



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

XAVIER INSTITUTE OF ENGINEERING

**XAVIER INSTITUTE OF ENGINEERING, OPPOSITE S L RAHEJA HOSPITAL,
MAHIM CAUSEWAY, MAHIM WEST**

400016

www.xavierengg.com

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

January 2019

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Xavier Institute of Engineering (XIE) is one of 130 Universities / Colleges in the world and one of 84 colleges in India that is managed by the Society of Jesus. The reputed Jesuit Institutions in India are XLRI-Jamshedpur, Loyola College-Chennai, St. Joseph's College-Bangalore, St. Xavier University-Kolkata, and Xavier University-Bhubaneswar. XIE is now one of the three engineering colleges run by the Jesuits in India. Xavier Institute of Engineering is a private, self-financed, Christian minority engineering college run by the trust "The Bombay Xavierian Corporation Pvt Ltd."

Back in the 1930's there was a felt need for an institution that could train radio communication officers for the shipping industry. The Jesuits decided to set up St Xavier's Technical Institute (SXTI), a polytechnic that would serve the maritime officers interests. It started off in the early 1930s on the premises of St Xavier's College, Mumbai, Fort, and when it soon began to burgeon it also demanded larger premises, and these were found in Mahim in 1967. With the rapid development of Information Technology, a further need was recognized for providing quality education in Computers and Electronics, and thus in 2005 a degree-level college, XIE, was set up alongside SXTI.

XIE offers personal care to every student, and fosters a holistic formation. The students appreciate the one-on-one chats with their mentors (ombudsman and the faculty). The students are able to approach the staff, apprise them of their difficulties, and even find the staff willing to organize extra classes for special needs. XIE is approved by the All India Council of Technical Education (AICTE), New Delhi, recognized by the Directorate of Technical Education, Govt. of Maharashtra and affiliated to University of Mumbai. XIE offers the following three degree courses in Engineering leading to Bachelor of Engineering from University of Mumbai.

- a) Computer Engineering
- b) Electronics and Telecommunication Engineering
- c) Information Technology

Location

XIE is located at Mahim West, Mumbai, India. It is 8km from Mumbai International airport and approximately 500 mts from Mahim railway station.

Address: Opposite S. L.Raheja Hospital, Mahim Causeway, Mahim, Mumbai - 400016, Maharashtra

Vision

Vision Statement of XIE:

To nurture the joy of excellence in a world of high technology.

Mission

Mission Statement of XIE:

To strive to match global standards in technical education by interaction with industry, continuous staff training and development of quality of life.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- **Faculty Retention:** Institution has a good faculty retention record. This helps in imparting excellent teaching.
- **Location:** Institution is located at city centre and well connected to suburbs by public transport systems.
- **Adequate IT Facility:** Institution has extensive computational facility available for faculty, students and supporting staffs. Computers are upgraded and replaced from time to time to cope up with required configurations. Faculties and students use Moodle e-learning system extensively.
- **Constant encouragement and support from the Management:** Students and staffs are always encouraged to excel and are provided with all feasible supports.
- **Infrastructure:** Institution is fulfilling all the mandatory requirements of AICTE. It has adequate number of class rooms, laboratories, library, workshop, drawing hall, toilets, seminar rooms, conference room, etc. There are two play-grounds. Management takes utmost care in maintaining a green environment.
- **ICT:** Institution has 9 ICT enabled class rooms, 2 ICT enabled tutorial rooms and a seminar room with a smart board and audio visual system. More than 95% of faculty use moodle for teaching and learning process.
- **Well-equipped Labs:** Labs are well equipped to fullfill the curricular requirements. Adequate grant is sanctioned for maintenance and upgradation of labs. Respective HoDs and Lab-in charges look after the utilization of labs. Students are allowed to use labs, on request basis, even after the working hours.
- **Well defined governance practice:** Institution follows a well-defined academic calendar for the teaching-learning process. There is total transparency in all academic and administrative processes.
- **Teacher-Student relationship:** Xavier Institute of Engineering believes in having positive relationship between a teacher and a student. Teachers and students maintain a cordial relationship. Institution conducts orientation and induction program for newly admitted students.
- **Supporting Staff:** Institution has adequate number of supporting staffs who also are very sincere and reliable.
- **Dedicated cells and committees:** Institution has dedicated training placement cell, interfaith committee, women development cell, grievance cell, library committee, students' council, etc. Members of these committees are dedicated for overall growth of students.
- **Placement in IT companies:** Institution has good placement record.

Institutional Weakness

- **New programme:** Though Institute has completed seventeen years of its existence there is no increase in sanctioned intake or no new programmes have been introduced.
- **Hostel Facility not available:** There are no hostels or anyform of residential facility available for

students and staffs.

- **Faculty cadre ratio and qualification:** Though every year institution advertises for recruiting suitable candidate for the Professor and Associate Professor posts in IT and Computer Engineering Department, these posts are lying vacant. As on date all faculty have master's degree, majority were supported financially after their joining, but very few have PhD degree. Only a few are pursuing PhD. None of the faculty has any significant industry background or associated with any recognised R & D organisation.
- **Lack of valued activities by Entrepreneur Cell:** Entrepreneur Cell is not fully functional and effective.
- **Alumni association:** Institution needs to workout on building robust alumni database and proper methodical communication for alumni support mechanism.
- **Curriculum:** Being an affiliated college Institution has limitations on defining or modifying the course curriculum.
- **Fund limitation:** Institution has scarcity of funds for organising national or international level academic and professional programme. One of the bottle neck for this is scarcity of fund because major source of income is student tuition fees.
- **Research, Collaboration and Consultancy:** Being the self-financed private engineering college, brand visibility is not at par with the premier institutes. This has limited Institution's reach to research oriented industries and consultancies.

Institutional Opportunity

- **Outreach and Extension Activities:** Recently Institution has moved forward by signing MOUs with the Jesuits run Institutions of International Recognitions. This may help improving the research and consultancy activities.
- **Incubation Centre:** Plans have been made to establish a strong incubation cell and organise more quality add-on or bridge courses.
- **Collaboration with Industries:** This can support quality internship program for students and consultancy.
- **Enhanced alumni involvement and support:** Well placed alumni can contribute for the betterment of the institution activities.
- **Encouraging and Guiding Students for Higher Studies and research:** Conducive atmosphere can be created to facilitate higher studies and research.
- **Interdisciplinary projects:** Adapt proactive mechanism to facilitate smooth implementation of research work and interdisciplinary projects.

Institutional Challenge

- **Intake quality:** Attracting adequate number of students with quality and quantity in future years looks challenging.
- **Preparing for the needs of the next generation technology:** Stake holders need to work out on industry requirements and plan bridge courses, which will help placement opportunity.
- **Support research activities:** Institution must gear up towards research work and come up with policies for sustainable research and collaboration.
- **Affiliated Institution:** No central or state grant are available, hence institution depends mainly on tuition fees for meeting the ever increasing cost of running the institute and its programmes. Finance and fund development process is a challenge.

- **Fluctuations in the job market and placement due to recession:** Volatility in macro economics impact the employment from time to time imposing a challenge for placement of students.
- **R & D:** Creating environment for R & D and consultancy at par with industry expectation, national and international standards and societal and environmental need is a challenge.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

The Institute is a self-financed, unaided organisation. All the three UG programs offered by the Institute are approved by the AICTE, recognized by DTE, Maharashtra and affiliated to University of Mumbai. The Institution has defined its Vision and Mission Statements along with the quality policies. These have been institutionalised keeping in view high quality of technical education to the aspiring engineering students. To administer various activities, an academic calendar is designed at the commencement of every academic year. For effective management and monitoring of various academic and extra curricular activities empowered committees are in place. Being an affiliated Institute, it does not have much flexibility in academic curriculum. Generally, Mumbai University reviews its curriculum in a cycle of 4-5 years and incorporates changes as deemed fit considering various advancement in the respective fields. Also, as an Academia-Industry partnership, continuous interaction with the leaders/experts from the Industry and experienced academicians from reputed organisations are held. The Institute takes into cognisance such feedbacks and recommendations to work on latest technical knowledge required by the industry, and suitably introduces supplementary add-on programs so as to develop the skill set of the students. Currently, all the programs are following the CBCS curriculum prescribed by Mumbai University. To understand the stakeholder's sentiments and the expectations, the Institute has a well established feedback system. Departments do analyse the course exit and program exit feedbacks given by the students. Institute has a well organised placement cell headed by a Training and Placement Officer, who continuously endeavours to attract the best in class Industries to recruit the budding engineers.

Teaching-learning and Evaluation

The Institute is affiliated to Mumbai University and its admission is carried out by the Directorate of Technical Education (DTE), Govt. of Maharashtra. Institution is a minority Institute (religious-Christian), hence category quota such as SC, ST, OBC, SBC and others are not applicable to it. Admission process is conducted by the Directorate of Technical Education (DTE) Maharashtra. Till date, Institute is able to attract students with nearly 100% intake capacity.

To cater to the diverse needs of the students, remedial classes are conducted for students, who are academically weak. Students are assigned with faculties as mentors to look after academic as well as personal counselling. Institution has experienced and committed faculty and supporting staffs, who are dedicated to impart academic and various add-on activities. In order to have a balanced execution of teaching and learning process and engagement of students, meticulous planning is done prior to the commencement of the semester. Syllabus completion status and student attendance are monitored periodically. Suggestions by the staff and feedback from students facilitate in continuous improvement in the teaching-learning process. The institute has consistency in academic results with an average graduation rate of around 95% over the last five years. Institute focuses on effective teaching and learning processes through intensive use of ICT-based learning. Every department has defined POs and PSOs. Departments calculate the learning outcomes following the OBE

method. Faculties are encouraged to keep abreast the latest developments in various technical fields by attending continuous education programs, workshops, conferences and are granted with financial assistances including duty leaves, as required. Around 10 % of the total students pursue their higher studies in India and abroad. Fair practices and transparency are maintained in the examination and other evaluation processes.

Research, Innovations and Extension

To promote the research culture, the institute has taken initiatives to advance research in the coming years. In this direction, the institute has signed up MOUs with sister universities of USA and other countries and is in the process of starting collaborated research activities in various academic programmes. A few faculties have paid visits to these Universities; three events have already been conducted jointly by faculties from XIE and partner institutions and more such activities are in the pipeline. Students get opportunity to know more about foreign culture and education system by hosting Santa Clara University students when they come for outreach program. However, due to compact academical schedule of Mumbai University, XIE students have not yet visited any partner Universities. A total grant of 75,000/- has been received from the University of Mumbai under minor research grant scheme during AY 2017-18. Nine more proposals of minor grant scheme, which have been submitted recently (2018-19) are under consideration. Faculties and students are encouraged for creating the IPR and publishing quality technical/research papers. Being a private organization, the institute has constraints in getting industry consultancies and therefore it is at the primitive stage. However, the institute has intentions to extend consultancy and R & D services. The institute is pro-active to carry out the extension programmes through its various cells. Institute has constructive relationship with more than 5 NGOs. It also organizes various activities through Students Council, WDC, etc. Every year students and faculties participate actively in community services which include activities like health related campaigning, community teaching, sharing of infrastructure with the local community, sparing old computers and stationaries, etc. Institute has also received the appreciation award for some activities.

Infrastructure and Learning Resources

The institute is located in Mahim West, Mumbai and well connected with local public transport systems. The lush green campus is spread over an area of 3 acres with 60KW solar panel. The physical facilities comprise of 9 classrooms, 2 tutorial rooms, 25 well equipped laboratories (as per the AICTE norms), seminar hall, Director's Office, Principal's office, drawing hall, workshop, Training and Placement (T & P) cell, ample space for outdoor & indoor games. Fire Extinguishers are in place. Campus is well connected with intercom facility. Ramps and lifts are provided for physically disabled students. Library comprises of 12825 volumes with 5459 Titles, 10 national and international journals, 03 daily Newspaper, two Magazines. Library is having a reference section with photocopy facility. The Library is using commercial software SLIM 21 for automation of Library Services, dedicated computers for the students to access Moodle server, Science Direct and IEEE explorer, NPTEL, SWAYAM . Institute has a very strong IT infrastructure with regular updates, in terms of hardware, software and firewall system. The institute has massive network of 531 computers with 40 Mbps internet connectivity for academic and research need. Centralized firewall cyberoam is used for network monitoring, management and internet security. Civil maintenance are carried out by the outside contractors. Adequate in-house staffs are available for maintaining hygiene and cleanliness of the building. Maintenance of computers, after the warranty period, is taken care of by the Lab technicians supported by system manager and computer centre staffs. Electrical maintenance is carried out by inhouse electricians. Campus is secured with 45 CCTV cameras & external security agency.

Student Support and Progression

Institute aims building students with all-round personalities of students in a joyful environment with supportive measures and resources. It ensures development of students in academics and other activities. Institute follows a process of notifying to the students about various schemes of scholarships and freeships extended by the Government. Over the last five years, 776 students out of 4268 have been benefited by scholarships and freeships provided by the Government. Institute has various committees such as student grievance cell, anti ragging cell to address the grievances. The institute organizes number of events to enhance capability of students by internal faculties or by inviting experts for Expert lectures, Field Visits, Workshops and seminars and provide exposure on real life practical aspects. Due to these practices and guidance, good numbers of students are benefited who pursue higher studies in India and abroad. Training and placement cell works towards better job placements of students. It also conducts various activities such as virtual placements, trainings to develop technical skills. The College has an active Student Council. Student representatives are members of some of the College committees. Students organize various co-curricular and extra-curricular activities at inter-collegiate level.

Governance, Leadership and Management

For fulfilment of the college mission, Management strives to maintain an open and interactive environment. All stakeholders are actively encouraged to participate and voice their perspectives for effective decision making and policy formulation. The faculty and administrators work enthusiastically to comprehend and articulate requirements in the academic structure and functioning of the institution as per the requirement of the university. The college promotes a culture of participative management. Principal delegates authority to Deans, HODs, Administrative heads and coordinators for proper planning and implementation of the different task at the Institute. Before commencement of each academic session various councils and committees are formed. Under the guidance of the Director, a committee consisting of Principal, Dean and a council of staffs prepare academic calendar and decide execution strategies. Service rules of the Institute have been formulated as per the guidelines given by the competent authorities such as DTE, AICTE and the Affiliating University i.e., University of Mumbai. Performance-appraisal system is followed for all permanent teaching and non-teaching staff and is carried out annually. The college conducts regular internal and external audit and prepares an annual budget in consultation with all the departments that shall be taken up by the Director and the Governing body. Account section maintains and manages the finance of the Institute and the departmental expenditures and ensures clarity between income and expenditure. Fund for running the institute is mainly through the “tuition fee received from students and the fee granted by the social welfare office of the Govt.”, against minority and other categories of students. The Institute sponsors faculties to do their M.E./Ph.D., publish papers, attend FDPs, etc., as an on-going process of quality improvement while supporting the mission of the Institute. Provident fund is paid by the institution as per the statutory rules. General/Medical Insurance plan is also extended to all faculty/staff by the institution. Gratuity scheme is in place. Increments and career advancement schemes are extended to all employees who have continued to work in the organization as per the AICTE guidelines.

