /or reagents, etc. They also carryout administrative work of records keeping, stocks, distribution of material, etc. The lab hamals look after the overall cleanliness, washing and cleaning of the laboratory.

Maintenance of the college infrastructure is undertaken as follows:

### **1. Routine Maintenance:**

- It includes the cleaning of the entire college campus and other infrastructure facilities. The routine maintenance is carried out by the institute appointed staff and supported by temporary staff hired on contract basis. The work done is supervised by the Office superintendent (OS).
- Details of routine maintenance are: sweeping of the campus done twice daily.
- Classrooms, laboratories cabins, staff rooms, offices, library, etc. as well as toilets are cleaned and mopped
- The AMC door-to-door waste collection service van collects waste on a daily basis.

### **2. Building Maintenance:**

It includes repairs of damages, intermittent painting of the infrastructure to keep the college building effectively functioning. Major jobs are done by AES management staff or as required by external agencies.

The details of building maintenance involve cleaning of water supply line, water faucet, drainage line; on yearly basis; painting of internal and external walls, benches, repair of leakage in drainage and water lines, renovation and repairing is done as per need.

### **3. Electrical Maintenance:**

The institute has obtained a dedicated power line from the Torrent Power Limited (TPL), Ahmedabad. The major faults are resolved by the TPL, however, routine servicing, repairing and replacement of electrical accessories and installations in the campus are carried out by the permanent Electrician (staff). Recently the whole electrical wiring has been revamped by the AES under the renovation project along with MCB and ECB installation. This has enhanced the safe practices at the institute.

#### 4. Repair works:

This includes the repairs of the furniture and equipment of the college. The furniture of the institute includes:

- Lecture hall furniture
- Office furniture
- Teaching aids
- Library furniture
- Computer center furniture

These repairs are carried out as per need base by external agencies provided by AES.

#### 5. Library Maintenance

The day to day activities of library are managed by the Librarian and library peon. The overall monitoring of the Library is looked after by Faculty-in-Charge and the Principal, HoDs, members of Students Union and OS. The purchase of books and journals are purchased based on the recommendations of the HoD and faculty. Library software is normally reviewed by the committee and upgraded regularly. The library follows the Government norms to identify worn out books, and stock verification of the books is also carried out annually. Everyday morning the returned books are re-shelved by the library peon/Librarian.

#### 6. Laboratory Maintenance

The Laboratory assistants(s) and Faculty-in-charge of respective laboratory is responsible for the Calibration of equipment and is reviewed on the yearly basis. The obsolete equipments are identified as per Government norms. The equipment stock in the laboratory is maintained and audited.

#### 7. Computer Maintenance

The servers and desktop systems are checked on monthly basis and the hardware upgradation for network equipment like access points, switches are done on need basis. This is under AMC.

#### 8. Gas Maintenance

In various laboratory gas connections are provided by Adani Gas Limited. They monitor the supply and leakage of gas on regular basis. Also a Gas mechanic (permanent staff) is appointed for the minor problems and its solution regarding the gas supply.

#### 9. Utilization of Common facilities

The HoD and faculty can avail the common facilities such as Auditorium, certain laboratories for seminars, workshops, guest lectures, etc. with prior intimation to the Office Superintendent. In case of need for a classroom not assigned to one, it can be utilized with prior intimation to concerned Head of Department.

**10. Botanical Garden maintenance:** The management has recruited two part-time gardeners to look after the botanical garden and various activities associated with its upkeep.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

NAAC



## Criterion 5 - Student Support and Progression

### 5.1 Student Support

#### 5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during last five years

**Response:** 23.87

##### 5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
448	348	388	386	354

#### File Description

#### Document

upload self attested letter with the list of students sanctioned scholarship

[View Document](#)

Upload any additional information Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years (Data Template)

[View Document](#)

#### 5.1.2 Average percentage of students benefitted by scholarships, freeships etc. provided by the institution / non- government agencies during the last five years

**Response:** 0.17

##### 5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution / non- government agencies year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
2	2	1	2	7

#### File Description

#### Document

Upload any additional information

[View Document](#)

Number of students benefited by scholarships and freeships institution / non- government agencies in last 5 years (Date Template)

[View Document](#)

**5.1.3 Capacity building and skills enhancement initiatives taken by the institution include the following**

1. Soft skills
2. Language and communication skills
3. Life skills (Yoga, physical fitness, health and hygiene)
4. ICT/computing skills

**E. None of the above**

**D. 1 of the above**

**C. 2 of the above**

**B. 3 of the above**

**Response:** A. All of the above

File Description	Document
Details of capability building and skills enhancement initiatives (Data Template)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Link to Institutional website	<a href="#">View Document</a>

**5.1.4 Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five years**

**Response:** 19.3

**5.1.4.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
64	495	470	80	450

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 5.1.5 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

1. Implementation of guidelines of statutory/regulatory bodies
2. Organisation wide awareness and undertakings on policies with zero tolerance
3. Mechanisms for submission of online/offline students' grievances
4. Timely redressal of the grievances through appropriate committees

E. None of the above

D. 1 of the above

C. 2 of the above

B. 3 of the above

**Response:** B. 3 of the above

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	<a href="#">View Document</a>
Details of student grievances including sexual harassment and ragging cases	<a href="#">View Document</a>

## 5.2 Student Progression

### 5.2.1 Average percentage of placement of outgoing students during the last five years

**Response:** 2.42

#### 5.2.1.1 Number of outgoing students placed year - wise during the last five years.

2018-19	2017-18	2016-17	2015-16	2014-15
11	53	2	0	0

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Self attested list of students placed	<a href="#">View Document</a>
Details of student placement during the last five years (Data Template)	<a href="#">View Document</a>

### 5.2.2 Average percentage of students progressing to higher education during the last five years

Response: 250.93

#### 5.2.2.1 Number of outgoing student progression to higher education during last five years

Response: 1079

File Description	Document
Upload supporting data for student/alumni	<a href="#">View Document</a>
Details of student progression to higher education (Data Template)	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

### 5.2.3 Average percentage of students qualifying in state/national/ international level examinations during the last five years (eg: IIT/JAM/ NET/SLET/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations, etc.)

Response: 0

#### 5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: IIT/JAM/ NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations, etc.)) year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

#### 5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government

**examinations) year-wise during last five years**

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0

File Description	Document
Number of students qualifying in state/ national/ international level examinations during the last five years (Data Template)	<a href="#">View Document</a>

**5.3 Student Participation and Activities****5.3.1 Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) during the last five years.****Response:** 25**5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) year-wise during the last five years.**

2018-19	2017-18	2016-17	2015-16	2014-15
11	5	3	4	2

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at university/state/ national/international level during the last five year	<a href="#">View Document</a>
e-copies of award letters and certificates	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

**5.3.2 Institution facilitates students' representation and engagement in various administrative, co-curricular and extracurricular activities following duly established processes and norms (student council, students representation on various bodies)****Response:**

The students' council/Union is an essential part of the Institute functioning. The Institute believes in the dynamic participation of the students in various academic, curricular, extracurricular and other day-to-day activities so as to prepare them for leadership roles, team work, organization and execution of events.

The Students council is headed by the Principal and senior faculty members and includes one General Secretary, one Cultural secretary, One Ladies' representative, Class representatives and some co-opted members.

Selection Procedure: At the beginning of the year, the Principal and member faculties hold a meeting with all the topper students of semesters I, III and V. The General Secretary, cultural secretary and Ladies' representative are selected on the basis of merit, interest and willingness, irrespective of the gender or subject. All other student representatives form the union team. There is also a provision for co-opting volunteer students for sports and cultural activities.

The membership of students' council is an esteemed spot and the members of the council create an atmosphere of harmony, vitality and synchronization in the day to day management of the college. The fund for the students' union comes from the semester fees collected by the Institute.

There is students' representation in various academic and administrative committees like IQAC, Anti-ragging cell, Cultural committee, Library committee, Admission committee, etc.

- The students' council members stand out taking the leadership in organizing various events like Talent, Youth festival, Co-curricular activities, Sports day, Blood donation, Tree plantation, Community services, College Annual day and many more activities. Various days like Environment awareness day, compassion day, Blood donation day, Food & Nutrition day, no vehicle day etc. are celebrated under the aegis of Students' council. Students also visit the old age homes and spend quality time with the elderly people to brighten their day. Many items like clothes, stationery, books and toys are collected from College students and distributed to the children of slum areas.
- During the admission time, the committee of these meritorious senior students is given the responsibility of counseling to the admission seekers. Therefore we have a number of bodies functioning in the institute that have student representation.
- Students' council arranges a talent morning where all students from Semester-1 to Semester-6 are encouraged to participate and showcase their talent in Music, Dance, Drama, Literary activities, Fine Arts and Personality contests. Such involvement in extra-curricular activities also strengthens their learning experience. All these activities conducted in the college prepare the students for their future development.

It also actively volunteers for relief activities at the time of natural calamities.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

### 5.3.3 Average number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions)

**Response:** 59.6

#### 5.3.3.1 Number of sports and cultural events/competitions in which students of the Institution participated year-wise during last five years

2018-19	2017-18	2016-17	2015-16	2014-15
65	55	49	64	65

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Report of the event	<a href="#">View Document</a>
Number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions (Data Template)	<a href="#">View Document</a>

## 5.4 Alumni Engagement

### 5.4.1 There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

**Response:**

The Alumni Association was established on 30th June 2006, under society registration Act, XXI of 1860 as MAA (M.G. Science Alumni Association) (Registration No F\12103/Ahmedabad). Currently, the association comprises of 990 life members. The students who have completed UG, PG or Ph. D. from the college and past and present faculty members are eligible to register as members of this alumni association.

