

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

# **DELHI TECHNOLOGICAL UNIVERSITY**

BAWANA ROAD SHAHBAD DAULATPUR 110042 dtu.ac.in

#### Submitted To

# NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

**BANGALORE** 

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# 1. EXECUTIVE SUMMARY

# 1.1 INTRODUCTION

Delhi Technological University (DTU) is a non affiliating, teaching and research University at Delhi to achieve excellence in science, engineering, technology, management and allied areas and matters connected there with or incidental thereto. The University enables students to face the wide-ranging changes taking place in the fields of science, technology, environment and management. This includes innovation, design, development, construction, production, managerial and entrepreneurial activities. The University lays great emphasis on assisting students in the development of national character, self-confidence, leadership and fostering an ecosystem for creativity and imagination.

This university was initially established with the name of Delhi Polytechnic in the year 1941 and was renamed to Delhi College of Engineering in 1965. In 2009, Delhi Technological University was reconstituted from Delhi College of Engineering by the Government of NCT of Delhi and main campus was moved to Shahbad Daulatpur, Bawana Road, Delhi. The University has an illustrious history spanning over 77 years.

The newly established East Delhi Campus, Vivek Vihar, Phase II, Delhi has been functional since the 2017-18 academic session. This campus endeavors to provide quality education, research, and innovation in the emerging areas of management relevant to industry and society.

The University currently offers various inter-disciplinary and industry relevant programmes in science, technology, management, and allied areas at both the undergraduate and postgraduate level. The University has established a strong academia-industry interface and has collaborations with reputed research organizations, industries, and premier institutions. A great many alumni of the institute have excelled at home and abroad and through their contributions to the profession of engineering they have brought high honour and enhanced the dignity of engineering fraternity being rolled out from institutions in India. In fact, the DTU is a highly preferred choice of the meritorious students in the country. With its illustrious history, strong alumni power worldwide, profound contributions to the growth of quality human capital in engineering and technology and a campus vibrant with technology innovations unleashing the enormous power of creativity of the talented new generation professionals, DTU has earned the reputation of being one of the premier University of Technology in the Country.

#### Vision

" To be a world class university through education, innovation and research for the service of humanity"

#### Mission

- 1. To establish centres of excellence in emerging areas of science, engineering, technology, management and allied areas.
- 2. To foster an ecosystem for incubation, product development, transfer of technology and entrepreneurship.

- 3. To create environment of collaboration, experimentation, imagination and creativity.
- 4. To develop human potential with analytical abilities, ethics and integrity.
- 5. To provide environment friendly, reasonable and sustainable solutions for local & global needs.

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

# **Institutional Strength**

Located in Delhi with excellent connectivity to cities in India and abroad

Excellent academic reputation of institute leading to admission of very bright students

Highly qualified, engaged, and self-motivated faculty members

Strong and extensive alumni-network leading to effective institute-industry relations

Effective engagement of faculty and students in research and technical events

Vibrant Student Societies where students can explore their talents

Academic system sensitive to the student's needs and local/global requirements

Strong ecosystem for innovation at Campus

Number of environment conscious initiatives at campus

#### **Institutional Weakness**

Limited number of Intellectual Property

Less international/ non-government funded projects

#### **Institutional Opportunity**

Attracting international student community

Attracting financial support for research from alumni/industry

Designing multi-disciplinary skill-based courses to meet the demand of industry

Improving outreach activities and engage local community in socially-relevant projects

Scaling up the no. of startups by DTU students and faculty

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### **Institutional Challenge**

To increase the number of patents

To strengthen industry-institute collaborative projects

To expand civil infrastructure with growing student's strength

# 1.3 CRITERIA WISE SUMMARY

#### **Curricular Aspects**

The UG and PG curriculum of DTU is one of the most modern curriculum, based on the Choice Based Credit System (CBCS). It has a rich mix of courses from science, engineering, management, social sciences, humanities, fine arts, liberal arts, classical music, sports, etc. to be offered as departmental core (DCC), applied science (ASC), humanities and management (HMC) and foundation core and foundation electives (FEC). The curriculum has relative grading based CGPA system with more weightage to continuous evaluation. Research work based courses are introduced at UG level to enhance high-level research in cutting edge science, technology, management, and economics. Provision for earning credits through MOOCs on different platforms such as NPTEL, SWAYAM, and Coursera makes the curriculam very flexible.

In last five years' syllabus of all B. Tech., some M. Tech. and MBA courses are revised. The 56% of the courses have focus on employability/ entrepreneurship skills. Total 1193 new courses have been introduced. A total of 115 value added courses have been introduced where 89% students have enrolled. Most of the students undergo field training/ internship as it is part of curriculum.

For continuous improvement in the syllabus feedback from all the stakeholders are taken, analyzed and action is taken to meet the to meet the expectations of the parents, aspirations of the students, demand from the society and industry and the statutory regulations are considered as salient parameters for defining the vision and mission of a programme, in line with the University vision and mission.

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

DTU admits students from all over India and Abroad and approx. 14% of students come from other states. The institute admits students to B.Tech through JEE Mains Examination; M-Tech through GATE; and Ph.D and JRF sponsored candidates through written test and interview. Approx. 178 applications are received against each seat for admission. Total 86% of reserved seats (as per GOI norms) gets filled. Institute manages this diversity through Orientation programs at the time of admission so that their interaction with the faculty members and staff members can be analyzed and improved. During the course of time students undergo a systematic evaluation process consisting of written examination, group presentation, project, research papers, practical examination with viva, written assignment and class performance. Outcome-based education (OBE) is

adopted for the betterment of students.

Approx. 71% of sanctioned posts are filled with competent faculty, most of them are PhDs. Leading to student/ teacher ratio to approx. 16. Faculty at DTU is highly experienced and have been awarded for their achievements in teaching and research. Innovative teaching strategies are employed that encourage students to participate and contribute to the learning experience of their peers. Faculty uses latest ICT tools to make teaching-learning more attractive. Apart from the academics and co-curricular activities, the University encourages various extra-curricular activities which help them build interpersonal relations and help in overall personality development. Students are made to fill feedback forms at regular intervals so that issues faced by students can be dealt forthwith and the curriculum can be made even more student centric.

Examination system has been reformed and it is IT enabled. The time between examination to result declaration is about 30 days and very less complain/ request for reevaluation are received as answer sheets are shown and discussed with students. Most of the systems related to admission, examination etc. are automated. Programme outcomes, Programme specific outcomes and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students. Departments and faculty discus and evaluate the attainments of Programme outcomes, Programme specific outcomes and course outcomes.

#### Research, Innovations and Extension

The focus of the Delhi Technological University (DTU) is to promote teaching and research in emerging areas of science, engineering, management and allied areas. The university has created and developed an appropriate ecosystem for research and innovation. The university has taken several initiatives for the creation and dissemination of knowledge and establishing state of the art infrastructure. The faculty members are equipped with research infrastructure to carry out research works and get the funding from various Government and Non-Government sources such as DST, DBT etc. They are also provided with seed funding to pursue specific research programs. They are encouraged to establish collaborations for undertaking multi-disciplinary and interdisciplinary research. The university has also signed MoUs with academic institutions, research organizations both at national and international levels. This helps the students to channelize their innovative ideas. DTU has dedicated IRD Cell to coordinate all research and consultancy related work with industries, government agencies. Faculty have published a large number of research papers of international repute and brought many research projects in national and international collaboration. The University has an IPR Cell and Technology Business Incubator Cell (TBI Cell). TBI aims at Technology commercialization i.e. Mind to market, entrepreneurship, economic development. Along with all research and innovation activities, the students have been at forefront of bringing transformative social change through community engagement & development. Many initiatives have been carried out for the social responsibilities and to feel responsible towards the environment. DTU has been recognized and rewarded by Government for its extension activities.