Institutional Values and Best Practices

The Institute offers opportunities for holistic growth of students and staff with its core values of commitment, conscience, compassion and competence (4C's). The Institute follows Mumbai University curriculum which includes subjects related to human values and professional ethics. Code of conduct book exists for students and

staff.

The Institute has Woman Development Cell (WDC) which organises events for growth, safety and security of students and staff. Few gender-equity promotion programmes are organized every year to conscientise students and staff on gender equality. The Institute also has a Grievance Cell to help students and staff to address their problems. XIE campus is well secured by the compound walls and strong gates. The Institute has closed circuit TV (CCTV) and the security personnel continuously monitor the premises. It has Fire and Safety measures installed in the premises.

The Institute is using 100 KW Solar Power plant as a renewable energy source. Waste management is carried out locally and with the help of Brihanmumbai Municipal Corporation (BMC). The Institute has a 3 acre green campus in the heart of Mumbai. Continuous efforts are being taken to make the campus plastic free. Friendly options are available for the differently-abled and special skill development programs are organised for Divyangjan.

Many initiatives are taken up to address locational advantages. The Institute organizes different activities to increase the awareness of national identities and symbols. It also celebrates days of National festivals, Teachers day and Engineers day.

The two best practices are

- 1) Academic performance improvement program for FE students.
- 2) *Holistic Development of Staff and Students.*

This creates the environment for nurturing the joy of excellence and then using the acquired knowledge for the development of the community.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	XAVIER INSTITUTE OF ENGINEERING
Address	Xavier Institute of Engineering, Opposite S L Raheja Hospital, Mahim Causeway, Mahim West
City	Mumbai
State	Maharashtra
Pin	400016
Website	www.xavierengg.com

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Professor	Suprava Patnaik	022-24455937	7303409222	022-	s.patnaik@xavierengg.com
Principal	Y. D. Venkatesh	022-24451961	9820198029	022-2446226 7	office@xavierengg.com

Status of the Institution	
Institution Status	Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	Yes Minority Certificate.pdf
If Yes, Specify minority status	
Religious	Christian Religious
Linguistic	
Any Other	

Establishment Details				
Date of establishment of the college	01-06-2005			
University to which the college is affiliated/ or which governs the college (if it is a constituent college)				
State	University name	Document		
Maharashtra	University of Mumbai	View Document		
Details of UGC recognition				
Under Section	Date	View Document		
2f of UGC				
12B of UGC				
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
AICTE	View Document	04-04-2018	12	Yearly

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)?	No
Is the College recognized for its performance by any other governmental agency?	No

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Xavier Institute of Engineering, Opposite S L Raheja Hospital, Mahim Causeway, Mahim West	Urban	3	8399

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Computer Engineering	48	HSC CET	English	60	60
UG	BE,Electronics And Telecommunication Engineering	48	HSC CET	English	60	58
UG	BE,Information Technology	48	HSC CET	English	60	58

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	4				6				36			
Recruited	1	1	0	2	3	3	0	6	10	26	0	36
Yet to Recruit	2				0				0			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				29
Recruited	22	7	0	29
Yet to Recruit				0

Technical Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				22
Recruited	17	5	0	22
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	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.	1	1	0	1	1	0	1	1	0	6
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	2	2	0	9	27	0	40

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	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

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	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

Details of Visting/Guest Faculties					
Number of Visiting/Guest Faculty engaged with the college?	Male		Female		Total
	0	0	0	0	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	125	3	0
	Female	48	0	0	0	48
	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	0	3	3	3
	Female	3	4	3	1
	Others	0	0	0	0
ST	Male	1	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
OBC	Male	4	7	6	1
	Female	1	3	9	4
	Others	0	0	0	0
General	Male	153	147	156	141
	Female	61	60	61	57
	Others	0	0	0	0
Others	Male	6	7	7	4
	Female	2	5	4	4
	Others	0	0	0	0
Total		231	236	249	215

3. Extended Profile

3.1 Program

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

Response: 793

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of programs offered year-wise for last five years

2017-18	2016-17	2015-16	2014-15	2013-14
3	3	3	3	3

3.2 Students

Number of students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
866	842	841	844	868

File Description	Document
Institutional Data in Prescribed Format	View Document

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

2017-18	2016-17	2015-16	2014-15	2013-14
42	25	40	36	42

File Description	Document
Institutional Data in Prescribed Format	View Document

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

2017-18	2016-17	2015-16	2014-15	2013-14
212	208	202	220	197

File Description	Document
Institutional Data in Prescribed Format	View Document

3.3 Teachers

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

2017-18	2016-17	2015-16	2014-15	2013-14
46	46	46	46	44

File Description	Document
Institutional Data in Prescribed Format	View Document

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

2017-18	2016-17	2015-16	2014-15	2013-14
46	46	46	46	46

File Description	Document
Institutional Data in Prescribed Format	View Document

3.4 Institution

Total number of classrooms and seminar halls

Response: 10

Number of computers

Response: 531

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

2017-18	2016-17	2015-16	2014-15	2013-14
188.96	115.40	192.20	225.84	254.43

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:

Our Institute XIE is affiliated to University Of Mumbai and the curriculum and syllabi are prescribed by the university that are to be strictly adhered to. The institution has a well-defined system for effective implementation of the scheme of the curriculum. Teaching Learning Process is based on proper planning and effective delivery of Lecture / Practical / Tutorial as per time table, following the academic calendar. In case of any shortcoming due to unavoidable circumstances, necessary changes are made in consultation with HODs. Learning process of students is monitored by the faculty members on the basis of continuous evaluation.

Following are the various means through which the curriculum is executed:

Faculty Meeting: Meetings are held at least twice in a semester. However it is not restricted to only two meetings are held with Director/Principal as and when required. Each semester duration spans over 14 to 15 weeks. Load distribution and project guide allocation is carried out at the departmental level. It is finalized before the commencement of semester.

Academic Calendar: Academic Calendar is prepared as per the academic schedule of University of Mumbai and in consultation with the requirements of departments. Academic calendar and time-tables are prepared and displayed at least fifteen days before the commencement of the semester on the Institute website and notice boards.

FE Orientation Program: It is organized to promote congenial and healthy atmosphere among FE students who are newly admitted along with their parents. They are taken to various labs and classroom and all the available infrastructure of Institute are shown.

Teaching learning process:

a) The institution follows a student centric method of teaching. ICT is used extensively to ensure effective

delivery of curriculum. Every teacher is provided with a laptop/personal computer and have access to high speed internet.

b) All the classrooms are equipped with laptop, LCD projector and screen besides the conventional blackboards.

c) Faculty conducts lectures practical as per the time-table. Course material is uploaded on the Moodle server that enables students to see and prepare on the lecture delivery that takes place in class.

d) Based on the syllabus coverage and academic calendar faculty members give assignments.

e) Attendance and progress of the students are regularly monitored and informed to parents. Monthly attendance record is displayed on the notice board. Those with less than 75% attendance are called with their parents and an undertaking is taken from such students and parents. Extra classes, remedial classes are arranged in such cases.

f) Internal assessment test-I is conducted after 40% coverage of syllabus. Internal assessment test- II is conducted after 70 % coverage of syllabus. End semester examination is conducted by the University.

g) Well defined program outcomes and course outcomes aid in providing direction to teaching and other activities.

h) Guest lectures, seminars, Industrial visits and training programmes, supplement the curricular inputs. Students are encouraged for doing research work and present papers in seminars and conferences and to publish their papers in journals.

File Description	Document
Link for Additional Information	View Document

1.1.2 Number of certificate/diploma program introduced during the last five years

Response: 0

1.1.2.1 Number of certificate/diploma programs introduced year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
Details of the certificate/Diploma programs	View Document

1.1.3 Percentage of participation of full time teachers in various bodies of the Universities/ Autonomous Colleges/ Other Colleges, such as BoS and Academic Council during the last five years**Response:** 17.54

1.1.3.1 Number of teachers participating in various bodies of the Institution, such as BoS and Academic Council year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
4	3	1	0	0

File Description	Document
Details of participation of teachers in various bodies	View Document
Any additional information	View Document

1.2 Academic Flexibility**1.2.1 Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years****Response:** 26.67

1.2.1.1 How many new courses are introduced within the last five years

Response: 248

File Description	Document
Details of the new courses introduced	View Document

1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented**Response:** 100

1.2.2.1 Number of programs in which CBCS/ Elective course system implemented.

Response: 3

File Description	Document
Name of the programs in which CBCS is implemented	View Document

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

Response: 33.29

1.2.3.1 Number of students enrolled in subject related Certificate or Diploma or Add-on programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
528	564	50	205	69

File Description	Document
Details of the students enrolled in Subjects related to certificate/Diploma/Add-on programs	View Document

1.3 Curriculum Enrichment

1.3.1 Institution integrates cross- cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum

Response:

Gender: The curriculum is designed by the Mumbai University and does not have a course directly relevant to Gender issues. However Women Development Committee (WDC) takes care of this and works towards prevention of sexual harassment. WDC organises induction programme for newly admitted girl students. Every year WDC celebrates International Women Day, through which girls are made aware of gender related issues and how to tackle these issues. Girl students and women faculty are integral parts of all decision-making and monitoring committees. Institution provides guidelines to girl students about various special scholarships and other facilities.

Environment and sustainability: In first year all the students study a course entitled “**Environmental Studies**” in the curriculum, which helps to create awareness about environment and its allied problems. This course motivates students to participate in environment protection, improvement and develop attitude to concern for the environment. In this course students study about ecosystem, aspects of Sustainable Development, various types of pollution and pollution control legislation, renewable sources of energy, technological advances to overcome environment problems. Through the “**basic workshop practice**” course, first year students study basic techniques like carpentry, mechanical fitting, PCB designing, plumbing, masonry PC hardware, which are the basics and essential knowledge for any sustainable technology. “**Applied Chemistry-I & II**” courses also address about green chemistry, water pollutants, etc. which are indirectly relevant to environment and sustainability.

Human values and professional ethics:

Following courses of curriculum helps adding human value and create awareness about professional ethics.

- **Business communication and Ethics:** In the fifth semester, students from all the three programs (CE, EXTC, IT) study this curricular subject. Objective of this course is to: inculcate professional and ethical attitude at the workplace, enhance effective interpersonal skills, build multidisciplinary approach towards all life tasks, demonstrate awareness of contemporary issues knowledge of professional and ethical responsibilities, etc.
- **BE Project work:** Final year students conduct project work in teams of 2-to-4 students. The objective of this course is students will have glimpses of real world problems and challenges and suggest sustainable solutions. Students follow professional ethics while working in teams, preparing report and presentation, using software, etc. Students complete their projects with code of ethics for software and professional conduct and submit the reports at the end of the semester
- **Program Specific Courses:** Apart from above common courses there are courses specific to programmes which address human values and professional ethics.

	Course	Objective is to help students to understand:
Information Technology	System and web-security	web server vulnerabilities and counter measures
	E-commerce & E-business	e-business ethically
	Software Project Management	importance of team and share best project management practices.
	Software Testing & Quality Assurance	basic software debugging methods and different testing tools
Electronics & Telecommunication	Network Management	ethical management of communication network.
	Open Source Lab	efficient and ethical use of open source software.
Computer Engineering	Open Source Tech Lab	efficient and ethical use of open source software.

File Description	Document
Any Additional Information	View Document
Link for Additional Information	View Document

1.3.2 Number of value added courses imparting transferable and life skills offered during the last five years

Response: 6

1.3.2.1 Number of value-added courses imparting transferable and life skills offered during the last five years

Response: 6

File Description	Document
Details of the value-added courses imparting transferable and life skills	View Document
Brochure or any other document relating to value added courses.	View Document

1.3.3 Percentage of students undertaking field projects / internships

Response: 5.66

1.3.3.1 Number of students undertaking field projects or internships

Response: 49

File Description	Document
List of students enrolled	View Document
Institutional data in prescribed format	View Document

1.4 Feedback System

1.4.1 Structured feedback received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni and 5) Parents for design and review of syllabus-Semester wise/ year-wise

A. Any 4 of the above

B. Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

Response: A. Any 4 of the above

File Description	Document
URL for stakeholder feedback report	View Document

1.4.2 Feedback processes of the institution may be classified as follows:

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

B. Feedback collected, analysed and action has been taken

C. Feedback collected and analysed

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

File Description	Document
Any additional information	View Document
URL for feedback report	View Document

NVAAC

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average percentage of students from other States and Countries during the last five years

Response: 0.71

2.1.1.1 Number of students from other states and countries year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
5	12	7	3	3

File Description	Document
List of students (other states and countries)	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.1.2 Average Enrollment percentage (Average of last five years)

Response: 97.78

2.1.2.1 Number of students admitted year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
176	166	179	180	179

2.1.2.2 Number of sanctioned seats year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
180	180	180	180	180

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

Response: 50.54

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

2017-18	2016-17	2015-16	2014-15	2013-14
43	74	40	36	42

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students, after admission and organises special programs for advanced learners and slow learners

Response:

The institution conducts an Orientation program for newly admitted students accompanied by their parents, to make them aware of Institution, Infrastructure, Program Curriculum, Faculty, Assessment Mechanism, Co-Curricular Activities, etc. After admission preliminary analysis is done based on CET rank, HSC score percentage (PCM). For direct second year students respective programmes conduct induction programme on academic curriculum. Slow learners are identified based on the internal assessment test performance and afterwards are taken care of by conducting remedial classes, mentoring session and parent-teacher meetings. Fast learners are encouraged to participate in various co-curricular and extra-curricular activities and to show case their leadership and ability to work in groups.

Special Programmes for Advanced Learners:

Sl No	Programme	Methodology
1	Exhibitions	Students are encouraged to showcase proto type models in exhibitions, which are visited by experts, faculties and seniors.
2	Technical Events Group Activities	Students participate in annual Technical event SPARX, various workshops, etc. Volunteer and participate in institution level activities
3	Mr & Mrs	Preliminary round in conducted in class: few students are picked for Semifinal round.

Xavier	<p>Semifinals: three rounds – to decide 9 finalized</p> <p>Finals: three rounds- to decide the winners</p> <p>Academic excellence not mandatory for this however general observation is students who are good in academics become the winners (but not necessary)</p>
--------	---

Special Programs for Slow Learners:

Sl No	Programme	Methodology
1	Remedial Classes	Subject teachers conduct extra classes and module wise evaluation
2	Practicing Exam Papers	Past examination papers are discussed and students are asked to appear mock tests
3	Peer Learning	Tutorial classes conducted by advance learners and seniors.
4	Parents Meeting	Parents are requested to give special attention and informed about students' weakness in specific subjects.

File Description	Document
Link for Additional Information	View Document

2.2.2 Student - Full time teacher ratio

Response: 18.83

2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0

2.2.3.1 Number of differently abled students on rolls

File Description	Document
List of students(differently abled)	View Document
Institutional data in prescribed format	View Document

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:

The institution has made a conscious effort to shift from the traditional teacher –centric approach to student-centric one. The teaching pedagogies are styled and modified as per the needs of students. The institute utilizes blended learning approach which involves planned implementation of teaching modules involving student-centric methodologies like *mini-projects, poster presentations, web-based e-learning, technical exhibitions, designing proto type model* etc. The teacher provides feedback/corrections when questions arise. Students get opportunity to answer each other's' questions and give feedback to each other, using the instructor as a resource as and when needed.

