

## FOR

# **1<sup>st</sup> CYCLE OF ACCREDITATION**

# DON BOSCO INSTITUTE OF TECHNOLOGY

DON BOSCO INSTITUTE OF TECHNOLOGY PREMIER AUTOMOBILES ROAD, KURLA (WEST) - MUMBAI - 400070 400070

www.dbit.in

Submitted To

## NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

## BANGALORE

December 2018

## **<u>1. EXECUTIVE SUMMARY</u>**

## **1.1 INTRODUCTION**

DBIT is established and managed by the Salesians of Don Bosco. It aims to impart premium technical education to young people in an academic environment.

The Salesian Society is an International Religious Organization within the Catholic church , founded by Don Bosco to serve youngsters, especially those who are poor and disadvantaged.

The Don Bosco Institute o technology was established in 2001 to serve the needs of the Roman Catholic minority of the Mumbai province.

The Don Bosco style of education consists in involving young people, their parents or guardians and the educators in a family atmosphere. The goal of Integral Education involves developing physical and aesthetic talents, training in occupational skills, fostering intellectual skills and competence, furthering cultural development and integration with others, including moral uprightness.

The Salesian philosophy of education which emphasises the intellectual, spiritual and emotional growth of every individual student, is evident in all facets of campus life. The academic programmes allow students to prepare for their career as well as pursue higher education and entrepreneurship.

DBIT provides opportunities for personal growth as well as develops as sense of responsibility towards society at large. The institute is committed to Technology, Quality and Sustainability.

DBIT aims to do the following through its various processes:

- Train engineers to excel in industry, research and entrepreneurship
- Develop programmes that are contemporary and relevant to industry
- Become a centre for research and development in the field sustainable technologies
- Share expertise and resources for the benefit of the underprivileged youth of the local communities
- Gain recognition nationally and internationally for the quality of technical education that it imparts

## Vision

The current Vision statement of the institute was drafted after a detailed process that involved the following:

• Capturing the perceptions of all the major stakeholders like students, parents, alumni, industry, staff and the management.

- Understanding the value system of the institute
- Identifying the key words that define the campus culture.
- Reflecting on the unique contribution of the institute to societal problems

The Vision statement as finalised by the stakeholders is as follows:

# The Don Bosco Institute of Technology (DBIT) will be known to have an innovative, enjoyable and holistic learning environment that transforms individuals into socially conscious citizens the Don Bosco Way and will lead in research and entrepreneurship in the area of sustainable technologies

The vision statement reinforces the institute's commitment to creating a learning environment that brings out the best in the students and staff. Faculty are constantly engaged in evolving innovative methods of student engagement that cater to the widely varying learning abilities of the students. There is a constant endeavour to make learning holistic, enjoyable and participative.

Social commitment is a key aspect of life in a Don Bosco institution. DBIT has leveraged this commitment by engaging with the under privileged communities around the institute's premises as well as in other areas where there is a Salesian presence like the tribal communities of Jawhar taluka in Palghar district. Students and staff work closely with these communities to understand their problems and develop technological solutions. Several of the final year projects of the students are oriented towards solving such problems. The institute also plans to set up a Centre for Sustainable Technologies to patent some of the solutions and help incubate them into successful businesses.

The vision statement of the DBIT -MMS, which also reflects similar thought processes, is as follows:

To nurture for business, transformational leadership that is guided by values which sustain holistic growth. The consistent focus of the Institute has been and will be to develop students with Excellent Functional Competencies and a Sensitivity towards the Disadvantaged, Deprived and Challenged.

### Mission

The Mission statement of the institute for the **UG engineering programme** is as follows:

- To create future engineers who will work with honesty and integrity and excel in the use of technology for the benefit of the underprivileged
- To train engineers to be innovative problem solvers and entrepreneurs who engage in research and lifelong learning
- To provide a diverse and stimulating environment for staff and students to grow holistically

The Mission statement for the PG programme (MMS) is as below:

- To empower students with relevant industrial competencies
- To hone entrepreneurship skills
- To awaken environmental consciousness
- To encourage social outreach.

The Mission statements for UG and PG mirror similar expectations. While the engineering students design and develop sustainable solutions the Management students do internships with NGOs and organize an annual Social Business Summit to engage NGOs with Government bodies and Corporates to create an eco system that nurtures social entrpreneurship.

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

### Institutional Strength

## **Location and infrastructure:**

- The institute is **centrally located** in the city of Mumbai and provides convenient accessibility for all. It also provides several placement and internship opportunities for students.
- The institute has **good infrastructure** in terms of well equipped laboratory and workshop, good library facilities with a digital library and sports facilities.
- The institute was audited by TuV, Austria and is certified for ISO 9001:2015.

### Academics

- The institute follows **Don Bosco's student centric Preventive System** which nurtures the student and provides a holistic environment for staff and students to grow to their full potential.
- The institute has well **qualified faculty** who are deeply committed and motivated to work towards the goals of the institute as a well coordinated team. All the faculty have post graduate qualifications and nearly 12 15% of the faculty have Phd qualifications from reputed institutes like IIT, ICT, VJTI.
- Most of the faculty have **several years of experience** in teaching, research and some senior faculty have years of industrial experience.

#### **Management Policies:**

• The Management is **very progressive and is supportive** of research, entrepreneurship and all such initiatives directed toward development of students and staff

- An **active NSS cadre** for developing amongst the staff and students sensitivity to community needs and a deep sense of social commitment.
- Many key positions on campus, including the position of Principal, are held by lady faculty who are role models for staff and students.
- Robust systems are in place to ensure effective implementation of all policies.
- **Regular Faculty Development Programmes** are organised to train and orient faculty towards new developments in teaching-learning.
- High faculty retention levels.

## **Institutional Weakness**

- 51% of the students admitted to the campus belong to the Roman Catholic Minority. Therefore the student quality is average
- The campus is non-residential, therefore students and staff have to commute long distances each day to travel to college and are unwilling to stay back after college hours to carry out any academic or co-curricular activity
- Due to lack of industrial exposure the younger faculty are unable to convincingly link theory with practical applications.
- The institute has introduced several initiatives to make its teaching –learning more relevant and in tune with industry requirements, however it has not adequately marketed its capabilities and strengths to attract high ranked students.
- Few industries in the core engineering areas of Mechanical and Electronics and Telecommunication visit the campus for placement.
- The faculty explores various innovative pedagogies for teaching-learning, however the level of application is not satisfactory.
- The campus is located in the heart of the city, therefore there are limited options for expansion due to very high real estate prices.

• Lack of autonomy makes it difficult to introduce innovative practices that can propel the institute towards excellence.

## **Institutional Opportunity**

Given the prime location of its campus and the progressive policies of the management the institute can explore several avenues to grow and excel. Some of these are listed below:

### **Industry interaction and incubation:**

- To develop good ties with industry given its proximity to the industrial zone which has several MSMEs
- Establish Centres of Excellence in niche areas where projects are already undertaken by students and faculty like studies in 2- phase flow, Robotics, GIS technologies, AI and Machine Learning, Sensor development, Water testing and purification, Open Source Technologies, etc.
- Develop industry sponsored laboratories in robotics and AI, sensor technology, micro-machining, GIS studies, etc.
- In view of lot of unique projects related to sustainable technologies are being carried out, to set up an incubator and become a hub for social entrepreneurship and become leaders in deploying technology to solve societal problems.

### **Academics and Research**

- To position itself as a UG research institute.
- To make the DBIT journal of Science and Engineering a journal of international eminence.
- To elevate INNOVEX, the annual project exhibition, into an innovative product exhibitions with ideas that are patentable.
- Recently MoUs have been signed with 2 Taiwanese universities. This should be leveraged to motivate students to pursue less expensive world class Masters, PG and PhD education, faculty and student exchange programmes, faculty PhD, joint research projects.
- Develop the centre for 'Water testing and Research' into a unique centre for R & D studies in water contamination and purification.
- As a user and a strong advocate of Open Source Technologies, to popularise its use amongst colleges and schools in Mumbai through planned interventions.
- Introduce PG and PhD programmes in departments of Mechanical, EXTC and Computer Engineering.

## **Institutional Challenge**

The industry requirement of skillsets is being redefined in the wake of Industry 4.0. New technologies are evolving rapidly making it very challenging to define the skill set requirement and to impart these to the new generation of employees. In this context all professional institutes are seized with the task of rapidly adapting to the changes to remain relevant. Some of the challenges faced by DBIT are as follows:

- Ensure 100% enrolment during the present times when engineering is losing its popularity.
- Attracting top recruiters and providing placement in core industries for Mechanical and EXTC students.
- Inculcating career consciousness and professionalism amongst students.
- Motivating faculty to do carry out research and pursue their PhD from reputed institutes.
- Developing a strong industry-institute bond through faculty and student engagement in projects, consultancy and training.
- Identifying other sources of income generation for institute development in view of the fee restrictions imposed by Fee Regulatory Authority
- Maintain our position as one of the top engineering colleges in Mumbai and further improve our ranking in national institutional surveys.
- Identifying industry relevant skills and developing these in our students and faculty.
- Integrating holistic learning seamlessly into the curriculum given the time constraints and unwillingness of faculty and students to stay beyond the college hours.
- Changing faculty mindset on teaching beyond curriculum and introducing newer pedagogies for improving class engagement
- Any further expansion of the institute facilities is a challenge due to very high real estate prices.

## **1.3 CRITERIA WISE SUMMARY**

## **Curricular Aspects**

The curricular aspects of the Institute are designed to ensure quality education as per the current standards in the field of engineering education and to meet the ever growing industry demands.

Effective curriculum delivery is attained through well planned process. Curricular, co-and extra-curricular activities are planned in advance. Teachers in the Institute are members of the various bodies such as Local

Inquiry Committee (LIC), Syllabus Committee, Board of Studies and Subject Expert teams.

All new courses introduced by the University are offered by the Institute. All the programs offered allow electives courses and Choice Based Credit System (CBCS).

DBIT places a huge emphasis on human values, sustainability, gender equality and ethics and tries to enrich the curriculum accordingly. Through the extensive orientation/induction programme the First Year Students are introduced to the **Don Bosco Way of education**. The institute undertakes activities such as adoption of tribal villages, addressing community needs through technology as part of its commitment to the nation and to society at large.

The institute successfully conducts Value Added and certification courses. Students are encouraged to participate in Field Projects and Internships.

The institute has been able to set up a robust feedback system by which feedback is gathered from all stakeholders which includes students, parents, teachers and alumni. Analysis of the feedback is done to improve the teaching learning process and keep pace with the changing trends in society, industry and academia

## **Teaching-learning and Evaluation**

The admissions are based on the entrance examination conducted by the state government (MHCET) for both UG as well as PG students and at national level (JEE) for UG students and CAT /GMAT/CMAT/MAT/XAT/ATMA examinations for PG students. The institute admits students strictly according to guidelines laid down by the state government. Average Enrollment percentage over last five years is 92.61%.

The college supports financially weak students and also provides special infrastructure facilities for differentlyabled students. Since there is a wide variation in the merit ranking of the admitted students ,various assessment tools are used at entry level to identify weak and bright students. According to their learning styles, teaching methods are adapted.

The institute provides learning facilities like e-resources, learning management system and ICT enabled classrooms. Students are mentored on their academic and non-academic issues. Each faculty prepares a teaching plan at the beginning of the semester inorder to incorporate effective integration of creative learning strategies and innovative practices.

The institute has highly qualified faculty with rich academic as well as industrial experience with an **average experience of 11 years** The staff retention is good and is result of effective management policies, progressive academic environment and continuous motivation for individual growth.

The evaluation process is focused on regular and in time assessment. The exam committee ensures proper communication of various rules and regulations.

The institute has defined Programme Outcomes(PO), Programme Educational Outcomes (PEO), Programme Specific Outcomes (PSO) and the Course Outcomes (CO) / Learning Outcomes (LO) for all the courses.

## **Research, Innovations and Extension**

The institute encourages research culture among the faculty and students. It guide faculty to apply for Major and Minor Research Projects to the University of Mumbai, DRDO, DSTE,IEEE and so on. Each year **8-12 projects** are approved by the University for research funding ranging from INR 20,000/- to INR 1,00,000/-. The institute too provides grants upto 2 lakhs for in-house research groups after meticulous examination of the proposal.

The institute has well defined Code of Ethics to guide students & faculties toward the highest ideals of scholarly research. Faculties have actively participated in national and International conferences organized at national and international level and presented papers in reputed journals. The institute publishes an annual **''DBIT journal of Science and Engineering''** with external peer reviewed articles of students and staff. A Dean of R & D is appointed to nurture the research culture on campus.

The institute follows the **Don Bosco Way of Education** which emphasises holistic, social and sustainable development of students. NSS unit plays very important role for creating impact and raising social sensitivity among engineering students. NSS unit has conducted **more than 150 extension and outreach programs** collaboration with industry, community and Non- Government Organisations during the last five years

The Institute has good collaboration with industries, academic institutes and professional bodies. Institute has signed MOUs with academia as well as industries. Several students completed internship training in various companies . Institute had more than 300 linkages with different organizations in last five years in order to execute internship, final year projects and faculty and student exchange.

## Infrastructure and Learning Resources

Institute has a lush green campus with well designed infrastructure that satisfies the mandated requirements of the regulatory bodies like AICTE. Additional infrastructure is provided as per the institute's upgradation and development requirements.

All classrooms are **IT enabled with projectors, audio systems and internet connectivity** enabling the faculty to deliver lecture sessions through use of videos and presentations in addition to the blackboard.

The institute has adequate classrooms, seminar halls, tutorial rooms, laboratories, drawing halls to fulfil the academic requirements.

All laboratories are provided with high quality equipment / instruments. Several laboratories have equipment that have been purchased to introduce students to new technologies and concepts which are not specified in the curriculum. Some equipment are designed by faculty and students and are used for conducting experiments.

High end software like ANSYS FLUENT, GENESYS, MATLAB, SOLIDWORKS, MASTER CAM, Mentorgraphics, ANSYS HFSS, are purchased for project and research activities of staff and students.

IT facility in the institute is well maintained with high configurations servers, 60 MBPS internet speed, Wifi routers, computers with less than 2:1 student:computer ratio and 1:1 faculty to computer ratio. The IT infrastructure is upgraded regularly to provide better and faster connectivity.

The central library of institute has rich collection of books and has e-journals, e-books and plagiarism software. A digital library is provided for students to access e-books and journals. Students and faculty can borrow books from the library and can also access reference books inside the library. Library Management System 'KOHA' is used to keep track of the library resources.

The institute has very good recreational facilities. The football field is used for football matches and athletic events. The basketball, volleyball and throwball courts are available for the students after college hours and during lunch breaks.

The institute ensure the availability of facilities like canteen with hygienic and wholesome food, clean toilets, adequate water purifiers and dispensers, CCTV cameras in all laboratories, classrooms, lifts, infirmary, prayer room, separate boys' and girls' common rooms.

The infrastructure and equipment are well maintained and all safety requirements are fulfilled.

## **Student Support and Progression**

Ours is a student centric campus that strives to provide students with all facilities that contribute to their academic and emotional well being .

Institute has well established student support system for financial assistance, capability enhancement/development, progression, alumni engagement. etc.

All eligible students are offered scholarships as per norms of Central and State Government. Average percentage of student benefited by these schemes is 18.25%. In addition, Institute also offers scholarships to meritorious and economically weak students.

The student mentoring system helps identify the strengths and weaknesses of the students and also their academic and emotional needs. Students are counselled on enhancing their personality, communication skills, inter-personal skills, etc. **Counsellors are available in-house** to deal with issues like relationships, addiction, depression.

Students are encouraged and supported to participate in inter-collegiate as well as national level technical activities like conferences, training programmes, competions like Smart India Hackathon, SAE BAJA, ISNEE GKDC, Robocon, etc.

Weak students are supported through bridge courses, remedial coaching and mentoring thereby improving academic results. Moreover, aptitude training and career counselling have helped Students' to qualify for competitive examination like GRE, TOEFL, GMAT, GATE for higher education.

Students are encouraged and supported to participate in sports activities at inter-collegiate, state and national level. Students have participated in various inter-collegiate sports competition and won prizes.

Institute has Grievance Redressal Cell for speedy resolution of the issues raised by students. Students grievances are addressed at various levels in person with multiple level escalation matrix helping in speedy resolution of students' issues.

The Student Council is responsible for all the major technical, cultural, literary and sports activities organized in the college premises. Institute regularly engages students through Anti-ragging, IQAC, CDC, Training and Placement, SC/ST/OBC, Women's Development Cell, Minorities Cell, Canteen, Website Development and maintenance, Disciplinary and Library committees.

The institute engages regularly with its alumni who contribute in conducting training and workshops, industrial visits, delivering expert lecture, mentoring student projects, etc. A formal alumni meet was conducted in 2017 as 'Synchrony 2017'. The DBIT Alumni Association was formalised in March 2018 with the constitution of a formally elected body.

## Governance, Leadership and Management

In line with the Vision and Mission statement the faculty of the institute have been empowered by the Management to collectively manage and monitor the academics, housekeeping, student activities, research etc.

Deans and HoDs have the autonomy to manage their department as effectively as possible within the guidelines provided by the management.

To decentralize the decision making process and speed up implementation of decisions several faculty committees have been formed, who meet on a regular basis to plan and execute activities for the semester.

The institute demonstrates its concern for staff well being by creating a congenial and caring environment on campus. Faculty are encouraged to participate in career development activities like qualification enhancement, paper presentations, attending seminars, conferences, training programs, internships, research, consultancy & certification programs. Student teams are also encouraged and sponsored to attend sports and cultural events, technical competitions, hackathons, internships etc. Non-teaching staff are supported to enhance their qualifications, train in new technologies, improve communication skills, undergo certifications, etc.

We strive to develop problem solving abilities and entrepreneurial attitude with social commitment in every student by engaging them innovatively in challenging real life problems.