#### **Infrastructure and Learning Resources**

Delhi Technological University has developed high-tech campuses (main campus at Bawana Road, Delhi and east campus at Vivek vihar Delhi) with modern facilities/learning resources as per the curriculum requirements and norms of statutory/regulatory bodies. Departments are well-equipped with latest state-of-the-art facility/building having specialized laboratories to provide a variety of platforms and computing environment for UG, PG, and Research students. Most of the classrooms and seminar halls are ICT – enabled. The Library has a very rich collection of printed as well as e-books and journals satisfying the information needs of the faculty and

students. The total collection of books is approx 2, 13, 351 consists of 1, 42, 315 main collections, 57, 887 Book Bank, 9,057 SCP Book Bank, and 4, 092 donated books.

Delhi Technological University has its own computer center to cater the need for IT infrastructure and services for faculty and students. The network setup at DTU supports maximum resource sharing for the connected departments. Computer Centre maintains the DTU websites (www.dtu.ac.in), alumni portal, departments portal, library portal, faculty portal, hostel portal, student portal, DTU times portal, and other related intranet web services. The center is networked through high-end intelligent CISCO/Dax/Avaya/D-Link manageable switch, and possesses round the clock two leased lines of 200 Mbps (Bharti Airtel) and 1Gbps link of NKN (shared bandwidth) in different pipes for the Wi-Fi connectivity in the Library, Academic, Departments, Administrative and Hostel blocks of the campus with internet facilities on all the nodes. Access internet is given to end user after secure authentication.

Delhi Technological University has 8 acres Sports Complex. The facilities include football, basketball, volleyball, hockey, kabaddi, cricket, tennis, table tennis, badminton, Gym/fitness center, yoga and meditation etc. Through its excellent sports facilities, DTU offers opportunities to students for regular work-out, lifestyle management and interaction.

The University has a dedicated maintenance department responsible for carrying out the duties of Estate Office and is responsible for overseeing the maintenance of buildings, classrooms, laboratories, hostels, sports facilities, utilities, etc.

#### **Student Support and Progression**

DTU provides an excellent student support system to encourage academic excellence and to inculcate social responsibilities. DTU provides financial grant to 5% students for academic performance and to less privileged category students. Apart from this, DTU ensures that its students get financial benefits by government schemes in various sections. For overall development of students, many facilities such as language lab, bridge course, yoga and meditation, sports and cultural activities are being provided. Remedial coaching is also arranged for weaker students. Students are also being trained by career counselling and guidance for competitive exam. As a result of which placement record of the University is achieving new heights and many students are progressing for higher education in many International Universities and institutions. Also a large number of students are serving in Civil Services. DTU has a transparent mechanism for timely redressal of student grievances which is governed through Board of Discipline, Women Cell and Internal Complaint Committee for prevention, prohibition and redressal of sexual harassment of women. DTU has an active student council which insures the representation of students in administration to put forward the interest and views of students. DTU arranges many sports activities for the physical fitness of the students. There is NSS branch also in which the students are working to address many social problems. DTU has an active office of International affairs which is responsible for carrying out all activities involving addressing international students, facilitation of student and faculty exchange and other activities related to international partnership. DTU has a strong, effective, engaged and supportive alumni network for the benefit of students, University and Nation at large.

#### Governance, Leadership and Management

The framework for the institutional governance for achieving its vision and mission is provided in the DTU Act. The university has qualified and competent administrators to provide effective leadership and management

at various levels. The Act and Statutes of the University which includes various statutory authorities is to provide policy framework and direction for the functionary of the university for the fulfilment of the common and specific objectives. The bodies are constituted for effective operation which includes evaluation, monitoring and providing recommendation in respect of various matters related to institution management, capacity, review, design and evaluation of course curriculum and research. For promoting the research quality in the university, award many has been implemented at various levels. Apart from this, the faculty received funds for professional development in each financial year. The institute has effective welfare measures for the teaching and non-teaching staff. The promotion of the faculties through CAS is based on the APAR system. The university has well-functioning IQAC and farmed SOPs, and follows the quarterly assessment of each administration and academic Department. The university received funds from govt. and non govt. agencies as well as from alumni and the account department managed all the funds and their utilization accordingly and separately in each financial year.

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

Delhi Technological University stands tall in respect of its institutional values like code of conduct for students and teachers; awareness about fundamental duties and rights of Indian citizens; imparting core human values like truth, non-violence and peace, national integration, communal harmony, social cohesion etc. It goes a step further in imparting the social responsibility towards gender equity and sensitivity; service to local community; environmental consciousness and responsibility; providing disable-friendly resources; safety and security. In addition to this, DTU observes a complete transparency in its administrative, financial, and other auxiliary processes with equal anticipation of student, faculty, and staff. The University is actively engaged in programmes of gender sensitivity and social security through its Women Cell, Equal Opportunity Cell, and various cultural societies of DTU. The Engineering Cell of DTU, Society for Environmental Sustainability-DTU, and Society for Civil and Environment Engineers-DTU have been continuously engaged in activities of environmental awareness and promotion leading to a Zero Liquid Discharge (ZLD) campus, waste minimization, water harvesting, energy conservation, renewable energy generation, promotion of public transport, green landscaping, and paperless office.

DTU is unique in terms of its strong research and incubation ecosystem, and its dynamic response towards the academic reforms. Introduction of new industry-relevant courses, fundamental electives of foreign language, sports etc. are a common practice. The faculty and students are supported through research excellence awards, support towards obtaining patents, and financial help for research projects. The University maintains equal participation of its students in official and other assignments through USIP programme etc.

# 2. PROFILE

# 2.1 BASIC INFORMATION

Name and Address of the University						
Name	DELHI TECHNOLOGICAL UNIVERSITY					
Address	Bawana Road Shahbad Daulatpur					
City	Delhi					
State	Delhi					
Pin	110042					
Website	dtu.ac.in					

Contacts for Communication								
DesignationNameViceYogesh SinChancellor	Name	Telephone with STD Code	Mobile	Fax	Email registrar@dtu.ac.in			
	Yogesh Singh	011-27882284	8375965159	011-2787102				
IQAC / CIQA coordinator	Madan Mohan Tripathi	011-27891147	7982912449	011-2729466 9	mmtripathi@dce.a c.in			

Nature of University	
Nature of University	State University

Type of University	
Type of University	Unitary

Establishment Details							
Establishment Date of the University	10-07-2009						
Status Prior to Establishment,If applicable	Affiliated College						
Establishment Date	02-08-1965						

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Recognition Details								
Date of Recognition as a University by UGC or Any Other National Agency :								
Under Section Date View Document								
2f of UGC	10-07-2009	View Document						
12B of UGC	17-12-2012	<u>View Document</u>						

University with Potential for Excellence								
Is the University Recognised as a University with Potential for Excellence (UPE) by the UGC?	No							

Location,	Location, Area and Activity of Campus								
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.	Program mes Offered	Date of Establishment	Date of Recognition by UGC/MHRD		
Main campus	Bawana Road Shahbad Daulatp ur	Semi- urban	163.87	158840	Undergra duate, Po stgraduat e, Doctorol				

# 2.2 ACADEMIC INFORMATION

# **Affiliated Institutions to the University**

Furnish the Details of Colleges of University

Type Of Colleges	Numbers
Constituent Colleges	0
Affiliated Colleges	0
Colleges Under 2(f)	0
Colleges Under 2(f) and 12B	0
NAAC Accredited Colleges	0
Colleges with Potential for Excellence(UGC)	0
Autonomous Colleges	0
Colleges with Postgraduate Departments	0
Colleges with Research Departments	0
University Recognized Research Institutes/Centers	0

Is the University Offering any Programmes Recognised by any Statutory	: No
Regulatory Authority (SRA)	