The learning experience of students is enhanced by:

1. **Experiential Learning:** Students learn from their experiences during various learning activities assigned to them like presentations on course topics, conducting experiments during lab sessions, peer teaching practices, solving individual/group assignments, preparation of informative posters, internships, industrial visits, etc.
 1. 80% of courses in the curriculum involve Lab activities.
 2. Students are taken for visits to local industries
 3. Students are encouraged to take up projects tuned to institution needs, societal needs & welfare, ethical and environmental consequences, modern technologies, etc.
 4. Students learn about their social responsibility through participating in community teaching.
 5. Experts from industry and academia share their experience with the students, which prepare them for the job scenario.
 6. Central computing facilities, e-Library facilities, guest lectures and seminars by experts from academia and industry and alumni help students in self- learning process and enhancing their ability of thinking outside-of-the box.
2. **Participative Learning:** To encourage participatory learning, group discussions are conducted during regular teaching hours.
 1. Students are encouraged to participate in group projects and various activities like Poster Presentation, Debating, Extempore Discussions, Competition, etc.
 2. Students are encouraged to suggest projects so that they look deeper and detail into the domain of the selected topic.
 3. Students are organizing *XIE-TEDx* (an independent event) for the past four years.
 4. Students are encouraged to publish papers based on the findings of project works.

3. **Problem based learning:** The problem solving abilities of student's are enhanced by including **case studies** and **assignments** related to respective course subjects in theory or practical sessions. Case studies help to bridge the gap between theory and practice and allow students to think critically and utilize the knowledge to arrive with workable solutions for problems related to engineering design and applications. Faculties are encouraged to introduce **new experiments** and **assign mini-projects** involving concepts from beyond the syllabus, but within the reach of students.

4. **MOODLE:** The institute uses Moodle as a learning management system which benefits the students with an innovative and creative learning environment. Various course content and resources like ppts, Question Banks, Sample Simulations, and links to e- resources are uploaded and made available to the students which enhance their overall learning experience. Lecture materials are made available to students as ready references and unceasing learning.

5. **E-resources:** E-resources like access to IEEE-explore, Science Direct, NPTEL, edX, Coursera are made available for students to enhance their learning experience. Plenty of computers with internet facilities

allow students to have access to e-resources.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

Response: 100

2.3.2.1 Number of teachers using ICT

Response: 46

File Description	Document
List of teachers (using ICT for teaching)	View Document
Any additional information	View Document
Provide link for webpage describing the " LMS/ Academic management system"	View Document

2.3.3 Ratio of students to mentor for academic and stress related issues

Response: 43.3

2.3.3.1 Number of mentors

Response: 20

File Description	Document
Any additional information	View Document

2.3.4 Innovation and creativity in teaching-learning

Response:

The following innovative and creativity are used by the faculty as individuals and institute as an organisation to improve the impact of teaching upon the students.

- ICT based learning is promoted through web-assignment, web-quiz
- ICT enabled teaching is practiced by 100% of the faculty.
- Interest in research is inculcated through paper presentation and publication

- Departments are at liberty to invite experts in the relevant field of specialization to deliver lectures, chair and moderate the sessions in seminars. Honorarium is paid to the experts from the fund meant for such activities following the prescribed norms.
- The uses of Interactive Board and ICT enabled classrooms have made teaching and learning process innovative.
- The digital library, with science direct and IEEE-explore is a great resource repository that caters to the requirements of teachers.
- MOODLE, internet and ICT facilities are tapped to enrich their deliberations through power point presentation.
- Placement training, hands-on experience and industry visits are introduced to develop professional skills required for successful employability.
- Academic Committee (renamed as IQAC) collects feedback on the performance of teachers from all the students using a structured questionnaire which includes components on the innovative teaching practices adopted by the faculty
- The College recognizes and appreciates students for their achievement and outstanding performances so that it acts as motivation for others.
- Participation and presentation of papers by students in conferences and technical events provide a platform for interaction with peer groups
- Publication of articles in National / International journals to impart confidence and inculcates involvement in research activities.
- Participation of students is encouraged in sponsored research projects.
- Circulation of XIE Samachar (monthly e-bulletin) and X-connection (XIE annual magazine) encourages students to write technical articles, poems, critics, etc and widens students creative skill.
- Guidelines of BE Project

Faculty members as project guides facilitate students from project selection on the topic till final presentation and evaluation. They make them understand the importance of the project and the procedure for implementation giving room for student's innovation. They guide them in the experimental work, selection of suitable software, collection of primary and secondary sources, analysis and interpretation of the data of the project. Internal marks are awarded by the guide after two reviews and internal viva-voce. They help the students in preparing the report accurately and present it in the viva-voce effectively.

2.4 Teacher Profile and Quality

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

Response: 99.13

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	View Document
List of the faculty members authenticated by the Head of HEI	View Document

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

Response: 8.75**2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
6	4	4	3	3

File Description**Document**

List of number of full time teachers with PhD and number of full time teachers for 5 years

[View Document](#)

Any additional information

[View Document](#)**2.4.3 Teaching experience per full time teacher in number of years****Response: 13.48****2.4.3.1 Total experience of full-time teachers**

Response: 620.16

File Description**Document**

Any additional information

[View Document](#)**2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years****Response: 0****2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description**Document**

Institutional data in prescribed format

[View Document](#)

e-copies of award letters (scanned or soft copy)

[View Document](#)

2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years**Response:** 15.22**2.4.5.1 Number of full time teachers from other states year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
7	7	7	7	7

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	View Document
Any additional information	View Document

2.5 Evaluation Process and Reforms**2.5.1 Reforms in Continuous Internal Evaluation(CIE) system at the institutional level****Response:**

The institute has taken efforts to improve the performance of students by framing significant reforms in Continuous Internal evaluation process .The reforms are as follows:

1. Remedial measures are taken by conducting tutorial classes to clarify doubts and re-explaining the critical topics.
2. Taking viva before allowing students to conducting practical.
3. Topic wise question banks are provided in all subjects.
4. Students are encouraged to solve previous years University Exam question papers and their answers are discussed in the class.
5. For First Year students prelim exams are conducted prior to University Exams.
6. MOODLE learning Management System is utilized for continuous availability of lecture slides and other teaching materials. Link - <http://14.142.126.126/moodle>
7. Conducting quiz tests at regular intervals.
8. Poor performance due to frequent absenteeism is dealt by sending letters to the parents of such students and holding parent meetings.
9. Monitoring improvements in slow learners.
10. Peer teaching wherever possible.
11. Conducting guest lectures by calling experts from industry.
12. Organizing pre-placement talks and virtual placement activities.
13. Organizing Alumni insight events.

File Description	Document
Link for Additional Information	View Document

2.5.2 Mechanism of internal assessment is transparent and robust in terms of frequency and variety

Response:

Institution follows Mumbai University guidelines for internal assessment.

Transparency and variety:

- During the Induction program the newly admitted students are updated about the attendance requirements as well as the pass mark requirements and the grading systems for the internal assessments.
- Academic calendar, which is displayed on college website, has mention of Internal Assessment Test dates.
- 15 days in advance, the test dates are notified in departmental notice boards. Students are notified about the examination time table through notice boards and announcements made in the class by the class-teacher and departmental examination coordinator.
- Question papers are set by subject teachers assuring uniform coverage among topics and balance of difficulty level.
- In order to assure transparency faculty follow rubrics and answer books are shown to the students.
- Average internal marks are shown to the students, which are countersigned and confirmed by students.
- Subject teachers announces about the various evaluation components, weightages and time line of execution of tests.
- Subject teachers provide question banks and makes sure that none of the questions are beyond the learning reach of students and irrelevant of syllabus.
- Efforts are being made to motivate students to participate in group discussions, presentation and allied activities.
- The regulations, curricula and syllabi of all the programmes offered by the Institute are available in the Institute and the affiliated University website. The regulations contain the detail of the evaluation process.
- The class teachers carefully monitor attendance and the performance of the students in internal evaluation tests and end semester examinations. In case of shortage of attendance parents are called and requested to take care and motivate their child.
- Internal assessment results are declared approximately within two weeks. Students can see their evaluated answer sheets and discuss the same with concerned faculty.
- Term test questions are in the line within the course outcomes and in the form that can be mapped to learning levels of Bloom's Taxonomy. It includes both descriptive questions and numerical questions.
- Examination Cell controls End Semester University Examination, following the guidelines of the Controller of Examination of Mumbai University.
- The university allots 80% marks for the end semester exams and 20% internal marks.

Frequency:

- Two Internal Assessment tests are conducted as per the academic calendar for all theory subjects.
- For continuous evaluation subject teachers conduct quizzes, tutorials, tests and give assignments in regular pace throughout the term.
- Continuous evaluation procedure is followed in all the labs on practical courses.
- External examiners are called to conduct oral and lab test for practical subjects once, at the end of each semester. The Institute appoints examiners for the practical and viva voce examinations from among the approved list of faculty members and as per the University directives.
- BE project work is evaluated internally twice during the semesters and once at the end by a panel of examiners including an external examiner. Appointing external examiner is approved by the University.

File Description	Document
Link for Additional Information	View Document

2.5.3 Mechanism to deal with examination related grievances is transparent, time-bound and efficient

Response:

The examination grievances redressal committee is formed in the Institute to deal with the grievances related to the examinations. The grievances of students are divided into two sections.

1. Grievances related to internal assessment.
2. Grievances related to external assessment.

Grievances related to Internal Assessment: The students raise their grievance in the examination grievance redressal form to the examination grievance redressal committee. The examination grievance redressal committee informs the grievance to the concerned subject teacher. Concern subject teacher looks into the matter, analyzes and verifies the same and forward the corrections if any. Examination grievance redressal committee takes the corrective action in satisfying the student. Student grievances related to internal examination are resolved in a time bound period of 5 working days.

Grievances related to External assessment: Students apply and register online and get enrolled for examinations. Any problem regarding filling the online examination forms and obtaining Hall tickets are resolved by the Institute Examination In-charge in coordination with the Mumbai University Examination section. Students having grievances regarding evaluation in any subject at the end term assessment may opt for revaluation. Students have to submit their application through the Principal to the University for the Photocopy of the answer book within 10 days from the declaration of result. The photocopy of evaluated answer books are reviewed by subject teachers. In case of any discrepancy, the student further applies for revaluation by paying requisite fee to the University. During the conduct of exam, if questions from “out of syllabus” or if any error in question paper is observed, students inform their grievance to the subject teacher and it is communicated to the Controller of Examinations through the Principal. The Institute’s Exam In-charge does the needful to communicate all grievances to the University

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

2.5.4 The institution adheres to the academic calendar for the conduct of CIE

Response:

Academic year starts as prescribed by Mumbai University. The university publishes in advance, the academic calendar containing plans for curricular and co-curricular activities based on the available working/teaching days as per university norms. Institution academic calendar is prepared in concurrence with the University calendar. The academic calendar is made available to all faculties before the commencement of the semester. Lesson plans are prepared based on the academic calendar. The lesson plan comprises of content, learning aid and methodology, approach towards course outcomes. Academic calendar of the Institute includes schedule of curricular activities, assessment dates, technical events, class tests, submission of defaulter lists, list of holidays and extracurricular activities. The institution adheres to the academic calendar and conduct Internal Evaluation. The adherence in conducting the Internal Examination is monitored by the Academic Committee of each Department in line with the subject requirements that are guided by subject in-charges. Faculty adheres to the planned dates while conducting of Internal Assessment Tests and publication of results.

The laboratory Schedule is prepared by the time-table committee and batch-wise details are specified in laboratory schedule. Time Table of regular lectures for the semester is prepared as well and displayed on the notice board and website. In case of poor performance by any student his/her parents are called for a meeting and requested to monitor and build up student's confidence.

File Description	Document
Link for Additional Information	View Document

2.6 Student Performance and Learning Outcomes

2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students

Response:

Program Outcomes and Programme Specific Outcomes were first prepared during the year 2015-16 and further refined during 2016-17, following the guidelines of NBA. POs and PSOs were notified after due approval from the members of Departmental Academic and Programme Advisory Committee. The Program Specific Outcomes and Programme Outcomes are displayed on website, Lab notice boards, Course files, and Departmental Notice Board. PSOs and COs are disseminated to Course Files and Lab manuals. Students can also go through this using the MOODLE, course introduction lectures and lab notice boards. Apart from this, Program specific outcomes and Course outcomes are made available to all the

stakeholders of the program through faculty workshops, seminars, student induction programs, parent meetings and other meetings.

Every Semester, before the commencement of teaching process, faculty prepare the COs of their respective subject and get it approved from the Departmental Academic Committee. The course outcomes are written by the respective faculty member using action verbs of learning levels as suggested by Bloom Taxonomy. Each faculty announces about all COs in course during their introductory lecture. COs are mapped to the POs and PSOs in scales of 0-to-3, where 3 stands for maximum correlation and 0 for no correlation. Faculty also decides the policy and rubrics to be followed for CO attainment calculation. The process of attainment of COs, POs and PSOs starts from writing appropriate COs for each course, followed by calculating attainments of COs, mapping the COs with the POs and PSOs and finally calculating attainment of POs by considering courses from all the semesters of an academic year of the programme.

File Description	Document
COs for all courses (exemplars from Glossary)	View Document
Any additional information	View Document
Link for Additional Information	View Document

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

Response:

The program outcomes and Program Specific outcomes are assessed through direct and indirect methods. Direct methods: Direct Assessment is carried out through evaluation of Internal assessments and University examination.

CO Attainment:

Some of the Direct CO assessment tools used to measure the attainment levels are :

- Internal Assessment Test – I & II
- Assignments, Quiz, Presentations
- End semester exams
- Performance during experiments
- Mini projects etc

Course Attainment:

- Course Outcome attainment by Direct methods is calculated using University Examination (40%-60%) + Internal examination (60%-40%)
- Indirect assessment of Course Outcome is carried out by Course Exit Survey, using students' feed

back towards his understanding addressed by the COs

- Final Course Outcome attainment = Direct Attainment (90%)+ Indirect Attainment(10%).
- Average course outcome is =Sum(Attainment of COs)/number of COs

PO Attainment:

CO attainments, which are in percentage, are mapped with scale of 0-3.

CO Attainment in %	CO attainment in 0-3 scale
Attainment<40	0
40?Attainment<50	1
50?Attainment<70	2
70?Attainment	3

- Average PO Attainment is calculated using Direct Method which is $\text{sum(Attainment of Course} \times \text{mapping of Course to PO)/number of courses}$

Average attainment in Indirect method = Average (Alumni survey + Graduate Exit Survey)

The following is used to calculate the final attainment of POs.

PO Attainment (%) = 80% of Average attainment in direct method + 20% of Average attainment in indirect method.