MAA contributes significantly to the development of the Institution directly or indirectly through financial or other means. It not only provides a platform for alumni to maintain their link with their Alma mater, but strives to promote education and learning at the institute. All activities of Alumni Association can be viewed on <https://www.almashines.com/maa>

As per the UGC guidelines, the IQAC of the college comprises of at least one member from the Alumni association. This way, the alumni can contribute in various decision making processes of the Institute.

Further, the mission of Alumni association is brought to life by maintaining alumni website, social media pages and a detailed database and organizing various events and programs. The Alumni association reunites alumni from all over the world. A number of alumni have visited the campus and given lectures and group discussion on various scientific subjects and on relevant social and spiritual matter to students.

It supports philanthropic activities like funding to deserving and needy students for their studies, organizing workshops, lectures and symposia.

Not only financially but alumni members enthusiastically participate in flag hoisting, talent programme and other celebrations at the institute. Thus, the active involvement of the Alumni provides a platform for sharing their work, technical knowledge and experience which has proved highly essential in the holistic development of the students, reflecting the core objective of the alumni association.

Recently at mega event more than ten lakh rupees' fund was generated for the benefit of the Institute. Prominent alumni, who are renowned citizens of India, were facilitated by the institute. These included, a High-court Judge, IFS, IAS and IPS, Vice-chancellor of University, Leading Industrialists, well-known artists, amongst others.

They shared their experiences at the Institute and their life stories to motivate all others.

The leading members of the Alumni Association have regular interaction with the Principal, the management, and the staff members regarding the overall development of the college.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 5.4.2 Alumni contribution during the last five years (INR in lakhs)

E. <1 Lakhs

D. 1 Lakhs - 3 Lakhs

C. 3 Lakhs - 4 Lakhs

B. 4 Lakhs - 5 Lakhs

**Response:** E. <1 Lakhs

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Link for any additional information	<a href="#">View Document</a>



## Criterion 6 - Governance, Leadership and Management

### 6.1 Institutional Vision and Leadership

#### 6.1.1 The governance of the institution is reflective of and in tune with the vision and mission of the institution

##### Response:

M.G. Science is a seven-decade old Institute, affiliated with Gujarat University and committed to impart holistic knowledge in pure and applied sciences with interdisciplinary approach to students from all sections of society. The Governance of the Institute reflects the vision to instil high level of moral values and scientific skills in the students, so that they become enlightened individuals. It also endeavours to develop the institute as a “Centre of Excellence” in teaching, research and service in the field of science.

The avowed objective of the institute is to provide students with high quality science education while developing in them a sense of ethics and social responsibility. Although, courses are pure and applied in nature, there is scope for inculcating core values, and to do so, the institute strives to integrate its broad vision in the curricula by arriving at the judicious amalgamation of academic and non- academic activities.

The Ahmedabad Education Society, which governs the Institute provides an excellent leadership and gives full freedom to the Principal to run the college in tune with the University policies. The Principal, in turn, designates all heads of departments with the day to day running of the department in a way that leads to the fulfilment of the overall mission and vision of the Institute. All staff, whether teaching or non-teaching, are made part of various committees so as to design and implement all college activities for the betterment of the students.

A students’ union is also formed, which acts as a bridge between students and teachers and students too, get a first-hand experience to become leaders. Various academic activities at the institute aim at promoting excellence in learning, which is reflected in the sterling performance of the students in various university examinations. The institute encourages students to participate in extra-curricular activities like youth festivals, blood donation camps, community services, relief camps, literacy drives, research projects, environmental activities, in fulfilling the mission of promoting multidimensional learning for the overall benefit of the community.

To inculcate in the students a high-level of self-discipline and dignity, the Institute arranges invited talks and seminars for their awareness in health, hygiene as well as self-defence.

The Institute has a diverse students’ diaspora consisting of students from Ahmedabad as well as from nearby towns and rural areas. To realize the goal of preparing students to appear at National as well as Global platform, the institute runs several career oriented courses. It also arranges summer schools and finishing school to polish the skills of students.

There is an active Alumni association which supports the Institute in various activities. The Governance adopts complete decentralization policy in the running of the Institute and thus provides an effective leadership which is in tune with the mission and vision of the Institute.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

### **6.1.2 The effective leadership is visible in various institutional practices such as decentralization and participative management**

#### **Response:**

The institute enjoys grant in aid status and is managed by Ahmedabad Education society. The society appoints Governing Body that includes eminent industrialists, lawyers and other stakeholders.

Principal of institute is appointed as per UGC rules. The senior most faculty member is given charge, who, in absence of the principal manages the smooth running of all day-to-day college activities. Administration is further decentralized by appointing a head of the department for all subjects for effective and constructive management of their departments. The Head of the department, in turn, assigns mentorship and gives semester wise charge to faculty members who are responsible for conduction of day to day practicals, various batches, assigning project work, designing schedule for internal examination, etc. To make day to day administration more smooth specific duties are assigned to both teaching and non-teaching staff.

Several sub committees like, IQAC, Admission, Cultural, CWDC, Examination, Time-table, research committee, etc., are formed for smooth conduct of academic, co- curricular and extra-curricular activities.

A students' union is formed by selection of meritorious students. It is responsible for organization of cultural and sports fest, help NCC and NSS activities, college magazine, and also work as volunteers as and when required. Some of the members of the union are a part of administrative committees like anti-ragging committee, IQAC, etc.

#### **Case study:**

##### ***Conducting internal exams for all semesters:***

an internal exam is conducted every semester by the institute. It carries 30% weightage per theory paper and practical. Smooth and hassle free conduction of exams requires coordination amongst entire staff. First meeting for the same involves Heads of all departments and Principal. In this meeting a suitable date and time is decided unanimously with inputs of all heads and time period specified by affiliated University.

A notice is drafted for preparation of manuscripts in a particular format common for all subjects.

The students are informed of the dates through the general notice board, well in advance.

Exam committee sits with time table committee to design time table for exams. Once that is finalized two-member committee is formed that is responsible for collection of manuscripts from all heads. They print and prepare question paper sets to be distributed on the day of exam.

Non-teaching and office staff are assigned duty to prepare blocks and assign seating arrangement. Invigilation duties are assigned to all staff members prior to commencement of exams so they can arrange their leaves accordingly.

Collection of answer sheets and their assessment need to be completed on time. Each department puts up the internal marks on their respective notice boards for students to check. A time limit is also given to the students who wish to recheck their marks. The final marks are sent to the main office for further process.

Finally, the result committee prepares final internal marks to be submitted to the University.

The entire exam process involves almost entire staff and is completely transparent.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

## 6.2 Strategy Development and Deployment

### 6.2.1 The institutional Strategic / Perspective plan is effectively deployed

#### Response:

The Institute is grant-in-aid and follows policies and norms of the Gujarat University as well as the Ahmedabad Education Society. The Principal, along with IQAC members and heads of the Departments, charts out a workable academic calendar every year and presents it to the Academic advisory body of the management whose members are easily approachable and ready to guide. Deployment of various activities is done as per planned and sanctioned, keeping the vision, mission and goals of the Institute in mind. All the documents related to various activities are available at the Institute. The students are involved in various committees and organizing activities so as to inculcate leadership values in them.

The institute has established a culture of excellence through the efficient teamwork of the staff. As a result, the institute has achieved A-Grade in 2nd Cycle and the “College with Potential for Excellence (CPE)” Status of UGC.

Some of the important activities of the Institute, successfully implemented based on the strategic plan are mentioned below:

- participation in state and national ranking process: in NIRF ranking conducted by MHRD and secured 152nd rank, participation in GSIRF by Gujarat Government and ranked among top five college with four stars and 126th amongst colleges of India as per ‘India Today’.
- Infrastructure maintenance: renovation of class rooms and laboratories with the sanction of 5 crore rupees by the management.
- Auditorium: AC auditorium with a seating capacity 170 and LCD, Wi-Fi and audio facilities is now fully functioning.

- Faculty development programmes: participation and organising.
- Research-Innovation: MoUs have been signed, Faculty and students are encouraged for presentation at seminar/symposia, Publishing papers, and so on.
- Environmental consciousness: The Institute is part of National Green Corps, eco-club, Green initiatives by the Institute include green and landscaped campus, LED bulbs and tube-lights, Composting, waste segregation, Rain-water harvesting, etc.

#### CASE STUDY: Installment of HD CCTV cameras in the Institute

The Institute has around 1600 students out of which at least 55% are girl students. This required that high Definition CCTV cameras be installed at the Institute for surveillance on the campus, in place of previously existing normal cameras so that better safety and security are ensured.

For installation of CCTV cameras, strategic plan was developed in the IQAC meeting. All the present members agreed for the activity. The IT and purchase committee then surveyed various available vendors for the CCTV installation. In August 2018, as per the policy of the Institute, 3 vendors were invited to submit their quotation. the best service provider was selected for the said activity. The actual work for this installation started in September 2018 and completed by November 2018.

The entire activity was strategically organized and deployment documents are available with the Institute office.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
strategic Plan and deployment documents on the website	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 6.2.2 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment and service rules, procedures, etc.

##### Response:

**Administrative set up:** The Ahmedabad Education Society (AES) was established under the inspiration of Late Shri Sardar Vallabhbhai Patel, the first Dy. Prime Minister of Independent India. Other inspiring leaders who played a vital role for the same includes G V Mavalankar: first speaker of Loksabha, Shri Kasturbhai Lalbhai: an industrialist and philanthropist with foresight and Shri Amrutbhai Hargovandas: an eminent industrialist. This institute was established in 1946 with a generous donation from Sheth Shri Navinchandra Mafatlal and is named after his father. The institute was declared open by Dr Sarvapalli Radhakrishnan, the Vice President of India When Government policy changed M G Science institute became a Grant in aid Institute, affiliated to Gujarat University, Ahmedabad but managed by Ahmedabad education Society.