The LMC/ CDC and IQAC meeting are conducted to discuss the growth and development of the institute in aspects like academics, placement, manpower requirements, infrastructure, annual budget, co-curricular and extra-curricular activities. In order to generate quality awareness among the teaching and non-teaching staff, training program on ISO 9001:2015 was conducted. Various processes for teaching learning and administration are designed to ensure proper implementation of institute quality policy.

DBIT promotes research at the undergraduate level. A carefully planned out research strategy has been implemented over the years which has helped in fostering a research culture on the campus.

The institute has a very robust mechanism to conduct faculty appraisal and evaluate performance. The appraisal system is merit based and is not only used as a tool to offer or deny increments and promotions but also for faculty self development. The institute also has a well developed mechanism for review of teaching learning processes and learning outcomes.

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

Striving to achieve the goals as guided by its Vision and Mission statements, DBIT provides a holistic learning environment that enhances individual success, the Don Bosco way. Although skill development and achieving core competencies is crucial for success of students to face the global challenges ,DBIT takes the responsibility of inculcating desirable value system among students.

DBIT is committed to encourage equality and diversity among its staff and students and create an environment free of unlawful discrimination, promoting dignity and respect for all. The institute strongly advocates gender equality and promotes equal representation and participation of women in decision making at the professional and administrative levels.

The Institute also displays sensitivity to environmental issues and adopts environment friendly practices and takes necessary actions. DBIT is a member of the **Don Bosco Green Alliance** which is an international collective of young people from Don Bosco institutions and organisations that contribute to global environmental action, thought and policy.

In order to be relevant in the changing national and global context and be responsive to the emerging challenges, DBIT promotes research at the undergraduate level. The institute has been proactive in its efforts towards social development and this role of the institute is reflected in terms of the kind of projects the students undertake and also the programmes and activities which are held. The concern for promoting social responsibilities and values along with sustainable development among future professionals are explicit in the regular activities conducted in the campus . The NSS unit of DBIT plays a very important role for creating an impact and raising social sensitiveness among the students. Students are encouraged to engage in community development and are made to interact with the tribal villagers and use technology to bring about minor positive changes in their lives.

# **2. PROFILE**

## **2.1 BASIC INFORMATION**

Name and Address of the College		
Name	DON BOSCO INSTITUTE OF TECHNOLOGY	
Address	Don Bosco Institute of Technology Premier Automobiles Road, Kurla (west) - Mumbai - 400070	
City	Mumbai	
State	Maharashtra	
Pin	400070	
Website	www.dbit.in	

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Prasanna Nambiar	022-25040508	9820080079	022-2504068 2	dbit@dbit.in
IQAC Coordinator	Sudhakar Mande	022-25041585	9867285270	022-2503563 2	iqac.dbit@dbclmu mbai.org

Status of the Institution	
Institution Status	Private and Self Financing
	1

Type of Institution	
By Gender	Co-education
By Shift	Regular Evening

Recognized Minority institution		
If it is a recognized minroity institution	Yes <u>Minority Certificate.pdf</u>	
If Yes, Specify minority status		
Religious	Roman Catholic	
Linguistic		
Any Other		

Establishment Details	
Date of establishment of the college	28-06-2001

University to which the college is affiliated/ or which governs the college (i	f 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/App roval details Inst itution/Departme nt programme	Day,Month and year(dd-mm- yyyy)	Validity in months	Remarks
AICTE	View Document	04-04-2018	12	

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	Don Bosco Institute of Technology Premier Automobiles Road, Kurla (west) - Mumbai - 400070	Urban	5	10132				

## **2.2 ACADEMIC INFORMATION**

Details of Pro	ogrammes Offe	red by the Col	lege (Give Data	a for Current	Academic year	)
Programme Level	Name of Pr ogramme/C ourse	Duration in Months	Entry Qualificatio n	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Informati on Technology	48	HSC CET JEE	English	60	60
UG	BE,Electroni cs And Telec ommunicatio n Engineering	48	HSC CET JEE	English	60	48
UG	BE,Compute r Engineering	48	HSC CET JEE	English	60	56
UG	BE,Mechani cal Engineering	48	HSC CET JEE	English	120	118
PG	MMS,Master s In Management Studies	24	Any graduation	English	60	60

Position Details of Faculty & Staff in the College

	Teaching Faculty											
	Prof	Professor				Associate Professor			Assis	Assistant Professor		
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government		1	,	8		1	1	16			1	51
Recruited	6	1	0	7	0	2	0	2	17	34	0	51
Yet to Recruit				1				14				0
Sanctioned by the Management/Soci ety or Other Authorized Bodies				0				0	J			22
Recruited	0	0	0	0	0	0	0	0	17	5	0	22
Yet to Recruit				0				0				0

		Non-Teaching	Staff	
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	7			0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				34
Recruited	16	18	0	34
Yet to Recruit				0

		<b>Technical St</b>	aff	
	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				26
Recruited	25	1	0	26
Yet to Recruit				0

## Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualificatio n			Associate Professor		Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	6	1	0	0	2	0	0	0	0	9
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	34	39	0	73

<b>Temporary Teachers</b>											
Highest Qualificatio n	Professor			Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total	
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	4	2	0	6	

Part Time Teachers										
Highest Qualificatio n				Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
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		99999999999999999999999999999999999999		
Number of Visiting/Guest Faculty	Male	Female	Others	Total
engaged with the college?	17	0	0	17

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	223	3	0	0	226
	Female	56	0	0	0	56
	Others	0	0	0	0	0
PG	Male	29	1	0	0	30
	Female	29	1	0	0	30
	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	2	1	3	1
	Female	2	2	3	1
	Others	0	0	0	0
ST	Male	0	0	0	0
	Female	1	0	0	1
	Others	0	0	0	0
OBC	Male	14	10	13	13
	Female	3	2	3	1
	Others	0	0	0	0
General	Male	234	217	245	241
	Female	79	70	78	75
	Others	0	0	0	0
Others	Male	6	3	1	0
	Female	1	2	2	2
	Others	0	0	0	0
Total		342	307	348	335

## **3. Extended Profile**

## 3.1 Program

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

Response: 585	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
5	5	5	5	5

## **3.2 Students**

## Number of students year-wise during the last five years

2017-18	2016-17	2015-16		2014-15	2013-14
1516	1499	1512		1541	1527
File Description			Docum	nent	
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
1	1	1		1	1
File Description			Docum	nent	
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
386	399	419	438	384

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
88	92	101		101	105
File Description			Docum	nent	
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	
88	92	101		101	105	
File Description			Docum	nent		
Institutional data i	n prescribed format		View	<u>Document</u>		

## **3.4 Institution**

## Total number of classrooms and seminar halls

## **Response: 19**

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

2017-18	2016-17	2015-16	2014-15	2013-14
315.15	366.90	461.71	554	529.24

## Number of computers

## **Response: 941**

## 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:**

Curricular planning and its implementation takes place in 3 phases as follows:

1) Pre-Semester

2) In-Semester

3) Post-Semester.

## Phase- 1: Pre-Semester

Curricular planning begins with the allocation of course(s) to the faculty. The faculty plans his/her delivery of allotted course(s) by preparing the Teaching, Lesson and the Practical plan.

Inputs used for course planning are:

- Curriculum provided by university
- Input of Academic Advisory Committee
- Feedback from alumni
- Programme Outcomes as per NBA.

Once course planning is done, gaps are identified and curricular and co-curricular activities are planned to fill the gap.

Course material like Teaching Plan, Assessment Plan, Assignments, Lecture Notes, etc. are uploaded on the LMS – Moodle for students and on MIS for academic monitoring.

Institute level academic calendar is prepared and based on which each department prepares the department level calendar.

## Phase- 2: In-Semester

The faculty executes the curricular and co-curricular plan. Course material is made available to the student on LMS – Moodle for self-study. Students are provided access to the course material on and off campus on

their smart phone as well as on computers.

Pre-requisite test is conducted to plan the course delivery. The results of Pre-requisite and Internal Assessment - 1 are used to identify weak and bright students. Remedial sessions are conducted for weak students and challenging assignments are given to brighter students

Following Academic Monitoring activities to ensure quality are conducted:

- Feedback on course delivery from the students
- Course delivery monitoring by members of AMC.
- Audit of Course Material
- Lab Audit
- Attendance Monitoring of students & counselling of students with poor attendance
- Mentoring of students

### **Phase- 3: Post-Semester**

Students provide feedback on the course conduct and attainment of learning outcomes. This information is analysed to provide inputs for the next cycle.

Exam audit is conducted to ensure transparency and integrity in the assessment process.

Attainment of Course Outcome with reference to Program Outcome is calculated and used for improvement in the next cycle.

File Description	Document
Any 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
Minutes of relevant Academic Council/BOS meetings	View 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: 4.11

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
3	1	0	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: 100

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

Response: 585

File Description	Document
Minutes of relevant Academic Council/BOS meetings.	View 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: 5

File Description	Document	
Name of the programs in which CBCS is implemented	View Document	
Minutes of relevant Academic Council/BOS meetings.	View Document	

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

**Response:** 5.9

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

2017-18	2016-17	2015-16	2014-15	2013-14
157	163	57	35	34

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:** 

The vision statement of DBIT is as follows:

"The Don Bosco Institute of Technology (DBIT) will be known to have an innovative, enjoy able and holistic learning environment that transforms individuals into socially conscious citizens the Don Bosco Way, and will lead in research and entrepreneurship in the area of sustainable technologies."

The "Preventive System" of Don Bosco based on the principles of Rapport, Religion, Reason and Presence is practiced on campus. Every faculty and students are introduced to this system to inculcate the human values and ethics.

As part of the First year orientation program students are made aware of the following through lectures and practical sessions and various competition:

- Curricular aspects
  - Students are introduced to the various facets of engineering profession through interaction with industry professionals including alumni.
- Yoga, self-defence and good dietary habits:
  - Students are taught posture, introduction to meditation, good eating habits.
- Environment and Sustainability
  - Students participate in a "Sustainability" competition held each year in which they design prototypes of systems to solve specific environmental issues.
- Gender Sensitization
  - Students are made aware of the provisions of "Sexual harassment Act" and encouraged to be sensitive to others need.
- Human Values
  - Developing right attitude in life and in one's profession.

Every department aims to have 20% of their final year projects based on Environment and Sustainability.

Awareness relating to the issues of Human values, Environment and Sustainability are done through participation of students in various activities. Following are the list of activities which are carried out regularly at the institute:

- Adoption of tribal village :
  - DBIT has adopted the tribal villages of Walvanda, Adkhadak and Fanaspada in Jawhar Taluka of Palghar district. Student volunteers engage with the local tribals and carry out activities like; enhancing tribal lifestyles through rain water harvesting, design of trolley to carry water, improved design of chulas, introduction of solar devices as part of their final year project.
- Addressing community needs using technology
  - Projects are undertaken to solve the issues faced by the community. Some of the examples are Crime mapping, e-RTO, GIS mapping of schools, GIS mapping of Mithi river, Nallah cleaning without human intervention.

Formal training in Business Communication & Ethics is given to students as part of curriculum. The students are exposed to the professional ethics while they work with the various Professional bodies like the IEEE, ACM etc.

File Description	Document	
Any Additional Information	View Document	

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

## **Response:** 5

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

Response: 5

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: 8.25

1.3.3.1 Number of students undertaking field projects or internships

Response: 125

File Description	Document
List of students enrolled	View Document
Institutional data in prescribed format	View Document
Any additional information	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-wiseA.Any 4 of the above

Sell S	study Report of DON DOSCO INSTITUTE OF TECHNOLOGY
B.Any 3 of the above	
C. Any 2 of the above	
D. Any 1 of the above	
<b>Response:</b> A.Any 4 of the above	
File Description	Document
Any additional information	View Document
URL for stakeholder feedback report	View Document
<ul> <li>1.4.2 Feedback processes of the institution ma</li> <li>A. Feedback collected, analysed and action ta</li> <li>B. Feedback collected, analysed and action ha</li> <li>C. Feedback collected and analysed</li> <li>D. Feedback collected</li> <li>Response: C. Feedback collected and analysed</li> </ul>	ken and feedback available on website
File Description	Document
Any additional information	View Document

## **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: 0.38

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	5	10	6	3

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

## 2.1.2 Average Enrollment percentage (Average of last five years)

## Response: 92.61

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
342	307	348	335	335

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
360	360	360	360	360

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:** 0

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
0	0	0	0	0
ile Deserintie			Decument	
ile Descriptio	n		Document	
-	on ta in prescribed form		Document View Document	1

## 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:**

Ours is a minority institute where 51% of the students are admitted under the Catholic Christian religious minority quota. There is therefore a wide variation in the merit ranking of the students as well as their learning levels.

An **internal study** carried out in 2016-17 by the institute faculty on the **learning styles** of the students revealed that 45% of the students are **Kinesthetic Learners** who learn by doing and being actively involved in hands-on activities. Therefore our teaching methods are adapted accordingly.

In addition to classroom training, students are engaged in **Project Based Learning**. Students groups work on **Mini-Projects** in various subjects of the First year and submit project reports or make presentations.

The teaching –learning methodology caters to the needs of the slow as well as advanced learners. The institute adopts the following methods :

- Each class has a balanced mix of high ranking and low ranking students to encourage peer learning
- Senior and experienced faculty are assigned to teach the first year students. The faculty are fully dedicated to teaching the first year students and are not assigned any other class. This ensures their accessibility to the students at all times
- Subject notes are uploaded on the LMS platform MOODLE and can be accessed by each student on her mobile and laptop.

• A **faculty mentor** is assigned to each student to understand her difficulties and provide guidance and encouragement. The mentorship document captures all details of the student and thereby provides the faculty mentor with an understanding of her academic abilities, any health concerns, financial background of the family, her dreams and aspirations and hobbies and other interests.

## Methodology for student assessment and improvement :

- An assessment of the newly admitted students' academic abilities is done through an in-house developed **'Competency Test'** which is administered within a month of the student being admitted. These tests are Multiple Choice as well as descriptive and are conducted for Maths, Physics and Chemistry.
- MMS department has outside companies come to campus to administer aptitude tests / online assessments, the results of which are used to guide students in terms of their career choices / specialisations (such as marketing, finance, human resources, etc).
- The performance in the competency test coupled with the first class test results is used to identify slow and advanced learners.
- Based on the above the following measures are taken:
- Close academic monitoring and counselling of slow learners
- Remedial classes for slow learners where the faculty also engages senior students as teachers
- Challenging assignments and projects for advanced learners
- Student attendance is closely monitored . Parents of defaulting students are summoned and the student is counselled
- To assess their communication skills the students are examined for written as well as oral communication. The students who are weak in communication are trained in speaking and writing skills through extra sessions

File Description	Document
Any additional information	View Document

## 2.2.2 Student - Full time teacher ratio

Response: 17.23

File Description	Document
Any additional information	View Document

2.2.3 Percentage of differently abled students (Divyangjan) on rolls	
Response: 0.13	
2.2.3.1 Number of differently abled students on rolls	
Response: 02	
File Description	Document
List of students(differently abled)	View Document
Institutional data in prescribed format	View Document
Any other document submitted by the Institution to a Government agency giving this information	View Document
Any additional information	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:**

In DBIT there is a wide variation in the academic scores of the students admitted as well as their learning abilities. As per an internal survey nearly 45% of the students are kinesthetic learners who prefer to learn by doing. Hence various teaching methods are implemented to enhance student engagement as follows:

## **CLASSROOM ENGAGEMENT:**

- 1. The teaching –learning process is a combination of classroom teaching, practical working, seminar presentations, industry visits and project work
- 2. Outcome based education system is followed and students are assessed on the knowledge and skills demonstrated by them
- 3. Classroom engagement is through lectures using black board and chalk, power point presentations and videos. All classrooms are ICT enabled to facilitate this.
- 4. Guest faculty and expert faculty are invited to share information with students on latest technology and current trends

## **COURSE MATERIAL:**

- 1. All lecture notes, presentations and other learning material are uploaded by the subject teacher on the Learning Management System, MOODLE. Students can refer to these notes at their convenience on their mobile phones or laptops in college as well as outside permitting them to revise the material taught in the class and cover up any missed lectures. In MMS the soft copy of the notes are made available to the students.
- 2. Faculty uses MOODLE for discussions, forums, uploading of assignments and practical work, introducing concepts through games like snakes and ladders.

## **PRACTICAL WORKING:**

- 1. Project based learning is promoted to engage students in ideation, critical thinking and team working. They also learn to make impactful presentations
- 2. Practical sessions are conducted to reinforce theoretical concepts, train students in measuring and recording data, analysing data and drawing significant conclusions
- 3. All laboratories are fully equipped with high quality equipment & measuring tools.
- 4. Group discussions, debates, role plays, interview sessions are conducted in courses like Environmental studies, Business communication and Ethics
- 5. Industry visits are organised to enable students to relate their theoretical studies with practical working
- 6. Students are encouraged to undertake internships during their vacation periods.

### **RESOURCES:**

- 1.Library facilities cater to all student academic requirements. Digital library with e-books is available. High quality national and international journals, technical and general magazines, videos, technical books and books for general reading.
- 2. Good computing facilities, internet facilities with 2 lines of 30 Mbps each and wi-fi is provided on campus.

## **OVERALL DEVELOPMENT:**

1.DBIT believes in holistic development of the students. Leadership abilities, team working, time management, resource planning, report writing, finance management and other such skills are imparted to the students by engaging them to organise activities like HYSTERIA ( cultural and sports festival), COLOSSEUM ( technical festival), SAMVAAD ( Mock Parliament), INNOVEX ( Project exhibition), Social Business Summit.

2. Community engagement is an important element of life on DBIT. Students are sensitized to societal needs through engagement with the local community. Students teach the local school children maths, computer, communication and sports. The local women are trained in English speaking and computer skills.

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:** 97.73

2.3.2.1 Number of teachers using ICT

Response: 86

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: 17.23		
2.3.3.1 Number of mentors		
Response: 88		
File Description	Document	
Any additional information	View Document	

### 2.3.4 Innovation and creativity in teaching-learning

### **Response:**

At DBIT, Creativity and Innovation is introduced into the teaching learning process through various initiatives which encourage the students to look beyond conventional text books for gaining knowledge.