Frequency:

The tools used for the assessment of COs/POs/PSOs and their frequencies are given below:

- 1.The Internal exam marks of each component are calculated for **Direct Attainment** of Course Outcome **Once in a semester**
- 2.Evaluation of assignments, mini-projects, projects, quizzes, presentations, demonstrations, as and when required and according to the announcements made by course in-charges. **Direct Attainment** of Course Outcome **during the semester**
- 3.End Semester Examination (University Exam) for **Direct Attainment** of Course Outcome **Once in a semester.**
- 4.CO understanding feedback during exit survey the course. **Indirect Attainment Once in a semester/year.**
- 5.**Alumni Survey:** Specific questions are designed to support the assessment level of attainment of POs. After receiving the answers they are assessed and mapped with the corresponding POs to find out level of attainment of POs. **Indirect method is used once in a year**
- 6.**Employer Survey:** It is conducted for finding out whether the knowledge, skill and attitude learned by the student is satisfying their expectations. **Indirect through the placement cell as and when possible.**

7. **Student Exit Survey:** The Graduate Student Exit Survey is conducted from the recent graduate students. This survey gives the feedback of their overall satisfaction with their academic experience and level of professional development, quality of mentoring, and care. **Indirect method is used once in a year.**

8. **Parents Feedback:** It is the feedback taken from parents, addressing their satisfaction for the decision taken towards enrolling their child in the program.

File Description	Document
Any additional information	View Document

2.6.3 Average pass percentage of Students

Response: 95.37

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 206

2.6.3.2 Total number of final year students who appeared for the examination conducted by the institution

Response: 216

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.54

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants for research projects sponsored by government/non government sources such as industry ,corporate houses, international bodies, endowment, chairs in the institution during the last five years (INR in Lakhs)

Response: 18.59

3.1.1.1 Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
4.086	0	10	4.5	0

File Description

Document

List of project and grant details

[View Document](#)

e-copies of the grant award letters for research projects sponsored by non-government

[View Document](#)

3.1.2 Number of research projects per teacher funded, by government and non-government agencies, during the last five year

Response: 0.11

3.1.2.1 Number of research projects funded by government and non-government agencies during the last five years

Response: 6

3.1.2.2 Number of full time teachers worked in the institution during the last 5 years

Response: 56

File Description

Document

Supporting document from Funding Agency

[View Document](#)

Any additional information

[View Document](#)

Funding agency website URL

[View Document](#)

3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations including incubation centre and other initiatives for creation and transfer of knowledge

Response:

Xavier Entrepreneurship Cell:

To encourage and support an Entrepreneurial Mindset, XIE has formed an entrepreneurship cell. Xavier e-cell team had participated in national entrepreneurship challenge 2013-14 organised by Entrepreneurship Cell, IIT Bombay and they reached to the final round of the competition. XIE students have uploaded the videos of this activity on YouTube. Xavier e-cell thrives to provide information on the latest technological developments. It conducts the following programs/workshops which helps students during their placements.

Brain Gym:

Xavier e-cell has Brain Gym exercises for all students. It was started in the year 2013-14. Brain Gym focuses on aptitude and logical reasoning questions. All interested students solve these exercises and verify their answers with the answer key, which will be put up on the notice board. This exercise has acted as a catalyst in solving aptitude and reasoning questions. Hence, it has helped in improvement of campus placements.

Spoken Tutorial:

Xavier e-cell conducted spoken tutorial of IIT Bombay through online interaction. XIE students have learnt python and java programming through spoken tutorial.

SAP Course:

Xavier e-cell in collaboration with AMI Tech India Pvt Ltd, organised an online training program of SAP. This collaboration was of 3 years and it is for 300 users. The SAP tutorials and study materials were made available online for students who have registered for the course.

CCNA Course:

Xavier e-cell in collaboration with RST forum organised 12-week instructor led CCNA course. This course was designed to provide students with extensive networking knowledge and CCNA certification. Course contents were based on Cisco guide lines and it covered all topics required to pass the CCNA certification.

Dot net certification program:

Xavier e-cell in collaboration with ATS Infotech organised ASP.NET course. ATS Infotech is Microsoft certified trainers on Latest Microsoft technologies. Course curriculum was provided by ATS Infotech. XIE students learnt the course through hands on training and development. Students were given Course Participation certificate from Microsoft IT Academy.

Oracle Workforce Development Program:

XIE has signed agreement with oracle for conducting OCJP course in 2015-16 for XIE students at college premise.

Python for Machine learning course:

Xavier e-cell in collaboration with Marquette University organized Python course for machine learning. In this course, students are learning python through online interaction with the faculty.

File Description	Document
Link for Additional Information	View Document

3.2.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the last five years

Response: 8

3.2.2.1 Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
3	1	2	1	1

File Description	Document
Report of the event	View Document
List of workshops/seminars during the last 5 years	View Document

3.3 Research Publications and Awards

3.3.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research**Response:** Yes

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

3.3.2 The institution provides incentives to teachers who receive state, national and international recognition/awards**Response:** Yes

File Description	Document
e- copies of the letters of awards	View Document

3.3.3 Number of research papers per teacher in the Journals notified on UGC website during the last five years**Response:** 0.09**3.3.3.1 Number of research papers in the Journals notified on UGC website during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
2	3	8	6	2

File Description	Document
List of research papers by title, author, department, name and year of publication	View Document

3.3.4 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years**Response:** 2.76**3.3.4.1 Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
27	18	23	38	20

File Description	Document
List books and chapters in edited volumes / books published	View Document

3.4 Extension Activities

3.4.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

Response:

Xavier Institute of Engineering (XIE) is committed both to the well-being and development of neighbourhood communities and to the larger realm of social concerns. Children and college-going students from neighbourhood communities of XIE lack suitable space to study and play. XIE in collaboration with Savalya Tandel Vidyarthi Samiti helps neighbourhood community by providing ground facility and classrooms in our premise. In addition, XIE has following bodies to sensitise students to social issues and their overall development.

XIE OUTREACH PROGRAMME: XIE's outreach programme encourages students to volunteer their services to the following: community education programmes, creating awareness drives, teaching underprivileged children and being mentors to them. XIE's outreach programmes emphasize the importance of Education, Health and Environment. XIE is associated with NGOs like SL Raheja Hospital and Katalyst which are active in neighbourhood areas and conduct awareness programmes. XIE also supports central government's swachhha bharat abhiyaan through its regularly held cleanliness drive in the neighbourhood areas and railway station.

Women Development Cell (WDC) of the college works to empower women in all walks of life. Any woman who has a grievance or problem may contact a member of the WDC and express her difficulties. WDC creates social awareness about the problems of women and in particular those concerning gender discrimination. Following is the list of some of the programs organized by WDC.

1. Workshop on breast cancer awareness
2. A talk by Dr Kiran Thigale on mental illness and mental health
3. Yoga and meditation session
4. Workshop on zumba for girls
5. Stress management counseling session by Dr pallavi wagh
6. A Talk by Dr Suprava Patnaik on facilities and scholarship for higher studies
7. A talk by Ms Yogini Ghare Deputy Registrar Mumbai University on women empowerment.

The Interfaith Committee celebrates inspirational events and festivals of different religions for the staff and students of XIE. It fosters all religions and build harmony, love and peace among the followers of different religions. It creates opportunities to understand other faiths and the contribution they make to a pluralistic society.

XIE also provides platform and learning stage for physically impaired persons. In addition, XIE has conducted one week training program of solving rubik's cube for blind persons and conducted competition for their encouragement. XIE has also organised cricket tournament for blind people.

XIE in collaboration with Katalyst serves as the centre which conducts training programs to support girls from lower income group.

XIE donates used engineering drawing sheets to The Nab Workshop for the blind (A training centre for the blind-aided by Government of Maharashtra) for visually handicapped trainees so that they can take down dictations in Braille.

As part of cultural activities SPANDAN 2017 student council introduced the LAKSHYA campaign as an initiative to support underprivileged children by donating clothes, books and stationeries.

The college authorities also bring awareness among students as well as staff about the environment and the need to protect it by planting trees in the XIE campus. XIE also lends its support to the anti-smoking campaign.

File Description	Document
Link for Additional Information	View Document

3.4.2 Number of awards and recognition received for extension activities from 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 /recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
Number of awards for extension activities in last 5 years	View Document
e-copy of the award letters	View Document

3.4.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the last five years

Response: 2

3.4.3.1 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	0	0	0

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach programs conducted with industry,community etc for the last five years	View Document

3.4.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

Response: 8.68

3.4.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
143	104	101	21	0

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Govt. or NGO etc.	View Document

3.5 Collaboration

3.5.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc during the last five years

Response: 55

3.5.1.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
27	14	6	5	3

File Description	Document
Number of Collaborative activities for research, faculty etc.	View Document
Copies of collaboration	View Document
Any additional information	View Document

3.5.2 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 12

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 (only functional MoUs with ongoing activities to be considered)

2017-18	2016-17	2015-16	2014-15	2013-14
4	3	4	1	0

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The institution has adequate facilities for teaching- learning. viz., classrooms, laboratories, computing equipment, etc.

Response:

The campus is spread over an area of 3 acres with a built up area of 8399sq.m. comprising building of high-standard, with 9 classrooms, 25 laboratories, computer centre with 72 computers. Seminar hall with seating capacity of 300, language lab, drawing hall, conference room, Tutorial rooms, workshop, library, Administrative office, examination section, Director Office, TPO-Office, HOD-Cabins, Ombudsman office, & canteen. All the labs and offices are well connected through intercom. The above mentioned infrastructure befits the norms of AICTE.

The institute is powered with a solar system with a capacity of 60kW. SL Raheja hospital being in the vicinity is an added advantage to the institute as medical assistance can be obtained on an urgent basis.

There is medical first aid facility available on campus for students and staff. There are fire extinguishers at appropriate places. Water purifiers are also available for drinking water on every floor.

The institute ensures that all the teaching faculty have a dedicated Laptop or desktop for their lecture and practical preparation. The teaching, non-teaching staff and students are provided with internet facility on campus.

At the beginning of every academic year requirements for replacements/up-gradation/addition of the existing infrastructure is carried out based on the suggestions obtained from Lab In charge, subject experts, Lab Assistant /Technician, System Administrator & the Heads of Departments, after reviewing course requirements. There is a collection of selective books in the departmental library of the respective departments. The College also organizes several seminars, talks, workshops, faculty development programmes related to emerging technologies to keep everyone in college updated in their respective fields.

To support disabled persons the institution has facilities like lift, ramp, rest rooms, wheelchair within the institution premises. The facility for girls and boys common rooms are also available on the premises for the students.

Institution has good canteen facility which provides healthy & hygienic food items. There is ample parking space in the campus. Institution is secured through CCTV surveillance.

4.1.2 The institution has adequate facilities for sports, games (indoor, outdoor), gymnasium, yoga centre etc., and cultural activities

Response:

- The institution has spacious ground for outdoor sports and adequate facilities for indoor games.

- To encourage personality development, team spirit and leadership qualities among students, the institute encourages students to participate in various sports and games at different level.
- Sports facilities have been provided to students to participate in various games such as Cricket, Football, Basketball, and Volleyball and ensure they participate in the extra-curricular activities.
- Yoga sessions are conducted in the seminar hall.
- Cultural Festival- Spandan is held every year to explore and nourish the hidden talents of the students. Every year student council organizes various intercollegiate & intra college events such as dance, fashion show, street play and so...on.
- Students are encouraged to organize various cultural activities in the college so that the students are efficiently conducts various events such as teachers day, Engineers Day, cultural Day celebration Farewell, Fresher party, etc.
- Students organizes TedX event every year.
-

4.1.3 Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc

Response: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 10

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	View Document
Link for additional information which is optional	View Document

4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

Response: 28.5

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
36.61	51.05	59.14	74.09	39

File Description	Document
Details of budget allocation, excluding salary during the last five years	View Document

4.2 Library as a Learning Resource

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

Response:

Library is well equipped with 10 dedicated computers with internet connectivity for accessing e- resources such as moodle server , e-journals. These machines are used by students even for NPTEL courses . There are science direct 275 e-Journals, Institute of Electrical & Electronics Engineering (IEEE) 169 e-Journals .There is dedicated printer for the students. Photocopy machine is available in the library.Previous years question papers are available in the library. There is spacious reading hall. Library is partially automated with ILMS software SLIM-21 , it was automated in the year 2010, gradually versions of the software were updated, latest is 3.3.0 in August 2016. Library has 12844 volumes with 5465 titles. All the departments has department Library. Library includes books on competitive and career oriented examinations. The respective departments send their requirements for books and journals to the librarian. Based on this, the librarian prepares the list of books or journals to be purchased and submits to the Management in consultation with the library committee.

4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resources for library enrichment

Response:

The Library makes all efforts to acquire useful books including rare books, reports, and other knowledge resources to enrich its collection. Library and departmental Libraries was established in 2005 and has a collection of rare books. The Special Collections include books which are first editions, highly priced books, some audio cassettes for Learning German ,encyclopaedia, around 70 years old books. Library has have career guidance, higher education & competitive examination books, novels and motivational books and miscellaneous books. Library keeps all final year project reports for reference. Previous Years University question papers. There are science direct 275 e-Journals, Institute of Electrical & Electronics Engineering (IEEE) 169 e-Journals ,10 journals,02 magazines and 03 daily news paper. It also has adequate number of work stations to facilitate searching/accessing, e-resources, web browsing and for other academic works. Provision has also been made to allow downloading /printing of material from these resources.

File Description	Document
Link for Additional Information	View Document

4.2.3 Does the institution have the following:

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases

A. Any 4 of the above

B. Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

Response: C. Any 2 of the above

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc	View Document

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 9.52

4.2.4.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
12	.75	12.71	10.86	11.29

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	View Document

4.2.5 Availability of remote access to e-resources of the library**Response:** Yes**4.2.6 Percentage per day usage of library by teachers and students****Response:** 2.08**4.2.6.1 Average number of teachers and students using library per day over last one year****Response:** 19**4.3 IT Infrastructure****4.3.1 Institution frequently updates its IT facilities including Wi-Fi****Response:**

The institute has upgraded computer labs with 174 new Dell Desktop Vostro, Intel Core i3, 4GB RAM systems in 2018, 46 new Dell Desktop Vostro, Intel Core i3, 4GB RAM systems in 2017, 21 Desktop All in One Dell Vostro 3800 ST i3, 4GB RAM systems in 2016, 24 Desktop All in One Dell Vostro 3800 ST i3, 4GB RAM systems in 2015.

All computers in the campus are connected to the internet using CAT-6 cable as it is essential for them to work, also surplus Ethernet ports are provided for laptops or other devices in need of internet connectivity. The classroom laptops are connected to the internet using CAT-6 cable. The LAN cables are upgraded from CAT-5 to CAT-6 and installation of 14 new 24-port D-LINK switches in the lab is done. The college has installed two Cisco Ws-C2960S-24TS-L switches, one Cisco Ws-C3750x-24T-S switch and one ATEN 8 Port USB KVM switch in 2015.

In 2018, the numbers of labs were increased from 5 to 6 in Computer and IT department. The college has a computer centre with 74 computers. The college has language lab with 24 computers.

The college has bought six HP Laser Jet Printers 1108 in 2018, two HP LJ P-1108 printers in 2017, one HP LJ M1005 printer in 2016 and five Canon LBP 2900 LaserJet Printers in 2015. The college has bought six projectors (Casio / EPSON) in 2018, four projectors (Casio / EPSON) in 2017 and one EPSON projector in 2016.