# **Details Of Teaching & Non-Teaching Staff Of University**

Teaching Faculty												
	Professor			Associate Professor			<b>Assistant Professor</b>					
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned			-	78				150				466
Recruited	66	12	0	78	42	14	0	56	71	53	0	124
Yet to Recruit				0				94				342
On Contract	12	1	0	13	1	0	0	1	184	147	0	331

Non-Teaching Staff							
	Male	Female	Others	Total			
Sanctioned				360			
Recruited	49	9	0	58			
Yet to Recruit				302			
On Contract	27	23	0	50			

Technical Staff							
	Male	Female	Others	Total			
Sanctioned				207			
Recruited	48	1	0	49			
Yet to Recruit				158			
On Contract	50	10	0	60			

# **Qualification Details of the Teaching Staff**

Permanent Teachers										
Highest Qualificatio n	Profes	ssor		Assoc	iate Profes	ssor	Assist	ant Profes	ssor	
	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.	66	12	0	30	10	0	28	24	0	170
M.Phil.	0	0	0	0	0	0	2	4	0	6
PG	0	0	0	12	4	0	41	25	0	82

Temporary Teachers										
Highest Qualificatio n	Profes	rofessor 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.	12	1	0	1	0	0	8	4	0	26
M.Phil.	0	0	0	0	0	0	0	1	0	1
PG	0	0	0	0	0	0	176	142	0	318

Part Time Teachers										
Highest Qualificatio n	Profes	ssor		Assoc	iate Profes	ssor	Assist	ant Profes	ssor	
	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

# Distinguished Academicians Appointed As

	Male	Female	Others	Total
Emeritus Professor	0	0	0	0
Adjunct Professor	2	0	0	2
Visiting Professor	4	0	0	4

# **Chairs Instituted by the University**

Sl.No	Name of the Department	Name of the Chair	Name of the Sponsor Organisation/Agency
1	Not Applicable	Not Applicable	Not Applicable

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

Programme		From the State Where University is Located	From Other States of India	NRI Students	Foreign Students	Total
Doctoral (Ph.D)	Male	96	509	1	9	615
	Female	94	283	0	1	378
	Others	0	0	0	0	0
PG	Male	427	317	0	20	764
	Female	190	141	0	4	335
	Others	0	0	0	0	0
UG	Male	5680	1718	181	58	7637
	Female	887	336	52	15	1290
	Others	1	0	0	0	1

Does the University offer any Integrated Programmes?
--

# **Details of UGC Human Resource Development Centre, If applicable**

Year of Establishment	01-01-2018
Number of UGC Orientation Programmes	0
Number of UGC Refresher Course	0
Number of University's own Programmes	0
Total Number of Programmes Conducted (last five years)	0

# 2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Department Name	Upload Report
Applied Chemistry	<u>View Document</u>
Applied Mathematics	<u>View Document</u>
Applied Physics	<u>View Document</u>
Biotechnology	<u>View Document</u>
Civil Engineering	<u>View Document</u>
Computer Science And Engineering	<u>View Document</u>
Delhi School Of Management	<u>View Document</u>
Design	<u>View Document</u>
Electrical Engineering	<u>View Document</u>
Electronics And Communication Engineering	<u>View Document</u>
Environment Engineering	<u>View Document</u>
Humanities	<u>View Document</u>
Information Technology	View Document
Mechanical Engineering	<u>View Document</u>
University School Of Management And Entrepreneurship	View Document

# 3. Extended Profile

# 3.1 Program

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

2017-18	2016-17	2015-16	2014-15	2013-14
56	56	56	56	56

File Description	Document
Institutional Data in Prescribed Format	<u>View Document</u>

## Number of departments offering academic programes

Response: 14

File Description	Document
Institutional Data in Prescribed Format	View Document

# 3.2 Students

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

2017-18	2016-17	2015-16	2014-15	2013-14
9780	8850	8612	8410	7735

File Description	Document
Institutional Data in Prescribed Format	<u>View Document</u>

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

2017-18	2016-17	2015-16	2014-15	2013-14
2096	2099	2500	1665	1828

File Descripti	on	Docun	nent	
Institutional I	Data in Prescribed Format	<u>View l</u>	<u>Document</u>	

# Number of students appeared in the examination conducted by the Institution, year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
8943	8308	8212	8119	7470

File Description	Document
Institutional Data in Prescribed Format	<u>View Document</u>

# Number of revaluation applications year-wise during the last 5 years

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	1	22	67

# 3.3 Teachers

# Number of courses in all programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1163	1107	1107	1107	1107

File Description		Document	
	Institutional Data in Prescribed Format	View Document	

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

2017-18	2016-17	2015-16	2014-15	2013-14
603	351	274	257	231

File Description		D	ocument	
Institutional Data in Presc	ribed Format	V	iew Document	

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

2017-18	2016-17	2015-16	2014-15	2013-14
694	626	370	346	346

File Description	Document
Institutional Data in Prescribed Format	<u>View Document</u>

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# 3.4 Institution

Number of eligible applications received for admissions to all the programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
23831	15673	16419	17811	22569

File Description	Document
Institutional Data in Prescribed Format	<u>View Document</u>

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
1652	1336	1148	1174	1176

File Description	Document
Institutional Data in Prescribed Format	<u>View Document</u>

Total number of classrooms and seminar halls

Response: 224

Total number of computers in the campus for academic purpose

Response: 1832

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

2017-18	2016-17	2015-16	2014-15	2013-14
2714	2886	1637	2995	2262

# 4. Quality Indicator Framework(QIF)

# **Criterion 1 - Curricular Aspects**

# 1.1 Curriculum Design and Development

1.1.1 Curricula developed /adopted have relevance to the local/ national / regional/global developmental needs with learning objectives including program outcomes, program specific outcomes and course outcomes of all the program offered by the University

#### **Response:**

The academic programmes in Delhi Technological University (DTU) are governed by the University ordinance & regulations. DTU has a common ordinance and regulations (F.DTU/Council/BOM-AC/Notification/ 31/2018/ 2242) for its undergraduate (UG) & Post-graduate (PG) programmes. DTU has 14 academic departments in the main campus and one department in the University School of Management and Entrepreneurship (USME), at East Delhi Campus. DTU offers a total of 14 B.Tech programmes, 04 B.Tech Evening programmes and 1, B. Des programme on the main campus. In addition, 2 UG programmes in BBA & BA (Economics) run in DTU East Delhi Campus. DTU also offers 20 M. Tech programmes, 01 MBA programme, 01 MBA in Business Analytics and 01 Executive MBA programme. DTU also offers 15 Ph.D. Programmes.

The UG and PG curriculum of DTU is one of the most modern curriculum, based on the Choice Based Credit System (CBCS). It has a rich mix of courses from science, engineering, management, social sciences, humanities, fine arts, liberal arts, classical music, sports, etc. to be offered as departmental core (DCC), applied science (ASC), humanities and management (HMC) and foundation core and foundation electives (FEC). Every student has to take 4 foundation elective courses. The curricula are designed considering its relevance to the regional/national/global developmental needs with well-defined and informed learning objectives and outcomes of each course and programme. The following are the main features of the revised curricula at UG and PG level in DTU.

- 1. CBCS based modern curricula
- 2. A model framework for programme structure with semester-wise credit distribution for various course types, course code etc.
- 3. Relative grading based CGPA system with more weight to continuous evaluation.
- 4. Introduction of purely research work based courses at the UG level to enhance high-level research in cutting edge science, technology, management, and economics.
- 5. Provision for credit transfer and earning credits through massive online courses (MOOCs) through different platforms such as NPTEL, SWAYAM, and Coursera.

The Chairperson, Board of Studies (BOS) of the programme initiates the process of curriculum designing and development taking the inputs from the stakeholders of the programme - students, parents, alumni, teachers, various regulators, employers, and the industry. The collected data and strengths and weaknesses of the existing curriculum are discussed in a meeting of internal experts of the BOS to arrive at the necessary inputs for the design of the program curriculum.