The Governing body is as shown in the Organogram. It is represented by some of the leading educationists,

industrialists, advocates and philanthropists of the state. The Principal, appointed as per UGC norms, regularly meets the Director and Academic advisor of the Governing Body to discuss various administrative and academic matters respectively. The governing body appraises ideas and prepares the roadmap for the future. The principal conveys this road-map to all HoDs and Convenors of respective committees to execute the activities. All faculty members are assigned specific duties as part of various working committees. The students' union is also involved in these.

The non-teaching staff is headed by the Office Superintendent under whom, Accountants, junior and senior clerks and peons work. There is a Librarian who is also answerable to the OS.

The laboratory non-teaching staff includes Lab assistant, electrician, gas mechanic, gardener, plant collector, store keeper, peons and sweeper. All are assigned specific duties by the HoDs of the respective departments.

Office staff is involved in day to administration like completing admission formalities, fees collection, filling of enrolment forms, issuing I Cards to students and staff, making payments, preparing transcripts, maintaining all records.

#### **Recruitment:**

Permanent posts are filled as per university, UGC and state government norms. The Management recruits certain unfilled vacancies like teaching assistants, laboratory assistants, librarian, clerks, peons, sweepers, etc. on fixed pay basis or on daily wages.

#### **Promotion policy:**

The teaching and nonteaching staff is promoted as per the rules of university and state government.

The daily wagers, depending on their performance are promoted to fixed pay status by the management.

#### **Grievance Redressal Mechanism:**

There is a grievance redressal committee which looks after the students' problems regularly. A Student's suggestion box is kept outside the admin office on the ground floor within easy vicinity of all students. The students are encouraged to give their suggestions and complaints. The Box is opened at regular intervals by the committee and actions are taken wherever needed.

Certain grievances related to exam results are dealt with at the departmental level.

Moreover, the girl students approach the CWDC in case of their problems.

Apart from this the students have direct access to teachers/mentor and authorities with whom they can discuss their problems anytime.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Link to Organogram of the Institution webpage	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

### 6.2.3 Implementation of e-governance in areas of operation

1. Administration
2. Finance and Accounts
3. Student Admission and Support
4. Examination

E. None of the above

D. 1 of the above

C. 2 of the above

B. 3 of the above

**Response:** A. All of the above

File Description	Document
Screen shots of user interfaces	<a href="#">View Document</a>
ERP (Enterprise Resource Planning) Document	<a href="#">View Document</a>
Details of implementation of e-governance in areas of operation, Administration etc	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>

## 6.3 Faculty Empowerment Strategies

### 6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

**Response:**

The Institute believes in the welfare of its entire staff - teaching as well as non-teaching.

Welfare scheme for Class III and IV Employees: The Welfare measures provided by the College management are:

- 1) Mediclaim facility of Rs. 2L and 1L to Class III and Class IV employees, respectively

- 2) Group Insurance
- 3) Bonus once a year for festival celebration.
- 4) Class IV employees get 2 pairs of uniform plus a pair of shoes
- 5) EPF for staff appointed by the management under HR policy.

As per Government norms, various leaves are available to all teaching and non-teaching staff like Casual Leave, Earned Leave, Vacation, Medical, Maternity and Paternity Leave.

Since 5th January, 1989, a **staff credit cooperative society** was set up. It is registered under the name, "M. G. Science Staff Credit Consumer Co-operative Society Ltd." It functions efficiently for the overall benefit of the staff members.

The executive council of the society comprises of senior teachers and non-teaching staff who meet regularly and attend to various activities of the credit society like giving loans, felicitation of retiring staff, gift vouchers during festivals, appreciation of children of staff members who shine at board exams, condolence messages, welfare of family in case of accidental death or disability of staff members, etc.

This credit society provides various services like deposit and loan to its shareholders up to a limit. Gratuities, Pension and all other such Government welfare schemes and measures are given to the staff

Various schemes developed over the years for the welfare of staff members:

Welfare Scheme	Details
Loan	Teaching staff- Rs. 6L Non-teaching- Rs. 3.5 L Peons- 2 L
Incidental loan	Rs. 50,000/-
Saving scheme	Minimum Rs. 200-500/month
Kalyan-nidhi welfare scheme	<i>On the cause of the death of a member of credit society, while on service period the member's family is paid Rs 10,000/-</i>  Given to all outgoing staff members
Retirement felicitation	(Silver coin, shawl and Lunch for all staff)
Children's appreciation scheme	Given to children of staff members on passing board exams- 3 each, in 12th as well as 10th standard board exams
Festival Gift	On the occasion of Diwali the staff members are given gift/Gift voucher

Other welfare measures include:

- Duty Leave for teachers to participate and present papers in seminars, for pursuing higher studies, FDP and Research Projects,
- Medical Reimbursement Scheme to refund the medical expenditure of employees and their

dependents,

- Zero tolerance towards Sexual Harassment,
- Free Parking Facility, Wi-Fi facility,
- Leave Travel Concession subject to rules and regulations,
- Accidental Death Policy Insurance Scheme for all staff members as well as all the students on the campus.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

### 6.3.2 Average percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

**Response:** 2.6

#### 6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
5	1	0	1	0

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Details of teachers provided with financial support to attend conference, workshops etc during the last five years	<a href="#">View Document</a>

### 6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

**Response:** 0

#### 6.3.3.1 Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
0	0	0	0	0



File Description	Document
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff	<a href="#">View Document</a>

#### 6.3.4 Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP)during the last five years (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course ).

**Response:** 15.37

##### 6.3.4.1 Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course year-wise during the last five years

2018-19	2017-18	2016-17	2015-16	2014-15
05	05	18	12	03

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	<a href="#">View Document</a>
IQAC report summary	<a href="#">View Document</a>
Details of teachers attending professional development programmes during the last five years	<a href="#">View Document</a>

#### 6.3.5 Institutions Performance Appraisal System for teaching and non-teaching staff

**Response:**

The Institute encourages annual self-appraisal by all teachers for enhancing their performance. M.G. Science Institute follows the standard UGC pattern for the API calculation for the teaching staff members.

Based on the teacher's self-assessment, API scores are proposed for (a) teaching related activities; (b) domain knowledge; (c) participation in examination and evaluation; (d) contribution to innovative teaching, new courses etc.

For the teaching staff the method for calculating API score is based on the UGC recommendations. The faculty members annually fill up the self-assessment forms indicating their teaching related activities, participation in co-curricular and extension activities; professional development and also research and academic contributions. The IQAC of the institute verifies the self-assessment scores proposed by the

faculty. On a prescribed day, the faculty have one-on-one meeting with the Academic advisor, Ahmedabad Education Society and discuss their strengths and areas for development and to further enhance the capability development of the faculty.

For the career advancement of the faculty, the complete file is first checked and verified by the college IQAC. It is then passed in the committee meeting to be sent onward to the Gujarat University IQAC for screening-cum-Evaluation. Based on their recommendation the faculty member is approved for career advancement.

The performance of the non-teaching staff and ad-hoc teaching staff, appointed by the Management is appraised by the respective HOD in a prescribed format designed by the Ahmedabad Education Society. These reports are forwarded by the Principal to the management for further action. Based on the recommendations of the authorities, the management decides the annual increment for this staff.

Similarly, the Office Superintendent appraises the performance of the office-staff.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

## 6.4 Financial Management and Resource Mobilization

### 6.4.1 Institution conducts internal and external financial audits regularly

#### Response:

M. G. Science Institute is a Grant in Aid College, affiliated to Gujarat University and managed by The Ahmedabad Education Society. The accounts are done by Tally software so that authorities can monitor entries. There is a mechanism of checking, rechecking and crosschecking of accounts by the Accountant, Office Superintendent, Administrative Coordinator and the Principal periodically.

There are two types of audits- internal audits and statutory audits, taking place at the institute. All the grants and emoluments received from the management in the form of budgetary support as well as grants and special funds from UGC, RUSA and Research organizations are subjected to strict auditing. Effective monitoring is done to make proper use of available financial resources. The management monitors the spending of the finances through proper scrutiny by the appointed External auditors, Sorab S. Engineer & Company, Mumbai. The firm is responsible for final statement of expenditure and utilization certificates.

A recognized chartered accountant firm, Mehta & Sheth Associates conducts internal and academic audit. This audit takes place twice a year. The team visits each department for the academic audit. It is responsible for the annual review and analysis of the academics and the internal accounts and gives its report to the management with comments. The management reviews the statement and sends it back to the Institute with its remarks. If there are any specific suggestions made by the management, the institute implements these suggestions for the new financial year. The last audit was done in May 2019. There were

no audit objections.

Thus, the financial process at M. G. Science Institute is transparent and all standard procedures are followed in the financial management.

The state government periodically also does an external audit. The grant of state government is finalized only after the audit. The last government audit was done in August, 2015. There were no major objections raised by the auditor.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

#### 6.4.2 Funds / Grants received from non-government bodies, individuals, philanthropers during the last five years (not covered in Criterion III)

**Response:** 4.19

6.4.2.1 Total Grants received from non-government bodies, individuals, Philanthropers year wise during the last five years (INR in Lakhs)

2018-19	2017-18	2016-17	2015-16	2014-15
0	1.26	0	0	2.93

File Description	Document
Details of Funds / Grants received from of the non-government bodies, individuals, Philanthropers during the last five years	<a href="#">View Document</a>
Any additional information	<a href="#">View Document</a>
Annual statements of accounts	<a href="#">View Document</a>

#### 6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

**Response:**

The institute has a well-defined financial policy to ensure effective and optimal utilization of funds for academic, administrative and infrastructure development purpose which in turn ultimately realizes the institute's vision and mission. The source of funds for student activities and day-to-day expenditures at the Institute is the fees received as well as from the management. It also receives grants from UGC, DBT, SAC-

ISRO, RUSA, GUJCOST and other organizations. The main sources for funds are various UGC schemes like College Development, CPE, Merged Scheme and Women Hostel. In addition to these, the Institute also receives funds from the SF(PG-Chemistry).