The internet connection bandwidth has been increased from 20Mbps to 40 Mbps in 2018. The college has 12 Reliance Jio WiFi hotspots, 07 Joispot WiFi hotspots, 5 wireless routers using cyberoam provided to cover the wireless range throughout the college. The WiFi access points are installed in the library, canteen and the corridors in all four floors. In the library, there are 11 computers for the students to access moodle server, ScienceDirect and IEEE explorer.

The institute has Cyberoam firewall. The institute has a smart board – CybernytxsEyeris ix series in the Language Lab.

The entire college premises area is under CCTV surveillance using total 45 CCTV cameras. The general office, exam cell, library, entrance, ground area and corridors in all four floors are under the CCTV

surveillance 24 x 7.

4.3.2 Student - Computer ratio

Response: 1.63

4.3.3 Available bandwidth of internet connection in the Institution (Lease line)

>=50 MBPS

35-50 MBPS

20-35 MBPS

5-20 MBPS

Response: 35-50 MBPS

4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

Response: No

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

Response: 73.89

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

2017-18	2016-17	2015-16	2014-15	2013-14
150.17	101.6	135.5	146.7	169.1

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document

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:

The Institute has an Administrative Department where the Admin Executive and junior executive monitor the day to day cleaning, for which there are Contract Workers who are . For Electric maintenance and repairs we have an Electrician and an Assistant Electrician who look into all Electric related jobs. For any major civil maintenance the trust will take care of it .

Adequate in-house and contract workers are employed to take care of hygiene, cleanliness of the campus so as to provide a clean and healthy environment. Over and above the contract workers the peons also contribute in maintaining the cleanliness of the college. Classrooms, Labs, Seminar hall, etc. are cleaned and maintained regularly by these workers Wash rooms are well maintained. Garden and plants are well maintained for which 2 workers are separately appointed as Garden Attendants. The Garden is well maintained and plants are watered regularly.

Optimum working condition of all properties/equipment on the campus is ensured through Annual maintenance contracts (AMC) for the Elevators, intercoms, air conditioners, water purifiers and water coolers.

Students and faculty members are provided separate login credentials to access the internet. Access to internet is provided in the lab even after college working hours. Apart from the regular lab classes, students are offered practice in programming languages through various value added courses.

Lab Assistants work under the supervision of the System administrator to maintain the efficiency of the college computers and accessories.

If the problem is minor, the technical support staff of the labs will rectify it. For major failures, support from vendor is taken.

Periodic maintenance is done by regular cleaning of the lab spaces, software updates.

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 the last five years

Response: 18.25

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

2017-18	2016-17	2015-16	2014-15	2013-14
194	189	150	122	121

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	View Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 1.65

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
9	20	24	9	8

File Description	Document
Number of students benefited by scholarships and freeships besides government schemes in last 5 years	View Document
Any additional information	View Document

5.1.3 Number of capability enhancement and development schemes –

1. For competitive examinations
2. Career counselling
3. Soft skill development
4. Remedial coaching
5. Language lab
6. Bridge courses
7. Yoga and meditation
8. Personal Counselling

A. 7 or more of the above

B. Any 6 of the above

C. Any 5 of the above

D. Any 4 of the above

Response: A. 7 or more of the above

File Description	Document
Details of capability enhancement and development schemes	View Document
Any additional information	View Document
Link to Institutional website	View Document

5.1.4 Average percentage of student benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

Response: 36.49

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

2017-18	2016-17	2015-16	2014-15	2013-14
505	478	331	94	145

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document

5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years

Response: 0

5.1.5.1 Number of students attending VET year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
Details of the students benefited by VET	View Document

5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

Response: Yes

File Description	Document
Details of student grievances including sexual harassment and ragging cases	View Document

5.2 Student Progression

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

Response: 57.3

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

2017-18	2016-17	2015-16	2014-15	2013-14
132	135	123	115	91

File Description	Document
Self attested list of students placed	View Document
Details of student placement during the last five years	View Document
Any additional information	View Document

5.2.2 Percentage of student progression to higher education (previous graduating batch)

Response: 6.13

5.2.2.1 Number of outgoing students progressing to higher education

Response: 13

File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education	View Document
Any additional information	View Document

5.2.3 Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 92.21

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil services/ State government examinations) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
23	15	34	8	12

5.2.3.2 Number of students who have appeared for the exams year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
24	23	34	8	12

File Description	Document
Upload supporting data for the same	View Document
Number of students qualifying in state/ national/ international level examinations during the last five years	View Document
Any additional information	View Document

5.3 Student Participation and Activities

5.3.1 Number of awards/medals for outstanding performance in sports/cultural activities at national / international level (award for a team event should be counted as one) during the last five years.

Response: 0

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one) year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at national/international level during the last five years	View Document
e-copies of award letters and certificates	View Document
Any additional information	View Document

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

The aim of forming Students' Council (SC) is to involve the students in academic, co-curricular & extracurricular activities. Through these activities SC members learn planning, organization, analysis, estimation and execution along with trouble shooting, which help in their comprehensive development.

Students' Council members are General Secretary, Assistant General Secretary, and Secretary & Assistant Secretary for Technical, Cultural, Sports and outreach program each, selected by the college.

College has different committees such as Grievanceredressal, Anti-Ragging, Cultural, Sports, Technical events, Magazine, Outreach programs.

Following is the narrative of functions and events conducted by various Committees:

1. Students' Council: Under section 40(3) of Maharashtra Universities act, 1994, this council is established every year in the Institute and it performs its duties prescribed.
2. Student Grievance: This committee addresses student grievances and maintains harmony and discipline among the students.
3. Anti-Ragging: This committee ensures zero ragging incidents in the Institute and also spreads awareness among students against any type of ragging activities.
4. Cultural: This committee co-ordinates various cultural activities and events throughout the year. "Spandan" is annual social gathering which showcases cultural talent of students. The intercollegiate cultural competition is organized by the students.
5. Sport: This Committee organizes different indoor and outdoor sports events like Cricket, Football, Carom, Chess etc. Our students actively participate in various sports in intercollegiate, interuniversity level.
6. Technical Activities: Every Department is having active Student's chapter associated with the Institution of Engineers, India. These chapters conduct various programs such as Expert lectures, Industrial visits to name a few. Institute organizes technical symposium "Transmission" every year consisting of various technical competitions such as Paper Presentation, Technical Quiz, Robot War, Model Making etc. Each department organizes these events which motivate students to take part and enhance their technical ability.
7. Magazine: 'Connexion' is our annual magazine published by Magazine committee. Students express their talent in the form of articles, poetry, interviews of eminent personalities etc. This exercise imbibes societal values in students.
8. Extension Activities: Any education is incomplete without social awareness. "Outreach Program committee" is active in carrying out different activities such as visit to Tribal areas like Talasari, Manor etc, Blood donation Camp, Swachha Bharat Abhiyan, Yoga day, Tree plantation etc.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

5.3.3 Average number of sports and cultural activities/ competitions organised at the institution level per year

Response: 2

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2	2	2	2	2

File Description	Document
Report of the event	View Document
Number of sports and cultural activities / competitions organised per year	View Document

5.4 Alumni Engagement

5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years

Response:

Xavierites' Alumni association provides a forum for students to maintain bonding between them & the institute.

Our alumni contribute in many ways for the development and betterment of our Institute. Our students and Institute are benefited in various fields such as student placement, training, expert lectures, career guidance sessions, Industrial visits & so on. The alumni of Institute is guiding and nurturing our students to become engineering professionals.

Some of the alumni are involved in the academic committees of different departments keeping their connection alive with the Institute.

Some of the alumni have entered into their career through start-ups & also have set good examples of an entrepreneur for the students.

Financially, the alumni contribution for raising the funds is taken during the admission process. This fund is utilized for convocation purpose & other benefits of the students.

It is our plan to develop everlasting relations with our alumni which in turn will give rise to mutual benefits.

File Description	Document
Link for Additional Information	View Document

<p>5.4.2 Alumni contribution during the last five years(INR in Lakhs) ? 5 Lakhs</p> <p>4 Lakhs - 5 Lakhs</p> <p>3 Lakhs - 4 Lakhs</p> <p>1 Lakh - 3 Lakhs</p> <p>Response: <1 Lakh</p>	
File Description	Document
Alumni association audited statements	View Document

<p>5.4.3 Number of Alumni Association / Chapters meetings held during the last five years</p> <p>Response: 0</p>											
<p>5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>		2017-18	2016-17	2015-16	2014-15	2013-14	0	0	0	0	0
2017-18	2016-17	2015-16	2014-15	2013-14							
0	0	0	0	0							
File Description	Document										
Number of Alumni Association / Chapters meetings conducted during the last five years.	View Document										

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the institution

Response:

Vision

- **To nurture the Joy of Excellence in a world of high technology.**

Mission

- **To strive to match Global Standards in Technical Education by Interaction with Industry, Continuous Staff Training and Development of Quality of Life.**

The Establishment of Engineering Institute is largely due to the vision of late Fr. William Borges S.J. He took charge in the year 1964 as the Principal of St. Xavier Technical Institute (X-Tech) - Mahim. Those days, X-tech was running only the diploma courses. However, Fr. Francis de Melo S.J. who took over the charge later played a key role in the establishment of Engineering College in the name of Xavier Institute of Engineering. The Organizers had prepared the vision and mission statement of the Institute's run by them those days itself. However, with changes in technology and advancements, it was thought of to revisit on the "Vision and Mission" statements of the organization. Hence, a Series of brainstorming sessions were held in the year 2014 and 2015, which involved all the stakeholders of the institution. The Management, the Principal, the Heads of the Department's, Faculty, Administrative staff, Alumni, and the Advisory committee were invited to attend the meeting. The then Director, Fr. Francis de Melo. S.J. briefed the entire scenario. The participants who attended the meeting were divided into three groups with reference to the three branches that we run. Each group was asked to come out with their own version of "Vision and Mission" statements and jot out a plan of action that can be achieved in a given time frame of three years, five years and ten years.

Each group was also asked to list the strengths and weakness of the institution and their department while keeping in mind the needs of our engineering students within the framework of University Curriculum and come out with the "vision and mission" statements of the Institute as well as their department.

Each group was further asked to discuss each one's idea with other groups and come out with a workable plan. Faculty members of the Institution were also asked to contact few students and seek their opinion and their requirements. All the responses jotted down were discussed. Hence, all stakeholders were involved in the discussion to form the "vision and mission statement of the institution", as well as the vision and mission statements of individual department. However, all the stakeholders felt that the original vision and

mission statement of the organization is good and must be continued as it is. They further agreed that the vision and mission statements of each department are to be stated and developed in line with the vision and mission statement of the organization. Hence the departmental “Vision and Mission” statements were developed in tune with the organizational vision and mission statements.

File Description	Document
Link for Additional Information	View Document

6.1.2 The institution practices decentralization and participative management

Response:

A case study:

Annual budget: Proposal, Approval and Allocation.

The accounts department is in-charge of maintaining the budget. They maintain and manage the finance of the Institute and the departmental expenditures and ensure clarity between income and expenditure. There are various budgetary requirements at the institutional level. These include teaching-learning process, career development, examinations, operations, transport, research and development, applied learning, administrative expenses and so on...

All the departmental heads are asked to submit their carefully prepared budget proposals to the accounts department. These budget proposals are prepared by individual departments with lot of discussions at their departmental level meetings that are conducted by their respective heads of the department. They arrive on a conclusive summary of the budget with the essential requirements of the department that are to be taken care of including the budget requirements of student development activities and also organizing the guest lectures, seminars, workshops and conferences for them.

Along with it, laboratory in-charges are also asked to provide proposal of their laboratory requirements including purchase of new equipments (if any), repairs and maintenances, services, training kits and up gradation of existing facilities. The proposals received from all the departmental heads are forwarded to the principal. The principal shall send it to accounts department for further processing.

The Accounts department shall discuss with the Director and consolidate all the budget proposals received from various departments and prepare a final budget proposal and sends it for the Chairman’s approval in the GC meeting. The Chairman/Director finally shall initiate and call a Governing Council/Local managing committee meeting to go through the budget. This final budget including all anticipated income and expenditure prepared by the accounts department shall be discussed in length by the governing council/local managing committee for final approval. As the document is the outcome of an integrated approach of participative process, it shall be approved by the Governing Body/LMC with minor changes (if need be). Any objection raised by any member during the meeting is discussed at that point of time and a decision is taken then and there only and the budget shall be passed/approved.

Approval of budget is communicated to all departmental heads who has proposed them, through proper channel. Accounts department releases funds as and when the purchase proposals are made and equipments are purchased as per the plan. Hence, through effective decentralization plan, the institution practices successful delegation of power that enhances the productivity of the college. Through this participative management system, each person who is in-charge of an activity handles the allocated task and ensures that it is carried out or completed in time.

File Description	Document
Link for Additional Information	View Document

6.2 Strategy Development and Deployment

6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

Response:

The development of the Institute is a constant ongoing process. Quality standards of the Institute are made possible only with the help of perspective/strategic plans. These are chalked out plans with necessary actions carried out for the development and growth of the Institute. All stake holders of the institution were involved in a brain storming process. Their inputs and suggestions were considered for developing the strategic plan/s.

The strategic plans are subdivided into two major categories. These were formulated as lists of five/ten year plan. Every department was asked to give their suggestion for the development/improvement on the quality standards of the department and the Institute. Once the plans were jotted down by each departmental head, every department was instructed to work on their plan of action to achieve the stated goal/s. Management offered constant support at every stage. One such example of implementation is a strategic plan that 100% of our faculty shall acquire M.E./M.Tech, qualification and out of them 90-100% (if not all) shall receive approved faculty position letters from University of Mumbai by the end of 2015-16.

Firstly, the primary goal (acquiring M.E/M.Tech.) and secondary goal (Obtaining approval letters from UOM) were decided and strategic plans were jotted down. Then the process of achieving this includes the start and end points of the process. Steps were taken to complete the task, with a clear cut picture of what is needed to be done down the line to achieve the goals.

Further, all HOD's were asked to identify at least two faculty members each year from their dept., who could be sponsored to do his/her M.E./M.Tech. Once they identified, steps were taken to sponsor them by asking such faculty to apply for M.E., in various colleges of Mumbai University. A well defined plan of action was followed in completing this task. Either adhoc faculty members were appointed to take their classes or the concerned faculty was asked to take partial load of their subject/s on holidays. Through such strategic plan, of first 4-5 years from 2007-08 up to 2011-12, every individual was sponsored and they were allowed to complete their masters' programme. The Institute sponsored 19 people to do their M.E./Ph.D., with full payment of admission fee from the Institute and with full salary. This enabled them to focus solely on their assigned job which resulted in excellent outcomes.

Further, as per the rules and regulations of University of Mumbai, advertisements were to be given in the leading news papers to fill up their post/s. These were to be filled up, after obtaining University's approval for giving the advertisement itself in leading newspapers. This process was also periodically carried out with a well defined plan and by the end of the 9th-10th year; i.e., by the year 2015-16, almost all faculty members were made eligible to get their approval letters from University of Mumbai.