These are :

## **INNOVATION AND CREATIVITY:**

- 1. **Mini projects**: Students prepare physical working models, write programs based on specific topics in the curriculum. They work as a team, create the design, develop the model and test it. The students submit a report and make a project presentation. Mini projects are used as assessment tool as an alternative to the written test thereby evaluating the students' skills in the cognitive, affective and psychomotor domains.
- 2. Seminars: Students are encouraged to research on contemporary issues and share their findings through a seminar presentation. They are further encouraged to get deeper into the topic and pursue it as their final year project. MMS students do a book review.
- 3. **Designing experiments**: Some student teams have designed laboratory experimental set ups as part of their project. These experiments are used for demonstrating important principles to the students
- 4. **Final year projects**: Students are encouraged to think of innovative project ideas to be executed in the final year of their undergraduate studies. For this purpose they are exposed to various technologies through the following means:
- Industry visits to understand state of the art technologies. Also to assess industry requirements and select industry problems for solving.
- Expert lectures by industry personnel to understand the practical significance of the concepts taught in the classroom.

## **CRITICAL THINKING:**

- 1. **Design Thinking Workshop**: Students are trained to identify complex problems which could be technical or social in nature and to evolve a User Centred Design that focuses on the specific needs of the end user.
- 2. **Community engagement**: Field visits are conducted to engage the students with the community and understand the larger issues related to health, education, communication, safety, etc. Students work on open ended problems and seek to provide solutions that directly impact society. Some examples are GIS mapping of water bodies in Latur district, Design of water carrying trolley to ease head load of tribal women, design and development of a HYDRAM to lift water, etc.
- 3. **Competitions**: Student teams participate in challenging competitions like SMART HACKATHON, which encourages student teams to use technology to solve a social problem. In ROBOCON the student teams use their skills in building robots to complete a specific task and in SAE BAJA the
student teams design and build an all terrain vehicle. PHYSICS CLUB organizes Poster making competition and the literary scoirt organizes Parliamenatry debate, SAMVAAD.

#### **DEVELOPING TECHNICAL APTITUDE:**

- 1.Student chapters of IEEE, IETE, ACM, CSI, ISHRAE, SAE are formed and student members inducted
- 2. **Skill development workshops**: Students are trained in specific skills like CNC machine operation, Computational Fluid Dynamics, Networking, PCB building, Web page making, android programming, robot making, HAM workshops etc.
- 3. **Certification**: Several certification programmes like Oracle, Android, CCNA network certification, Piping, etc are conducted to enhance student understanding and improve their employability

File Description	Document
Any additional information	View Document

#### 2.4 Teacher Profile and Quality

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

#### Response: 100

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
Any additional information	View Document

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

#### Response: 8.52

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

2017-18	017-18 2016-17 2015-16 2014-15		2013-14		
9	10	9	6	7	
File Description	0 <b>n</b>		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: 11.06				
2.4.3.1 Total experience of full-time teachers				
Response: 973				
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: 5.13

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	2016-17 2015-16		2013-14	
1	4	0	0	0	
Tile Descriptio	n		Document		
-	n ta in prescribed form	at	Document View Document		

# 2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years

Response: 17.95

2.4.5.1 Numbe	r of full time teacher	s from other state	s year-wise during the la	st five years	
2017-18	2016-17	2015-16	2014-15	2013-14	
17	18	18	17	17	
File Description	)n		Document		
	e teachers from other alifying degree was o		View Document		

#### **2.5 Evaluation Process and Reforms**

#### 2.5.1 Reforms in Continuous Internal Evaluation(CIE) system at the institutional level

#### **Response:**

We follow the semester pattern system of the university in which there is one end semester exam and 2 internal assessment tests at UG level while in MMS there is one end semester examination, one mid-term examination, and presentation with weightage to the attendance. The evaluation process as practiced in DBIT focuses on regular and timely assessment and feedback to the students.

The Exam Committee, comprising of members from each department, ensures proper conduct of all forms of assessment and timely submission of results and other data.

Apart from the End Semester exams which are administered by the University of Mumbai, oral and practical exams and Internal Assessment tests prescribed by the university are also conducted. Additionally students are evaluated for attainment of Learning Outcomes in the classroom as well as the laboratories.

The process followed for the End Semester written assessment is given below:

- Students register for exams online for the first year and final year of engineering. For the 2nd and 3rd year the exams forms are filled offline
- University declares the exam dates for all end semester exams
- For each subject a team of 3 paper setters submit 3 sets of question papers to the university exam section along with the answer key. One of these papers is randomly selected for the exams
- Question papers can be downloaded only from the link provided by the university one hour prior to the exam, to prevent any leakage.
- Answer books are bar-coded for semester –I,II, VII, VIII exams and scanned and uploaded for Online Marking System ( OMR). Approved examiners assess the papers online and submit the

marks after which the papers are moderated and the marksheet is generated.

- For the remaining semesters assessment and moderation is carried out within the institute and marksheets are prepared.
- A committee of senior faculty approve any grace marks and certify the complied marksheet.
- After declaration of results students can apply for revaluation/ photocopy within 20 days.
- Students can apply to the grievance cell if they are dissatisfied with the revalution.

#### PRACTICAL AND ORAL EXAMS:

- Practicals exams and oral exams are conducted in the presence of an external examiner.
- A question bank of probable questions that could be asked in the oral exams is shared with the students.
- Practice sessions are conducted for the students to boost their confidence while appearing for a practical exam.

#### **INTERNAL ASSESSMENT TESTS:**

- For the internal assessment exams the syllabus and question bank are shared with the students.
- Faculty prepares question paper in accordance with guidelines given by the university.
- HOD reviews and signs the question paper before sending to exam section for printing.
- Answer key with assessment rubrics is submitted to the exam section and also uploaded on MOODLE for any future reference by the students.
- An exam audit is conducted to ensure that the laid down processes are followed.
- Any grievance is submitted to the Grievance Redressal Committee for due action.

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

**Response:** 

- The institute has constituted a separate examination cell headed by the Controller of Examinations to ensure that all the processes related to the conduct of the examination are carried out diligently.
- The exam committee assists the COE in smooth conduct of the exams and ensures adherence to University norms and timely declaration of results.
- The assessment is carried out as per the university norms with 80% weightage for End Semester eams and 20% weightage for Internal Assessment(IA) Test. The Internal Assessment (IA) tests are a separate head of passing and are conducted twice in a semester as per the university norms
- Students are made aware of the examination scheme and the weightage for end semester examination, internal assessments, oral & practical examination as prescribed by the UoM.
- The rubrics for evaluation of all internal assessment activities are prepared in advance and shared with the students.
- The tests are declared well in advance and are scheduled as per the dates mentioned in the academic calendar.
- The exams are conducted strictly as per the university guidelines. All junior and senior supervisors are made aware of the rules and regulations regarding invigilation and handling of unfair practices.
- An internal squad is appointed to ensure that no malpractices take place.
- CCTV cameras are placed in all examination halls and are monitored by the the Senior Supervisor from the exam control room.
- Answer papers are moderated after assessment by the examiner. Moderators feedback is collected and shared with the examiner for improvement
- After the declaration of results the student can apply for revaluation and/or photocopy of her answer sheets . If the student is not satisfied with the revaluation results she can approach the Internal Grievance Committee or the University Grievance Cell for redressal.
- An exam audit is conducted to ensure that all processes are followed during assessment
- The Internal Assessment is conducted at the institute level in a manner similar to the end semester examination with proper seating arrangement and invigilation by faculty.
- Oral and practical examinations are conducted as per the guidelines and the schedule declared by UoM. The examiners are appointed as per the norms of UoM.
- Students mini projects, tutorials, assignments are graded as per the rubrics designed by the respective faculty in-charges thereby maintaining transparency. Evaluation of the laboratory sessions, assignments is done by the faculty as per pre-defined rubrics. Many faculty members make use of the learning management software Moodle for conducting quizzes, tests, etc. as part of their rubrics for term work assessment.

• In addition to the theory subjects, the final year students are also evaluated for the final year project through progress presentations and demonstration of the project. The projects are also evaluated by external experts during an annual project competition for all the final year students. Students' exam related information is stored in digital format.

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

#### **Response:**

DBIT has a very effective and transparent mechanism to deal with grievances related to assessment, communication of various rules and notices, timely declaration of results and victimisation by faculty members.

- The Exam Committee headed by the Controller of Exams (COE) is responsible for all exam related issues.
- Each department has a dedicated Exam Notice Board which displays all relevant information related to exams.
- The names of the members of the Grievance Redressal Committee is prominently displayed for the benefit of the students
- University prescribed procedures are strictly adhered to while handling any kind of grievance
- Grievances related to all forms of internal assessment like IA test, seminars, class tests, assignments and term work are handled by the COE and the Exam Committee.
- Grievances related to End semester theory exams, orals and practical exams, errors in convocation certificate are forwarded to the university through proper channels as prescribed by the university. The students are given guidance to follow the proper course of action in this regard.
- Practical and oral exams are conducted in the presence of an internal and external examiner. Each examiner submits her marks separately and the average marks are entered in the final marksheet
- All end semester answer books are masked and coded to conceal the identity of the examinee.
- Assessment and moderation are done by experienced approved faculty of the University. A formal letter of appointment is issued to the examiners with mention of the assessment deadline.
- Examiner is made to submit the answer key to the exam section with proper marking scheme and rubrics before starting the assessment

- Moderators' feedback is taken for the correctness of the solution and the marking scheme. The feedback is shared with the examiner.
- An examination audit is carried out to ensure that the process has been correctly followed
- In case of grievances related to the marks obtained by the candidate, he / she can apply for photocopy of the answer book and / or apply for reverification of the answer book within the stipulated time as notified through the notices displayed on the institute notice board. Photocopies of the answerbooks are made available on demand if the candidate applies within the specified period after submission of requisite fees as informed via a notice put up after declaration of the results.
- If there is any discrepancy brought to the notice of the exam dept by the candidate, viz. error in totalling, unassessed question / sub-question, candidate is not satisfied with the assessment, he/she can apply to the University/Institute through the Principal's permission along with the said photocopy. Revaluation process is time bound and the results of the same are declared immediately after receiving them from the UoM.

File Description	Document	
Link for Additional Information	View Document	

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

#### **Response:**

Preparation of the the academic calendar is an important activity since it maps the academic, co-curricular and extra-curricular activities for the term.

- The academic calendar is prepared at the institutional level as well as at the departmental level, a week prior to the commencement of the term, after consultations with the Heads of Departments, Deans and representatives of the Student Council.
- The Student Council prepares a calendar of the co-curricular and extra –curricular activities during the semester. This is to ensure that the students have adequate time to prepare for the assessment test.
- The Exam Section prepares a tentative calendar for Internal Assessment and End Semester exams with deadlines for activities like submission of question paper, completion of assessment, submission of results, etc.
- Tentative dates for commencement of oral and practical exams and end semester theory exams are also marked. The dates are revised after receiving formal circulars from the University

- Dates for filling of exam forms, collection of hall tickets, application for revaluation, etc. are announced separately after declaration of results.
- Exam calendar is displayed on the exam notice boards of the department
- Any change in the exam calendar is immediately notified to the students
- Every effort is taken to ensure that the calendar is adhered to. The calendar is prepared in consultation with the HODs and Deans and the representatives

File Description	Document
Any 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:**

Our institute uses the Programme Outcomes (Graduate Attributes) framed by the National Board of Accreditation (NBA) and our Vision-Mission statement as the framework to define our Programme Educational Outcomes (PEO), the Programme Specific Outcomes (PSO) and the Course Outcomes (CO).

- Each faculty prepares a teaching –learning plan and lesson plan for hisher course at the beginning of the semester.
- Learning Outcomes (LO) are framed for each lecture
- The COs are framed from the Lecture Outcomes .
- Each CO maps to a particular level of Bloom's Taxonomy in the cognitive domain
- The COs are mapped to the Programme Outcomes (PO) and gap areas are identified
- Value added courses, certificate courses, mini projects, seminars, expert talks, etc are planned to address the gaps
- The faculty share the COs with the student right at the beginning of the course
- The COs are uploaded on MOODLE and are viewed by the students when they access the course files. They are also displayed on the website
- COs are displayed in the laboratories for the students' reference

File Description	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:**

DBIT has been a specific process defined for measuring attainment levels of Program Outcomes (POs), Program Specific Outcomes(PSOs) and Course Outcome (CO) for each course.

The teacher designing the course material has the prerogative of deciding the attainment levels, since the centre of every activity leads to pinnacle of learning levels for the students.

#### Example:

Course Name:	Course name		
Faculty Name:	Faculty name		
Year	2	Sem	III
CO Name		Brief Description	n of the attainment levels
CO1	CO1		40 % of students
CO2			than 50 % marks
CO3		2	60 % of students
CO4			than 50 % marks
CO5		3	80 % of students
CO6			than 50 % marks

#### Table 1: CO attainment levels

Every Course outcome planned by the teacher maps on to PO over a correlation levels of 1 to 3. This level between 1 to 3 is determined by the teacher's proficiency in the course. For example for PO1 the teacher uses a metric as below.

#### **Correlation level 1. Slight (Low)**

When in the course student solves only topic/subject related problems/questions from books, exams etc.

#### **Correlation level 2. Moderate (Medium)**

When in the course student solves topic/subject related problems/questions from real life situations.

#### **Correlation level 3. Substantial (High)**

When in the course student solves problems/questions from real life situations related to multiple topics/subjects linked with the course.

PO/PSOs are competency which a student should acquire at the end of four years of engineering studies. Each CO in a given course is mapped to PO/PSOs.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P
Course Outcome 1	2	2	2	2	2	0	0	0	2	0	2

#### Table 2: CO-PO mapping

The attainment levels as measured in Table 1 and the correlation levels of Table 2 communicate the learning levels obtained by students of a particular course.

The weightage decided for assessment tools can be as follows:

- Internal Assessment 1 20% or 25%
- Internal Assessment 2 20% or 25%
- Other internal assessment tools 10% or Nil [optional]
- University exam 50%

**For example:** at the end of the semester, let the following be the CO attainment table obtained for a course with respect to various assessment tools used.

Asssessme nt tools used	Weightage	Attainment o	Attainment of						
		CO1	CO2	CO3	CO4	CO5			
IA test 1	20%	2	1						
IA test 2	20%		2	1	2				
Class test (others)	10%					2			
University exam	50%	2	2	2	2				
Total		2*0.2+2*0. 5=1.4	1.6	1.2	1.4	0.2	1.45		

So the average attainment level for the course is 1.45.

This value is entered in the CO - PO table for all the POs to which this course is mapped.

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO
Name (Code)	1.45	1.45	1.45	1.45	1.45	0	0	0	1.45		1.4
File Desc	ription				]	Document					
Any addi	- tional inf	formation			2	View Docur	nent	1			
) ( ) A			tage of St	udonta		-					]
2.0.5 Ave	erage pas	ss percen	lage of St	udents							
		ss percen	lage of St	uuents							
Response	e: 90.16				passed	the examina	ation cond	ucted by I	nstitution		
Response	e: 90.16				passed	the examina	ation cond	ucted by I	nstitution		
<b>Respons</b> 2.6.3.1 To Response	e: 90.16 otal numl :: 348	ber of fina	al year stud	dents who		the examination the examination of the examination					
<b>Respons</b> 2.6.3.1 To Response	e: 90.16 otal numl :: 348 otal numl	ber of fina	al year stud	dents who							
Response 2.6.3.1 Te Response 2.6.3.2 Te Response	e: 90.16 otal numl :: 348 otal numl :: 386	ber of fina	al year stud	dents who	appeare						
Response 2.6.3.1 Te Response 2.6.3.2 Te Response File Desc	e: 90.16 otal numl a: 348 otal numl a: 386 cription	ber of fina	al year stud	dents who dents who	appear	ed for the ex	aminatior				

### 2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.38

### **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: 25.06

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
20.01	2.218	1.10	1.33	0.4

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 Percentage of teachers recognised as research guides at present

#### Response: 6.82

3.1.2.1 Number of teachers recognised as research guides

Response: 6

File Description	Document
Any additional information	View Document

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

Response: 0.9

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

Response: 28

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

Response: 155

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:**

The institute's commitment towards innovation and incubation is evident through the VISION statement. DBIT strongly believes in nurturing entrepreneurship amongst its students and faculty and has created an ecosystem for this.

The following activities have been undertaken for this purpose:

- 1.A 5 day training program is organised through 'Aspiring Entreprenuers Workshop ' designed and delivered by 'I CREATE' which is a PAN- IIT initiative to promote entrepreneurship. A batch of 25 to 30 students drawn from various programmes undergo a rigorous training in different aspects of entrepreneurship like identifying an opportunity, creating a business plan, costing and feasibility studies, marketing, etc
- 2. Students were given a week long rigorous training on a business simulation software called 'i-BizSim conducted by Dr. Ashok Ullal of International Business Simulations, Germany, where they learnt strategic planning and control. The student groups worked as teams to build and implement an international business strategy for a simulated company located in Germany.
- 3. The Technical cell of the 'Students' Council' organises events on entrepreneurship like case study discussions, business plan competition, panel discussions with industry experts
- 4. The DBCL campus signed an MoU with E & G Innovative Education Pvt. Ltd, Nashik, in April 2017 to impart entrepreneurial capacity building knowledge through various courses, teach students to set business goals, learn financial literacy, planning and execution, risk assessment, mitigation of risk in business, etc.. The MoU is for a duration of 3 years. Under the MoU an incubation centre is planned on campus to help students and alumni of DBCL incubate their businesses. As part of the MoU, twelve month training was imparted to over 16 students to understand the fundamentals of running a business.