For optimal utilization of the fees and management funds, the institutional has fixed norms.

Once the fee is collected as per the Gujarat Government policy, the tuition fees are transferred to the accounts of Government of Gujarat (there is no tuition fee for the girl students). From the Laboratory fees, various laboratory purchases are done. Similarly, purchases are made from the fees collected under different heads for respective requirements.

- For maintenance of laboratory equipment, computers and software and additional expenses of chemicals, glassware, etc. following procedure is adopted:

At the beginning of each academic year, each department is asked to prepare a proposal of requirements and submit to the Principal. Once it is sanctioned by the principal and management, the respective head of the department is asked to submit minimum three quotations for respective purchases. The best supplier is chosen with regards to quality as well as after sales service. Following this procedure, unnecessary purchases are avoided, product quality is maintained and available funds are effectively utilized.

The Management ensures funds for the following:

- For the salaries of ad-hoc personnel, mandatory deposits, annual fee of statutory bodies/university, etc.
- Electricity and PNG bills (approx.12L rupees per annum)
- For maintenance of infrastructure
- Deficit expenses of sports and cultural activities
- For research and development
- All miscellaneous expenses like stationery, uniforms and rain-boots for class IV staff, etc.
- The Institutional charges received from various research projects are generously waived by the management and the funds are used for the upgradation of college infrastructure. Eg. Funds from Botany department projects are utilized for upgradation of Botanical garden, ornamentation and greening of campus, digitalization, etc.

The members of the Alumni association are motivated to contribute financially for the development of the Institute by sponsoring various activities such as workshops, seminars, lectures, cultural activities, farewells, etc.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

## 6.5 Internal Quality Assurance System

### **6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes**

#### **Response:**

M. G. Science Institute has recognized the importance of quality assurance since its very beginning. Formally, the IQAC was set up in 2010. Currently, as per the new guidelines of UGC, the college IQAC comprises of Principal as Chairperson, a senior faculty as Coordinator, a Management member, one administrative officer, four senior teachers, one nominee each, from students' union and from alumni association and two prominent industrialists.

The Management representative in the IQAC is the Academic advisor of the Ahmedabad Education Society. He plays a pivotal role in providing guidance in Academic matters and in supporting the Principal in strategic planning and quality assurance initiatives. The IQAC also supports the Principal in the decision making regarding various academic matters.

IQAC has made the faculty and the staff aware of the parameters of quality assessment, and channelize the activities, introduce new models, design the forms as well as maintains records of their activities. It has created a Learner-Centric Environment and motivated teachers for more interactive and efficient delivery of subjects.

The meetings of IQAC committee take place on regular basis to monitor the academic quality. The institution has taken up academic audit to accomplish both, accountability and quality improvement. The administrators and staff practice self-assessment and appraisal to achieve quality in education. To bring out improvements, the committee interacts with the faculty members to assess the progress. All suggestions, new activities and any other matters are placed before IQAC for further action.

Under the aegis of IQAC, a seminar on, "Outcome based Education: Achieving Excellence through Learning Outcomes" was organised for 110 faculties of various colleges under the Ahmedabad Education Society. Topics such as Experiential learning, Project and problem based Learning, blended learning and Outcome based higher education were discussed by eminent educationists.

One of the major contributions of IQAC is in the participation of national (NIRF) as well as State (GSIRF) ranking. The IQAC also initiates participation of the Institute in ranking processes of reputed magazines like India Today.

The annual API of the teachers, career advancement of various faculty, etc. are also institutionalized by the IQAC. Moreover, it also recommends the participation of teachers in Faculty Development programmes from time to time.

Through the IQAC, the Institute reviews teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms. Feedback from various stakeholders has helped to improve the overall performance of the Institute in mitigating its goals and objectives. IQAC has stressed upon involvement of students in various curricular and co-curricular activities and, in general, developed a culture for excellence.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

**6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities ( For first cycle - Incremental improvements made for the preceding five years with regard to quality For second and subsequent cycles - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives )**

**Response:**

One of the chief functions of the IQAC at the Institute is to assess the teaching and learning process in the institute and recommend steps to be taken for improvements. Under the Chairmanship of Principal, the Internal Quality Assurance Cell (IQAC) has been constituted as per UGC guidelines.

- The Academic advisor of the Ahmedabad Education Society is an integral part of the IQAC. He provides guidance in Academic matters and in supports the Principal in strategic planning and quality assurance initiatives. He often meets with staff members to impart academic quality culture in the institute.

The IQAC reviews all Career Advancement proposals of teachers and recommends them further to the University IQAC. It encourages the teachers and students to undertake self-motivated improvement activities with the goal to continuous improvement in their performance. As a result, faculty is actively engaged in the enhancement of knowledge and skills by participating in FDPs/ Orientation/ Refresher courses/ Workshops/ Training programs etc. FDPs are also organized by the Institute at the instance of IQAC.

The IQAC also reviews teaching methodologies from time to time and has promoted use of ICT in teaching and learning process. In compliance with this policy all the classes are enabled with LCD projector and internet facility. The college has ambient labs and a language lab, too. As per IQAC suggestion many journals have been subscribed, and service of Inflightnet is made available to the faculty as a part of research policy.

IQAC periodically reviews all activities at the Institute and as a result its teaching learning process, structures & methodologies of operations and learning outcomes show tremendous improvement as follows:

**Learning outcomes:**

- Reviewing learning outcomes every year, especially when the syllabi are revised.
- Examining students by conducting internal test as well as continuous comprehensive assessment.
- Performing regular academic audit for understanding student presence and student results.

**Teaching learning initiatives:**

- Providing ample library resources
- Provision for NAMO Wi-Fi facility, e-classes and e-seminar hall
- Increased usage of ICT tools for teaching learning process
- Preparing course distribution plan at the beginning of every semester
- Making industrial training compulsory for PG students

### Methodologies of Operations:

- Implementation of online admission process for second and third year students.
- Annual API Preparation of each faculty member
- Yearly presentation of activity plan and progress made at the Institute by the Principal to the academic advisory committee of the Ahmedabad Education Society.

### Feedback mechanism:

Every year, under the initiative of the IQAC, the feedback on the academic processes is taken by the committee appointed to analyse the feed-backs. The committee collects the feed-back semester wise from all the stakeholders like students, parents and alumni to review the structure and methodologies of operation for reviewing the teaching –learning process and enhance the overall quality of the Institute.

After the 2nd cycle of Accreditation, the Peer Team made recommendations for the enhancement of Institute quality. The incremental improvement made during the preceding five years with regards to quality and post accreditation quality initiatives are mentioned below:

Peer team Recommendation	Action taken
To offer add-on courses	Following courses have been conducted: <ol style="list-style-type: none"> <li>1. Finishing school course has been added from 2017-18</li> <li>2. Nano-science course</li> </ol>
New UG-PG programs	B.Sc- self financed course from higher payment programs in B.Sc. and M.Sc. –Chemistry have been started.
web-based interactive teaching	As an initial step, two smart boards have been purchased and will be operational soon
more PH.D degrees may be completed for teachers	at least 6 permanent faculty have now received Ph.D. degree
library digitalization	<ul style="list-style-type: none"> <li>• Institute is now a member of INFLIBNET</li> <li>• Barcoding of books</li> <li>• Digitalization and RFID technology are implemented</li> </ul>
linkages between college and industry to be strengthened	old linkages have been strengthened and new ones have been developed
linkages between college and society to be strengthened	College has strong linkage with Humad Samaj for blood donation on a regular basis  Second alliance foundation, an NGO, conducts

	tree-walk at the Institute biodiversity park from time to time for society and student awareness. The students also participate in tree-walk at other places
college may conduct periodical academic audit	the management conducts annual academic audit by inviting recognised agency
alumni association to be strengthened	More efforts have been put to strengthen the Alumni association: the membership number has increased from 656 in 2014 to 990 in 2018  Activities of the association have doubled. Financial contribution is tremendous.
IT Up-gradation	New softwares have been purchased and older versions of MATLAB and SPSS have been upgraded
reduce drop-outs	All-round efforts are made to counsel students to reduce drop-outs.
College may apply for autonomous status	MANAGAEMENT has conducted two meetings regarding the same. The Institute plans to apply for the same after the result of the current cycle.

File Description	Document
Upload any additional information	<a href="#">View Document</a>
Paste link for additional information	<a href="#">View Document</a>

### 6.5.3 Quality assurance initiatives of the institution include:

1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements
2. Collaborative quality initiatives with other institution(s)
3. Participation in NIRF
4. any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

E. None of the above

D. 1 of the above

C. 2 of the above

B. 3 of the above



**Response:** B. 3 of the above

File Description	Document
Upload e-copies of the accreditations and certifications	<a href="#">View Document</a>
Upload details of Quality assurance initiatives of the institution	<a href="#">View Document</a>
Upload any additional information	<a href="#">View Document</a>
Paste web link of Annual reports of Institution	<a href="#">View Document</a>

NAAC

## Criterion 7 - Institutional Values and Best Practices

### 7.1 Institutional Values and Social Responsibilities

#### 7.1.1 Measures initiated by the Institution for the promotion of gender equity during the last five years.

##### Response:

The institute believes in gender equity and tries to inculcate gender sensitization in all its curricular and co-curricular activities.

Specific facilities like safety and security, common room, etc. are provided for women.