File Description	Document
Any additional information	View Document
Strategic Plan and deployment documents on the website	View Document
Link for Additional Information	View Document

6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism

Response:

Governing Council/Executive Body consists of The Chairman, The Director, The Administrator, Member/s of the Society, Industrialist/Educationalist/Technologist nominated by the Society, and the Member Secretary (Principal), who all are normally coming from the same region. The body meets once in a year (generally). However, if the situation warrants that something which is a pressing need has to be discussed and decided urgently, special governing council meeting shall be called and the meeting shall be held at any time by talking to the members on phone and or by sending an invitation with the date and time and calling it as a "Special Governing Council Meeting (SGCM)".

Decisions like enhancement of physical facilities and other initiatives for improvement and growth of the institution are taken up by the governing body. The Governing body is the ultimate authoritative body for making any change in the institutional set up.

Administrative set up of the institution is as per the organizational chart. The Governing body being the ultimate authority, the Society will have its own person as the Chairman of the Institute in the body. Board members are under the Chairman. The principal is the academic and administrative head of the institution, who is also called as Ex-officio Secretary. The Heads of the department's shall report to the Principal. Faculty/Staff shall report to respective HOD's. The Coordinators are working under Heads of the department. A Coordinators could be a professor/Associate Professor/ an Assistant Professor. All Staff (including Administrative staff) shall report to the administrator. The COE, TPO, Librarian and System Administrator shall report to the Principal. However they may also be asked to report to the Administrator at times if needed. A file of Organisational Chart is attached.

Service rules of the Institute have been formulated as per the guidelines given by the competent authorities such as DTE and AICTE and the affiliating university (UOM) as far as possible, since they are the approving bodies.

Grievance redressal cells are functional and are described in 6.2.4. An yearly appraisal report is generally followed for considering the Increments/Promotions of the faculty and staff.

File Description	Document
Any additional information	View Document

6.2.3 Implementation of e-governance in areas of operation

- 1.Planning and Development
- 2.Administration
- 3.Finance and Accounts
- 4.Student Admission and Support
- 5.Examination

- A. All 5 of the above
- B. Any 4 of the above
- C. Any 3 of the above
- D. Any 2 of the above

Response: E. Any 1 of the above

File Description	Document
Details of implementation of e-governance in areas of operation Planning and Development,Administration etc	View Document

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions

Response:

Various committees, cells and bodies are constituted as per the norms or requirements to oversee academic and administrative operations of the Institution. The lists of the various committees are as shown below:

- **Governing Council**

Governing Council is the supreme authority of the Institute. It has right to formulate all the rules and regulations of the institute. It also decides on the infrastructure development, budget and the growth of the Institute.

- **College Development Committee (Local Managing Committee)**

LMC looks in to the academic activities and the results of the Institute. It also looks in to the budget utilization of each department that is granted by the Governing Council. It also takes care of student and staff welfare schemes apart from FDP, STTP and conferences.

- **Internal Quality Assurance Cell (IQAC)**

IQAC looks in to the academic activities, Internal Quality audits, conducting Seminars, STTPs, FDPs, research and Development, Infrastructure requirements as per certain norms of academic regulating authorities, the level of attainment of COs and POs and all quality requirements of the Institute.

- **Anti ragging committee**

As per the Govt. regulations ragging is an offence. Hence, it looks in to all matters connected with ragging and the precautionary measures that are to be taken to avoid such things and deal with cases reported on ragging.

- **Library Committee**

Library committee looks after all the books, furniture, journals required for the library. It will recommend the books to be purchased and the number of copies required. It also decides on the budget of library each year.

- **Students Council**

Formation of Student Council is for developing and appointing a team of students on positions equivalent to the actual governing body of the institute which helps them to understand the various challenges faced in running an institution on a day to day basis.

- **Canteen Committee**

Canteen committee looks after the hygiene and cleanliness of the canteen. They also decide upon the menu and fix the rates of eatables.

- **Women's Development and grievance cell**

Women's development cell is in place. They are meant to conduct activities connected with women empowerment, address upon their grievance and solve the problems. If any complaint is received, the committee shall look in to the matter, conduct queries and recommend the type of punishment to be extended to a person under question and so. on....

- **Internal complaint committee.**

It is formed as per the University norms. They must look after cases of "sexual harassment" and address upon the action to be taken against any person who is indulging himself in such activities.

- **Grievance Redressal Cell**

In order to ensure transparency, prevent unfair practices and to provide a mechanism to innocent students, grievance redressal cell is formed.

The Governing Council/Executive Council and the Local Managing Committee Members of the above committee meet ones in a year or as per the requirement. Most of the other committees meet once in six/three months. IQAC, Women Development and grievance redressal Cell meets once in a semester.

File Description	Document
Link for Additional Information	View Document

6.3 Faculty Empowerment Strategies

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

Response:

An institution shall be rated as Excellent/Good, only when the Faculty and Staff are happy and feel good. The institution understands this and appreciates the efforts put by their faculty/staff. It also recognizes their hard work and acknowledges their roles. Hence, the institution has a good welfare policy for its teaching and non-teaching faculty and staff. Performance of each member of the faculty as well as the non-teaching staff is evaluated by the institution yearly.

Increments are given to all faculty and staff on the basis of their appraisal report received from HOD's or other concerned evaluator in the college. Performance appraisal starts with tracking of individual accomplishments in terms of self rating on all parameters such as number of lectures conducted, their attendance, results, paper presentations, publications, conferences attended/held, workshops attended/held, seminars attended/held, certifications and other awards received. Further ratings are given by the HOD's followed by the Principal of the Institute.

Faculty Development Programs are also organized by the institution. The faculties are facilitated to attend various Professional Development Activities throughout the academic year. Training and Study Leave is approved for the faculty who wish to do their M.Tech, or Doctoral programs. Career Advance Schemes after obtaining M.Tech/Ph.D, programs have been implemented. If any faculty gets admission in University Colleges for doing M.Tech, and at IIT's or NIT's for doing Ph.D., the institution encourages such a faculty. Those who are pursuing Ph.Ds., are also allowed to go and meet their Guide/s on week days without disturbing their regular academic activities.

Summer vacation of six weeks and winter vacations of four weeks are extended/given to all the faculty members who have completed a minimum of two years of service in the institution. Flexible working hours at times are also extended to faculties who have personal difficulties for a particular reason on a particular day.

Provident fund is paid by the institution as per the statutory rules. General/Medical Insurance plan is also

extended to all faculty/staff by the institution. Gratuity scheme is also in place for those who complete five years of continued service in the Institution.

Career advancement is extended to all those employees who have continued to work in the organization as per the AICTE guidelines.

A lady employee who has been confirmed and who does not have two or more children living as on the date of the application, shall be entitled for maternity leave on full pay for a period of 90 days from the date of its commencement. In the case of miscarriage or abortion, including abortion, induced under the Medical Termination of Pregnancy Act, 1971, maternity leave not exceeding six weeks shall be admissible on the production of a medical certificate.

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: 39.45

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

2017-18	2016-17	2015-16	2014-15	2013-14
19	10	15	30	16

File Description	Document
Details of teachers provided with financial support to attend conferences,workshops etc. during the last five years	View Document
Any additional information	View Document

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: 3.4

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

2017-18	2016-17	2015-16	2014-15	2013-14
5	3	3	4	2

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	View Document
Any additional information	View Document

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

Response: 56.48

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
38	11	30	30	20

File Description	Document
Details of teachers attending professional development programs during the last five years	View Document
Any additional information	View Document

6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

Response:

Employees are the fundamental part of the organization. The institution respects and acknowledges the contribution of all its Faculty/Staff. It also rewards them duly. All employees of the institution are evaluated under two broad categories. These two categories are functional and behavioral.

Under the first category, all employees are scrutinized based on their teaching skills. They are given ratings based on the effectiveness in delivering the lecture for which he/she being employed. Faculty is also examined w.r.t., his/her personality enhancement. A good employee always enhances his/her quality of work. This enhancement improves his/her quality of work and proves beneficial to the college. Faculty are rated based on course skills, maintenance of lesson plan and punctuality. The overall capability of an employee in doing his/her work effectively while enriching his/her academic experience and his/her rapport with the students is examined.

The second category consists of employee's behavior. Under this category, an employee's demeanor is evaluated. An employee's behavior with students and handling them in their difficult times also becomes

an important aspect along with their qualification for effectiveness. Therefore, their behavior is monitored and examined. An employee's punctuality in grooming the students' in other activities, language used while talking, obedience and dedication are among many other parameters under which they are evaluated. There are three parts of rating. The first part is a self-appraisal assessment rating done by the employee for himself/herself. They have to rate themselves based on the self-evaluation report questions asked on all of the above given categories. This is given to their head of department or the reporting officer who evaluates and either accepts or rejects an employee's self-appraisal/evaluation report. This is the crucial 2nd part of evaluation, as the head of the department knows the employee individually and he/she is also aware of his/her performance. Once this second part is passed and the heads have submitted their own ratings, the report shall be sent to higher authorities. They shall look in to it. This is the 3rd part. They too shall put their own evaluation of the employee. An average of all these three ratings is then calculated and made into a single component. This is the final rating.

The final rating is the deciding factor of an employee's appraisal. For example, the initiatives that have been taken in certain co-curricular and extracurricular activities of the Institute which are not specifically mentioned with reference to any department is also noticed and duly credited. Its weightage in addition to their report will also be considered during the final evaluation.

If it is positive, will finally leads to an increment which shall be offered to an employee. In case an employee is not satisfied with the decision, he/she has the right to raise a grievance which will also be duly addressed and acted upon.

File Description	Document
Any additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

All account books are maintained by the accounts department as per the total admissions that has taken place by following the rules and regulations of the fee regulation authority of the state. Internal accountants shall verify the books of accounts every day. Entries done by one accountant is/are verified by the other accountant. Errors found (if any) are analyzed and fixed instantly. External auditor shall verify all the account books once in a year and provides his/her input to incorporate the required changes as per the statutory requirements.

File Description	Document
Any additional information	View Document

6.4.2 Funds / Grants received from non-government bodies, individuals, Philanthropists during the

last five years (not covered in Criterion III) (INR in Lakhs)**Response:** 308.85

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

2017-18	2016-17	2015-16	2014-15	2013-14
0	171.49	117.36	20	0

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	View Document
Any additional information	View Document
Annual statements of accounts	View Document

6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources**Response:**

There are different sources of funds for the institution.

1. Students Tuition Fees – Tuition fees itself has two types of payments.

A) There are students who pay the fee directly to the College in full.

B) There are students who are entitled to get fee reimbursement from Govt, of Maharashtra. The Government releases the fund to the student/college after verifying the eligibility of the student. These are given in installments and are received from the Government. All the tuition fees are collected once during the academic year. However, for some needy students it is accepted half yearly or even quarterly.

2. Funding projects from Government – There are faculty who are eligible to take up research projects and submit proposals to University, AICTE and DST of government of India for getting funds to enhance the quality of learning. The funds are used for purchasal of equipment/s and or conduct research in their specific areas proposed.

3. Contributions from Non Government Organizations – Few organizations, who are impressed with the initiatives of XIE for competency building, come forward to sponsor some students to do their studies/projects so that they can learn better. They directly help the students covering their book expenses, laptops and their fee sometimes such as “Katalyst”.

4. Systematic investment funds: Available funds are invested in mutual funds and fixed deposits. It generates income and contributes to return on investment.

5. Contribution from the Society: Xavier Institute of Engineering Society is a parent body that provide fund to XIE as and when required for educational purpose.

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:

The Internal Quality Assurance Cell was started in the year 2018 to monitor the quality of service being provided by the institution to its stakeholders. An IQAC committee is formed and approved by the governing body to take care of Quality assurance strategies and processes. The Management of Xavier Institute of Engineering is committed to continually improve the infrastructure, enhance the faculty competencies and empower the students for self-learning. The IQAC enables the institution to focus on this mission and never falters from its goal.

Reviewing of the quality policy is done once in every semester and the revision takes place as and when required by the IQAC committee. Parameters related to the enhancement of the quality of the institution through workshops, conferences, FDP's, paper publications, innovations in teaching and learning process are considered by the IQAC Committee.

Example 1: Training programs to the faculty

The institution pays lot of attention to the quality of their product. Through years of experience it has initiated and conducts several activities such as training programs for our faculty and also has formed an IQAC. Some of the notable activities that are organized earlier to formation of IQAC for the development of the institution are English Communication Skills, yoga, professional behavioral workshops, aptitude training and training on outcome based education and many more.

Example 2: Virtual Placement Activity (VPA)

Drawing from its rich experience in engineering education since its inception in 2005, with the placement statistics of a decade and invaluable inputs from numerous leading industry experts and stakeholders, who come for Campus placements and others, XIE has developed and built VPA. This program allows every student of XIE to be successful. If followed diligently, the program completely prepares all students to venture out and begin their careers – be it in India or abroad. This systematic, rigorous, outcome based program uses the concept of digestible lesson plans as building blocks with measurable outcomes to slowly but surely train students towards success in their chosen career. The program includes career mapping, benchmarking, frequent check points on aptitude and soft skills training and counseling them to ensure that each student remains on track. Through these various adopted methods, the students receive a holistic development of their skills that helps them in building their own unique personality. Alongside providing quality education, XIE ensures that this education which they acquire is useful to them in whichever profession they wish to choose.

These examples are among the many others. Apart from these initiatives, the college constantly reinvents and innovates itself to comply with the need to maintain high quality of education. It strives to be the best so that it can provide the best to its students. The organization keeps in mind the vision and mission statement of the institution and conducts regular self-assessments to ensure that IQAC is efficiently functioning to achieve the goal

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

Response:

Example 1: Faculty meetings.

Once in every fortnight or a month, faculty meeting is arranged. The Principal conducts the meeting. The very first Saturday, before starting the odd or even semester, he shall briefly narrate on the plan of action of the entire semester. In this meeting, the faculty members shall also be asked to share their experiences. The faculties after the meeting shall discuss their course plan, lecture delivery and assessment method. Each subject teacher writes course outcome in the beginning of the semester and schedules a 40 to 60 hour plan to deliver it. He/she also makes a day wise schedule of lecture delivery plan, showing the details of topic that shall be taught each day, the methodology and pedagogies used, and the expected outcome of the course.

Example 2: Course files

Course files or Lesson/course plan documents of every course are prepared to bring objectivity and strategize the course of teaching and learning process on every topic. The teacher goes through the syllabus. They ensure on the pre-requisite condition (if required) for the course. They also ensure, whether the students have a fair knowledge of the basics, so that they are able to understand their teaching and understand the subject which they are teaching.

Upon cross-checking the pre-requisites the teachers shall start their teaching schedule that they have planned right from the beginning of the semester. A proper plan of action for each topic and its delivery is followed by the teacher. At the end of every topic, the teacher conducts a pre-planned revision. Mapping of the course outcome is done along with the program outcome after conducting the tests.

Course files have proven to be great guiding tools that provide a teacher with direction and a sense of clarity while teaching. It is a 15 to 20 page document including a few basic details about the teacher, course and department followed by the day wise schedule, pedagogies, Question banks, previous university question papers, revision questions/MCQ's that are prepared by them with a brief note on the expectations of the students.