Draft course content is prepared by individual faculty experts and is reviewed by the group coordinators. These are discussed and reviewed by external experts of reputed institutions such as IITs / NITs etc. The necessary suggestions are incorporated and the draft course content is made ready.

The recommended curriculum of BOS is put up for discussions and approval of the Academic Council. The approved programme curriculum is implemented by the concerned Department. The programme outcomes (POs) of each programme are established and refined by the Board of Studies in sync with the programme educational objectives (PEOs), which in turn takes feedback from different faculty members.

File Description	Document	
Any additional information	<u>View Document</u>	
Link for Additional Information	View Document	

### 1.1.2 Percentage of programs where syllabus revision was carried out during the last five years

Response: 42.86

1.1.2.1 How many programs were revised out of total number of programs offered during the last five years

Response: 24

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

Response: 56

File Description	Document
Minutes of relevant Academic Council/BOS meeting	View Document
Details of program syllabus revision in last 5 years	View Document

# 1.1.3 Average percentage of courses having focus on Employability/ Entrepreneurship/ Skill development during the last five years

### Response: 55.7

# 1.1.3.1 Number of courses having focus on employability/entrepreneurship/skill development year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
835	833	813	321	321

File Description	Document
Program/ Curriculum/ Syllabus of the courses	<u>View Document</u>
MoU's with relevant organizations for these courses, if any	View Document
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View Document
Average percentage of courses having focus on employability/ entrepreneurship	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: 65.84

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

Response: 1193

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

Response: 1812

File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	<u>View Document</u>
Any additional information	View Document

## 1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system

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#### has been implemented

Response: 100

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

Response: 56

File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	<u>View Document</u>
Any additional information	<u>View Document</u>

#### 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:**

For the holistic development of the students, the University has integrated the courses based on cross cutting issues relevant to gender, environment and sustainability, human values and professional ethics into the curriculum. Along with departmental electives the University offers about 60 different types of foundation electives and open electives aiming at the holistic development of the students. Some of these courses enhance their professional competence, while some other may enhance the Empathy Quotient, some courses aim to inculcate life skills, ethics, environment sensitivity etc. Also, along with such formal courses, DTU has several societies like through which the students are sensitized about these issues.

#### 1. Gender Sensitivity:

The University is highly sensitive to the issues of Gender Equality. We have a very vibrant 'Women in Engineering' Group which undertakes the activities related to Gender sensitization. Lectures by eminent women professionals are organized. The issues related to gender bias are also raised through, invited talks on gender related issues, theatre and other cultural societies of DTU.

#### 2. Human Values and Professional Ethics

The DTU offers 2 credit course on Professional Ethics and Human Values which is compulsory for all the students of the university. The other related courses are Universal Human Values, Corporate Governance and Business Ethics. It is intended to develop a set of beliefs, attitudes and habits that may help them to deal effectively with the moral complexities of the engineering profession. Workshop on Youth empowerment, ethics and values from Art of Living, ISKCON etc. are regularly conducted and International Yoga Day is celebrated with much fanfare.

In order to ensure professional ethics and code of conduct, DTU follows a Policy Guidelines in conformity with UGC (Promotion of academic integrity and prevention of plagiarism in HEI) Regulations-2018.

#### 3. Environment studies

To sensitize the students of DTU towards sustainable development and environment safety, a course of 3 credits is included in 1st year of all UG programmes. Further, DTU runs a UG programme on Environmental Engineering. Also, open elective of 3 credits on 'Non-conventional energy sources/ Renewable energy sources' is offered to the students. A number of activities such as seminars, workshops, guest lectures, industry visits and field excursions are organized. Environment Day, Earth Day, Water Day are celebrated every year. Bicycle Sharing System has been launched to sensitize the students about the environmental hazards created by motorized vehicles. DTU has set up a 1 MW solar PV based micro-grid to reduce the dependence of DTU on conventional grid and thereby aiding to the environment.

For sensitizing the DTU community and nearby areas about the pollution levels in the ambient air, an ambient air quality station has been established by CPCB. DTU has a 500 kg Bio-gas plant to process the biodegradable waste and generate clean power used by the kitchen in the main canteen. Moreover, there are efficient mechanisms for Liquid Waste Management and Electronics waste management.

File Description	Document
Upload the list and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum	View 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:** 115

1.3.2.1 How many new value-added courses are added within the last 5 years

Response: 115

File Description	Document
List of value added courses	<u>View Document</u>
Brochure or any other document relating to value added courses	View Document
Any additional information	View Document

#### 1.3.3 Average percentage of students enrolled in the courses under 1.3.2 above

Response: 89.16

1.3.3.1 Number of students enrolled in value-added courses imparting transferable and life skills offered year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
9554	8500	5407	7583	7665

### 1.3.4 Percentage of students undertaking field projects / internships

**Response:** 15.43

1.3.4.1 Number of students undertaking field projects or internships

Response: 1509

File Description	Document
List of programs and number of students undertaking field projects / internships	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 5) Parents for design and review of syllabus Semester wise /year-wise
- A. Any 4 of above
- B. Any 3 of above
- C. Any 2 of above
- D. Any 1 of above

**Response:** A. Any 4 of above

File Description	Document
Any additional information	View Document
Action taken report of the University on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	View Document
URL for stakeholder feedback report	View Document

- 1.4.2 Feedback processes of the institution may be classified as follows:
- A. Feedback collected, analysed and action taken and feedback available on website
- B. Feedback collected, analysed and action has been taken
- C. Feedback collected and analysed
- D. Feedback collected

Response: A. Feedback collected, analysed and action taken and feedback available on website		
File Description Document		
Any additional information	<u>View Document</u>	
URL for feedback report	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: 14.04

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
1419	1238	1093	1142	1194

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

## 2.1.2 Demand Ratio(Average of last five years)

Response: 6.59

2.1.2.1 Number of seats available year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
3888	2996	2570	2655	2654

File Description	Document
Demand Ratio (Average of Last five years)	<u>View Document</u>
Any additional information	<u>View Document</u>

# 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: 86.23

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
1365	1098	1014	1068	1024

File Description	Document
Average percentage of seats filled against seats reserved	View Document
Any additional information	View Document

# 2.2 Catering to Student Diversity

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

#### **Response:**

DTU admits students from all over India and Abroad in B.Tech through JEE Mains Examination; M-Tech through GATE; and Ph.D and JRF sponsored candidates through written test and interview. The policy of the institute enables students with diverse social background to get admitted and there are variations in the levels of learning. The institute access the achievement, satisfaction and the extent to which academic environment supports student learning to improve achievement in co-curricular activities and scholarly work. Institute manages this diversity and accepts it as a challenge to support advance and slow learners and take the following measures.

- · Orientation programs are conducted for newly admitted students so that their social skills can be analysed and improved
- The students are encouraged to present their work using ICT Tools to check the learning level of students for the said assignment.
- · Mid- term examination is conducted to access the performance of students.
- · The students who fail in any course undergo guided study.

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· Remedial classes for subject matter queries are offered to students.

During the course of time students undergo a systematic evaluation process consisting of written examination, group presentation, project, research papers, practical examination with viva, written assignment and class performance. **Outcome-based education** (OBE) is adopted for the betterment of students in which classes, opportunities, and assessments help students achieve the specified outcomes. The role of the faculty adapts into instructor, trainer, facilitator, and/or mentor based on the outcomes targeted.

#### Programme for advanced learners

In order to further enhance the skills of fast learners, they are given additional challenges like project work, encouraged to participate in various symposia such as quiz, poster presentation, conferences, inter institution competition etc. Meritorious students are encouraged to do their final year project in collaboration with industry. Competent students are fully sponsored to present papers in national and international conferences. They are encouraged to publish papers in reputed journals as first author through independent study and research works and are awarded as per university policy. Facilities are provided to access to research labs for student projects. Student clubs and incubation are fully funded to enable students to innovate and participate in various events.