##### Safety and security

Safety and security of all the students, teachers, non-teaching staff and the visitors to the college is always the first priority and gender sensitivity is encouraged. To ensure a safe campus and a secured environment the college has embarked upon the following initiatives:

- For **Girls' Hostel**: One newly constructed floor with 14 rooms has been added to the in 2016-17 with the help of grant received from UGC.
- A CWDC- Collegiate Womens' Development Cell is fully functioning to address issues of female students.
- Keeping the safety of girl students in mind, the annual Talent program and other celebrations have been shifted to Morning.
- Compulsory presence of lady attendant during field work and excursions.

Some general safety and security measures at the Institute are as follows:

- Experienced gatekeepers during day and night.
- Fire extinguishers placed on every floor.
- The entire campus is under CCTV surveillance
- In case of emergency all four corners of first floor are attached with staircase so they can be used by anyone.
- All the electrical switch boards, air condition machines, fans and tube lights are checked regularly.
- Maintenance of a First Aid box.
- Separate wash rooms for the male and female students as well as for male and female teaching, non-teaching staff on each floor.
- College I-card is compulsory on the campus.

##### COUNSELLING

The college nurtures a healthy environment on the campus. Both, physical health and the health of the young minds are given equal importance. In order to fulfil this, several committees like anti-ragging cell, grievance-redressal cell, CWDC, etc. are set up.

In all day-to-day running of the Institute, gender sensitivity is shown. Any grievance reported is thoroughly

scrutinized and necessary actions are duly taken by the respective cell. The cell provides assistance to the faculty for taking preventive steps in the matter of gender discrimination and sexual harassment.

Apart from this, informal counselling is provided to all students by the faculties. Students are free to approach any faculty for counselling which may be regarding career, further studies, college routines or of personal nature. Some departments allocate students of semester 5 and 6 amongst the department faculty for counselling. These faculties meet up with the students on informal basis and discuss their issues at length.

#### **Common Room:**

The college has two common rooms for the girl students, one on each floor, with attached toilets. Girl students may use it not only during college hours but also during Sundays or holidays, during participation or practise sessions of sports and cultural activities.

One of the Ladies rooms has a sanitary napkin vending machine and also an incinerator to destroy sanitary napkins.

<b>File Description</b>	<b>Document</b>
Link for annual gender sensitization action plan	<a href="#">View Document</a>
Link for specific facilities provided for women in terms of: a. Safety and security b. Counselling c. Common Rooms d. Day care center for young children e. Any other relevant information	<a href="#">View Document</a>

#### **7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures**

- 1.Solar energy**
- 2.Biogas plant**
- 3.Wheeling to the Grid**
- 4.Sensor-based energy conservation**
- 5.Use of LED bulbs/ power efficient equipment**

**E. None of the above**

**D. 1 of the above**

**C. 2 of the above**

**B. 3 of the above**

**Response: D. 1 of the above**

File Description	Document
Geotagged Photographs	<a href="#">View Document</a>
Any other relevant information	<a href="#">View Document</a>

### 7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

- Solid waste management
- Liquid waste management
- Biomedical waste management
- E-waste management
- Waste recycling system
- Hazardous chemicals and radioactive waste management

#### Response:

#### Solid and wet waste management:

The institute has solid waste management system. The dustbins are provided by National Green Corps through GEER foundation agency with annual grant of Rs. 5000. The institute has installed Green-colored dustbins for wet and biodegradable wastes and blue color dustbins for disposal of plastic, wrappers and non- biodegradable wastes. There is a dedicated sweeper employed by the management and several ad-hoc as well as permanent peons who regularly clean the floors and empty the dry waste from these dustbins to the ones kept outside , to be removed by the 'door-to-door' waste removal service of Ahmedabad Municipal Corporation.

There is a compost pit where all the garden waste is collected to be composted and used within the garden.

Efforts are done to make all class-IV employees as well as others to be aware of hazardous toxic waste.

#### E-waste management:

In the institute we have yet not generated permanent facility to collect E-waste and handover to the registered recyclers. Computer and other electronic waste are being collected by the technicians and the spare parts if possible, are reused (if usable). Non usable electronic waste is then handed over to local agencies for disposal through contractors or vendors, who pay certain amount of money to dispose them.

Students are genuinely sensitized towards harmful effects of e-waste. The Institute has several initiatives like street plays and expert talks to make all the stakeholders aware of this, so as to reduce the overall generation of waste.

**Biomedical waste management:** As such there is not any bio-medical waste generated, but Microbiology and Zoology departments conduct certain hematology experiments and care is taken to dispose off any waste generated.

**Liquid waste and hazardous chemicals waste:** The chemistry department generates some hazardous

liquids but there are plans to link up with AMC and other organizations like The Green Environment Services Co-op. Soc. Ltd. for the disposal of such wastes.

File Description	Document
Any other relevant information	<a href="#">View Document</a>
Link for Geotagged photographs of the facilities	<a href="#">View Document</a>
Link for Relevant documents like agreements/MoUs with Government and other approved agencies	<a href="#">View Document</a>

#### 7.1.4 Water conservation facilities available in the Institution:

1. Rain water harvesting
2. Borewell /Open well recharge
3. Construction of tanks and bunds
4. Waste water recycling
5. Maintenance of water bodies and distribution system in the campus

E. None of the above

D.1 of the above

C. 2 of the above

B. 3 of the above

**Response:** B. 3 of the above

File Description	Document
Geotagged photographs / videos of the facilities	<a href="#">View Document</a>

#### 7.1.5 Green campus initiatives include:

1. Restricted entry of automobiles
2. Use of Bicycles/ Battery powered vehicles
3. Pedestrian Friendly pathways
4. Ban on use of Plastic
5. Landscaping with trees and plants

E. None of the above

D. 1 of the above

**C. 2 of the above**

**B. 3 of the above**

**Response:** B. 3 of the above

<b>File Description</b>	<b>Document</b>
Various policy documents / decisions circulated for implementation	<a href="#">View Document</a>
Geotagged photos / videos of the facilities	<a href="#">View Document</a>
Any other relevant documents	<a href="#">View Document</a>

#### **7.1.6 Quality audits on environment and energy regularly undertaken by the Institution**

- 1.Green audit**
- 2.Energy audit**
- 3.Environment audit**
- 4.Clean and green campus recognitions / awards**
- 5.Beyond the campus environmental promotion activities**

**E. None of the above**

**D.1 of the above**

**C. 2 of the above**

**B. 3 of the above**

**Response:** C. 2 of the above

<b>File Description</b>	<b>Document</b>
Certificates of the awards received	<a href="#">View Document</a>
Any other relevant information	<a href="#">View Document</a>

#### **7.1.7 The Institution has disabled-friendly, barrier free environment**

- 1.Built environment with ramps/lifts for easy access to classrooms.**
- 2.Disabled-friendly washrooms**
- 3.Signage including tactile path, lights, display boards and signposts**
- 4.Assistive technology and facilities for persons with disabilities ( Divyangjan) accessible website, screen-reading software, mechanized equipment**

**5.Provision for enquiry and information : Human assistance, reader, scribe, soft copies of reading material, screen reading**

**E. None of the above**

**D.1 of the above**

**C. 2 of the above**

**B. 3 of the above**

**Response:** C. 2 of the above

<b>File Description</b>	<b>Document</b>
Geotagged photographs / videos of the facilities	<a href="#">View Document</a>
Any other relevant information	<a href="#">View Document</a>

**7.1.8 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 500 words).**

**Response:**

The existence of M.G. Science Institute dates back to the pre- independence era and the institute has continued this great legacy giving priority to value based education providing equal opportunities to the students belonging to different sections of society.

All inclusive culture of the Institute is reflected through the kind of diversity it offers to the society in general. The faculty and the staff of the Institute represent the cross- section of Indian society as they are from different areas, strata and religion. The environment of the Institute is full of togetherness in which the cardinal principal is equality. No issues related to any kind of discrimination are ever reported on the campus. The Institute has in its vicinity some of the top academic institutions of Ahmedabad ie. L.M. Pharmacy college, CEPT University, H.L. Commerce college which provides the students the opportunity to mingle with variety of students which in turn enrich their life experience.

There are a number of programs on the campus where students stand together and promote causes related to national unity and cultural diversity of our country. M.G Science Institute celebrates all religious festivals with equal gaiety. The institute also admits students of all casts, class and religion strictly on the basis of merit. The institute also follows the reservation policy mandated by the government of Gujarat, thus the students belonging to socially & economically backward sections get adequate representation in the Institute.

M.G Science cultural festival is the testimony to the fact that folk dances, musical plays & theatre activities represent all the cultural heritage of pan India. Students belonging to different regions of India present the programs typical of their region and culture. Students of different sections of society get to participate in various cultural and academic activities of the Institute. There are various opportunities for the students to exchange and debate the various aspects of socio-cultural contexts of our society.

The Institute has arranged lectures in which defense personnel are invited to deliver lectures which help the students to inculcate the feeling of nationalism. There are other activities on the campus in which students voice their concern regarding the issues that divide India.

Although M. G. Science Institute is predominantly a science College, it has full fledged English department which looks after various activities that promote the values which are ethical and pertinent for the society.

As per the university norms, all admissions at UG as well as PG level are done according the government quota allocated for open and Reserved categories. Equal opportunities are provided to all students, irrespective of gender, caste, or nationality.

File Description	Document
Link for supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	<a href="#">View Document</a>
Link for any other relevant information	<a href="#">View Document</a>

#### **7.1.9 Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).**

##### **Response:**

M.G. Science Institute has core values which are extremely visionary and true to the highest standards of morality.

The activities of the NSS & NCC units at the Institute strive to mould students as responsible citizens of our country.