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

Response: 0

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	View Document

6.5.4 Quality assurance initiatives of the institution include:

- 1.Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements**
- 2.Academic Administrative Audit (AAA) and initiation of follow up action**
- 3.Participation in NIRF**
- 4.ISO Certification**
- 5.NBA or any other quality audit**

A. Any 4 of the above**B. Any 3 of the above****C. Any 2 of the above****D. Any 1 of the above****Response:** E. None of the above

File Description	Document
Details of Quality assurance initiatives of the institution	View Document

6.5.5 Incremental improvements made during the preceding five years (*in case of first cycle*) Post accreditation quality initiatives (*second and subsequent cycles*)**Response:****Outcome Based Education (OBE):**

The college follows strictly Outcome Based Education. Every faculty of the department with his/her rigorous assessment method, evaluates each student's performance and follows an effective teaching learning process to ensure better results. Attention to each student and his/her needs is taken care of by the teachers and the mentors.

SC (Students Council)

Formation of Student Council is for developing and appointing a team of students on positions equivalent to the actual governing body of the institute which helps them to understand the various challenges faced in running an institution on a day to day basis.

This will help them to understand their limitations and also learn to respect various college practices. It helps them to take up various roles and responsibilities of the institute on co-curricular and extracurricular activities. They have significant freedom to develop and project their talent/s and take decisions that are necessary. They can fix a goal (what they have to achieve) and carry out work with responsibility. This will make the students to come closer having an open mind inside and outside the classroom, and develop an attitude of love affection and faith amongst each other. They engage themselves ethically with their local, national and international community's, (if any).

Interfaith and Outreach Engineering Projects in Community Services (IOEPCS)

IOEPCS is a unique program in which team/s of our undergraduate students, who are interested in developing projects with the deployment of real systems of engineering-based solutions for the local community and with other educational organizations, shall contact a community service centre or an educational organization on the projects that they can offer on broad areas such as human services, accessibilities, education and outreach, and the environment.

IOEPCS students shall teach communication skills and computer skills. Through this initiative the students of rural area shall get awareness on professional practices that are taking place around the urban areas that teaches them moral values, ethics and awareness while living in a community. Such students of rural area shall gain access to technology that would normally be prohibitive and expensive in their area. This gives them a boost and improves their understanding.

EDC (Entrepreneurship Development Cell)

This is a step taken by the college to prepare our students for their future journey as entrepreneurs. With a distinctive vision of providing a path for our young minds to follow and develop their skills, EDC is formed.

The cell conducts seminars on Entrepreneurship Development. These seminars shall facilitate the students to come up with some idea/s and recommendations wherein such ideas can be transformed into upcoming business ventures. It will provide them with necessary inputs on resources available to execute their well-thought out plans in future.

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

Response: 12

7.1.1.1 Number of gender equity promotion programs organized by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
02	03	03	02	02

File Description	Document
Report of the event	View Document
List of gender equity promotion programs organized by the institution	View Document
Any additional information	View Document

7.1.2

1. Institution shows gender sensitivity in providing facilities such as:

1. Safety and Security
2. Counselling
3. Common Room

Response:

Gender Sensitivity:

One of the objectives of our Institution is to provide education that is sensitive to the needs of the various sections of society with special emphasis on gender equality. Students of both the genders are given equal opportunities to grow and develop as responsible citizens of the future. The Institute makes efforts to maintain gender balance among the faculty members. There is a greater number of women in teaching, non-teaching and administrative staff.

The Institute has woman development cell (WDC) which organizes various programs and talks by doctors on topics related to growth, safety and security of students and staff. Every year there is a celebration of women's day during which inspiring women personalities share their life experiences. These motivates the girl students to overcome the challenges in their life and develop their immense potential and fulfil their dream. Institute has arranged workshop on "cancer awareness" for the ladies staff and ladies from the

neighbourhood.

Girl students plays important roles as a member of Student Council and committees which organize various events for the Institute during the intercollegiate cultural and technical fest *Spandan*. Girls get equal opportunities in technical as well sports events. In the last few years our cultural, technical and sport committees have been headed by girl students.

1. Safety and Security:

Security and Safety is the major concern of every institution. Our campus is well secured as it has been covered by the compound wall on all the four sides. Strong gates are provided at the main entrance, which is guarded by trained security guards for 24x7. Security guards take rounds of the campus during day and night. Norms of Fire and Safety measures are strictly followed in the campus. Fire extinguishers are installed at various places in all the floors, laboratories and workshop. Our Institute has closed circuit TV (CCTV) which is continuously monitor by the guards at main entrance of the Institute. A complaint box has been installed on the premises of the college to ensure that their grievances are resolved. The girl students are assured of their well-being, safety, security and mental health and are encouraged to approach any faculty or WDC committee for their grievances.

2. Counselling:

At the Institute, we believe that even the slightest positive influence has the potential to change a student's life. Hence, mentoring has been introduced at our institute for each and every student across all the departments.

3. Common Room:

The Institute has separate Girls Common Room. There are books, magazines and wireless internet and relaxing furniture where students can relax and rest. Students can also meet to chat or prepare for exams together.

File Description	Document
Any additional information	View Document

7.1.3 Alternate Energy initiatives such as:

1. Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 28.21

7.1.3.1 Annual power requirement met by the renewable energy sources (in KWH)

Response: 39690

7.1.3.2 Total annual power requirement (in KWH)

Response: 140673

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document
Link for Additional Information	View Document

7.1.4 Percentage of annual lighting power requirements met through LED bulbs

Response: 2.77

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 0.6

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 21.67

File Description	Document
Details of lighting power requirements met through LED bulbs	View Document
Any additional information	View Document

7.1.5 Waste Management steps including:

- Solid waste management
- Liquid waste management
- E-waste management

Response:

The total solid waste collected in the campus is 12 Kg/day on an average, from tree leaves, cups, paper, kitchen food leftovers and other sources. The waste is segregated at source by providing separate dustbins for Bio-degradable and Plastic waste. Single sided used papers are reused for writing and printing in all departments. Plastic waste (average of 0.1Kg/day) is generated by stores and office which is collected and given to the vendor on a regular basis. Metal, wooden and glass waste is stored and given to authorized scrap agents for further processing. The food waste from the Canteen is processed in a waste management system and used as compost for the trees. Non-working computers, monitors, and printers are discarded and scrapped on an annual basis. E-waste from labs is properly collected and is given to recycler, reused

wherever possible, donated and sold if possible. Some parts useful for other systems are kept aside for future use. Students are also imparted awareness and education about E-Waste management in their Environment Studies.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

7.1.6 Rain water harvesting structures and utilization in the campus

Response:

The Institute understands that rain water harvesting will help in developing a better green campus and easy watering system for the plants thus conserving water. Presently our Institute does not have any provision for rain water harvesting and utilization. We are considering this matter as we want to implement a rain water harvesting system. At present there is a borewell which is used for gardening. We have looked into some case studies of Centre for Environmental Research & Education (CERE) and other organizations and we will surely implement it in the near future based on a feasibility report.

Link to this statement is available on institute website under:

<http://www.xavierengg.com/images/NAAC/CriteriaVII/7.1.6.datasignonly.pdf>

File Description	Document
Link for Additional Information	View Document

7.1.7 Green Practices

- **Students, staff using**
 - a) **Bicycles**
 - b) **Public Transport**
 - c) **Pedestrian friendly roads**
- **Plastic-free campus**
- **Paperless office**
- **Green landscaping with trees and plants**

Response:

The institute is located centrally at Mahim causeway. With large number of trees XIE is a 3 acre Green Campus in the heart of Mumbai with landscaping.

Tree plantation drives by our own staff and students help in encouraging sensitiveness towards

environment and also help in providing fresh air for the staff and students of our institute. Corporate companies under CSR have also carried out plantation drives in our campus. Regular care is taken by the 2 gardeners by watering Plants & Trees to keep them thriving.

The college makes the students aware of carbon foot print calculation, carbon credits in the subject of environmental science in the first year to promote concern towards environment and save energy resources. Students of the first year have also clicked photographs and documented the biodiversity (different flora and fauna) at our lush green campus.

The college classrooms are well illuminated by natural light with proper ventilation considering the open campus and large number of trees.

Proper steps have been taken to facilitate easy movement of pedestrians in and out of our campus through different gates.

Another crucial step towards green initiative is the installation of solar panels.

The students and staff residing near the college either commute by bicycle or walk to the college. Many students and staff members use public transport facilities as well as car pool which help in taking steps towards environmental protection. Emission test documents (PUC) are mandatory for the vehicles in the campus.

The institute has instilled a paperless work system with the use of moodle server, sms facility to update students and parents, a website with updates on upcoming events The speakers/dignitaries are welcomed by a plant sapling. This promotes awareness about environment.

Continuous efforts are being taken to make the campus plastic free. Dustbins and sign boards of plastic ban are placed at appropriate locations to help achieve a clean and plastic free campus.

File Description	Document
Link for Additional Information	View Document

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

Response: 0.65

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
0	0.7854	0	5.8176	0

File Description	Document
Green audit report	View Document
Details of expenditure on green initiatives and waste management during the last five years	View Document

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

1. Physical facilities
2. Provision for lift
3. Ramp / Rails
4. Braille Software/facilities
5. Rest Rooms
6. Scribes for examination
7. Special skill development for differently abled students
8. Any other similar facility (Specify)

A. 7 and more of the above

B. At least 6 of the above

C. At least 4 of the above

D. At least 2 of the above

Response: A. 7 and more of the above

File Description	Document
Resources available in the institution for Divyangjan	View Document
link to photos and videos of facilities for Divyangjan	View Document

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

Response: 3

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	1	0	0

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	View Document
Any additional information	View Document

7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

Response: 5

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2	2	1	0	0

File Description	Document
Report of the event	View Document
Any additional information	View Document

7.1.12

Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff

Response: Yes

File Description	Document
URL to Handbook on code of conduct for students and teachers , manuals and brochures on human values and professional ethics	View Document

7.1.13 Display of core values in the institution and on its website

Response: Yes

File Description	Document
Any additional information	View Document
Provide URL of website that displays core values	View Document

7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations

Response: Yes

File Description	Document
Details of activities organized to increase consciousness about national identities and symbols	View Document
Any additional information	View Document

7.1.15 The institution offers a course on Human Values and professional ethics

Response: Yes

File Description	Document
Any additional information	View Document
Provide link to Courses on Human Values and professional ethics on Institutional website	View Document

7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions

Response: Yes

File Description	Document
Provide URL of supporting documents to prove institution functions as per professional code	View Document

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years

Response: 23

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony

and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
4	6	6	4	3

File Description	Document
List of activities conducted for promotion of universal values	View Document
Any additional information	View Document

7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities

Response:

The institute celebrates days of national importance such as Independence Day and Republic Day. This instills in the staff and students the quality of being patriotic and a feeling of love towards ones motherland. The occasion also reminds the staff and students about our valiant freedom fighters who fought selflessly and even sacrificed their lives for our country to attain freedom. A teacher can affect lives of many and the bond between the teacher and a student cannot always be put into words. Thus every year teachers day is celebrated on 5th September to recognize the importance of teachers in ones life. The role of engineers in nation building is extremely vital. Thus Engineers day is also celebrated on 15th September every year to mark tribute to the greatest Indian engineer Sir M Vishweshvaraya. India is a secular country full of diversity in the religions, languages, cultures and castes, with the people involved in celebrating different festivals. The institute also celebrates different festivals uniquely in different ways. Each festival celebrated has its own history, legend and significance of celebration.

File Description	Document
Any additional information	View Document

7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

Response:

The institution which is bound by ethical values maintains transparency in its financial, academic, administrative, and auxiliary functions in a just and fair manner.

Financial

The Institute endeavours to ensure all financial transactions, reports and documents are completed with integrity. The Institutional mechanism for monitoring the effective and efficient use of financial resources is monitored by the Trustees, the Governing Council and the Local Managing Committee. The Committee is assisted by the experts to finalise matters relating to fee structure and the budget provisions of the college. Actual day-to-day financial transactions are tracked by the Director, Administrator and Principal for approvals and the Chief Accountant for cross verification and accounting. The Institute has appointed external auditors, who regularly audit the accounts. The Institute presents timely and accurate information to the statutory authorities and stakeholders. Every transaction is through the bank and care is taken to promptly issue a receipt. All these are meticulously documented by the Accounts Department. The Faculty and Staff salaries are as per the AICTE scales and are paid on time. The disbursement of scholarships and other monetary benefits to the students is also done through banks.

Academic

Each Department creates its Academic Calendar for the Semester. The subject course files are created / updated before the beginning of each Semester. They are aligned for the attainment of mapping and comply with Bloom's taxonomy. The questions for every test/assignment are mapped with the Course Outcomes (COs) which is used to calculate CO attainment. The transparency in term work assessment is ensured by informing the student about assessment process and the rubrics of the same at the commencement of the semester. Labs / Tutorials have a rubrics cover page to make the assessment process extremely transparent. The students understand why they have been graded in a particular way. List of students' attendance is displayed on the notice board and subsequent action is taken against defaulters. At the end of the Semester, if attainment of any CO is found to fall short of expectations, remedial action is taken to overcome the shortfall. The faculty conducts a course exit survey to check the level of comprehension by the students.

Administrative

The Institute is a part of the Centralised Admission Process (CAP) of Directorate of Technical Education (DTE), Government of Maharashtra. All the rules and regulations and admission process is made available on official website www.dte.org and also published in the form of information brochure. The Institute endeavours to maintain transparency and fair practices in admission and recruitment processes.

Auxiliary functions

Auxiliary functions are conducted in a transparent way. Decisions are taken in Faculty and Department meetings. All circulars regarding Students, Faculty and Non-teaching Staff are circulated and displayed on the notice boards.

File Description	Document
Any additional information	View Document

7.2 Best Practices

7.2.1 Describe at least two institutional best practices (as per NAAC Format)

Response:

1. Title of the Practice

Academic performance improvement program for FE students.

Objectives of the Practice

Engineering curriculum is more demanding and involves a lot of problem solving. Our program is intended to improve and enhance the students' ability to understand the fundamentals and solve a variety of problems so as to prepare them to perform better at the University exams.

The Context

Students who enroll in the first year are often oblivious to the semester pattern of the University and also the time constraints they will have to face in the semester. First year of engineering is the first step for the student to get interested in engineering syllabus. The subjects in first year of engineering are totally different than their pre-graduate syllabus. In view of this, the performance improvement program really prepares them to face the University exams

The Practice

The practice involves two stages: the first is the revision session conducted at the term end of each semester which involves a 5-8 day revision program covering the difficult and important topics of the subjects. The objective is to revise the important concepts of the whole syllabus and solve question papers of the past years. The second stage involves conduction of a preliminary exam as per the University pattern. This gives an opportunity to the students to assess their strengths and weaknesses and decide on their course of action in each subject.

Evidence of Success

The practice followed has fetched increasing percentage of results in the University exams in successive years. Also, the students get to know the paper pattern of the University exams and get a chance to have a feel of the paper and manage time. Students get more time to solve their doubts with teachers conducting the session. It is observed that students are solving more and more questions during such practice sessions.