#### **Programme for slow learners**

For slow learner the tutorial classes are conducted by the faculty members, wherein the topics are taught again based on the student needs. There are extra classes during the semesters, practice assignments, study materials or notes are provided, and they are engaged in social activities/class activities / institutional activities to develop social skills among them. Class committee brings out student/ faculty grievances which are redressed immediately. Personality development program are also conducted in the respective domains to motivate students and encourage them to work hard. These classes help them by building their confidence through continues interaction with the faculty and fellow student/seniors. Moreover, the university offers **CBCS system** so that slow learners may opt for the number of credits in a semester as he/she feels, would be able to cope with at his /her own pace.

File Description	Document
Any additional information	View Document
link for additional information	View Document

#### 2.2.2 Student - Full time teacher ratio

Response: 16.22

File Description	Document
Any additional information	View Document

# 2.2.3 Percentage of differently abled students (Divyangjan) on rolls

**Response:** 0.83

2.2.3.1 Number of differently abled students on rolls

Response: 81

File Description	Document
Institutional data in prescribed format	<u>View Document</u>
Any other document submitted by the Institution to a Government agency giving this information	<u>View Document</u>

### 2.3 Teaching-Learning Process

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

#### **Response:**

The academic module for various programmes in DTU is tailored to give a holistic learning experience to the students. Innovative teaching strategies are employed that encourage students to participate and contribute to the learning experience of their peers. The core curriculum ensures that students have a strong grasp on the basic concepts and are able to apply the knowledge to analyse, evaluate and use in practical situations. Emphasis is given to Outcome-Based Education where a student achieves a goal by the end of the educational experience. Choice Based Credit System (CBCS) allows students to choose papers of their choice that aligns with their goal for the future. Technical Education Quality Improvement Program

(TEQIP) is conducted for faculty members so that they can become more effective teachers with the knowledge of latest tools and trends, to prepare them for the role of motivator and guides both within and outside the classroom, to help students achieve their post-education goals. The following measures are taken to ensure experiential learning, participative learning and problem solving methodologies:

# **Experiential Learning**

Students are involved in various major and minor project works where they explore their flair for research. Industrial visits organized by the respective departments provide an insight and understanding of real life applications and challenges. Students are required to carry out industrial training. Students are encouraged to come up with their own ideas for research and take up relevant skill development programmes to help achieve their goals.

### **Participative Learning**

To ensure that students actively participate in the learning process, various assignments, presentations and group discussions are organized at both intra-department and inter-department platforms. Seminars/workshops are held at regular intervals, inviting eminent speakers for lectures and discussions. Students are made to write literature reviews and articles so as to develop their science communication skills. Students also participate in various international conferences. Students are encouraged to form various discussion forums and activity clubs amongst themselves. Interactive teaching methodologies are employed by the faculty members to make the learning process engaging and fun. Students are made to fill feedback forms at regular intervals so that issues faced by students can be dealt forthwith and the curriculum can be made even more student centric.

#### **Problem Solving Methodologies**

The curriculum is designed in such a way that laboratory-based learning inculcates problem solving abilities in each individual and prepares them to work well in a team. Students take up various internships and projects to add to the experience.

Apart from the academics and co-curricular activities, the University encourages various extra-curricular activities involving Sports Club, Literary Society, Cultural Society, Quizzing Society, and Robotics Club, are formed and managed by students which help them build interpersonal relations, boost healthy

competition and help in overall personality development. Students also do volunteer work through the National Service Scheme under which, students organize and conduct various campaigns such as Adolescent Awareness campaign, Teach India campaign, Plantation drives, Swatchh Bharat Abhiyan, Road Safety Campaign etc., that makes them alert and aware citizen.

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

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

Response: 100

2.3.2.1 Number of teachers using ICT

Response: 603

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: 8.46

2.3.3.1 Number of mentors

Response: 1156

# 2.4 Teacher Profile and Quality

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

**Response:** 71.61

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	View Document

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

Response: 43.13

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

2017-18	2016-17	2015-16	2014-15	2013-14
195	142	126	121	115

File Description	Document
List of number of full time teachers with PhD and number of full time teachers for 5 years	View Document

# 2.4.3 Teaching experience per full time teacher in number of years

Response: 8.94

2.4.3.1 Total experience of full-time teachers

Response: 5393

File Description	Document
Any additional information	<u>View Document</u>

# 2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

**Response:** 0

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

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

File Description	Document
Institutional data in prescribed format	View Document

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

Response: 36.62

2.4.5.1 Number of full time teachers from other states year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
176	166	154	154	156

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

#### 2.5 Evaluation Process and Reforms

# 2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results during the last five years

Response: 31.8

2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
27	24	44	23	41

File Description	Document
List of programs and date of last semester and date of declaration of result	View Document

# 2.5.2 Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

**Response:** 2.15

2.5.2.1 Number of complaints/grievances about evaluation year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
127	158	93	281	212

File Description	Document
Any additional information	View Document

# 2.5.3 Average percentage of applications for revaluation leading to change in marks during the last five years

Response: 100

2.5.3.1 Number of applications for revaluation leading to change in marks year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	1	22	67

File Description	Document
Any additional information	View Document

# 2.5.4 Positive impact of reforms on the examination procedures and processes including IT integration and continuous internal assessment on the examination management system

#### **Response:**

Positive impact of reforms on the examination procedures and processes including IT integration and continuous internal assessment on the examination management system

#### Response:

The course/semester/exam registration of students is done online using the student registration portal. Students have choice to choose electives and credits as per Choice Based Credit System (CBCS). The continuous evaluation is done in following manner.

- The mid semester examination is conducted during mid of each semester.
- The assessment of marks is divided into Class marks(CWS), Midterm examination marks(MTE), Practical marks(PTE) and End term examination marks(ETE).

- · All the components(CWS/MTE/PRE/ETE) have equal weightage and the percentage of marks in the component is decide by the Academic council for a particular course.
- The students are allowed to pursue Massive Open Online Courses (MOOC) against elective courses.
- A large no. of Foundation electives from different domains such as technology, humanities, yoga, sports, law, literature, entrepreneurship, value & ethics are also offered to the students as per their choices. including sports activities.

The whole examination and academic procedures are automated using ERP system. The features include followings.

- Course/Exam Registration by Students
- · Board of Studies (BOS) recommendation by departments
- · Marks entry by faculty directly
- · Grade generation and moderation by Course Coordinators
- · Result processing, generation and publishing of results
- · Generation and printing of Mark sheets and Degrees
- · Bill and Claims processing of examiners
- · Student grievance address system
- · Generation of various reports

The examination system has been accordingly reformed and operates as described below.

- The Examination Department makes available the list of courses offered in the current semester for registration through registration portal which can be filed online or downloaded.
- The Controller of Examination appoints and issues the letter to paper setter and examiners based on the recommendation of BOS, with the approval of competent authority. The letter of appointments as paper setter and examiners with the T-Number are sent over the email also.
- The Examination Department prepares Date Sheet for the mid semester and End semester and publishes on the university website.
- The Center Superintendent publishes the seating plan on the university website.
- After examination, examiners evaluate the answer sheets within a time limit and show it to all the students and clarify any discrepancies there only.
- · Course coordinators receive marks from the examiners and convert that to the relative grades and

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submit it finally to examination branch with software based moderation duly signed by the Chairman Grade Moderation Committee.

- The result is declared and uploaded on the Examination Website for the public view.
- · Any correspondence regarding any type of discrepancy in the published result uploaded in the Examination website is open from the students/faculties within 15 days of declaration and publishing of results.
- The awards/grades are entered into the result processing system and result is generated and published on the university website.