Swachhagrah and cleanliness drives under the aegis of 'Mitti' Eco-club and NSS speak volumes about our efforts to lead India to be a society devoid of all kinds of pollution. Each and every Independence day and Republic day are organized with great enthusiasm. The patriotic songs competition organized on the Independence day create an environment of patriotic fervor on the campus. There is a special significance of the celebrations of Independence day & republic day as the institute generally invites a prominent citizen, a defense personnel or a successful alumni member to preside over the function. This is the way a connection is created between the old and new students whereby the present lot of students gets an opportunity to learn from the experience of successful past students of the Institute.

There are talks and interactions as well as activities on traffic awareness, voting awareness and importance, gender sensitivity, and gender equity.

Under the component 9-gender Equity of The RUSA GRANT received, the Institute has purchased several books on gender equity and caste equity in an effort to sensitize all employees and students. Not only this, various programs are arranged for girl students with the RUSA grant in order to inculcate a sense of confidence and fearlessness in them and to understand rights, responsibilities and duties and duties as citizens of India.

The celebrations of various days on the campus build brotherhood, amity, and feeling of camaraderie



among the students.

The NSS team of MG. Science institute sets examples of social services in the Countryside areas of Gujarat by helping the villagers in the areas of cleanliness and literacy.

The Eco-club celebrated world River day with CMS Vatavaran, a New-Delhi based NGO with a two-day film and discussion forum about pollution of rivers and ways to mitigate.

The Eco-club strives to motivate students to understand their duties as responsible citizens by organizing innovative and student-friendly activities like Swachhagrah Garba, Photo-essay competition, Young Reporter for Environment and many others.

The NCC cadets regularly attend camps and get selected for RDC parade. Through all such different activities the Institute strives to inculcate in the students as well as employees, constitutional obligations: values, rights, duties and responsibilities of citizens.

File Description	Document
Link for details of activities that inculcate values necessary to render students in to responsible citizens	<a href="#">View Document</a>
Link for any other relevant information	<a href="#">View Document</a>

**7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.**

- 1. The Code of Conduct is displayed on the website**
- 2. There is a committee to monitor adherence to the Code of Conduct**
- 3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff**
- 4. Annual awareness programmes on Code of Conduct are organized**

**E. None of the above**

**D. 1 of the above**

**C. 2 of the above**

**B. 3 of the above**

**Response:** C. 2 of the above

File Description	Document
Details of the monitoring committee composition and minutes of the committee meeting number of programmes organized reports on the various programs etc in support of the claims	<a href="#">View Document</a>
Code of ethics policy document	<a href="#">View Document</a>
Any other relevant information	<a href="#">View Document</a>

### 7.1.11 Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).

#### Response:

The Institution makes ardent efforts to celebrate all the national and international commemorative days, events and festival. National values, human values, national integration, communal harmony and global comradeship are promoted at the Institute.

Universal values like Truth, righteous conduct, Love, non-violence and Peace form the basis of all celebrations. The Republic and Independence Days are celebrated annually with flag hoisting, motivational address by eminent citizens of the city, NCC parade and cultural program along with sweets distribution. Patriotic songs and dances are performed by the students to inculcate awareness and cultural integrity.

The college observes birth anniversary of Mahatma Gandhi, Swami Vivekananda, Dr. Sarvapalli Radhakrishnan.

Swami Vivekananda day is celebrated as **National Youth day** or Yuva Divas on 12th of January. This day students are inspired towards the philosophy and ideals of Swami Vivekananda. Before the annual talent commences, portrait of Swami Vivekananda is decorated and garlanded by the Principal, staff and student union members.

Teachers' day is dedicated to Dr. Sarvapalli Radhakrishnan, second President of India. The students express their gratitude and appreciation for the teachers on this day in different ways. Students take the role of teachers and go to teach in the classes. Classes are also decorated, lectures are conducted and posters and projects are displayed. This gives students the feel of being a teacher, a sense of achievement and to teachers, a sense of gratification.

Guru Purnima celebrations include felicitation of teachers by the students in different endearing ways with bouquets, personal poems, books and prayers. Teachers in turn motivate and bless the student which establish and strengthens the bond between teacher and student. Knowledge sessions are also organized on this day.

International Yoga day is celebrated with great enthusiasm, ever since its inception. National Science day, International Youth day, World Environment day, World Wetland Day, are all celebrated at the Institute by invited lectures, seminars, posters, etc.

International festivals like Christmas and Important days like Friendship day are very popular amongst the students. Such celebrations provide a platform for interaction, cooperativeness, collegiality, team spirit and holistic wellbeing within the staff and the students in the college.

File Description	Document
Link for Geotagged photographs of some of the events	<a href="#">View Document</a>
Link for Annual report of the celebrations and commemorative events for the last five years	<a href="#">View Document</a>

## 7.2 Best Practices

### 7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

#### Response:

#### Best Practice 1

1. **Title of the Practice:** Internal and Academic Audit

#### 2. Objectives of the Practice

M. G. Science Institute is a Grant in Aid College, affiliated to Gujarat University and managed by The Ahmedabad Education Society. At M.G.Sc, there is a vision and mission to impart quality education to achieve all-round development of the students. This requires self-reflection and introspection along with collaborative teaching learning methods. For this, the Management emphasizes conduction of Internal and Academic audit. The objectives are:

- 1) To audit annual maintenance contract for various services and bill passing activities.
- 2) to audit student and teachers' attendance and compilation of results
- 3) to audit internal marks assessment procedure

#### 3. The Context

In today's times, it is a challenge to lead students to academic excellence for all-round development. In such a scenario, Academic audit is the best practice to follow. This helps to assess the academic performance of both- the teachers and the students. It provides self-assessment based on quality principles and promotes integration across programs and disciplines

By conducting academic audit, the accountability of each department is adjudged and the strengths and weakness are known. The audit can help to ensure punctuality, timely finishing of syllabi and understand

the result pattern of the students. This enables the Principal to appreciate innovative teaching-learning methodologies as well as to suggest corrective measures if needed. The internal audit, on the other hand, enables the Principal and respective committees to decide the performance of annual maintenance providers.

#### **4. The Practice**

The management has appointed a reputed firm of auditors to conduct the internal and academic audits semester-wise. Towards the end of each semester, the auditors arrive at the Institute and a list of required data is given to all HoDs to be kept ready for auditing. The audit members meticulously go through all the reports, presence sheets of staff and students, results, answer sheets, leave reports, etc. The audit of each department may take two to three working days. In all, the auditing process goes on for 15 to 20 days. Only when they are fully satisfied of the authenticity of data provided, do the auditors close the activity. A detailed report is provided to the Principal and the management to be reviewed and take action if necessary.

Constraints/limitations faced: Initially, some of the departments did not welcome the idea of their academic responsibility being subject to academic audit. Sometimes, departmental staff found it cumbersome to produce all the detailed data asked by the auditors. In due course, the process has become a habit and the reports are eagerly awaited. Departments also share their practises in day to day disbursing of activities.

#### **5. Evidence of Success**

- 1) Departments share their practises in day to day disbursing of activities. As a result, a standard format for attendance has evolved, where, previously, each teacher took presence as they pleased.
- 2) The teachers have willingly become more accountable towards their activities.
- 3) The students are more punctual and their results have improved.
- 4) The individual vendors for various services have also become more accountable and their services have improved.
- 5) The Management has appreciated the efforts of the Institute in improving academic performance.
- 6) The student result shows that each semester, there are at least ten to fifteen students among the top 50 students in the Gujarat University exams.
- 7) Since the attendance has been audited, the students have become more responsible towards their presence in the classes. They inform the concerned teachers well in advance in case they are going to remain absent.

#### **6. Problems Encountered and Resources Required**

Any activity of self-introspection requires total commitment and dedication of members to improvement of quality. Initially, some departments resisted the idea of their academic performance being scrutinised by a third party. It was also a matter of stress for the department heads to keep all data ready for the auditors as per the dates given. Later, it has become a habit to prepare all required data from the beginning of the

semester so that it is ready at hand when the auditors visit the department.

### 1. Title of the Practice:

## SOIL ANALYSIS & PREPARATION OF SOIL HEALTH CARD

### 2. Objectives:

(i) Capacity building of students and teachers in terms of knowledge gaining, sharing and enhancement of skill.

(ii) Empowering students with financial benefits by giving them work during vacation.

iii) Joining hands with the Government to help the farmers in their work.

(iii) It is a tripartite project in which the Govt. of Gujarat, teachers and students work collectively for the benefit of society.

### 3. The Context:

The Government of Gujarat has taken up the initiative to make a 'Soil Health Card' for each farmland so that if the soil is deficient in mineral nutrients the farmers can take steps to improve its quality. This project has been given to selected research organizations and M.G. Science has been one of them. During the years 2014-15 and 2015-16, the students analysed soil samples for five different parameters viz. pH, Electrical Conductance (EC), Organic carbon, Phosphorus and Potassium. Last year in 2018-19, the study of micronutrients like S, Zn, Bo, Fe, Mn, Cu, N was also done.

Out of these, four of them- Zn, Fe, Mn, Cu were analysed using a highly sophisticated instrument called Atomic Absorption Spectrophotometer.

#### *Soil Analysis data*

Year	Number of soil samples analysed	students involved	Amount allocated by the government
2014-2015	10,060	20	6,33,600
2015-2016	5,108	20	3,06,480
2018-2019	11,251	37	14,00,637

### 4. The Practice:

The Agricultural Department of Govt. of Gujarat proposed the institute to carry out the project of "Soil health card". This is a very noble and timely project to help the farmer community. The Institute took keen interest in this mammoth task, and took up the project. The selected students and teachers were trained at the Soil analysis laboratory, Gandhinagar. They were provided with the technical know-how and methodology for the same. Different batches of students were allotted different tasks and thousands of soil samples received from different areas of the state were analysed by precise, timely and accurate teamwork.