Problems Encountered and Resources Required

The students who have not performed well during the semester and who need actual practice and attention come in small numbers for the revision lectures. Also, as the University schedule for commencement of term is late (mostly first week of August), time constraints always exist on finishing the course and conducting the revision sessions. Early commencement of lectures will help in resolving this issue.

2. Title of the Practice (2)

Holistic Development of Staff and Students.

Objectives of the Practice

The staff and students at the Institute are personally made aware of their abilities and potential, and guided to achieve great things in incremental steps to realize their immense potential. It is in discovering their potential that the staff and students find joy, working in their areas of passion, and when doing so, become highly motivated to achieve excellence in their work. Celebration of our different religious and cultural festivals also adds to the holistic development of the Institute family.

The Context

India had a functioning system of higher education as early as 1000 B.C. Unlike present day universities, these ancient learning centers were primarily concerned with the Holistic development of the students.

At the Institute we understand “Education” as an unrelenting quest to bring forth from our inner resources to help us grow continuously. This necessitates the involvement of every staff and student, each and every day. At the Institute it is not just about excellence but about nurturing the joy of excellence which is shared in creating fond memories as we engage in our pursuit of excellence. We want everyone at the Institute to be fully engaged in a broad spectrum of fields so as to ensure a holistic growth to meet the challenges of modern times.

The Practice

At present India’s higher education system is the third largest in the world, next to the United States and China. The rise of IT sector and engineering education in India has boxed students into linear path without giving them a chance to explore and discover their passions. Concerted and collaborative efforts are needed to broaden student choices through a holistic education.

The practice involves setting up structures so that this holistic development can be a way for us to live our lives, professional as well as personal and the way we support and nurture one another.

It begins with the academic excellence. The Institute emphasizes providing quality education, and training to staff and students. The students can make significant contributions in their field under the guidance of trained and experienced faculty members and well equipped laboratories. Deserving students are provided with scholarship. The best students and class toppers are felicitated with prizes for the various events and their projects are displayed in exhibitions conducted by the Institute. Remedial classes are conducted for academically weaker students who don’t perform well. They are also taught time management and given methods to learn in an efficient way. Staff and students are encouraged towards goal oriented activities like publishing papers, research, pursuing higher studies. The students and staff are given exposure to latest trends in technology through lectures, workshops and seminars. The institute offers many value added educational programs and certification programs to the students and staff including CCNA, SAP, and Microsoft Certification. The staff members are paid full pay scale, on time, as per the updated government rules and regulations. Book allowances are given to staff for purchasing required books. The staff members

are sponsored to pursue their high studies, attend and conduct various STTPs, publish research papers that improve their professional and quality work.

Staff and students are encouraged and challenged to excel in other fields by getting involved in organizing co-curricular and extra-curricular activities. The Institute conducts cultural and technical events, which give opportunities to develop leadership and organizational skills. There is an enthusiastic participation by staff members and become occasions to nurture the joy of working together as a team. Staff picnics and the Industrial Visits for students help them to create fond memories of sharing the joy of togetherness.

Evidence of Success

Staff members have successfully accomplished milestones, such as, completing their higher studies and publishing papers with higher grades and better reviews. Students have pursued higher studies from reputed universities both in India and abroad. The staff members received the research project grants from the Mumbai University.

The student council initially used to organize only intra-college events. Later after a few years they started with inter-college events. These events demand a higher degree of organizational and leadership skills. Thus by organizing these events they learnt to network with other student council leaders and participate in other inter-collegiate events. The alumni share how these organizational skills help them to take leadership roles in their workplace. The celebration of our different religious and cultural festivals helps to create a harmonious atmosphere in the Institute family. There is a better understanding of what unites us rather than what divides us and efforts are made to listen and understand the other.

Problems Encountered and Resources Required

“*Holistic Development of Staff and Students*” as a theme is the common thread that runs across all Institute activities. It has to be well planned at both the Institute and Departmental level. The student council has to be guided so that they can incorporate this theme in the events that they conduct in the academic year. This requires a lot of planning, time and follow-up.

The staff and students have to balance equally the curriculum and co-curricular activities. It has been observed that if the co-curricular and extra-curricular activities are spaced out during the entire academic year the balance is more easily attainable.

One of the obstacle is a general lack of motivation and interest amongst students. So far full participation by students, especially for cultural events, is not seen. With the help of class representatives we are working to set up policies for a greater involvement of students.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

7.3 Institutional Distinctiveness

7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Response:

The Vision of the Institute, Xavier Institute of Engineering (XIE), is to “*To nurture the joy of excellence in a world of high technology.*” The Institute endeavours to provide value-based education to enable the students face the challenges of modern life. It works for the holistic development of the students who are motivated to use their acquired knowledge for development of the community.

The Institute was ranked 5th and 3rd among Mumbai private engineering Institutes by Times of India survey June 2013 and June 2015 respectively. .

The Institute provides the best amenities required for students to enhance their academics, technical skills, co-curricular activities and extra-curricular activities and thus nurture the joy of excellence.

Workshops, seminars, paper presentations are organized every year by the Institute to make students industry ready. Students are encouraged to develop their own projects which are monitored by the experts in that area. At the end of the project completion a project exhibition is planned by each department. This provides a platform to unleash the potential of the students by showcasing their innovative projects developed in the academic year. The projects are judged based on the students’ presentation, percentage of completion, real world applicability and originality. Winners of the exhibition are given cash prizes to motivate them to do more innovative and better projects in future. In order to gain practical knowledge, Industrial Visits (I.V’s) are arranged during the academic year. There is an annual I.V. outside the state while others are arranged in and around Mumbai for a day.

The Faculty regularly conduct aptitude tests, tell motivational stories and quotes during lectures to instil a sense of self-discipline and to make the students aware of the immense possibilities of their potential. Deep breathing sessions were organized for the students and staff to release their stress and increase their focus and concentration towards their goal. English communication skill sessions are conducted to improve vocabulary skills. The innovative *Brain Gym* helped students to understand the power of their mind to solve puzzles. The mentors closely monitor their mentee performance and provide as required an ongoing support. They also provide awareness and guidance about competitive examinations and courses required for placements. They encourage the students to pursue higher studies and venture into entrepreneurship projects.

Virtual Placement is an annual event of XIE where students are put through identical levels of stress and refinement of technical knowledge and personality as they will at the time of actual placements. They are interviewed by experts from the industry who guide them to achieve success in their actual job placements.

Spandan is the **annual inter-Institute Festival** organized every year at XIE. Every year many Colleges from all over Mumbai, participate in this festival with Art, Music, Dance, Literary and Technical events. These events **help to enhance technical knowledge of the students and help them to acquire organizational skills.** *Sparx* the annual intra-Institute sports festival provides abundant sports opportunities for the holistic development of the staff and students. Our students are also encouraged to participate in inter-collegiate sports festival.

Vital skills like leadership, collaboration, creativity, problem-solving and social and cultural awareness are essential in today's world. XIE has signed MoU with foreign universities from the United States, France, Japan and Indonesia. Some students from these universities visit our campus and get to interact with our students and also learn about Indian culture. Some of our staff have also gone to these Universities for study programs. These cultural exchanges help our staff and students to get a global experience which is needed to succeed in this increasingly complex and competitive world and acquire experience that sets them apart and opens doors to work globally.

XIE Outreach Program (XOP) is what gives XIE its Jesuit identity. Under these the students engage themselves in social service activities like teaching English and Maths to slum children; playing with them; talking to them about moral values, health and hygiene; and motivating them for higher education. They also reach out to the tribal and poor children who are studying in Jesuit schools in nearby places such Talasari, Manor and Ashaghad and who show a great eager desire to learn and grow. They enthusiastically participate in such visits and conduct activities such as drawing, basic computer skills, and spoken English to these students. The greatest gift for our students is to see the joy on the children faces as they beam with their newly gained knowledge.

Thus XIE endeavours to nurture the joy of excellence in the lives of our staff, students and the communities it reaches out to by bringing them the joy, wonder and the practical uses of the rapidly changing technology.

File Description	Document
Any additional information	View Document

5. CONCLUSION

Additional Information :

Apart from the Governing Body (Trustees) functioning of the Institution is monitored by the following committees.

Governing Council

- 1 Fr. Dr. Arun de Souza S.J., Chairman, Jesuit Provincial
- 2 Fr. Dr. John Rose S.J., Member, Director, XIE, Mumbai
- 3 Fr. Fabian Barreto S.J., Member, Assoc. Prof., XIE, Mumbai
- 4 Fr. Reginald Tauro S.J., Member, Former Director of XIE
- 5 Fr. Francis de Melo S.J. Member, Former Director of XIE
- 6 Mr. Shailesh Naidu, Member, Advocate, High Court, Mumbai
- 7 Mr. Albert D'Souza, Member, Founder Chairman, Aldel Education Trust
- 8 Prof. Dr. S. Biswas, Member, Prof of Computer Science Engg, I.I.T. Powai
- 9 Prof. Dr. S. N. Merchant , Member, Prof of Electrical Engineering ,I.I.T. Powai
- 10 Prof. Dr. Ramesh Laul, Member, Former Dean, Faculty of Science, University of Mumbai
- 11 Dr. Y. D. Venkatesh, Member Secretary, Principal, XIE, Mumbai

Local Managing Committee Members

- 1 Fr. Dr. Arun de Souza SJ Chairman, the Jesuit Provincial
2. Fr. Dr. John Rose SJ Member, Director, XIE
3. Fr. Fabian Barreto SJ Member, Associate Prof, EXTC XIE
5. Mr. Albert D'Souza Member, Founder Chairman, Aldel Education Trust
6. Mr. Salil Thigale Member, Asst. Prof, Applied Physics
7. Dr. Suprava Patnaik Member, Prof., Dept. of EXTC

8. Ms. Suvarna Bhoir Member, Asst. Prof., Dept. of IT
9. Prof. A.P.D'Souza Special Invitee,
- 10 Mr. Panil Jain Member, Asst. Prof, EXTC
- 11 Mr. Jaychand Upadhyay Member, Asst. Prof, IT
- 12 Dr. Y. D. Venkatesh Member secretary , Principal , XIE

Academic Advisory Body

1. Fr. Dr. John Rose SJ Director-Chairperson
2. Dr. Y.D. Venkatesh Principal – Member Secretary
3. Fr. Fabian Barreto SJ Administrator – Member
4. Dr. S. Biswas Member
5. Dr.S. N. Merchant Member
6. Dr. Suprava Patnaik HOD EXTC and Dean of Academics
7. Ms. Sushma Khanvilkar HOD COMP
8. Ms. Chhaya Narvekar HOD IT
9. Ms. Madhavi Parimi HOD FE
- 10 Ms. Meena Ugale Dean of Student and Staff Welfare
- 11 Mr. Naveen Kukreja Special Invitee

Institution website: <http://www.xavierengg.com/>

Concluding Remarks :

Xavier Institute of Engineering is a Combination of Commitment, Conscience, Compassion, and Competence. The Institute endeavours to provide value-based education through its holistic approach to enable the students to face the challenges of modern technology requirements.

NAAC

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																				
2.1.1	<p>Average percentage of students from other States and Countries during the last five years</p> <p>2.1.1.1. Number of students from other states and countries year-wise during the last five years Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>9</td> <td>6</td> <td>5</td> <td>6</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>12</td> <td>7</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	11	9	6	5	6	2017-18	2016-17	2015-16	2014-15	2013-14	5	12	7	3	3
2017-18	2016-17	2015-16	2014-15	2013-14																	
11	9	6	5	6																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
5	12	7	3	3																	
2.3.2	<p>Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.</p> <p>2.3.2.1. Number of teachers using ICT Answer before DVV Verification : 44 Answer after DVV Verification: 46</p>																				
2.3.3	<p>Ratio of students to mentor for academic and stress related issues</p> <p>2.3.3.1. Number of mentors Answer before DVV Verification : 46 Answer after DVV Verification: 20</p> <p>Remark : As per documents provided by HEI</p>																				
2.4.4	<p>Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years</p> <p>2.4.4.1. Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>4</td> <td>2</td> <td>4</td> <td>1</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	4	4	2	4	1	2017-18	2016-17	2015-16	2014-15	2013-14	0	0	0	0	0
2017-18	2016-17	2015-16	2014-15	2013-14																	
4	4	2	4	1																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
0	0	0	0	0																	

Remark : Letter of Appreciation, Participation Certificate and Thank you Letter are not considered.

3.1.1 Grants for research projects sponsored by government/non government sources such as industry ,corporate houses, international bodies, endowment, chairs in the institution during the last five years (INR in Lakhs)

3.1.1.1. Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
3.43	0	10	4.5	0

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
4.086	0	10	4.5	0

3.1.2 Number of research projects per teacher funded, by government and non-government agencies, during the last five year

3.1.2.1. Number of research projects funded by government and non-government agencies during the last five years

Answer before DVV Verification : 6

Answer after DVV Verification: 6

3.1.2.2. Number of full time teachers worked in the institution during the last 5 years

Answer before DVV Verification : 56

3.2.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the last five years

3.2.2.1. Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	1	1	1

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
3	1	2	1	1

3.4.2 Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
3	2	2	0	0

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

3.5.2 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

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 (only functional MoUs with ongoing activities to be considered)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
5	3	4	1	0

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
4	3	4	1	0

4.2.6 Percentage per day usage of library by teachers and students

4.2.6.1. Average number of teachers and students using library per day over last one year

Answer before DVV Verification : 45

Answer after DVV Verification: 19

Remark : As per average of teachers and students using library on 22/9/2017, 10/10/2017 and 15/12/2017 in provided logbook.

5.2.2 Percentage of student progression to higher education (previous graduating batch)

5.2.2.1. Number of outgoing students progressing to higher education

Answer before DVV Verification : 12

Answer after DVV Verification: 13

5.3.1 Number of awards/medals for outstanding performance in sports/cultural activities at 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 national/international level (award for a team event should be counted as one) year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
0	2	1	1	3

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

5.3.3 Average number of sports and cultural activities/ competitions organised at the institution level per year

5.3.3.1. Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
44	51	54	43	34

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
2	2	2	2	2

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:

2017-18	2016-17	2015-16	2014-15	2013-14
17	10	15	30	16

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
19	10	15	30	16

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

7.1.1.1. Number of gender equity promotion programs organized by the institution year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
05	03	05	04	04

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
02	03	03	02	02

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years 7.1.10.1. Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
11	7	7	6	3

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	1	0	0

2.Extended Profile Deviations

ID	Extended Questions																				
1.1	Number of courses offered by the institution across all programs during the last five years Answer before DVV Verification : 930 Answer after DVV Verification : 793																				
2.1	Number of students year-wise during the last five years Answer before DVV Verification: <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>866</td> <td>842</td> <td>841</td> <td>833</td> <td>868</td> </tr> </tbody> </table> Answer After DVV Verification: <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>866</td> <td>842</td> <td>841</td> <td>844</td> <td>868</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	866	842	841	833	868	2017-18	2016-17	2015-16	2014-15	2013-14	866	842	841	844	868
2017-18	2016-17	2015-16	2014-15	2013-14																	
866	842	841	833	868																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
866	842	841	844	868																	
2.2	Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during the last five years																				

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
93	93	93	93	93

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
42	25	40	36	42

NAAC