For the creation and transfer of knowledge DBIT strongly promotes a research culture on campus. Faculty and students are encouraged to carry out research projects. The initiatives taken for the advancement of

research are as follows:

- 1. Faculty are supported and sponsored by the institute to enrol in Phd programmes in IITs
- 2. A Dean of Research & Development is appointed to facilitate research activities on campus.
- 3. Faculty are encouraged to apply for Minor Research Projects of the University of Mumbai. Each year 8-12 projects are approved by the University.
- 4. Grants ranging from 50,000/- to 2,50,00/- are sanctioned by the Management for the conduct of inhouse research to faculty who propose good research projects. Such proposals are scrutinised by an expert team before the grant is sanctioned
- 5. The institute brings out a Technical Journal, 'Don Bosco Journal of Science and Technology' comprising of papers written by the faculty and students. The articles in the journal go through rigorous selection and review process before being published
- 6. Faculty are provided monetary assistance to present papers in conferences
- 7. Adjunct faculty and Mentors are appointed to help faculty define good research projects and carry out original work
- 8. Students are encouraged to work on original ideas for their final year projects. Such projects are exhibited in INNOVEX the project exhibition and the best projects are awarded.

File Description	Document
Any 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:** 28

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
4	5	7	5	7

File Description	Document
List of workshops/seminars during the last 5 years	View Document
Any additional information	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

<b>Response:</b>	No
------------------	----

File Description	Document
e- copies of the letters of awards	View Document
Any additional information	View Document

### 3.3.3 Number of Ph.D.s awarded per teacher during the last five years

#### Response: 0.5

3.3.3.1 How many Ph.Ds awarded within last five years

Response: 3

3.3.3.2 Number of teachers recognized as guides during the last five years

Response: 6

File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document
Any additional information	View Document

#### 3.3.4 Number of research papers per teacher in the Journals notified on UGC website during the last

#### five years

#### Response: 0.25

3.3.4.1 Number	of research papers	in the Journals no	tified on UGC website c	luring the last five yea	urs
2017-18	2016-17	2015-16	2014-15	2013-14	
12	5	2	1	4	
File Descriptio	n		Document		
ist of research papers by title, author, department, ame and year of publication		View Document	1		

# **3.3.5** 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: 1.18

3.3.5.1 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
19	19	6	60	11

File Description	Document
List books and chapters in edited volumes / books published	View Document
Any additional information	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:**

The Vision statement of the institute emphasises on holistic development as well as creating socially conscious citizens who will contribute towards creating sustainable technologies.

The institute contributes to the welfare of the local communities not only through a strong NSS cadre but also through other socially relevant activities. The institute is located in an area that houses many slum dwellers and people from the under-privileged communities, which provides several avenues to serve the community. The important activities undertaken can be classified as follows:

- 1. Health and education
- 2. Skill development and training
- 3. Entrepreneurship
- 4. Technical projects to solve community problems

Under the 'UDAAN' project of the institute our students visit the neighbouring schools and conduct classes in English, Maths, Science, Computers and Personality development for students of 8th, 9th and 10th standards. The school children are taught to play volleyball, basketball and football by DBIT student volunteers in the DBIT campus. The school students are given an orientation on the various skill training facilities in the campus.

Each year Diwali Mela and Christmas Mela is organised for HIV affected kids and their families. Over 500 people including children attend these events. Our student volunteers organise games and refreshments for them.

The local basti women are trained in English speaking and computer literacy. Entrepreneurship Development Programmes are held for them to encourage them to start their own enterprise. These women entrepreneurs are encouraged to sell their ware on campus during institute events.

Each year around 70-100 students of DBIT attend a 7- day camp in the tribal village of Walvanda in Jawhar taluka of Palghar districtto interact with the locals and understand their culture. They visit the local schools and teacah the students and hold competitions for them. A student exchange programme is initiated through which our students live with the tribals for 2 days and in turn invite the tribal children to live with them in Mumbai. Such programmes have helped increase mutual respect.

The students also take up projects employ technology to improve the lives of the tribals through the following projects:

- Design and fabrication of a water transporting trolley to reduce the burden of the women while carrying drinking water (2016-17).
- Improving the design of chulahs used by the villagers which resulted in 40% savings in wood consumption (2016-18).
- Improving design of solar cookers for the tribals.
- Survey on the use of solar lamps by the villagers, with IIT Bombay
- Educating the tribal women and girls about menstrual hygiene.

- Setting up a mobile phone repeater tower in Walvanda village with the help of international funding in 2016-17.
- Installing solar powered mobile chargers in Walvanda and Phanaspada villages

In Mumbai city, student teams have worked on the following projects:

- Jal-jyoti project to improve indoor lighting in slum areas
- Design of waste collecting basket to help sewage workers remove silt from nallahs by avoiding physical contact with the filth (2017-18)
- GIS survey of Mithi river

File Description	Document
Any additional information	View 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:** 13

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
4	2	4	2	1

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: 166

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	016-17 2015-16 2	2014-15	2013-14
36	22	46	35	27
ile Descriptio	n		Document	
Reports of the	event organized		View Document	- 11
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: 7.49

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. yearwise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
136	74	165	143	51

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Govt or NGO etc	View Document
Any additional information	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: 21

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
6	5	5	3	2

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:** 3

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	
1	2	0		0	0	
		1				
File Description			Docun	ient		
e-copies of the MoUs with institution/ industry/ corporate house		View I	Document			
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years						
national, internatio	onal importance, other		View I	<u>Document</u>		

### **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:**

DBIT complies with the requirements of laid down by AICTE and DTE for infrastructure, facilities and equipment. Institute has a lush green campus. The details of the infrastructure and facilities is as follows:

- The Engineering college operates in the regular shift from 9 am to 5 pm while the MMS functions in the second shift.
- All facilities on campus are designed to satisfy regulatory requirements.
- The institute has 15 classrooms, 36 laboratories, 2 Seminar halls, an auditorium, cafeteria, office rooms, examination centre, medical rooms, boys & girls common rooms, prayer hall, students' activities centre, library and drawing halls.
- All the classrooms are well furnished, connected with LCD projector, public address system and have internet connection. Some classrooms are being fitted with Smart Boards
- The institute has a well equipped and well ventilated workshop with modern lathes, high end milling machines and shaping machines. Students are also trained on CNC lathe and Vertical Milling Centre
- All laboratories have modern and well maintained equipment. All measuring instruments are calibrated regularly.
- To expose our students to the latest technology the institute has invested in advance technology based equipments such as **3D printers, milling machines, vector network analyser, 32 bit logic analyser , flue gas analyser, antenna test measurement system** which are over and above the equipment prescribed in the syllabus.
- High end software like Matlab, ANSYS FLUENT, GENESYS, Solid Works, Mentorgraphics, ANSYS HFSS 19.1 are purchased to provide students with hands-on experience on state of the art technology and motivate them to carry out research.
- Institute maintains less than 2:1 student: computer ratio as against required 6:1 and every faculty and office staff also being provided with independent high speed internet connected computer.
- The entire campus is Wi-Fi enabled with additional high speed LAN cable connection in faculty rooms and laboratories. These facilities help faculty and students to access NPTEL courses, e-journals, webinars and reports anywhere within campus.
- CCTV cameras are placed in all classrooms and labs and inside lifts for safety of the students and

to monitor any indiscipline.

- Central library of institute has rich collection of books and has e-journals, e-books and plagiarism software. It has a Digital Library with 50 dedicated computers on which faculty and students can access e-books and journals.
- Reprography facilities are available for all students and faculty. This is a paid facility for students
- A well equipped canteen with proper seating and good ambience is available. Food served in canteen is subsidised and hygienically prepared.
- The institute has a football ground, basketball court and a volleyball court. Facilities for indoor games like carom, table tennis and chess are available. A gymnasium is also provided for staff and student usage.

File Description	Document
Any additional information	View Document

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

#### **Response:**

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

DBIT invests in holistic development of the staff and student. The institute has many facilities to foster the spirit of sportsmanship and cultural excellence. It also ensures compliance as per AICTE norms. Institute encourages students to participate in both Extracurricular and Co-curricular activities. All sports facilities are used extensively by the students

The details are as given below:

- The college has a lush green football field ( 3900 sq.m)where intra collegiate and inter-coollegiate football matches are held.
- The football ground is also used for athletic events during the college festival 'Hysteria'. Students use the grounds to play during the lunch break and after college hours.
- A basketball court is provided to play basketball matches as well as rink football and box cricket.
- Throwball and volleyball courts are available for staff and students to play during breaks and after college hours. Inter collegiate and intra-collegiate matches are held on the courts.

- The college provides a coach to train and mentor the students for various sports and to manage the sports equipment .Coaches are also engaged for training before important competitions.
- The institute supports the participation of girls and boys in inter-collegiate events of the Mumbai University. Some students participate in state and national level competitions.
- Table tennis tables, carrom boards and chess boards are provided in the girls' and boys' common rooms.
- A gymnasium with various exercising and weight training equipment is provided.
- Yoga activities are carried out in the college auditorium, Santino Mondini Hall, which is of around 5000 sq. ft area. Yoga is done during the orientation of the First Year students and during Yoga day. On other days staff and students are permitted to use the facility for Yoga.
- DBIT has a vibrant cultural scene. There are various clubs like Music, Drama, Debate, Marathi Club, Literary Society, Physics club, Maths Club, etc.Cultural events are held round the year. The events range from Onam celebrations, Teachers' Day and Engineers' Day activities, Marathi Club celebrations, Christmas Ball, College cultural and Sports festival 'HYSTERIA', College Technical festival 'COLOSSEUM', the Parliamentary debate 'SAMVAAD'.
- Student teams participate in inter-collegisate festivals like Mood Indigo, Malhar, IIT Kharagpur Spring festival, Pratibimb (VJTI), etc.
- Most of the cultural events are conducted in the Mondini Hall
- There is a music room cum recording studio which is used by students to practice.

File Description	Document
Any additional information	View Document

**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: 19

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	View Document
any additional information	View Document

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

#### Response: 21.44

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
102.52	88.57	96.68	142.58	244.29

**View Document** 

Any additional information

### 4.2 Library as a Learning Resource

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

#### **Response:**

Institute has two separate libraries for Engineering and MMS programs. Both the libraries have reference, circulation, periodical, multimedia, issue-return & reading sections. The reading room is well furnished to accommodate students at a time and provides conductive environment for study. They have all types of required text books, reference books, periodicals and journals. Both the libraries are automated using Open Source Koha Library Management System, which unable the students and faculty to check books availability anywhere in the campus. It also helps to maintains record of books issue and return. Both students and staff can also access the library services from outside the campus, through web Access OPAC, http://opac.dbit.in. Institute also cultivate research culture amongst students and faculty. To avoid plagiarism, institute has plagiarism software. Institute also annually takes subscription of international e-journals and made it available on all computers in the institute. Both the libraries have dedicated 31 and 20 computer terminals connected with 50 Mbps internet, so that students can access e-journals, NPTEL video and notes. Library has taken steps to tie up with other technical libraries like IIT Bombay, NDL and others, to augment its services. Peer library committee which also includes students participation, review the progress of library.

Year	Name of ILMS software	Nature of automation	Version	Year of automation	
		(fully or partially)			
2012-13	Koha & E- granthalaya	Fully	3.08 & 3.0 (rev.23)	2012	
2013-14	Koha & E- granthalaya	Fully	3.08 & 3.0 (rev.24)	2012	
2014-15	Koha & E- granthalaya	Fully	3.08 & 3.0 (rev.25)	2012	
2015-16	Koha	Fully	3.08 & 3.20	2012	
2016-17	Koha	Fully	3.08 & 3.20	2012	
2017-18	Koha	Fully	17.11 & 17.11	2018	

#### Table : Details of ILMS software at DBIT

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

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

#### **Response:**

The institute maintains required number of text books, reference books as per the syllabus prescribed by the University of Mumbai. As part of research culture, institute has rich collection of books which are rarely available in related vicinity colleges. These book are mostly from renowned authors. This not only helps the faculty for their research and development but also helps in improving academic performance of students.

These books are also useful for carrying out final year project of the students.

File Description	Document
Any 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	
<b>Response:</b> A. Any 4 of the above	
File Description	Document
Details of subscriptions like e-journals,e-	View Document
ShodhSindhu,Shodhganga Membership etc	
should ment of the should be should be the	
Any additional information	View Document

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

### Response: 19.13

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
10.513	15.992	28.382	21.430	19.348

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

4.2.5 Availability of remote access to e	-resources of the library
Response: Yes	
File Description	Document
Any additional information	View Document

4.2.6 Percentage per day usage of library by	y teachers and students
Response: 14.46	
4.2.6.1 Average number of teachers and studen	nts using library per day over last one year
Response: 232	
Response: 232 File Description	Document

#### **4.3 IT Infrastructure**

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

#### **Response:**

DBIT provides its students with well equipped laboratories for all their computing needs. The institute has a total of **1126** computers for its students and staff. Internet access of **60 Mbps** is provided for everyday activities and is increased on demand for any extra technical activities. Internet facility is also extended to all the classrooms, library, faculty room, seminar halls and offices. In addition to high speed LAN connection, routers are also available for **wireless Internet facility** for the students and faculty. The high performance servers having 12 to 32 GB RAM with Xeon and IBM processor are deployed in the institute to deliver efficient Internet speed to the users. Institute has hosted all **web services** internally using **Apache** server. We use **IPCop** as a firewall for protecting all servers from outside attacks.

DBIT has a Central login authentication system (LDAP) for using all available services in the campus. Institute uses many open source softwares and application for various processes and activities. Most of the labs have machines with Linux OS. For faster installation of softwares we make use of Apt-catcher as the internal caching server. The Zimbra mail server is hosted for official communication. The institute makes use of One or Zero Helpdesk & Task Management System for raising technical support requests within the campus. Open source softwares like Koha for library management and Moodle as a learning management system for academic activities are used. **Biometric login system** is used for staff attendance management. All students and faculty are provided with storage space in **DBCL Drive**, a cloud based self-hosted file sync and share solution.

All classrooms are provided with **LCD projector, audio system and high speed Internet connection.** Institute frequently conducts **technical activities** like the annual Tech Fest Colosseum and other smaller events conducted by the technical bodies like CSI,ACM,IEEE etc., where it ensures, sufficient Internet speed is made available to the students.

Institute has dedicated support staff for maintaining the IT facilities in the campus. It has developed inhouse software applications such as MIS and NEST for computerization of processes and for efficient functioning.

**MIS** is an exclusive management information system where students and staff profile is maintained. It helps in maintaining academic record of students in terms of their attendance, internal marks etc. Students feedback is also conducted in MIS. Faculties make use of this system to upload the teaching and learning plan and progress for their respective subjects. Staff attendance and leave records are maintained in this system. Stationary utilization is also recorded by MIS.

File Description	Document
Any additional information	View Document

4.3.2 Student - Computer ratio		
Response: 1.63		
File Description	Document	
Any additional information	View Document	

4.3.3 Available bandwidth of internet connection in the Institution (Lease line) >=50 MBPS	
35-50 MBPS	
20-35 MBPS	
5-20 MBPS	
<b>Response:</b> >=50 MBPS	
File Description     Document	
Any additional information View Document	

# 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: 72.63

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
277.42	246.95	327.90	373.06	367.65

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts.	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:**

Systems and procedures have been established to ensure that all facilities on campus are well maintained and appropriately utilised by students and staff. Adequate care is taken to ensure preparedness before the beginning of the academic term.

Pre-Semester preparation:

The following activities are carried out prior to the beginning of the semester:

1. Inspection of all classroom facilities like adequacy of benches, working of lights and fans, proper

working of LCD projector and sound system, availability of internet connections.

- 2. Checking of all computers in the laboratory, ensuring availability of prescribed software on each machine, inspection of lab furniture and replacement /repair of broken furniture, working of projectors, printers, scanners if available.
- 3. Inspection of machines in the workshop and carrying out any preventive/breakdown maintenance. Maintenance of laboratory equipment and calibration of measuring instruments as per schedule
- 4. Procurement of consumables and raw materials required for conduct of experiments.
- 5. Purchase of new equipment in the laboratory as per curriculum requirement.
- 6. Stock taking in the library at the end of the academic year and procurement of books for the new semester as per the syllabus.
- 7. Stationery required for academic and administrative functions is procured.
- 8. Any infrastructural requirements like painting, renovation, restoration, modernisation of IT infrastructure, etc. is carried out
- 9. Sports ground is cleared of wild grass and weeds and properly rolled

In- Semester activities:

During the semester routine inspection and maintenance is carried out to ensure that facilities are well utilised and there is no misuse.

- 1. House-keeping committee of the institute inspects the facilities like toilets, water coolers, class-rooms, corridors and conveys any specific requirement to Dean Administration/ Administrator.
- 2. Canteen committee oversees the cleanliness and hygiene in the canteen and monitors the food quality
- 3. Library committee addresses specific needs of the students and staff related to availability of books, accessing of journal articles, utilisation of plagiarism software, etc.
- 4. The sports committee along with the Sports –in-Charge ensure the availability of sports equipment and monitor the usage of the ground, courts and indoor games facilities. The Sports-in-charge maintains an inventory of the sports equipment. An attendant is provided during the lunch break and after college till 6 pm.
- 5. The laboratory assistant along with the laboratory in-charge handles the laboratory equipment and maintains the Dead Stock Register (DSR) and the routine maintenance of the equipment.

- 6. Any breakdown maintenance is taken care of by the Dean Administration / Administrator in consultation with Management
- 7. Class teachers are responsible for addressing day to day requirements and monitoring the upkeep of the facilities in the classroom.
- 8. The exam section along with the exam committee ensures that all processes for assessment and evaluation are meticulously followed.