The results of the analysis were crosschecked by the government monitoring agency and they were found to be satisfactory. The soil health cards prepared this way are sent to the concerned farmers for further action. This helps the farmers to determine which crops to cultivate as well as to choose the fertilizer required for getting optimum yield.

Besides helping the farming community, the project of Soil analysis has helped a number of the students to gain the knowledge and a sense of achievement.

### 5. Evidence of Success:

Over the period of last three years, approximately 26,419 samples were analysed. All the results were handed over in clear, precise and methodical manner within a stipulated timeframe. The fact that the Institute has been assigned this important work time and again, is, in itself, an evidence of success.

The targets given in each of the years were achieved well in time. The work was performed during the summer break so as to give students enough time to work. About 5 percent of samples were re-analysed by the external agency of the monitoring committee of the government. The results were always in coherence, thus proving the accuracy and success of work done.

### 6. Problems Encountered and Resources Required:

As with any scientific project, there were a few problems related to samples, instruments and resources.

- Many a times, the amount of soil samples received was not enough so more of the same were to be procured which extended the total time of the analysis.
- Availability of funds was delayed at times.
- Calibration and maintenance of instruments was regularly needed.
- In year 2018-19 AAS was used for the first time, to analyse four micronutrients. However, its installation and functioning were found to be tedious.

File Description	Document
Link for Best practices in the Institutional web site	<a href="#">View Document</a>
Link for any other relevant information	<a href="#">View Document</a>

## 7.3 Institutional Distinctiveness

### 7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

#### Response:

The mission of M.G. Science Institute is to be a **centre of excellence** in science education and research. It aims to impart quality science education and promote **creativity with an emphasis on holistic**

**development** of the students. The institute lays prime importance on making the students scientifically and ethically stronger and instil confidence in them, so that they, in turn, serve the nation to improve the quality of life.

The one area where the Institute strongly focuses on, and has a **distinctive performance is its teaching-learning process** which is thoroughly **robust and multidimensional**. The Institute code of conduct is stated on the website for all stakeholders. The students are **oriented towards the code and course outcomes** by the facilitators. This awareness helps teachers and students to set their goals and strive to achieve them.

Looking at the current scenario, the facilitator is inspired to use a variety of tools to keep the learners engaged in the learning process. The traditional method of using chalk and duster in the class is enhanced in various other **innovative and engaging methods** so as to keep the students interested in the topic at hand, to inspire them to ask questions and to increase the interface in the class. Today, knowledge is just a click away to the learner and it is a challenge to the facilitators to keep pace with the latest developments and happenings. Not only this, the teacher has to use variety of tools and methods to engage the learners in an entertaining manner. In view of this, **all classes at the Institute are ICT enabled** and teachers use novel methods to encompass all perspectives in a given topic. Several power point presentations and videos are uploaded on the college website for free access by the students.

Teaching-learning process is further enhanced by **student –centric** methods like participative learning, experiential learning, field visits, excursions and interactions, industrial training, and use of sophisticated instruments as well as **software**. The Institute has a **high-speed Wi-Fi** facility within the campus which is regularly upgraded. There is a **fully functioning auditorium** with audio-video-Wi-Fi capacity to hold seminars, symposia, workshops, cultural activities, film-shows and meetings.

The Institute believes in inviting **learned speakers** to share their knowledge and interact with students and staff. Some of the renowned visitors have been **Padmashri decorated Madam Indira Nath and Shri Kartikeya Sarabhai**, Dr. Subhash Lakhotiya and ex-director, PRL, Dr. Anil Bhardwaj. Many successful alumni are also invited to share their experiences so that students learn and be motivated.

Resources in terms of finance are continuously required to upgrade technology requirements necessary for best teaching-learning practises. The Institute has received **DBT Star college, UGC-CPE grants** and various **research projects** which are helpful in procuring the best instruments and services. Financial resources also come from the **strong Alumni** and above all, a **highly supportive Management**.

To ensure that students **acquire knowledge in multidisciplinary areas**, the Institute runs **Career oriented programs**, Skill enhancement and finishing schools and summer schools. **Remedial classes** are regularly organised. Special bridge courses like **Environmental science** are offered to students apart from **other electives**.

The institute is as good as its students. The students are as good as the teachers. The institute trains the facilitators by **organizing FDPs** or inspiring them to attend FDPs and Refresher courses. Many are provided **financial support** from the funds of DBT, UGC-CPE or other institutional funds.

**Continuous comprehensive assessment** followed at the Institute is fair and transparent. Students have full freedom to ask for reassessment and grievance Redressal. Both, internal and external exams assessment is quick and fair and there is a transparent process for reassessment.

Teaching-learning is further enhanced by **E-governance** in the areas of functioning like student admission and support, administration, examination and finances.

The Institute has strong norms for discipline and keeps a keen eye on attendance, assignments, submissions and the like. **The academic audit**, conducted regularly, promotes a healthy teaching-learning atmosphere. It is one of the **best practises** at the Institute.

**Several committees** comprising of teaching-non-teaching staff as well as students work with complete coherence, dedication and transparency to implement various activities. Participation of high achievers in the **Students' union** is encouraged so as to impart training in leadership and management.

“Nothing is more enriching than a state-of-the-art library”. The Institute has a big repository of books, journals, periodicals, thesis, rare editions, manuscripts, videos and five Computer terminals for the use of all staff and students. It is registered with **INFLIBNET** for access to **eShodhSindhu**, **e-journals**, **Shodhganga**, etc. and has **N-LIST membership**.

Although this is primarily an undergraduate college, there is an ecosystem for **research and innovation** which supports creation and transfer of knowledge. The Institute has **15 projects** bringing in funds of **2 crores, 6 Lakhs rupees**. It has provided **research fellowships** to more than 25 students. Apart from the research projects, some in-house projects are also done by students and they are taught how to present them at seminars. There are **105 research publications** in journals of national and international repute. The faculty have published **33 books or book chapters**.

As part of learning process, the Institute motivates students to participate in seminars, debates, quiz and other **co-curricular activities** for all-round development. Not only academic success but students are encouraged to **participate in sports, cultural and extension activities** also.

**Self-examination** is the best way to **recognise strengths and areas of improvement**. The Institute participates in **AAA, GSIRF, NIRF** and other accreditations to realize its vision and mission. The promising results of such surveys and recognitions received by the Institute (most active college in MEGA-PLACEMENT FAIR) have instilled a sense of achievement in the teachers and pride and confidence in the students. All the activities, future plans and **aspirations and achievements of our students** are regularly reported in the **college magazine (aptly called 'Expressions')**. The highlights are also reflected in the newsletter published by the Management (**AES Newsletter**).

File Description	Document
Link for appropriate web in the Institutional website	<a href="#">View Document</a>
Link for any other relevant information	<a href="#">View Document</a>



## 5. CONCLUSION

---

### Additional Information :

**Actions taken by the College on the recommendations of NAAC Peer Team for Quality Enhancement of the institution:**

#### 1. On strengthening the Alumni association:

M.G. Science Alumni association has become a vibrant body involving more than one thousand past students. What is noteworthy is the contribution of past students to improve the infrastructure of the institute. The members have also donated generously to help the students with dire economic needs.

#### 2. On encouraging the faculty members to apply for research grants:

Around 6 faculty members received 16 projects funded by both Government and Non-Governmental agencies.

#### 3. On immediate attention for upgrading the existing laboratories:

The Science Laboratories (**Chemistry, Physics, Micro Biology, Botany and Zoology, Geology**) have undergone a major reformation. Computer Laboratories have been upgraded in the Departments of **Statistics & Maths**. New software like MATLAB & SPSS have been upgraded. Facilities set-up through DST –FIST funding has enhanced the teaching and research environment in Science Departments.

#### 4. On strengthening of the Central Library:

The library is having more than 26000 books and new books worth 13 lac have been purchased to augment the facilities in the library. The automation of library is initiated and there is more focus on the digitalization of the library. The access to a number of E- journals is put in place.

#### 5. On linkages between college and industry:

The institute makes constant endeavour to improve linkages with other educational institutes and renowned industries. The institute has developed excellent linkages with top research institutes with ISRO and PRL for a number of research projects. There is also a partnership IITE for student exchange. The institute also has working collaboration with Zydus Cadila for recruitment and training activities.

### Concluding Remarks :

#### Concluding Remarks:

Academic excellence, spirit of innovation and social relevance have always been the major institutional distinctiveness for M.G Science Institute for more than seven decades. The legacy that the College has carried forward is the hall mark of our achievement. Our pursuit of excellence has inspired the generations of students to come up with amazing career prospects..the institute has not decided to rest on its past laurels – we have chosen to move on the path of excellence achieving considerable success in the areas like UGC-CPE status and

DBT Star Colleges Scheme, NIRF and 4-star ranking in GSIRF, E-governance, networking with industries and renowned institutions, students' exchange program, Wi-Fi campus, state of the art laboratories, classrooms with audio-visual facilities and many more. ... It is no wonder that the College which provides quality education continues to remain one of the top academic institutions in the academic world of the western India. M.G. Science Institute has remained the top draw for the major pharmaceutical industries of Gujarat as it provides all important quality human resources to them. It is important to note that M.G. Science Institute has an MOU with pharma major Zydus Cadila.

M.G. Science Institute has retained its position of eminence through its constant eagerness to accept changes. This pure science college is not lost in its theory education, but it has constantly strived to include some application based content its programme structure. Its uniqueness lies in its recognition of the forces of changes. The initiatives like entrepreneurship development and skill development programmes, awareness campaigns, seminars discussions, and value-based education, quality research, academic collaboration, industry-institute tie ups have turned the college into an institute of eminence in Gujarat.