Mark sheets and Degrees are generated and printed.

File Description	Document
Link for Additional Information	View Document

- 2.5.5 Status of automation of Examination division along with approved Examination Manual A. 100% automation of entire division & implementation of Examination Management System (EMS)
- B. Only student registration, Hall ticket issue & Result Processing
- C. Only student registration and result processing
- D. Only result processing

**Response:** A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Document
Current manual of examination automation system and Annual reports of examination including the present status of automation	View Document
Current Manual of examination automation system	View 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:	
The vision and mission of the university is reflected in Programmoutcomes (PSOs) and Course Outcome (CO) for all programme programmes are states having following essential attributes:	
· Engineering knowledge	
Droblem analysis	
· Problem analysis	
· Design/development of solutions	
· Conduct investigations of complex problems	
· Modern tool usage	
· The engineer and society	
. The engineer and society	
· Environment and sustainability	
· Ethics	
· Individual and team work	

· Communication
· Project management and finance
· Life-long learning
To achieve POs and PSOs, the university has stated course outcomes (COs) and designed relevant curriculum for each course of all programmes in consultation with all stakeholders. A course coordinator is elected for each course run by the university before commence of every semester. The course coordinator prepares course file for the particular course. Course Outcomes (COs) are an important part of the course file.
Mechanism of Communication:
1. POs and PSOs of each Programme are displayed on the university website and are available for all stakeholders viz. faculty members, students, Industry, Employers, parents, society, Government.
2. POs and PSOs are displayed on the noticeboards and other prominent places of the respective departments and the university.
3. POs and PSOs are circulated among the stakeholders through emails/ social media platforms.
4. COs are well circulated among all students through university website and Registration Portal before registration process (before commence of every semester).

5.	Copy of the course	file consisting	COs is	always	available	in the	department	for	students,	faculty
meml	oers, staff members a	and visitors.								

- 6. Course coordinator circulates COs among all registered students in the particular course during semester.
- 7. Time-to- time, the university conducts workshops/seminars to spread awareness about POs, PSOs, and COs among all stakeholders.

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:**

The University has adapted a well-defined method of measuring attainment of POs, PSOs and COs. The CO attainment is calculated by course coordinator of each course. POs are calculated at department level for every Programme run by the department. Evaluation of COs and POs are done by **Board of Studies** (BoS) committee at department level. The remedial actions are suggested by BoS for improvement. The method of measuring COs, POs, PSOs is briefly described below (Detailed description for the same is given at link below).

#### I. Method of calculation of attainment of COs.

Each course of a programme have well-defined COs. Attainment of COs is calculated using a combination of direct methods of assessment and indirect method of assessment.

**Direct Assessment:** Direct method of assessment have two major components:

1. Continuous Evaluation (CE) (Assignments, Quizzes, Laboratory performance, Mid-term examination etc.).
2. End Term Examination (ETE).
Weightage of CE and ETE is 30%-60% and 40%-70% respectively depending on course and programme.
<b>Indirect Assessment:</b> Indirect method of assessment of COs is based on course exit survey performed at the end of the semester.
II. Programme outcomes (POs), Programme specific outcomes (PSO) level of attainment calculation:
Level of attainment of POs and PSOs are calculated using direct assessment method and indirect assessment methods.
<b>Direct assessment:</b> Direct assessment is performed using CO-PO, CO-PSO matrix.
In the set against the direct against it must be supply and united the set against a section of the set against the set agains
<b>Indirect assessment:</b> Indirect assessment is performed using programme exit survey, employer feedback,

and alumni feedback.

File Description	Document
Link for Additional Information	View Document

### 2.6.3 Average pass percentage of Students

Response: 90.91

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

Response: 2010

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

Response: 2211

File Description		Document
	List of programs and number of students passed and appeared in the final year examination	View Document
	Link for annual report	View Document

### 2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process

Response: 3.29

## Criterion 3 - Research, Innovations and Extension

### 3.1 Promotion of Research and Facilities

## 3.1.1 The institution has a well defined policy for promotion of research and the same is uploaded on the institutional website

Response: Yes

File Description	Document
URL of Policy document on promotion of research uploaded on website	View Document

### 3.1.2 The institution provides seed money to its teachers for research (average per year)

Response: 56.75

3.1.2.1 The amount of seed money provided by institution to its faculty year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
195.76	83.38	2.36	0.58	1.68

File Description	Document
Minutes of the relevant bodies of the University	View Document
List of teachers receiving grant and details of grant received	View Document

## 3.1.3 Number of teachers awarded international fellowship for advanced studies/ research during the last five years

**Response:** 3

3.1.3.1 The number of teachers awarded international fellowship for advanced studies / research year-wise during the last five years

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

File Description	Document
List of teachers and their international fellowship details	View Document
e-copies of the award letters of the teachers.	View Document
Any additional information	View Document

## 3.1.4 Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates, other research fellows in the university enrolled during the last five years

**Response:** 156

3.1.4.1 The Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other research fellows in the university enrolled year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
52	38	14	24	28

File Description	Document
List of research fellows and their fellowship details	View Document
Any additional information	<u>View Document</u>

### 3.1.5 University has the following facilities

- 1. Central Instrumentation Centre
- 2. Animal House/Green House / Museum
- 3. Central Fabrication facility
- 4. Media laboratory/Business Lab/Studios
- 5. Research/Statistical Databases

Any four facilities exist

Three of the facilities exist

Two of the facilities exist

One of the facilities exist

Response: Any four facilities exist

File Description	Document
List of facilities provided by the university and their year of establishment	View Document
Any additional information	View Document
Link to videos and photographs geotagged	View Document

## 3.1.6 Percentage of departments with UGC-SAP, CAS, DST-FIST, DBT, ICSSR and other similar recognition by government agency

### **Response:** 7.14

3.1.6.1 The Number of departments with UGC-SAP, CAS, DST-FIST ,DBT,ICSSR and other similar recognition by government agency

Response: 1

File Description	Document
List of departments and award details	View Document

### 3.2 Resource Mobilization for Research

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

**Response:** 408.08

3.2.1.1 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
57.46	84.66	56.88	142.92	66.16

File Description	Document
List of project and grant details	<u>View Document</u>
e-copies of the grant award letters for research projects sponsored by non-government	View Document

### 3.2.2 Grants for research projects sponsored by the government sources during the last five years

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**Response:** 1556.84

3.2.2.1 Total Grants for research projects sponsored by the government sources year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
326.86	201.12	219.88	314.80	494.18

File Description	Document
e-copies of the grant award letters for research projects sponsored by government	View Document
Any additional information	View Document

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

Response: 1.58

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

Response: 68

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

Response: 215

File Description	Document
Supporting document from Funding Agency	View Document
Link for funding agency website	View Document

### 3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations including Incubation centre and other initiatives for creation and transfer of knowledge

### **Response:**

The University has created and developed an appropriate ecosystem for Research and Innovation. The

University has taken several initiatives for the creation & dissemination of knowledge and establishing state of the art infrastructure.

The University does recruitment of dynamic and vibrant faculty along with renowned distinguished experts at various level. This helps the students to channelize their innovative ideas. The faculty members are further enriched with recent knowledge through various FDPs, organization of Conferences, Seminars and Lecture Series in their respective domains. Faculty members are granted leave and provided financial support as per the University rule to attend similar activities outside the University, in India and abroad. Appreciable fee concession is provided to them, to encourage them to pursue PhD programs, if not done PhD.

The faculty members are provided with research infrastructure to carry out research works and get the funding from various Government and Non-Government sources such as DST, DBT, etc. They are also provided with seed funding to pursue specific research programs. They are encouraged to establish collaborations for undertaking multi-disciplinary and interdisciplinary research, The University has also signed MoUs with academic institutions, research organizations both at national and international levels.