File Description	Document
Any additional information	View Document

### **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: 18.2

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
314	335	276	219	236

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
Any additional information	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: 0.09

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
1	2	1	2	1

File Description	Document
Any additional information	View Document

5.1.3 Number of capability enhancement and development schemes -

<ol> <li>For competitive examinations</li> <li>Career counselling</li> <li>Soft skill development</li> <li>Remedial coaching</li> <li>Language lab</li> <li>Bridge courses</li> <li>Yoga and meditation</li> <li>Personal Counselling</li> </ol>	
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	
<b>Response:</b> 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

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
452	343	341	237	232

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

Response: 21.16

# **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 benifitted 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
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	<u>View Document</u>
Details of student grievances including sexual harassment and ragging cases	View Document
Any additional information	View Document

### **5.2 Student Progression**

Response: 48.47						
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		
173	207	235	219	152		

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: 4.15

5.2.2.1 Number of outgoing students progressing to higher education

Response: 16	
File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education	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: 21.63

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
84	33	11	13	13

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
160	106	130	171	154

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

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

#### **Response:**

Student Council is the representative body of the students of the college. The objective is to make the students participate in the development of the institute as well as in the process develop their personality, organizational skills and career through interactive programs with the faculty, administration and society. The goal of the student council is to provide a common platform to students for co-curricular and extra-curricular activities. It is responsible for all the major technical, cultural, literary and sports activities organized in the college premises. Activities under the council will be well supported by a team of faculty members.
Each year the student class representatives elect the following members (one boy and one girl student) to the student council:

- 1. General Secretary
- 2. Technical secretary
- 3. Treasurer
- 4. Cultural Secretary
- 5. Sports Secretary
- 6. Public Relation
- 7. Alumni Secretary

Since AY 2018 – 2019 the post of Public Relation and Sustainability Secretary were discontinued.

## COMPOSITION, DUTIES AND RESPONSIBILITIES OF THE COUNCIL:

Sr. No.	Name of the Post	Responsibilities
1	General Secretary	Spearheading the cou executing and mon activities across the a
2	Treasurer	To plan the budget handled by the stud disbursement of fund and prompt prepar accounts.
3	Technical Committee	To organize intra Technical Festival programmes, training Club and Physics Quiz, I
4	Cultural Committee	To organize intra and Festival, 'Hysteria' 'Crextal'. To organiz Club, Literary Club Club, Music Club. collegiate Parli competition is the Literary club.
	Sports Committee	To spread awarenes

5		campus through intra
		well as organization
	Public Relations Committee	To reach out to th
		effective manner by
		communication strat
6		posters, blog posts, F videos and any oth
0		collect sponsorship
		events
7	Alumni Committee	To organize student
		through seminars, p
		lectures; to assist
		Alumni Meet.
		To generate interes sustainability on car
8	Sustainability Committee	creation, regular inter
	Sustainability committee	and administrators t
		for a green environm
		waste reduction, ene
		alternate forms of end
Student representatives are an inte	egral part of the following committees:	
Student representatives are an inc	gran part of the following committees.	
• Anti-ragging		
• IQAC		
• CDC		
• Training and Placement		

- SC/ST/OBC
- Women's Development Cell
- Minorities Cell
- Canteen
- Website Development and maintenance
- Disciplinary
- Internal Exams

- Housekeeping and Maintenance
- Library

The student secretaries are groomed as leaders through a 3- day 'Leadership Development Camp'. They prepare the annual activity calendar and propose the annual student activity budget which is sanctioned by the Principal. They submit a formal report and the expenditure statement for each event.

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: 26.8

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
53	27	29	16	9

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:**

The Salesians of Don Bosco is an international organisation headquartered in Rome. The Indian National Federation of the Past Pupils of Don Bosco was founded in 1968 in Mumbai. The Alumni Association of DBIT is affiliated to the Mumbai Provincial Federation of the Past Pupils of Don Bosco which in turn is affiliated to Indian National Federation of the Past Pupils of Don Bosco. DBIT is part of

the Kurla unit of the Mumbai Provincial Federation. Despite the affiliation, individual Don Bosco Institutes are permitted to have their own alumni association without a formal letter of affiliation.

The first formal alumni meet was held in March 2017 which was attended by over 100 alumni from batch of 2005 onwards. The founder Principal of the institute, Dr. S. Krishanmoorthy was the Guest of Honour. Some senior alumni shared their experiences of campus life and how it had helped to shape their careers. In the alumni meet of March 2018, the DBIT Alumni Association was formalised and elections were held for the various posts after receiving nominations. Distinguished alumni were felicitated for their contribution to various fields.

Alumni of DBIT have been contributing to the development of the institute in over the past several years. However a formal structure was put in place only in 2017. Some of the activities in which alumni have contributed are listed below:

- 1. Visiting faculty for lectures in various subjects
- 2. Expert lectures on upcoming technologies
- 3. Full time teaching faculty (Several alumni are full time teaching faculty in this institute)
- 4. Design and maintenance of institute website
- 5. Conducting training programmes and workshops for students
- 6. Mentoring students on employment, entrepreneurship and career planning: "Alumni Konnect" is an event organised for the first year engineering students to interact with alumni and learn from their experiences
- 7. Presence on the Academic Advisory Committee of the departments
- 8. Financial contribution for conferences
- 9. Coaching the presents students for football
- 10. Helping forge MoU between their organisation and DBIT
- 11. Providing internships for students
- 12. Presence on IQAC and CDC

All departments organise Alumni interactions formally each year on a regular basis as mentioned above

# FUNCTIONING OF THE ALUMNI ASSOCIATION:

• Since the formation of the Alumni Executive Committee, several meetings have been held to formalise the objectives of the association and plan the activities

- The Memorandum of the Association is framed
- The alumni web portal has been set up
- Activities to be carried out during the academic year have been identified.
- The Mumbai Provincial Federation is to be registered soon. By virtue of the affiliation, DBIT Alumni Association will not need to be registered separately
- Presently the accounts of the association are managed by the institute.

File Description	Document
Any additional information	View Document

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

## 5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

## **Response:** 3

5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years

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

File Description	Document
Number of Alumni Association / Chapters meetings conducted during the last five years	View Document
Any additional information	View Document
Report of the event	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:**

The Don Bosco Institute of Technology (DBIT) will be known to have an innovative, enjoyable and holisti c learning environment that transforms individuals into socially conscious citizens the Don Bosco Way, and will lead in research and entrepreneurship in the area of sustainable technologies.

# MISSION

- To create future engineers who work with honesty and integrity and excel in the use of technology for the benefit of the underprivileged.
- To train engineers to be innovative problem solvers and entrepreneurs who engage in research and life-long learning.
- To provide a diverse and stimulating environment for staff and students to grow holistically.

# OBJECTIVE

- To produce engineers who will excel in industry and research.
- To provide consultancy to various industries.
- To provide programmes which are contemporary and relevant to industry.
- To share expertise and resources for the benefit of underprivileged youth of local communities.
- To be a center of research and development in the field of technology.
- To gain recognition in the field of technical education, both nationally and internationally.

In accordance with the Vision and Mission statement the faculty of the institute has been empowered by the management to collectively draft a perspective plan. To make DBIT one of the top 20 technical institutes in the country. The faculty have undertaken the SEAD (Strategy to Engage, Achieve and Deliver) journey and drafted an action plan for the next 2 years (18-19 and 19-20) under the mentorship of experts from academica and industry.

Faculty participation in decision making is evident through faculty representation on Board of Governance.

The LMC/CDC has elected faculty representatives, non-teaching representative and student representatives who give suggestions for improving governance.

Several faculty committees meet and ideate to manage and monitor the academics, house –keeping, student activities, research and other such activities on campus. Student representatives are also part of these committees

An elected Student Council is empowered to plan the cultural, technical and sports extra-curricular activities on campus.

Faculty are encouraged to participate in career development activities like qualification enhancement, paper presentations, attending seminars, conferences, training programmes, internships, research, consultancy, certification programmes and so on. The institute provides sponsorships for all such activities.

Student teams are also encouraged and sponsored to attend sports and cultural events, technical competitions, hackathons, internships and so on.

Non-teaching staff are supported to enhance their qualifications, train in new technologies, improve communication skills, undergo certifications, etc.

Inorder to ensure the holistic development of the students and to inculcate values and sense of responsibility towards society students are engaged in community development through NSS as well asthrough projects undertaken as part of the curriculum. Staff is encouraged to become a part of such societal projects

The management also provides a faculty mentor for each student so as to facilitate her overall development.

A Campus Minister and on campus counsellors are available to address the psychological problems of staff as well as students.

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

# 6.1.2 The institution practices decentralization and participative management

## **Response:**

- The institute appoints Deans (Academic, Research and Administration) and Heads of Departments to manage the day to day operations. The appointments are for a period of 3 years thereby providing all senior faculty an opportunity to handle the responsibility.
- Deans and HODs have the autonomy to manage their domains as effectively as possible within the

guidelines provided by the management. The Principal meets with the Deans and HODs every week to plan ,monitor and assess the impact of the various activities on campus.

- The institute has a functional LMC (Local Managing Committee) comprising of management representatives and elected representatives of the teaching and non-teaching staff. The LMC meets twice each year and and discusses the growth and development of the institute in aspects like academics, placement, manpower requirements, infrastructure, annual budget, co-curricular and extra-curricular activities. The LMC gives important inputs that are taken up by the management for implementation.
- The IQAC meets atleast twice a year to propose quality improvement initiatives and take stock of practices already adopted by the institute. Student representatives are also part of the IQAC.
- The various committees at the institutional level meet regularly to assess the campus requirements and propose measures to improve the environment on campus.

CASE STUDY:

Decentralization and participative management is evident in the process of preparation and sanction of the Annual Budget which is elaborated below:

- Before the end of the financial year each HOD submits to the Principal the budgetary requirements of their department for the following academic year.
- The HOD gathers the necessary requirements for equipment, consumables, training of faculty and students, purchase of books, from her departmental colleagues.
- The Principal consolidates all the requirements under various budget heads and presents the consolidated budget before the LMC for their approval.
- After approval from the LMC the budget is presented before the Board of Governors
- The Board sanctions the same after due deliberations
- Once the budget is sanctioned the Principal conveys the budgetary sanctions to the various departments

- The individual departments are authorised to spend within the budgetary provisions under advice to the management
- For any expenditure beyond the budgetary provisions, the HOD makes a special request to the Management through the Principal. The request is forwarded by the Principal after assessing the need for the expenditure.
- The Student Council also proposes a budget for all technical, sports and cultural activities to be carried out during the academic year.
- The proposal is scrutinised by the Principal and forwarded to the Administrator for approval.
- Once approved the student council is empowered to spend within the budgetary provisions under the supervision of the Faculty-in-charge and the Dean Administration.
- The Accounts Manager monitors the expenditure and informs the Principal of any spending in excess of the budget.

File Description	Document
Any 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:**

DBIT takes immense pride in promoting research at the undergraduate level. Research initiatives have been a significant part of the institute's growth and development. A carefully planned out Research Strategy has been implemented over the years which has helped in fostering a research culture on the campus.

The initiatives taken are outlined below:

No	Strategy	Outcome	
1	Sponsor faculty for qualification upgradation	1.Nearly all f sponsored Masters De sponsorshij Study leave leave withe	to con egrees. p was e with

		<ul> <li>2.Six faculty member sponsored to contact at IIT and other runiversities</li> <li>3.Three faculty are sponsored for the sponsored</li></ul>
2	Publishing of DBIT Journal	<ul> <li>1.The Journal complete technical papers being published a 2005</li> <li>2.The journal has a and a team of peepaper selection</li> <li>3.The Journal also number</li> <li>4.Papers can be sul round the year</li> </ul>
3	Appointment of Director R & D, Dean R&D, External Mentors to mentor faculty for research	<ul> <li>1.Director R &amp; D a 2011</li> <li>2.Dean R &amp; D app facilitate research D committee con faculty from each was forms in 201</li> <li>3.External mentors Basic Sciences D Mechanical Engi Computers and I assist faculty in e research ideas</li> </ul>
4	Minor Research Projects	Since 2014, faculty have proposals to the Mum under the Minor Research

# Self Study Report of DON BOSCO INSTITUTE OF TECHNOLOGY

		year projects worth 2,5 la out by the faculty
5	Department to form research groups and strategise their activities	Each department has for groups of faculty member research goals and time activities. These are more Research committee and D
6	Management sponsored Research Grant	<ul> <li>1.The management grant of Rs. 10 la sponsoring in hor activities</li> <li>2.Faculty teams to presentations on ideas to the mana</li> <li>3.Presently 4 proje lakhs totally have under this schem underway</li> </ul>
7	Collaborations with research institutes	<ul> <li>1.An MoU has bee IICT. Hyderabad CSIR lab to set u laboratory in DB undertake joint re testing and water</li> <li>2.MoUs have also 2 universities in 7 collaborative wor student exchange</li> <li>3.More MoUs are e sensor technolog machining, GIS s</li> </ul>
8	Faculty / student sponsorship	1.Faculty are provi to attend STTPs, congferences

		2.Students are spor conferences, part hackathons, etc.
9	Performance appraisal	Faculty research contr important aspect of the a
DBIT would also prepare themselves for Nat	tional Board of Accrediation process.	
File Description	Document	
Any 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 body** 

Governing Body is responsible for guiding the Principal in policy making. The Governing Council meetings are held each year to review the policies and the institutional progress. The Council is responsible for approving the budget.

Decisions are made at appropriate levels in the organizational hierarchy. Statutory bodies such as IQAC Cell, Anti-ragging Cell etc., as per the university/ government guidelines are part of the organizational structure of the institution though not depicted in the diagram. A committee comprising of faculty members and administrative staff are involved in the planning and implementation, academic audit and evaluation. There are different bodies that provide academic and administrative leadership to the institution. An optimum level of decentralization is maintained at the department level and participative decision making is practiced.

# **Functions of various bodies**

Various committees are formed in the Institute for the smooth and efficient management of activities. This gives an opportunity to the students, faculty and non-teaching staff to grow and develop their leadership and administrative skills. The committees are constituted by the Principal in consultation with HODs for one academic year or until new committees are constituted.

The outgoing Conveners/ In-charges of the committees are expected to hand over all the relevant documents/files to the new Conveners /In-charges in the presence of the Principal or a representative

appointed by him.

# Service rules

The institution has framed the Service Rules according to the AICTE, UGC and UoM norms. The official working hours of the institute are from 9:00 AM to 5:00 PM. The teaching and non-teaching faculty have the benefits of EPF/ Group Insurance Scheme / Gratuity and Casual / Earned / Medical /Maternity / Compensatory Leaves.

# **Recruitment Policies:**

The HoDs reviews faculty requirements as per teaching load and submits the consolidated staff requirement to Principal.

Recruitment takes place according to the norms of the University of Mumbai, AICTE and rules applicable for institute with minority status. The selection committee decides the worthiness of the faculty member by his/her performance in the interview according to the parameters.

In case of the Ad-hoc requirement the recruitment happens through written test, demonstration lecture and interview with Principal & Director.

# **Promotional Policies:**

Promotions are based on merit and qualifications required for the higher position. The policy is outlined in the service rule book.

**Grievance redressal and Internal Complaints**: The institute has formed Grievance Redressal Committee to handle student grievances regarding teaching and assessment. The committee has framed guidelines as well as processes for timely review and redressal.

An Internal Complaints committee has also been formed to handle cases of gender discrimination, harassment or any other matter related to the day- to -day activities on campus.

Committees are also in palce to handle the issues of minorities and those belonging to socially backward communities.

File Description	Document	
Any additional information	View Document	
Link for 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	
<b>Response:</b> A. All 5 of the above	
File Description	Document
Screen shots of user interfaces	View 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:**

To decentralise the decision making process and speed up implementation of decisions several faculty committees have been formed. These committees meet on a regular basis to plan and execute activities for the semester.

The Project Committee has been instrumental in improving the quality of projects and organising the annual Project Exhibition 'INNOVEX' since 2016-17. The process is detailed below:

	Date of meeting and points discussed	Action taken	
	15 November 2016	All departments collect project ic semester	leas be
	1.Faculty and students to propose projects ideas		
	sufficiently in advance	<ul> <li>Departmental committee constitution implemented for selection of program</li> </ul>	
	2. Proper system to be developed to monitor progress of		
	projects	<ul> <li>Format created to monitor studen basis</li> </ul>	it prog
	3.Faculty to be fully engaged in project and available for		
	discussion	• Proper rubrics framed for evaluate progress . Faculty team evaluates	
Ĺ			

4.Proper evaluation format to be prepared	gives feedback to the students for imp
5.Students and faculty to work towards Project Exhibition. The exhibition would showcase the talent of the students to the outside world and attract more recruiters. This could bring in more seriousness in the process of selection and implementation of the project and encourage students to be more innovative.	<ul> <li>Project team to meet in January to plan exhibition</li> </ul>
20 January 2017, 22 Feb 2017	• Venue booked for the event
1.Project exhibition dates finalised	• Approval taken from Management to c
2.Tentative budget prepared	• Principal, HODs and project co-ordina details of the events with the BE stude
3.Responsibilites assigned to committee members	them to display their best effort
4.Project brochure to be prepared	
17 March 2017, 24 March 2017	• Brochure soft copy approved
1.Banner details finalised	• All logistics related to individual stalls
2.Inaugural programme details to be finalised	<ul> <li>Programme details finalised for inaugulation closing</li> </ul>
3.Water and power requirement for the projects to be finalised	• Timings for student visitors and extern finalised
6-7 April 2017	• The first project exhibition is well app and sets a benchmark for the following
External team of judges evaluates each project and declares the winners	
27 October 2017	• Exhibition planned on Friday, Saturda industry participation
1.Discussions were held to improve the quality of ideas proposed by the students and increase faculty engagement.	<ul> <li>Faculty load adjusted for better interaction</li> </ul>
2.Ideation workshop to be organised for the students	<ul> <li>Students trained in LATEX and on Te Writing</li> </ul>

3.INNOVEX -2018 to be held in April. Indust to be increased	• Vendor sourced for purchase of id 'INNOVATIONEXT'	leatio
4.Students to convert project into a conference paper	e or journal	
Meetings on 14 and 21 February	• Layout and presentation is vastly	impro
Logistics for INNOVEX-18 to be held on 6-7 April discussed	il 2018 are	
File Description	Document	
Any additional information	View 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:**

The institute demonstrates its concern for staff well being by creating a congenial and caring environment on campus. Management supports all activities that enable the staff to develop holistically. Staff is motivated and encouraged to upgrade themselves academically and otherwise. The institute also organises events and activities for the staff to get together and work cohesively.