## 6.ANNEXURE

### 1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																				
1.2.1	<p><b>Percentage of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented</b></p> <p><b>1.2.1.1. Number of Programmes in which CBCS / Elective course system implemented.</b>            Answer before DVV Verification : 12            Answer after DVV Verification: 12</p> <p>Remark : Based on the supporting documents.</p>																				
1.2.2	<p><b>Number of Add on /Certificate programs offered during the last five years</b></p> <p><b>1.2.2.1. How many Add on /Certificate programs are added within the last 5 years.</b>            Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>6</td> <td>5</td> <td>5</td> <td>5</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>1</td> <td>1</td> <td>0</td> <td>5</td> </tr> </tbody> </table> <p>Remark : Revised as per the certificate programs are added in the institution as listed in the excel sheet.</p>	2018-19	2017-18	2016-17	2015-16	2014-15	5	6	5	5	5	2018-19	2017-18	2016-17	2015-16	2014-15	2	1	1	0	5
2018-19	2017-18	2016-17	2015-16	2014-15																	
5	6	5	5	5																	
2018-19	2017-18	2016-17	2015-16	2014-15																	
2	1	1	0	5																	
1.2.3	<p><b>Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years</b></p> <p><b>1.2.3.1. Number of students enrolled in value added courses (beyond the curriculum) offered year-wise during last five years.</b>            Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> </tr> </thead> <tbody> <tr> <td>60</td> <td>115</td> <td>52</td> <td>98</td> <td>84</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> </tr> </thead> <tbody> <tr> <td>138</td> <td>115</td> <td>52</td> <td>98</td> <td>84</td> </tr> </tbody> </table>	2018-19	2017-18	2016-17	2015-16	2014-15	60	115	52	98	84	2018-19	2017-18	2016-17	2015-16	2014-15	138	115	52	98	84
2018-19	2017-18	2016-17	2015-16	2014-15																	
60	115	52	98	84																	
2018-19	2017-18	2016-17	2015-16	2014-15																	
138	115	52	98	84																	
1.3.3	<p><b>Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year</b></p>																				

**1.3.3.1. Number of students undertaking project work/field work / internships**

Answer before DVV Verification : 213

Answer after DVV Verification: 167

**2.1.1 Average Enrolment percentage (Average of last five years)****2.1.1.1. Number of students admitted year-wise during last five years**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
659	576	467	617	494

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
659	576	467	617	494

**2.1.1.2. Number of sanctioned seats year wise during last five years**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
625	624	570	576	570

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
625	625	625	520	830

Remark : Revised as per the proof of sanctioned intake and NIRF data have been considered for the years 2015-16 & 2016-17.

**2.1.2 Average percentage of seats filled against seats reserved for various categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years ( exclusive of supernumerary seats)**

2.1.2.1. Number of actual students admitted from the reserved categories year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
400	365	193	293	224

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
313	306	193	282	224

Remark : Revised with respect to the metric 2.2 in extended profile as no. of students admitted were more than the seats earmarked for the year 2015-16, 2017-18 and 2018-19. For those years, the seats earmarked is considered here also as final admission list indicating the category is not provided.

### 2.6.3 Average pass percentage of Students during last five years

#### 2.6.3.1. Number of final year students who passed the university examination year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
485	604	608	489	770

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
346	469	444	380	480

#### 2.6.3.2. Number of final year students who appeared for the university examination year-wise during the last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
537	674	729	580	888

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
430	575	660	524	814

Remark : As per uploaded documents, withheld student in the final year can't be considered as passed so excluded that from total pass out and considered total appeared students of Sem-VI as per the attached report signed by COE.

### 3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)

#### 3.1.2.1. Number of teachers recognized as research guides

Answer before DVV Verification : 10

Answer after DVV Verification: 10

### 3.2.2 Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the last five years

#### 3.2.2.1. Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year-wise during last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15

12	12	6	3	16
----	----	---	---	----

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
6	6	0	1	12

Remark : Revised as per the given reports.

### 3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years

#### 3.3.1.1. How many Ph.Ds registered per eligible teacher within last five years

Answer before DVV Verification : 18

#### 3.3.1.2. Number of teachers recognized as guides during the last five years

Answer before DVV Verification : 10

Answer after DVV Verification: 10

### 3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the last five years

#### 3.3.2.1. Number of research papers in the Journals notified on UGC website during the last five years.

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
24	20	34	11	16

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
06	06	06	04	02

Remark : Considered only the UGC approved journals from the revised excel sheet whose ISSN numbers are present in the UGC list of journals.

### 3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

#### 3.3.3.1. Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year-wise during last five years

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
9	10	5	5	5

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
9	9	5	5	5

Remark : Revised as per the attached list.

**4.2.3 Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)**

**4.2.3.1. Annual expenditure of purchase of books/e-books and subscription to journals/e-journals year wise during last five years (INR in Lakhs)**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
12.43	1.54	0.73	0.53	2.11

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
12.14	1.38	0.66	0.38	2.05

Remark : Revised as per the CA certified consolidated statement.

**4.4.1 Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years(INR in Lakhs)**

**4.4.1.1. Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year-wise during the last five years (INR in lakhs)**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
201.49	309.91	118.20	67.02	77.58

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
152.27	262.98	77.84	23.22	31.21

Remark : Considered only the expenditure incurred on maintenance of infrastructure (physical and academic support facilities) from the income-expenditure statement.

**5.1.2 Average percentage of students benefitted by scholarships, freeships etc. provided by the institution / non- government agencies during the last five years**

**5.1.2.1. Total number of students benefited by scholarships, freeships, etc provided by the institution / non- government agencies year-wise during last five years**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
4	4	2	4	9

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
2	2	1	2	7

Remark : Counted same students only once in every year as per the list attached.

**5.1.5 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases**

1. **Implementation of guidelines of statutory/regulatory bodies**
2. **Organisation wide awareness and undertakings on policies with zero tolerance**
3. **Mechanisms for submission of online/offline students' grievances**
4. **Timely redressal of the grievances through appropriate committees**

Answer before DVV Verification : A. All of the above

Answer After DVV Verification: B. 3 of the above

**5.2.1 Average percentage of placement of outgoing students during the last five years****5.2.1.1. Number of outgoing students placed year - wise during the last five years.**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
29	32	21	7	0

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
11	53	2	0	0

**5.3.1 Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) during the last five years.****5.3.1.1. Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) year-wise during the last five years.**

Answer before DVV Verification:



2018-19	2017-18	2016-17	2015-16	2014-15
7	9	13	12	12

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
11	5	3	4	2

Remark : Revised as per the certificate uploaded considering the academic years of the assessment period.

5.4.2 **Alumni contribution during the last five years (INR in lakhs)**

Answer before DVV Verification : A. ? 5 Lakhs

Answer After DVV Verification: E. <1 Lakhs

6.3.2 **Average percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years**

6.3.2.1. **Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
9	1	1	2	1

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
5	1	0	1	0

Remark : Counted one teacher only once per year as per the supporting proofs and considered those teachers only for whom the proof of financial support is attached during the assessment period.

6.3.4 **Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP)during the last five years (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course ).**

6.3.4.1. **Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course year-wise during the last five years**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
05	08	24	06	02

Answer After DVV Verification :

2018-19	2017-18	2016-17	2015-16	2014-15
05	05	18	12	03

Remark : Revised considering the attached certificates and excluding programs of duration less than one week.

6.5.3	<p><b>Quality assurance initiatives of the institution include:</b></p> <ol style="list-style-type: none"> <li><b>1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements</b></li> <li><b>2. Collaborative quality initiatives with other institution(s)</b></li> <li><b>3. Participation in NIRF</b></li> <li><b>4. any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)</b></li> </ol> <p>Answer before DVV Verification : A. All of the above Answer After DVV Verification: B. 3 of the above</p>
7.1.6	<p><b>Quality audits on environment and energy regularly undertaken by the Institution</b></p> <ol style="list-style-type: none"> <li><b>1. Green audit</b></li> <li><b>2. Energy audit</b></li> <li><b>3. Environment audit</b></li> <li><b>4. Clean and green campus recognitions / awards</b></li> <li><b>5. Beyond the campus environmental promotion activities</b></li> </ol> <p>Answer before DVV Verification : C. 2 of the above Answer After DVV Verification: C. 2 of the above</p>
7.1.10	<p><b>The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.</b></p> <ol style="list-style-type: none"> <li><b>1. The Code of Conduct is displayed on the website</b></li> <li><b>2. There is a committee to monitor adherence to the Code of Conduct</b></li> <li><b>3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff</b></li> <li><b>4. Annual awareness programmes on Code of Conduct are organized</b></li> </ol> <p>Answer before DVV Verification : B. 3 of the above Answer After DVV Verification: C. 2 of the above</p>

## 2.Extended Profile Deviations

ID	Extended Questions
1.1	<p><b>Number of courses offered by the Institution across all programs during the last five years</b></p> <p>Answer before DVV Verification:</p>

2018-19	2017-18	2016-17	2015-16	2014-15
283	283	283	283	283

Answer After DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
280	233	205	182	132

2.1 **Number of students year-wise during last five years**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
1528	1687	1540	1727	1619

Answer After DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
1528	1687	1540	1727	1619

2.2 **Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during last five years**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
773	827	755	755	793

Answer After DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
306	306	306	255	407

2.3 **Number of outgoing / final year students year-wise during last five years**

Answer before DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
472	591	591	446	672

Answer After DVV Verification:

2018-19	2017-18	2016-17	2015-16	2014-15
430	575	660	524	814

3.1 **Total number of classrooms and seminar halls**

Answer before DVV Verification : 17

Answer after DVV Verification : 17

3.3	<b>Number of Computers</b> Answer before DVV Verification : 148 Answer after DVV Verification : 139
-----	---

NAAC