The Human Resource Development centre has been created for training, retraining, skilling of faculty and students as well as disseminating the research outputs to the public and other institutions.

IRD cell is fully functional and coordinates all research and consultancy related work with Industry, Government and University. The faculty research profile is prepared and available on the website to get projects and it also supports faculty in getting the project and managing its operational issues.

A dedicated IPR Cell provides free IPR services to all the students, researchers and faculty members. The University covers all costs related to the IPR. The IPR cell through DTU incubation and innovation foundation (DTU IIF) continuously makes effort for commercialization the IPs of DTU.

The Technology Business Incubator (TBI) is organized to accelerates and systematizes the process of creating successful enterprises by providing them with a comprehensive and integrated range of support including: incubator space, business support services and clustering and network opportunities.

The objectives of TBI, DTU are (i) Technology Commercialization i.e. Mind to Market (ii) Entrepreneurship and (iii) Economic Development.

The aim is to provide desired product/ services in the future time-line. The role of incubation centres is very promising in promoting technology in the incubating institutions and creating robust ecosystems for innovation and incubation.

The business incubation process based on provisioning physical space and network support at DTU is given in the following sequence: (i) Pre-Incubation-Target Market (ii) Entry Criteria (iii) Incubation (Training, Business Advise, Financial Support, Technology Support) (iv) Exit Criteria (v) After incubation (Final exit of incubatees).

The above processes are achieved by providing the incubatees of DTU, the following services: (i) Secretarial Service, (ii) Infrastructure Facility-Based Service, (iii) Business Service, (iv) Financing and (v) Access to finance and Brand Building.

Till date nineteen starts-ups have been incubated on the campus.

File Description	Document	
Any additional information	<u>View Document</u>	
link for additional information	View Document	

## 3.3.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry

### - Academia Innovative practices during the last five years

Response: 48

3.3.2.1 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
20	7	9	6	6

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

# 3.3.3 Number of awards for innovation won by institution/ teachers/ research scholars/students during the last five years

### **Response:** 54

3.3.3.1 Total number of awards for innovation won by institution/teachers/research scholars/students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
21	13	9	6	5

File Description	Document
List of innovation and award details	<u>View Document</u>
e- copies of award letters	View Document
Any additional information	View Document

### 3.3.4 Number of start-ups incubated on campus during the last five years

### Response: 11

3.3.4.1 Total number of start-ups incubated on campus year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
6	5	0	0	0

File Description	Document
List of startups details like name of startup, nature, year of commencement etc	View Document
e- sanction order of the University for the start ups on campus	View Document
Contact details of the promoters for information	View Document

### 3.4 Research Publications and Awards

### 3.4.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

**Response:** Yes

File Description	Document
Any additional information	<u>View Document</u>

### 3.4.2 The institution provides incentives to teachers who receive state, national and international recognition/awards

**Response:** Yes

File Description	Document	
e- copies of the letters of awards	<u>View Document</u>	
Any additional infrormation	View Document	

### 3.4.3 Number of Patents published/awarded during the last five years

**Response:** 9

### 3.4.3.1 Total number of Patents published/awarded year-wise during the last five years

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

File Description	Document	
List of patents and year it was awarded	View Document	
Any additional information	View Document	

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

**Response:** 1.08

3.4.4.1 How many Ph.Ds are awarded within last 5 years

Response: 135

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

Response: 125	
File Description	Document
List of PhD scholars and their details like name of the guide, title of thesis, year of award etc	View Document
URL to the research page on HEI web site	View Document

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

**Response:** 3.07

3.4.5.1 Number of research papers in the Journals notified on UGC website during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
267	269	240	167	112

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

## 3.4.6 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: 4.6

3.4.6.1 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
342	353	408	306	169

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

### 3.4.7 Bibliometrics of the publications during the last five years based on average citation index in

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### Scopus/ Web of Science or PubMed/ Indian Citation Index

**Response:** 4.23

File Description	Document
BiblioMetrics of the publications during the last five years	View Document
Any additional information	View Document

## 3.4.8 Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - hindex of the Institution

Response: 37.5

File Description	Document
Bibiliometrics of publications based on Scopus/ Web of Science - h-index of the University	View Document
Any additional information	View Document

### 3.5 Consultancy

## 3.5.1 Institution has a policy on consultancy including revenue sharing between the institution and the individual

**Response:** Yes

File Description	Document
Soft copy of the Consultancy Policy	View Document
Minutes of the Governing Council/ Syndicate/Board of Management related to Consultancy policy	View Document
URL of the consultancy policy document	View Document

### 3.5.2 Revenue generated from consultancy during the last five years

**Response:** 968.18

3.5.2.1 Total amount generated from consultancy year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
461.42	144.63	303.66	18.90	39.57

File Description	Document
List of consultants and revenue generated by them	<u>View Document</u>
Audited statements of accounts indicating the revenue generated through consultancy	View Document
Any additional information	View Document

### 3.5.3 Revenue generated from corporate training by the institution during the last five years

**Response:** 308.08

3.5.3.1 Total amount generated from corporate training by the institution year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
57.46	84.66	56.88	42.92	66.16

File Description	Document
List of teacher consultants and revenue generated by them	View Document
Audited statements of account indicating the revenue generated through training	View Document

### 3.6 Extension Activities

3.6.1 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 students have been at forefront of bringing transformative social change through community engagement & development.

1. Implementing several projects and schemes, based on 'Social Entrepreneurship' for the upliftment of the poor.

2. Setting up Unnati cafes in slums, which are fully equipped with required hardware & furniture, to provide digital services and impart <b>Digital Literacy</b> at highly affordable rates.
3. <b>E-Waste Collection Drives</b> to use the discarded hardware for setting up of such cafes, after refurbishing them.
4. Implementing engineering acumen by creating <b>self-curated modules</b> which include written as well as audiovisual implements. The students have also developed an <b>'Unnati Software'</b> to automate the process of assessment, evaluation & report generation
5. <b>'Digital Days'</b> in slums, with the aim of spreading awareness about Digital Literacy. Numerous events are organized, such as games, competitions, quizzes, workshops etc on various aspects of digital economy.
6. Organizing Practical events such as online Voter ID signup, email id creation campaign, online EWS admissions form filling, etc in slums, thus helping the slum dwellers to <b>avail government service</b> benefits.
7. <b>Problem Surveying Visits</b> in slums to understand the problems of locals through questionnaires, interviews, ground assessment, etc.
8. Setting up <b>water filtration units</b> in urban slums to supply clean water to local households at affordable rates.
9. <b>Health Camps</b> in slums to provide free medical check-up, diagnostics, and medical consultancy from doctors.
10. <b>Blood Donation Camp</b> in the college to raise over 100 units of blood.
11. <b>Organ Donation Drives</b> at various places to pledge people to donate organs.

12. <b>Cloth Donation Drive</b> in winter to clothe those in need.
13. Awareness Camps on Anti Depression & Thalassemia in the college.
14. <b>Life lessons workshop</b> for the children at the juvenile aid center as well as distributing food, clothing, books, stationery, etc. for their well-being.
15. <b>Donation Drive for Assam Flood Victims</b> and raising money through student contributions for the rehabilitation of victims.
16. <b>Training Workshops for Acid attack survivors,</b> teaching them how to produce liquid dishwashing soap from waste cooking oil
17. <b>Skill-building workshops for women</b> on screen printing in order to create and sell printed textiles to earn livelihood.
18. <b>Sales Campaigns</b> in housing societies to sell organic dishwashing soap produced by attack survivors.
19. Setting up the <b>composting unit</b> to recycle the biodegradable waste into useful manure for gardening and farming.
20. Cleanliness Drives in the vicinity of the college with an overall objective of Swacch Bharat Abhiyaan.