The measures taken by the institute to motivate and empower the staff and to create sense of belonging is given below:

Staff self development:

- Teaching and non-teaching faculty are provided sponsorship to upgrade their qualifications by fully sponsoring their Phd studies, sponsorship for skill enhancement like certification and training, granting leave for preparing for exams, book writing
- Sponsorship to attend various Programmes like National / International conferences, workshops,

STTPs and seminars

- Conducting Faculty Development Programmes on topics like team building, developing a positive outlook
- Conducting training in English Communication for non-teaching staff
- Rotation of key leadership positions like HOD and Dean amongst the staff to provide an opportunity to develop leadership skills
- Participation of all staff in decision making process by involvement in various committees
- Library facilities for all staff
- Individual computer for all teaching faculty with internet connection and access to high quality scholarly material

#### Health and welfare

- Conduct of annual health check up for all staff
- Ensure immediate medical attention for any health emergency by admitting to near by hospital ( Kohinoor) and making any down payment required. This facility is extended to students as well
- Providing monetary assistance for staff who are unable to foot their medical expenses
- Accidental death policy (sum assured Rs. Five lakhs) with Oriental insurance company for all staff
- Creation of Employee welfare fund through voluntary monthly contribution from staff . Loans are provided to staff through this scheme
- Family get together and staff picnic organised alternatively for the entire campus
- Maternity leave available as per rules
- Campus Minister and counsellors available on campus to resolve any conflicts or personal grievances of staff
- Staff welfare committee constituted to provide suggestions for enhancing
- Prayer room and infirmary available for staff and students
- Institute gymkhana and gymnasium facilities available for staff
- Events like Teachers Day, Independence Day, Engineers Day celebrated by the institute during which lunch/refreshments are served

Other measures

- All leave rules like CL, earned leave, sick leave available to all full time faculty
- Faculty given time off to attend to important family matters like illness in the family, important exams of children, etc.
- Gratuity and PF available to all full time faculty
- Class 4 employees given uniform every 2 years. Snacks and tea provided to Class-4 employees each day
- Ward of staff given preference under management quota for admission to the program

File Description	Document	
Any additional information	View Document	

# **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: 28.6

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

20	17-18	2016-17	2015-16	2014-15	2013-14
53		23	24	18	17

File Description	Document
Details of teachers provided with financial support to attend conferences, workshops etc during the last five years	<u>View Document</u>
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:** 12

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
20	22	16	2	0

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: 22.55

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	
51	17	19	10	8	

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:**

Teaching faculty appraisal:

The institute has a very robust mechanism to conduct faculty appraisal and evaluate faculty performance. The appraisal system is merit based and is used as a tool to offer or deny increments and promotions. Over the year faculty responsibilities have evolved from mere teaching –learning to research, industry collaboration, outreach activities, consultancy and so on. The appraisal instrument has also undergone

several modifications to reflect these changes. The appraisal documents have all been designed by the management. The appraisal process not only evaluates the faculty performance against stated parameters but also provides guidelines for upgrading oneself.

The appraisal process comprises of the following elements:

No	Type of appraisal	Frequency	Evaluator
1	Faculty self appraisal and Management review	Once a year	Faculty/Mana
2	Peer review of classroom teaching	Once a semester	Senior Facult
3	Review of Course file	Once a semester	Peer
4	Review of learning material uploaded on MOODLE	Once a semester	Peer/ Externa
5	Student feedback	Twice a semester	Students

• The process begins with goal setting by the faculty through discussions with departmental colleagues. Faculty prepares a roadmap with timelines and milestones which is reviewed during the management review

- The peer review is carried out in the classroom by a senior faculty. The faculty is assessed for class engagement, inclusiveness, generating interest amongst the students and various such parameters. The reviewer shares the good aspects as well as those which need improvement.
- The course file undergoes a peer review to ascertain the adherence to guidelines for teaching –learning and student engagement in classroom and laboratories.
- During MOODLE review the course material uploaded on the LMS is reviewed for completeness and adherence to syllabus. The content review is assigned to experts including external experts.

The self appraisal format evaluates the faculty on the following aspects:

1. Academic planning and preparation

- 2. Execution of academic plan and assessment
- 3. Personal development: academic, professional and overall self development
- 4. Research and industry interaction
- 5. Attitudes: towards students, peers, seniors and community

The faculty submits her self evaluation on all parameters of the self appraisal document and provides evidence to substantiate her claim.

The management review is carried out by the Advisor, Executive-Director, Principal and the HOD. Recommendations are given to the faculty for improvement, growth and self development.

On the basis of the review, faculty are placed in Category-1, 2 or 3. The high performers are in category 1, the average performers in category 2 and the poor performers in category 3.

Non-teaching staff:

The performance appraisal of non-teaching staff is carried out by their respective HODs.

Different self-appraisal formats are used to capture data and information regarding the staff's attutide towards work, efficiency and committement. The HOD reviews these formats and counsels and motivates the staff to improve performance

The performance of the class-4 employees is reviewed by the Dean of Administration/ Administrator.

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:**

The institute is a self financed private institute . Its main source of income is the tuition fee collected from the students. The Fee Regulatory Authority, Shikshan Shulka Samiti, decides the fee on the basis of the expenditure incurred by the institute. The institute has to submit the audited statement of accounts as evidence . Hence extreme diligence is maintained in preparing the income and expenditure statement. The final statement of accounts is audited by an external auditor each year.

Some of the good accounting practices followed are:

- Qualified accounts team with an Accounts Manager
- All salaries are directly credited to the individual accounts through net banking
- Net banking is used for making purchases and also for transferring money for workshops, conferences, trainings, etc.
- Issuance of proper receipt against any income

There is no formal process of internal audit however adequate checks and balances are put in place to ensure financial accountability. These are given below:

- 1. Individual departments submit a budget for the expenditure to be incurred under the following heads:
- Infrastructure
- Books and periodicals
- Maintenance
- Consumables
- Equipment and hardware
- Software
- Training, conferences, expert faculty
- Students activities
- 1. The Principal presents the consolidated income and expenditure budget before the LMC/CDC and then before the Governing Board for approval.
- 2. The budget for the infrastructure and campus maintenance is prepared by the Administrator in consultation with the Accounts Manager
- 3. All expenses are to be approved by the Dean of Administration
- 4. Expenditure under the various heads is monitored regularly by the Accounts Manager and any unplanned expense is discouraged
- 5. The purchase policy of the institute is adhered to. Transparency is maintained in all purchases.
- 6. There are separate processes for utilisation of grants and funding received from external agencies.

The accounting procedure prescribed by the funding agency is followed.

7. Any income generated through training, consultancy, projects is properly accounted.

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:** 0

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	0	0	0	0

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

**Response:** 

DBIT is a self financed private institution. Hence resource mobilisation is given due importance.

The main source of funding for the institute is the tuition fee paid by the students. The tuition fee amount is fixed by the fee regulating authority and is collected through a transparent process. The institute ensures that it satisfies all the academic requirements in terms of infrastructure, well equipped classroom and laboratories, highly qualified and motivated staff as specified by UGC and AICTE to attract students to the various programmes. A robust teaching-learning process is followed and regular feedback is taken from students, parents, industry to improve stakeholder satisfaction.

The institute communicates its policies and achievements to the outside world through the college website and social media pages like facebook, twitter, instagram, etc to attract potential students.

Effective planning and utilisation of the resources, both infrastructural and human resources is ensured. Budget is prepared each year and submitted to the management for approval. All expenditure is carried out according to the budget.

Other strategies followed to mobilise finds is given below

OPTIMUM UTILISATION OF RESOURCES

- 1.Renting out the institute's infrastructure and equipment on holidays for conduct of training programmes, online examinations, tests, etc.
- 2. Providing the institute premises to various organisations on rent for conducting workshops, social gatherings and sports activities
- 3. Renting out the institute's computer laboratories on holidays for the conduct of competitive exams by various agencies like TCS, Accenture, etc.
- 4. Providing the human resources for conduct of activities like competitive exams, online testa, etc.
- 5. Utilising laboratory and equipment for conducting in-house training programmes for students on various technologies on weekends , holidays and after college hours

## STRATEGIES FOR RESOURCE MOBILISATION

- 1. Motivating faculty to apply for research grants of UGC, AICTE, DSTE, BARC, IEEE for funding research activities and purchase of high end equipment for laboratories
- 2. Conduct of workshops, training programmes, certification courses, value added courses for students other than those mandated by the curriculum
- 3. Carrying out consultancy work for industry
- 4. Use of laboratory equipment for testing
- 5. Encouraging faculty to engage in product/process design and patent the same
- 6. Sponsorship of laboratories and equipment by industry through MoUs
- 7. Applying to various bodies for grant for conducting Short Term Training Programmes on new technologies
- 8. Sponsorship from corporates of students activities like competitions, technical festival, cultural and sports festivals.,participation in national competitions like SAE –BAJA, GKDC, etc.
- 9. Approaching alumni, parents and well wishers for donations and sponsorship of the following activities:
- Fees, books, laptops for economically backward students
- Sponsorship of activities for community development
- Funding of conferences and workshops
- Purchase of laboratory equipment

1. Supplying solar power to the grid on holidays

# 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 institute has introduced several quality initiatives over the years to improve the quality of student and staff engagement on campus and enhance the teaching –learning experience.

Internal Qulaity Assurace Cell (IQAC) was established on July 17, 2017 to ensure quality education through our well designed student centric teaching and learning processes. Through the meetings of the IQAC the following initiatives for quality assurance were implemented:

- IQAC Establishment
- ISO Certification
- Academic Monitoring Committee
- NIRF

# IQAC Establishment

IQAC was formally established on July 17, 2017 as per the guidelines of National Assessment and Accreditation Council of India. Till date three meeting have been conducted to discuss the following agenda.

- Roles and responsibilities of the IQAC Members
- Academic and Examination Audit
- Strategic plan for 2020
- Capability assessment of first year students.

# **ISO Certification**

- In order to create quality consciousness among the teaching and non-teaching staff, and bring about a process orientation an awareness programme on ISO 9001:2015 was conducted.
- Various process for teaching- learning and administration were designed as per the guidelines of ISO 9001:2015 to ensure standardisation and proper implementation of institute quality policy.
- Internal auditors were trained and certified. The internal audit team audited all departments and highlighted the areas for improvement. The reports of the internal audit were shared with the management.
- A mock audit was conducted to ascertain our preparedness for the certification audit

As a result of these initiatives, institute was awarded ISO 9001:2015 by TuV Austria on November 22, 2017 for three years. The suggestions by the audit team regarding minor non-conformities were taken up for improvement before the surveillance audit.

## Academic Monitoring Committee

Academic Monitoring Committee (AMC) is one of the initiatives of IQAC to ensure the quality of teaching –learning processes including classroom delivery, laboratory sessions and the evaluation processes.

- AMC comprises of highly qualified senior and experienced faculty.
- The AMC meets regularly to review all the teaching –learning processes
- AMC reviews the student feedback data and meets with faculty who have received poor feedback. Their teaching material is scrutinised, classroom teaching is assessed and feedback is also sought from students. The assignments and conduct of tutorials and laboratory practicals is also assessed. The faculty is counselled and mentored for performance improvement.
- Faculty content delivery and classroom conduct is reviewed through a peer review mechanism. Feedback is provided to the faculty for further improvement. Till date frequency of such review is once a semester. However hereafter such review will be conducted twice per semester.
- The evaluation process is reviewed and monitored through 'Exam audit' system. The audit is carried out after the internal assessment tests and the end semester exams.

File Description	Document
Any additional information	View Document

# 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:**

The institute practices review of teaching learning processes and learning outcome periodically using well defined processess . Following are the major initiatives undertaken by IQAC since its formation.

- Peer review process for Class Room/ Laboratory content delivery.
- Course file review by Dean Academic.

# Peer review process for Class Room/ Laboratory content delivery

IQAC has taken initative to improve classroom and laboratory content delivery by peer review process. The peer teaching review is not just an evaluation process but also an opportunity to receive constructive feedback to improve teaching effectiveness . The process is carried out in three steps enumerated below

# 1. Pre?Visit Preparatory Meeting

In this stage the peer evaluator and faculty member meet prior to the peer evaluation visit. During this meeting focus of discussion is the course syllabus, course objective, assessment methods, types of learners and the focus area for evaluation. The peer evaluator also discusses about the various parameters for the evaluation along with their grading scheme.

# 2. Peer Evaluation Visit

During peer evaluation, the evaluator sits in the class during the lecture session and makes observations about various parameters as per the peer evaluation tool. Each parameter is evaluated on the scale of 1 to 5, where 5 stands for Excellent while 1 stands for Poor and needs improvement. In addition to this successful elements and elements to improve are identified. These observations are discussed in the post evaluation meeting.

The faculty also does a self evaluation of the lecture session and grades herself /himself.

# **3.** Post Evaluation Meeting

The peer evaluator and faculty meet after the class visit and review both the evaluation documents. Following the review and discussion, a summary is jointly prepared in which the following are identified:

- Successful elements of the lecture
- Elements to be refined
- General comments
- Recommendations for improvement

After a few weeks a follow up review is conducted to verify the improvements.

## **Course file review by Dean Academic**

Another IQAC initiative is the review of the Course file to be carried out as per the process defined by the Dean Academics.

Each faculty is assigned the course to be taught in upcoming semester at least 1.5 months in advance. The course file review ascertains the following:

- Faculty member refers University syllabus, programme outcomes provided by National Board of Accreditation (NBA), inputs from students, industry persons to prepare objectives, learning outcome, course outcomes.
- Faculty member also prepares teaching learning plan (TLP) for the assigned course.
- TLP includes course objective, learning outcomes, content to be taught, teaching pedagogies, reference material, as well as additional information for each lecture.
- TLP also includes plan for the guest lecture, industrial visit if any, pre requisite test, Internal Assessment Test etc
- TLP is approved by HOD and Dean Academics
- Rubrics are available for evaluation of tests, assignments, projects etc.
- Slow and fast learners are identified and appropriate action is taken

File Description	Document
Any additional information	View Document

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

**Response:** 1

2017-18	2016-17	2015-16		2014-15	2013-14
5	0	0		0	0
File Description			Document		
Number of quali romoting qualit	ity initiatives by IQAC ty culture	C per year for	<u>View D</u>	ocument	
ny additional i	nformation		View D	ocument	
QAC link			View Doc	<u>ument</u>	1
improve	Assurance Report (A ements	QAR) to NA	AC; Feedl	back collected	ely submission of Annual , analysed and used for
improve 2. Academ 3. Participa 4. ISO Cer 5. NBA or A. Any 4 of the B. Any 3 of the C. Any 2 of the D. Any 1 of the	Assurance Report (A ements ic Administrative Au ation in NIRF tification any other quality au above above above	AQAR) to NA. Idit (AAA) an	AC; Feedl	back collected	, analysed and used for
improve 2. Academ 3. Participa 4. ISO Cer 5. NBA or A. Any 4 of the B. Any 3 of the C. Any 2 of the D. Any 1 of the	Assurance Report (A ments ic Administrative Au ation in NIRF tification any other quality au above above above above	AQAR) to NA. Idit (AAA) an	AC; Feedl	oack collected n of follow up	, analysed and used for
improve 2. Academ 3. Participa 4. ISO Cer 5. NBA or A. Any 4 of the B. Any 3 of the C. Any 2 of the D. Any 1 of the Response: B. A Tile Description	Assurance Report (A ments ic Administrative Au ation in NIRF tification any other quality au above above above above	QAR) to NA. Idit (AAA) an dit	AC; Feedl d initiatio	oack collected n of follow up	, analysed and used for
improve 2. Academ 3. Participa 4. ISO Cer 5. NBA or A. Any 4 of the B. Any 3 of the C. Any 2 of the D. Any 1 of the Response: B. A Tile Description -copies of the a	Assurance Report (A ements ic Administrative Au ation in NIRF tification any other quality au above above above above ny 3 of the above	AQAR) to NA. Idit (AAA) an dit ifications	AC; Feedl d initiatio	oack collected n of follow up ent	, analysed and used for

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

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:**

Follwoing are quality initiatives in academics and adminstration over the last five years:

# **1. Project Quality Improvement**

There has been considerable improvement in the quality of final year project work due to the continuous improvement in the project allocation, monitoring, and evaluation processes. Students are encouraged to float their own ideas to bring in innovation, creativity and a sense of ownership amongst them. There is a robust system for project selection where project ideas from faculty and students are evaluated by a panel using well defined rubrics There is a well defined process for ensuring student and faculty engagement in the project and monitoring student progress All these project are exhibited during the institute level project exhibition INNOVEX. The best projects in various categories are judged by experts from industry and academia and awarded. The possibility of patenting some project designs is also explored. There has been a very encouraging feedback from visitors and judges on the project quality improvement.

# 2. Student Mentoring

Student Mentoring is one of the initiatives of DBIT to improve the student performance. Faculty mentors are assigned to each student right from the first year. The mentor monitors student progress and provides motivation and timely advice on improvement. From second year onwards department faculty is assigned to each student for three years. The mentor and mentee discuss the academic issues and difficulties as well as personal problems. This initiative has resulted in remarkable improvement in student and faculty engagement as well as improvement in students attendance and academic performance.

# 3. Research and Development

To promote research culture among faculty and undergraduate students a Dean of R & D is appointed whose primary responsibility is to provide necessary support and infrastructure to promote research culture. DBIT publishes a research journal titled 'DBIT Journal of Science and Engineering' each year. All articles are original work of the faculty and students and are peer reviewed. Research mentors are appointed to help faculty and students identify research projects and apply for grants. Training is provided on Research Methodologies, Paper writing, Plagiarsm, etc. Financial assistance is provided to faculty as well as students for attending conferences, presenting paper, project work. The institute provides grants upto Rs. 2 lakh per faculty group for carrying out research . MoU is signed with IICT-CSIR, Hyderabad for research in water contamination DBIT is also interacting with institutes like TIFR, IIT, and BARC for research colloboration. One of the outcome of such initiatives was the successful conduct of **"International Conference on Technologies for Sustainable Development"** in Febuary 2015. Over the years there has been a marked increase in the number and quality of papers presented by students and faculty.

## 4. Adminstration

DBIT has taken initiatives in administration such as budget preparation and delegation of responsibility. For the systematic functioning of the institute various committees are formed such as technical, website,

alumni, sports, mentoring, house-keeping etc. Committee members meet regularly to discuss various issues and future plans. Recommendations are forwarded to Management for approval and implementation.

File Description	Document
Any additional information	View Document



# **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:** 7

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
01	1	1	4	0

File Description	Document
Report of the event	View Document
List of gender equity promotion programs organized by the institution	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:**

# 7.1.2

The institute has a large number of girl students and lady faculty on campus. Girls account for approximately 25% of the student population and ladies account for 55% of the teaching staff. Women on DBIT campus are empowered to hold key positions such as Principal, HOD, Controller of exams.

The institute strongly advocates gender and supports the academic and personal development of all lady faculty and encourages them to hold key positions in the institute.

Girls students are motivated and encouraged to hold key positions in the student council. As a policy each student council post is held jointly by a girl and a boy student.

The institute demonstrates gender sensitivity by promoting several women-centric activities which are listed below:

# 1. POLICIES AND FACILITIES / INFRASTRUCTURE:

- Availability of Ladies Common Room (LCR) with toilets and recreation facilities
- Availability of sanitary pad vending machine in LCR
- Additional pad vending machines and pad incinerator to be installed in ladies toilets on each floor.
- CCTV cameras are available in all classrooms, labs, lifts , library as a safety and precautionary measure
- Self defence classes held for girl students by the Women's Development Cell
- Adequate washrooms made available for ladies on each floor
- Availability of infirmary for ladies to avail of in case of an physical inconvenience
- Time concession is provided on request to ladies before and after child delivery
- Strict adherence to guidelines for gender sensitivity and women's safety safety through posters, gender sensitization activities and awareness of the norms for sexual harassment at the work place
- Presence of an active Women's Development Cell, Grievance redressal committee and Internal Complaints Committee
- Zero tolerance for any acts on campus that violate the dignity of women

# **1.SELF DEVELOPMENT:**

- Girl students participate in competitive events which require them to travel outstation.
- Girls participate in sports and technical events on and off campus. Faculty assistance is provided for attending such events if required
- Leadership inculcated amongst girls by assigning them responsibilities of the student council at the institute level. There is a lady general secretay as well as lady secretaries for sports, technical activities, management of accounts, cultural activities and institute branding.
- Services of two lady counsellors is available on campus to deal with their personal issues
- Self defence classes are conducted for girl students
- Lady faculty are appointed to key positions on campus. Presently other than the Principal, 3 out of

5 HODs are women.

- Faculty is engaged in gender sensitive projects like, " Creating awareness on menstrual hygiene amongst tribal women of Jawhar", and "Training of self helpWomen;s groups from the locality to make sanitary pads for local consumption".
- Motivating talks by successful women and cultural programmes are organised during 'International Women's Day'.

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:** 0

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

7.1.3.2 Total annual power requirement (in KWH)

Response: 708689.5

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document
Any additional information	View Document

## 7.1.4 Percentage of annual lighting power requirements met through LED bulbs

#### Response: 5.01

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

#### Response: 5790.720

7.1.4.2 Annual lighting power requirement (in KWH)

## Response: 115517.376

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 institute strives to minimise the waste generation on campus by recycling and reusing wherever possible. The various initiatives taken for waste management are as follows

## Solid Waste:

- Part of the wet waste mainly comprising of waste from the canteen is fed into the Biogas plant installed in the institute. Biogas generated is used in project work and research related activities.
- The excess amount along with the garden waste and slurry of the Biogas plant are put into the compost pit (size 2 cubic meter) to convert the waste into nutrient-rich, organic fertilizer. This is then used as manure for gardening.
- The collection of dry waste is done by an agency for DBCL campus in exchange for stationery made out of 100% recycled paper. The waste generated is being stored on the premises and the vehicle will be called for once a sufficient quantity has been collected. 60% of the value of dry waste collected is being returned in the form of the stationery.
- Metal waste from the workshops and project lab are salvaged as far as possible or sold to the scrap dealer.
- Old equipment from labs is provided to students for dismantling and study
- One of the institute staff conducted survey and analysis on number of pages used in answer sheets and reduced the size to optimal. This resulted saving of 72000 pages per year.
- Answer sheet are shredded and sold to licensed agencies.

## E-waste :

• The institute has an E-waste management policy which is followed. Electronic and computer accessories which are declared as obsolete are sold at salvage value for recycling to vendors who provide the e-waste management certificate with MPCB (Maharashtra Pollution Control Board)
binding.

• Computer systems that are in working condition but cannot be used by DBIT labs due to constant updation of hardware, are donated to the economically backward student/ staff of the institute or other Don Bosco Institutions in the province .

#### Liquid waste:

- The institute proposes to set up a pilot sewage treatment plant on campus by 2020.
- The coolant waste from the machine shop is filtered and reused.

7.1.6 Rain water harvesting structures and utilization in the campus

#### **Response:**

Rainwater harvesting structures and utilization on campus.

The institute aims to be a sustainable campus and strives to implement as many sustainable technologies as feasible.

The institute conducted a survey of its daily water consumption as part of a student project.

Since the institute is located in a low lying area which is prone to flooding during monsoon, rainwater harvesting has not been recommended by some experts. However the institute invited a consultant to conduct a feasibility analysis who submitted a comprehensive report and proposed solutions to augment the water availability on campus.

Some of the suggestions given by the consultant have been implemented and the others would be implemented in due course.

As part of the implementation an underground tank of capacity 1,50,000 litres has been constructed to collect spring water from a stream that runs across the campus. This water is utilised for flushing, gardening and cleaning.

File Description	Document
Any 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 Vision statement of the institute promotes research in the field of sustainable technologies. The institute has framed a Green policy to promote sustainable alternatives in every day life. A 3 day International Conference on Technologies for Sustainable Development was organised in 2015.

#### Green Campus:

The college has a green campus with 180 trees and plants which are regularly maintained by a dedicated team. Manure is provided to the plant from the organic manure produced in the compost pit in the campus. For the institutional level programmes the guests are greeted with plant saplings.

**Plastic free campus:** DBIT uses paper/jute bags to provide welcome kits to the participants and the visitors during college events. The NSS unit in DBIT promotes the sale of cloth bags at low prices during events held in campus.

**Paperless Office:** A number of office activities have been made paperless through the DBIT- LAN portal. Attendance monitoring, salary slip, leave management system linked to monthly salary, time table of classes and individual faculty, stationary ordering for the staff, IT support, sharing of lecture notes and some of the assignment submissions and tests are also conducted on Moodle available on the DBIT-LAN portal. All kinds of circulars, notices and minutes of the meetings are provided to employees of the institute through the e-mail service provided. All internal and external communication in the institute is therefore, done through the official e-mail service.

A survey and analysis was conducted on the number of pages used in answer sheets during examinations by a faculty member of the institute. This helped reduce the volume of papers being consumed to an optimal level by saving about 72000 pages per year which is equivalent to 5 trees.

**Renewable Energy:** The 100kW Grid Tie Solar PV power plant annual production is approximately 125,425 kWh (1,450 kWh/kWp) because of which about 87.8 tons of CO2 emission is annually avoided. The institute has installed a 1000 litre biogas plant which manages wet waste. Institution has installed CFL/LED bulbs in many places for conservation of energy.

**Projects:** The institute has put in great effort to bring about awareness about sustainable development and has encouraged students and staff to take up projects in and out of the campus for the same. Around 16% of the projects in the final year are on sustainable development. Few faculty members are also engaged in project related to sustainable development out of campus. These projects include 'the Comprehensive Development Plan of Tribal Community of Walvanda' and 'Design Optimization of Grate used in wood burning chulhas'. The NSS unit of DBIT has a Renewable Energy club that conducts programs like Jal-

Jyoti project, waste management, solar workshops, etc. The institute organizes a Sustainability Project Competition and Exhibition for the First Year students in order to inculcate responsibility and commitment towards the environment at the very outset of the engineering programme. An International conference was also organised by DBIT on Sustainable Development in 2015.

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

#### Response: 0.18

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

2017-18	2016-17	2015-16	2014-15	2013-14
0.28	0.32	1.13	1.31	1.17

File Description	Document
Details of expenditure on green initiatives and waste management during the last five years	View Document
Any additional information	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:** C. At least 4 of the above

File Description	Document
Resources available in the institution for Divyangjan	View Document
Any additional information	View Document

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

#### **Response:** 0

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
0	0	0	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:** 1

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
1	0	0	0	0

#### 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

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 V	alues and professional ethics
Response: Yes	
File Description	Document
Any additional information	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
Any additional information	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:** 34

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	
	11	5	6		7	5	
F	ile Description			Docun	nent		
L	-	nducted for promotio	n of		nent Document		

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

#### **Response:**

The institute believes in instilling in the students a sense of pride in the customs and traditions of the country as well as respect for the great leaders who crafted the destiny of the country. The tight academic schedule gives little time to commemorate all national holidays, however the institute encourages and supports faculty and students in conducting as many events as possible.

#### National festivals:

The institute celebrates Independence Day, Onam, Diwali and Christmas each year.

All staff and class 4 employees participate in the flag hoisting ceremony on 15th August.

During Onam students of various departments participate in pookalam (rangoli made of flowers) competitions. Most of the students wear the traditional attire of Kerala to college. A cultural programme of songs and dances of Kerala is organised by the Student Council.

During Diwali the NSS organised Diwali Mela for HIV affected children from Mumbai. The children and their parents are invited to participate in games and other cultutra; activities. Refreshments and lunch is served to all present. Children are also given Diwali gifts sponsored by well wishers.

For Christmas, a party is organised for the entire staff and class 4 employees on the campus. Games are organised and refreshments are provided. Each person is also given a Christmas gift. A Christmas ball is organised for the students on the campus.

#### Birth and Death Anniversaries of Indian Personalities:

Teacher's Day is celebrated each year to commemorate Sept 5 as the birthday of Dr. Radhakrishnan. The Students Council organises cultural events and fun games for staff. The institute also organises lunch for the staff.

The institute celebrates September 15th as Engineer's Day to commemorate the birth anniversary of Dr. Visveswaraya. Student Council organises events like quiz competitions, expert talks, poster making competition.

University of Mumbai organizes Bhajan Sandhya every year on account of World Peace Day on October 2 at Gateway of Mumbai. Students from all NSS units participate in the same program. Our volunteers participate in the every year.

#### **Other events**:

The institute orgainses a Yoga session for staff and students to commemorate Yoga Day

International Women's Day is observed each year by organising cultural and educative programmes for the lady staff of the college. The Class 4 women employees are given gifts to acknowledge their service to the institute

For Swaccha Bharat Abhiyaan the NSS students participate in activities like Beach Cleaning and cleanliness awareness campaigns.

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

#### **Response:**

The institute displays all relevant information regarding academics, administration, research, alumni, etc on the official website www.dbit.in.

Additionally the institute has the following processes in place to ensue complete transparency in all its activities as follows:

#### ADMINISTRATION:

- The mandatory disclosure document as required by AICTE is uploaded annually on the website. The document contains all relevant details of faculty, students, facilities and infrastructure
- All compliance data is submitted annually to AICTE, DTE
- Local Inquiry Committee visits are conducted each year for continuation of affiliation to Mumbai University
- Committees are formed to monitor grievance redressal, internal complaints, ragging and other such incidents.
- Students are admitted to the programme strictly as per the admission norms of the state
- The management has an open door policy and welcomes suggestions from staff and students

through various mechanisms

• Institutional polices, rules and regulations are either uploaded on the website or are displayed on notice boards.

#### FINANCIAL:

- Each year a budget is submitted for approval. All expenses are accounted for and the statement of income and expenditure is audited each year.
- All salaries are directly credited to the bank account of the employees
- The institute provides the audited statement of accounts to the Fee Regulatory Authority of the state (Shikshan Shulka Samiti) for finalising the student fees for the academic year.

#### ACADEMIC:

- Study material is uploaded on MOODLE which is a Learning Management System
- The examination audit system ensures that the evaluation mechanism is robust and transparent
- Student feedback is taken for teaching, infrastructure, college policies, facilities, etc for improvement
- Student attendance is recorded on MIS and is accessible to the student as well as the parents.

#### 7.2 Best Practices

#### 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 statement of the institute mentions research as a core aspect of growth and development of the institute. In spite of being an under-graduate institute for engineering, faculty engagement in research is fundamental to their job description and is an integral component of faculty performance appraisal. Students are also encouraged to work on research projects both within the campus as well as outside the campus.

Although the faculty are free to choose their area, the institute is keen on encouraging research in

sustainable technologies in areas of water, energy, sensor design, advanced materials, etc.

DBIT has put in place several initiatives to motivate faculty and students to carry out research. These are described below.

#### **1. Faculty sponsorship for PhD:**

The institute has been providing sponsorship to faculty to pursue their Phd studies in IITs. After obtaining admission to the programme, the faculty is given fully paid leave for 6 months to 1 year to complete their course work. Later the faculty is provided time-off on 3 working days in the week for a minimum period of 3 years to complete the Phd. Further extension is provided after management review. The institute sponsor's the fees as well as sponsors participation in conferences for registration in national aims to develop research as a culture among the faculties and the students. In return the faculty signs a bond effective from the date of joining back full time.

#### 2. Appointment of Dean R & D

The position of Dean of Research and Development was created in 2014. A senior faculty with Phd is appointed to the post for a 3 year period. The responsibility of the Dean is to create a conducive environment for research, frame policies to encourage faculty to engage in research and create a research culture on campus. The Dean also frames the Research and IPR policies of the institute and also networks for exploring opportunities for collaboration

#### **3.** Applying for research projects:

Faculty are encouraged to apply for Minor and Major Research Projects of the University of Mumbai. Each year 8-12 projects are approved by the University every year for amounts ranging from Rs. 20,000/- to Rs.1,00,000/-. The research investigators are asked to present their projects before an expert committee and valid inputs are provided. They are also encouraged to enhance the scope of the project and convert it into a full fledged research.

Faculty have also applied for research grants to agencies like DTS, BARC, BRNS, DRDO, however with little success

#### 4. Institute sponsorship for projects:

The institute has created a research fund corpus of Rs. 10 lakhs to encourage faculty to undertake Major research projects on campus. Faculty teams present their research ideas before an expert committee, which approves the grant for selected projects. The team has to submit a progress report each semester. So far 4 research projects have been provided grants ranging from Rs.50,000/- till Rs.2.5 lakhs.

#### **5. Journal publication:**

Each year the institute publishes a technical journal titled 'DBIT journal of Science and Engineering' which is now a peer reviewed journal of papers submitted by staff and students on the original work carried out by them.

#### 6. Sponsorship for conferences, training, workshops:

All faculty and students are encouraged to present their papers in conferences and are provided part sponsorship for the same. They are also encouraged to undergo training and certification in latest technologies.

#### 7. Research groups in departments:

Each department has formed faculty research groups to identify projects to work on . They are mentored by external mentors who help them finalise the research topic, plan out the activities and the resources, establish milestones, review progress and finally publish results.

#### 8. MoUs and Research Centres

The institute has signed an MoU with the Indian Institute of Chemical Technology (CSIR), Hyderabad in October 2018 to set up a research centre for water quality monitoring and purification. Faculty are already working with student groups on developing sensors to detect arsenic and fluoride contamination in real time. Water purification and product development are other projects that the teams will work on.

MoUs have also been signed with 2 universities in Taiwan in November 2018 for joint research

collaboration, among other things.

#### 9. IPR and Patenting

Staff and students are made aware of IPR and patenting through expert lectures and workshops. The institute also has a code of ethics for research

#### 10. INNOVATIONEXT and product design

To encourage students and staff to innovate, an innovation centre is envisaged. A software that trains in idea generation and product development called INNOVATIONEXT has been purchased by the institute. Students of the second year will be trained in using the software to generate innovative ideas which they will further explore in their third year and final year.

#### **11. INNOVEX**

INNOVEX is the annual Project Exhibition of institute in which all BE students exhibit their final year project. The exhibition provides a platform to showcase the innovative ideas of the students to industry and also provides students with valuable feedback on their designs. All projects are judged by industry experts and th best projects are rewarded.

In this manner the institute has been able to provide an ecosystem to nurture research and innovation amongst faculty and students.

## **5. CONCLUSION**

### **Additional Information :**

The institute follows a very well defined process for student mentoring to ensure that special needs of students in terms of health, any kind of addiction, learning disabilities, lack of motivation, etc. are identified and addressed as far as possible.

ICT is deployed extensively in teaching-learning. All learning material is uploaded on MOODLE, an open source learning management software. The students can access this material anywhere even on their mobile phones.

The institute strongly advocates the use of Open Source software for all its academic and administrative needs. The department of Information Technology proposes to establish a centre for excellence in open source technologies.

## **Concluding Remarks :**

DBIT strives to be amongst the top 5 engineering colleges of Mumbai University and become the best institute for UG studies in the next 5 years.

Since inception DBIT has put in place practices to achieve a high level of academic output.

There have been challenges along the way like availability of qualified faculty, retention of good teachers, student academic performance, student discipline and so on. However through the support of the Management and the constant endeavour of the faculty these issues have been largely resolved.

The institute now has the readiness to step into the next orbit and elevate its teaching learning and research to the level of the best institutes in the country. This understanding has resulted in the SEAD journey (Strategy to Excel, Achieve and Deliver) being embarked on by all faculty since June 2018. As part of this journey each department has identified its goals for the next 2 years and planned out a strategy with the help of mentors for achieving the same.

The institute has signed MoUs with 2 Taiwanese Universities for collaborative research by faculty and students, exchange programmes, Internship for faculty and students, setting up of joint research laboratories. An MoU has also been signed with Indian Institute of Chemical Technology (IICT), Hyderabad, a CSIR laboratory, for setting up a water research centre to study water contamination and propose solutions for treatment and purification.

The institute has established a strong connect with the community by interacting with them to provide technological solutions to their problems. Several students projects are oriented towards understanding such issues and designing unique solutions. Students and faculty have been trained in Design Thinking to evolve effective solutions. Therefore the institute proposes to establish a 'Centre for Sustainability Studies' for solving societal problems. The centre will also look at incubating social business plans and create social entrepreneurs.

Each year students are trained in entrepreneurship and business development. The institute proposes to set up an Incubation Centre to provide initial hand holding to the business ventures.

## **6.ANNEXURE**

#### **1.Metrics Level Deviations**

<b>1.Metrics</b>	<b>Level Devia</b>	tions				
Metric ID	Sub Question	s and Answers	before and	after DVV	Verification	L
1.1.2	Number of ce	rtificate/diplor	na program	introduced	during the l	ast five years
	1.1.2.1. No years	umber of certi	ficate/diplo	oma progra	ms introdu	uced year-wise during the last five
	•	before DVV	Verification	:		
	2017-	18 2016-17	2015-16	2014-15	2013-14	
	5	8	3	1	2	
	Answei	r After DVV V	erification :			
	2017-	18 2016-17	2015-16	2014-15	2013-14	
	0	0	0	0	0	
1.1.3	Colleges/ Oth 1.1.3.1. No Academic Co	er Colleges, su	ich as BoS a ers participa e during the	nd Academ ting in vari- last five ye	ic Council	es of the Universities/ Autonomous during the last five years of the Institution, such as BoS and
	2017-		2015-16	2014-15	2013-14	]
	8	11	5	2	3	-
	Answe	After DVV V	erification :			-
	2017-	18 2016-17	2015-16	2014-15	2013-14	
	3	1	0	0	0	
1.2.1	during last fiv 1.2.1.1. He Answer		courses are i Verification	ntroduced v : 663		of courses across all Programs offered
1.4.1	Structured fee	edback receive	d from			
	Semester wise Answer		Verification	: A.Any 4 d	of the above	for design and review of syllabus-

1.4.2	Feedback proce	sses of the in	stitution ma	ay be classif	ied as follo	vs:
		efore DVV V fter DVV V				and analysed nd analysed
2.1.3		tage of seats	filled agair	nst seats res		rious categories as per applicable
	five years	ber of actual efore DVV V			1 the reserve	d categories year-wise during the la
	2017-18	2016-17	2015-16	2014-15	2013-14	
	0	0	0	0	0	
	Answer A	fter DVV V	erification :			1
	2017-18	2016-17	2015-16	2014-15	2013-14	
	0	0	0	0	0	
2.2.3			ently abled /erification	students on : 2		
3.1.1	,corporate house (INR in Lakhs) 3.1.1.1. Tota industry, corpor during the last f	es, internation l Grants for r ate houses, in	nal bodies, o research pro nternational R in Lakhs)	jects sponse bodies, end	, chairs in th pred by the	ernment sources such as industry e institution during the last five year non-government sources such as Chairs in the institution year-wise
	2017-18	2016-17	2015-16	2014-15	2013-14	
	25.08670	) 2.218	1.10	1.33	0.4	
	Answer A	fter DVV V	erification :			
	2017-18	2016-17	2015-16	2014-15	2013-14	
	20.01	2.218	1.10	1.33	0.4	
	not attached any web and mobile	document re based - a pla	elated to Re atform for c	search proje ommunity t	ect (develop o contribute	rs are not eligible. Moreover HEI ha ment of open source community gis to city development). Accordingly ot been provided are removed from

3.1.3	Number of research during the last f	1 0	per teacher	funded, by	governmen	t and non-government agencies,
	the last five yea Answer b Answer a 3.1.3.2. Num Answer b Answer a	rs efore DVV V fter DVV Ve ber of full tin efore DVV V fter DVV Ve	Verification rification: 2 me teachers Verification rification: 1	: 32 28 worked in : 97 .55	the institutio	and non-government agencies during on during the last 5 years been updated based on exclusion of
	DBIT sponsored	l projects and	d one for wh	nich docum	ents have no	ot been submitted in 3.1.1. Moreover as HEI has mis-understood the metric
3.2.2	Academia Innov 3.2.2.1. Tota Industry-Acade	vative practic	es during th workshops/s ve practices	ne last five y seminars co year-wise o	vears	erty Rights (IPR) and Industry- Intellectual Property Rights (IPR) and ast five years
	2017-18	2016-17	2015-16	2014-15	2013-14	
	5	6	8	7	9	
	Answer A	fter DVV V	erification :			
	2017-18	2016-17	2015-16	2014-15	2013-14	
	4	5	7	5	7	
3.3.2	recognition/awa		/erification	: Yes	receive state	e, national and international
3.3.5		-			-	ed and papers in g the last five years
	national/interna		ence-procee	edings year-		es / books published, and papers in the last five years
	2017-18	2016-17	2015-16	2014-15	2013-14	
	21	21	6	60	11	
	Answer A	fter DVV V	erification :			
	2017-18	ĺ	2015-16	2014-15	2013-14	

	19	19	6	60	11
Non-O Issue, 3.4 Organ	Governmen etc. during .4.1. Total isations, Ne eness, Genc	nge of studen t Organisati the last five number of s on-Governm ler Issue, etc fore DVV V 2016-17 658	ons and pro e years students par nent Organi c. year-wise	egrams such ticipating in sations and during the	as Swachh n extension programs s
	Answer Af	ter DVV V	erification :		
	2017-18	2016-17	2015-16	2014-15	2013-14
	136	74	165	143	51
job tra	aining, resea	arch, etc yea	ar-wise duri	ing the last	e, student e five years
job tra	aining, resea		ar-wise duri	ing the last	
job tra	aining, resea Answer be 2017-18 108	arch, etc yea fore DVV V 2016-17 68	ar-wise duri Verification 2015-16 84	2014-15 50	five years 2013-14
job tra	aining, resea Answer be 2017-18 108	arch, etc yea fore DVV V 2016-17	ar-wise duri Verification 2015-16 84	2014-15 50	five years 2013-14
job tra	aining, resea Answer be 2017-18 108 Answer Af	arch, etc yea fore DVV V 2016-17 68 éter DVV Ve	ar-wise duri /erification 2015-16 84 erification :	2014-15 50	five years 2013-14 24

		Answer Af	ter DVV V	erification :			_
		2017-18	2016-17	2015-16	2014-15	2013-14	
		1	2	0	0	0	
4.1.3	etc				alls with IC		facilities such as smart class, LMS,
	I	Answer be	fore DVV V er DVV Ve	Verification	: 19		
4.2.5	Availal	bility of re	mote access	s to e-resour	rces of the l	ibrary	
			fore DVV V ter DVV V				
4.3.3	Availal	ble bandw	idth of inter	met connect	tion in the I	nstitution (L	.ease line)
					:>=50 MB >=50 MBP		
5.1.1		ge percenta the last fiv		nts benefite	d by schola	rships and f	reeships provided by the Government
	year-w	ise during	er of studer the last five fore DVV V	e years		ships and f	reeships provided by the Government
		2017-18	2016-17	2015-16	2014-15	2013-14	
		318	335	276	219	236	
	I	Answer Af	ter DVV V	erification :			
		2017-18	2016-17	2015-16	2014-15	2013-14	
		314	335	276	219	236	
5.1.6			as a transpar at and raggin		ism for tim	ely redressa	l of student grievances including
			fore DVV V ter DVV V				
5.2.2	Percent	tage of stu	dent progre	ssion to hig	her education	on (previou	s graduating batch)
	A	Answer be	er of outgo fore DVV V er DVV Ve	/erification		g to higher	education
	Ren	nark : The	HEI input ı	pdated as p	oer HEI clar	ification res	sponse and attached document of proof

5.3.1		ber of award national leve				-					
	natio	3.1.1. Numb nal/internation ve years Answer ber	onal level (a		team event	• •		-			
		2017-18	2016-17	2015-16	2014-15	2013-14					
		2	2	0	0	0					
		Answer Af	ter DVV V	erification :							
		2017-18	2016-17	2015-16	2014-15	2013-14					
		0	0	0	0	0					
	6	3.2.1. Numh	er of teache	ers provided		cial support		nd cor	nferenc	es / work	shops and
				c · 1							
		ds members	ship fee of p	orofessional Verification	-	r-wise durin	g the la	ast fiv	e years		
		ds members	ship fee of p		-	2013-14	g the la	ast fiv	e years		
		ds members Answer be	ship fee of p fore DVV V	Verification			g the la	ast fiv	e years		
		rds members Answer ber 2017-18 72	ship fee of p fore DVV V 2016-17 35	Verification 2015-16	2014-15	2013-14	g the la	ast fiv	e years		
		rds members Answer ber 2017-18 72	ship fee of p fore DVV V 2016-17 35	Verification           2015-16           29	2014-15	2013-14		ast fiv	e years		
		Answer ber 2017-18 72 Answer Af	ship fee of p fore DVV V 2016-17 35 ter DVV V	Verification 2015-16 29 erification :	2014-15 25	2013-14 27		ast fiv	e years		
	towar	Answer bes 2017-18 72 Answer Af 2017-18	ship fee of p fore DVV V 2016-17 35 ter DVV V 2016-17 23 ough the in	Verification 2015-16 29 erification : 2015-16 24 put is being	2014-15 25 2014-15 18 accepted .4	2013-14 27 2013-14 17 As per reque	st by I	DVV f	or the	nentione	
6.3.4	towar Re docur Avera	Answer ber 2017-18 72 Answer Af 2017-18 53 emark : Alth ment, none of age percentar arm, Refresh	ship fee of p fore DVV V 2016-17 35 ter DVV V 2016-17 23 ough the in of document age of teach	Verification 2015-16 29 erification : 2015-16 24 put is being t has been p ers attendin	2014-15 25 2014-15 18 accepted .A provided by g profession	2013-14 27 2013-14 17 As per reque HEI. No poinal development	st by E licy do	DVV f cumer rogran	or the name	nentione udget ex Orientat	tract.
6.3.4	towar Redocur Avera Progr years 6.7 Progr	Answer ber 2017-18 2017-18 72 Answer Af 2017-18 53 emark : Alth nent, none of age percentar am, Refresh 3.4.1. Total fr am, Refresh aver years	ship fee of p fore DVV V 2016-17 35 ter DVV V 2016-17 23 ough the in of documen age of teach her Course, number of her Course,	Verification 2015-16 29 erification : 2015-16 24 put is being t has been p ers attendin Short Term teachers att	2014-15 25 2014-15 18 accepted .4 provided by g profession Course, Fa ending prof Course, Fa	2013-14 27 2013-14 17 As per reque HEI. No por nal developr culty Develo	st by I licy do nent pr opment	DVV f cumer rogran t Progr ent pr	for the r nt, no b ns viz., ram du ograms	nentione udget ex Orientat ring the l	tract. ion ast five ientation
6.3.4	towar Redocur Avera Progr years 6.7 Progr	Answer ber 2017-18 2017-18 72 Answer Af 2017-18 53 emark : Alth nent, none of age percentar am, Refresh 3.4.1. Total fr am, Refresh aver years	ship fee of p fore DVV V 2016-17 35 ter DVV V 2016-17 23 ough the in of documen age of teach her Course, number of her Course,	Verification 2015-16 29 erification : 2015-16 24 put is being t has been p ers attendin Short Term teachers att Short Term	2014-15 25 2014-15 18 accepted .4 provided by g profession Course, Fa ending prof Course, Fa	2013-14 27 2013-14 17 As per reque HEI. No por nal developr culty Develo	st by I licy do nent pr opment	DVV f cumer rogran t Progr ent pr	for the r nt, no b ns viz., ram du ograms	nentione udget ex Orientat ring the l	tract. ion ast five ientation

	Answer Af	ter DVV V	erification :			
	2017-18	2016-17	2015-16	2014-15	2013-14	
	51	17	19	10	8	
6.5.3	6.5.3.1. Numb years	per of qualit	-	by IQAC f		uality culture per year g quality year-wise for the last five
	2017-18	2016-17	2015-16	2014-15	2013-14	
	7	4	0	0	0	
	Answer Af	ter DVV V	erification :			
	2017-18	2016-17	2015-16	2014-15	2013-14	
	5	0	0	0	0	
6.5.4	Quality assurance	e initiatives	of the instit	tution inclue	le:	
7.1.3	Quality A improven 2. Academic 3. Participat 4. ISO Certi 5. NBA or a Answer be	ssurance Ro nents c Administr ion in NIRF fication ny other qu fore DVV V	eport (AQA ative Audit ality audit Verification erification:	R) to NAA (AAA) and : B. Any 3	C; Feedback	AC); timely submission of Annual c collected, analysed and used for f follow up action
7.1.5				irement of	the Institutio	on met by the renewable energy
	Answer be Answer aft 7.1.3.2. Total	fore DVV V er DVV Ve annual pow	Verification	: 89943.2 ) hent (in KW	H)	ergy sources (in KWH)

Answer after DVV Verification: 708689.5

Remark : The HEI was requested to provide geotagged pictures but again it has provided simple pictures which can not prove that pictures of HEI campus, moreover green audit report also do not mention anything about installed renewable energy resources, accordingly as the data cannot be verified, HEI input has been updated to ZERO for Annual power requirement met by the renewable energy sources (in KWH)

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

> 1. 7101 7 1

	7.1.8	8.1. Total of	expenditure	on green in	nitiatives an	d waste mai	agement excluding salary component
	-	U	the last five	•	,		
	A	nswer bef	fore DVV V	verification:			
		2017-18	2016-17	2015-16	2014-15	2013-14	
		19.86	16.78	17.12	24.69	16.39	
	A	answer Af	ter DVV Ve	erification :			
		2017-18	2016-17	2015-16	2014-15	2013-14	
		0.28	0.32	1.13	1.31	1.17	
			-		er attached een removed		ested document but value for
7.1.9	Differen	ntly abled	(Divyangja	n) Friendlir	ness Resour	ces availabl	e in the institution:
	1.	Physical f	acilities				
	2.	Provision	for lift				
	3.	Ramp / Ra	ails				
	4.	Braille So	ftware/facil	ities			
	5.	Rest Roor	ns				
	6.	Scribes fo	r examinati	on			
	7.	Special sk	ill developr	nent for dif	ferently abl	ed students	
		-	similar fac		-		
						t 6 of the ab	
7.1.10						1 of the abo	
7.1.10							and disadvantages during the last five
	years .			-	tiatives to a	ddress locat	ional advantages and disadvantages
		0	the last five	•			
		nswer bei	fore DVV V	erification:			
		2017-18	2016-17	2015-16	2014-15	2013-14	
		б	2	1	1	1	

		Answer Af	ter DVV V	erification :			_
		2017-18	2016-17	2015-16	2014-15	2013-14	
		0	0	0	0	0	
7.1.11	years 7.1	(Not addres .11.1. Num g the last fiv	ssed elsewh	ere) atives taken	to engage v		cal community during the last five
		2017-18	2016-17	2015-16	2014-15	2013-14	
		0	1	0	0	0	
			ter DVV V				
		2017-18	2016-17	2015-16	2014-15	2013-14	
		1	0	0	0	0	
7.1.12	Vice (	Chancellor Answer be		Principal /C Verification	Officials and : Yes	ners, govern l support sta	ing body, administration including ff
7.1.17	Non-V and so 7.1 condu comm	Violence an ocial cohesi .17.1. Num oct, Love, N ounal harmo g the last fiv Answer be	d peace); na on as well a ber of active on-Violenc ony and soci- ve years fore DVV V	ational value as for observ vities conduce e and peace ial cohesion	es, human v vance of fur cted for pro (); national v as well as ()	values, nation ndamental du motion of un values, huma for observan	es (Truth, Righteous conduct, Love, nal integration, communal harmony uties during the last five years niversal values (Truth, Righteous an values, national integration, ace of fundamental duties year-wise
		2017-18	2016-17	2015-16	2014-15	2013-14	
		11	5	6	7	5	
		Answer Af	ter DVV V	erification :			
		2017-18	2016-17	2015-16	2014-15	2013-14	
		11	5	6	7	5	
		L					]

ID	Extended (	Questions					
1.1	Answer be	courses offe fore DVV V er DVV Ver	erification :	663	ross all progr	ums during the	last five years
2.2	last five ye			erved catego	ry as per GO	/State Govt rule	e year-wise durin
	2017-18	2016-17	2015-16	2014-15	2013-14		
	1	1	1	1	1		
	Answer Af	fter DVV Ve	rification:		-		
	2017-18	2016-17	2015-16	2014-15	2013-14		
	1	1	1	1	1		
	í	fore DVV V		2014 15	2013 14		
	2017-18	2016-17	2015-16	2014-15	2013-14		
	343	343	376	386	343		
	Answer Af	ter DVV Ve	rification:				
	2017-18	2016-17	2015-16	2014-15	2013-14		
	386	399	419	438	384		
3.2		sanctioned		ise during th	ne last five ye	ars	
	2017-18	2016-17	2015-16	2014-15	2013-14		
	76	89	89	89	89		
	Answer Af	ter DVV Ve	rification:				
	2017-18	2016-17	2015-16	2014-15	2013-14		
	88	92	101	101	105		
	Answer be 2017-18 76 Answer Af	fore DVV V 2016-17 89 Tter DVV Ve	erification: 2015-16 89 rification:	2014-15 89	2013-14 89		
	88	92	101	101	105		
	Answer be	per of classro fore DVV V for DVV Ver	erification :	19			

2	-			year-wise d	uring the las
	r	fore DVV V	erification:		
	2017-18	2016-17	2015-16	2014-15	2013-14
	358.67	557.74	779.07	692.34	822.13
		fter DVV Ve			
	Allswel Al		inication.		
	2017-18	2016-17	2015-16	2014-15	2013-14
		ĺ		2014-15 554	2013-14 529.24
3	2017-18 315.15	2016-17	2015-16		
3	2017-18 315.15 Number o	2016-17 366.90 f computers	2015-16	554	