Imb	ibing values of social responsibility such as:
1.	To help people in distress
2.	To sympathize with their problems
3.	To feel responsible towards the environment
4.	To engage in larger social movements such as Swacch Bharat, Digital India, etc.
Lear	rning outcomes:
1.	Enlarging the understanding of social issues.
2.	Implementing sustainable solutions by putting theoretical knowledge into practical use.
3.	Building relations with NGOs, Government organizations, and locals
4.	Developing soft skills like teamwork, time management, leadership & managerial abilities
5.	Creating a feeling of brotherhood & sympathizing the less well off.

File Description	Document
link for additional information	<u>View Document</u>

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

### **Response:** 5

3.6.2.1 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
2	00	01	1	01

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

# 3.6.3 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: 105

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

2017-18	2016-17	2015-16	2014-15	2013-14
39	31	15	15	5

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

# 3.6.4 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: 37.46

3.6.4.1 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
4650	3565	3460	3325	1530

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

### 3.7 Collaboration

### 3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange per year

**Response:** 78.4

3.7.1.1 Total number of Collaborative activities for research, faculty exchange, student exchange yearwise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
113	83	96	69	31

File Description	Document
Number of Collaborative activities for research, faculty etc	View Document

## 3.7.2 Number of linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the last five years

**Response:** 439

3.7.2.1 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
88	160	54	60	77

File Description	Document
e-copies of linkage related Document	View Document
Details of linkages with institutions/industries for internship	View Document

3.7.3 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: 52

3.7.3.1 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
22	7	9	7	7

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

## **Criterion 4 - Infrastructure and Learning Resources**

### 4.1 Physical Facilities

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

### **Response:**

Delhi Technological University has occupied an eminent position in the field of education, research and technical innovation. It has developed tech-savvy campuses with modern facilities and learning resources as per the requirements and norms of regulatory bodies. It provides resources and infrastructure for academic excellence according to its vision and mission. Out of 163.87 acres of DTU 45% (i.e. 73.23 acres) area is under facilities for academic and teaching-learning categorized as under:

- 1. Learning Resources includes library, laboratories, classroom, workshops, etc.
- 2. Support facilities include hostels, health centers, sport facilities, auditoriums, seminar halls, etc.
- 3. **Utilities** like safe drinking water, washroom, heat ventilation & air conditioning, power backup, etc.

University has initiated in curriculum redesign and introduction of new courses focussed on industrial application. Laboratories equipped with sophisticated instruments and equipments work towards enhancing the practical knowledge of students and giving adequate tools for research and innovation. University has also been granted with **TEQIP** projects for strengthening PG education research and innovation and building quality faculty.

DTU has developed technologically smart and **ICT enabled classrooms** for interactive teaching-learning experience. The **Central Library**, a three storied centrally air-conditioned building spread over an area of 5000 square meters, is a central place for academic and research activities with rich collection of printed books as well as e-books and journals. A well-equipped **computer centre** housed in a magnificent state-of-the-art building having specialized laboratories provide variety of platforms and computing environment for UG, PG and research students. **EDUSAT Studio** provides facility for recording lectures, events and talks.

The University with its **Knowledge Park** infrastructure significantly contributes to the development of knowledge enterprises. It has a state-of-the-art connectivity and is networked with industries and R&D institutions. The university has established a **DTU Innovation and Incubation Foundation** to create a culture of entrepreneurship, startups and intellectual property creation. **Centre of Outreach and Extension Activities** and **Centre for Human Resource Development** has an aim to organise activities for public awareness and for upgrading skills and knowledge of faculty, staff and students.

DTU has 9 boys and 6 girls hostel which are connected wia campus-wide wifi network, enabling the students to browse the library resources. DTU has full-fledged health centre where services of medical practitioners is available round the clock.

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Campus-wise details regarding the infrastructure and Learning resources are described below:

Descriptions	Main Campus	East Delhi Campus
	(10,000 Students Approx.)	(1,000 Students Approx.)
Academic Departments	14	3
Air Conditioned Classrooms including tutorial rooms	76	14
Classrooms	51	14
Tutorial rooms	56	-
Laboratories (Including Research and Computer Labs)	151	02
Central Library	01	02
Departmental Library	14	-
Auditorium	01	-
Seminar Halls	14	01
Training Hall	01	-
Interview rooms	10	-
Multipurpose Hall	14	-
Smart Seminar room	02	-
Senate hall	01	-
Exposition hall	01	-
Convocation Hall	01	-
EDUSAT Studio	01	-
Student Common Room	08 (in all boys and girls hostel)	-
Activity Room	08 (in all boys and girls hostel)	03
Guest House	02	-

File Description	Document
Link for Additional Information	<u>View Document</u>

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

### **Response:**

Delhi Technological University has 2.45 acres Sports Complex which include facilities for 4x400m running track, fields for football, basketball, volleyball, hockey, kabaddi, cricket, tennis, table tennis, badminton, gym/fitness center, yoga and meditation etc. Through its excellent sports facilities, DTU offers opportunities to students for regular work-out, lifestyle management to maintain a healthy body and mind. The usage of sports facilities varies between 2000-2500 students per day. 2018-19 onwards, the university has provided sports, physical education, yoga and meditation as an elective course within its curriculum. Campus-wise details of sports facilities are given below:

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Sports facility	Main Campus	East Delhi Campus
	(10,000 Students Approx.) with year of estb.	(1,000 Students Approx.) with year of estb.
Cricket Ground	1 (1998)	-
Cricket Practice Pitch	5 (2009)	-
Football Fields	1(2009)	-
Volleyball Courts	2 (1998)	-
Basketball Courts	2 (1998)	-
Gymnasium/ Fitness Centre	2 (2009, 2011)	-
Badminton Courts	Indoor -3 (2015), outdoor-5 (1998)	-
Carrom Rooms	1 (1998)	1 (2018)
Chessboard Room	1 (1998)	1 (2018)
Table Tennis Tables	5 (1998)	2 (2018)
Kabaddi Courts	2 (1998)	- //
Tennis Courts	3 (1998)	-
Running Track	1 (1998)	-
Hockey (Portable)	1 (1998)	-
Handball (Portable)	1 (2016)	-
Yoga/meditation room	1 (2017)	-
Cultural Societies	6	-

The university annually organizes cultural and technical festivals which provide an opportunity to the students to connect to the professional world and also display their creative and technical skills in several events and activities. Student societies such as Madhurima - The Music Society, Pratibimb - The Dramatics Society, Kalakriti - The Creative Arts Society, Furore - The Live Events Society and SPIC-MACAY display a wide spectrum of activities. **Engifest**, the annual inter-college cultural festival, is celebrated comprising of several interesting events from astounding dance performances in Spandan to death-defying stunts in Shakedown to heart-wrenching onstage acting in the Nukkad and Natya. True to its spirits, Engifest provides a platform to students from all over India to discover their passion and showcase their talent. Events of engifest includes Balladeers and Vocalicious - Musical Events, Spandan - Solo Dance Competition, Drishtikon- Literary Event, Campus Princess, Shtuby Band Performance, Live Concert Anushthan - The Classical Dance Competition , Paridhan - The Fashion Parade, Spandan - The Western Dance Competition, Edm Night, Stage Play, Rock Night, Street Play, etc

NSS-DTU Unit aimed to give an extended dimension to the higher education system orient the students towards community service while they are studying in the institution. To establish a meaningful linkage between the campus and the community so that their interaction with the common villagers and slum dwellers will expose the students to the harsh realities of poverty-stricken life and bring about a change in their social perception. NSS DTU Unit include development of student's personality through community service, development of leadership qualities and democratic attitude and gain skills in mobilizing community participation, identifying practical solutions to problems of the community, development of sense of social and civic responsibility, working towards building a beautiful world and spread message of environment, peace and education among today's youth.

File Description	Document
link for additional information	<u>View Document</u>

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

Response: 70.98

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 159

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

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

Response: 100

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
2714	2886	1637	2995	2262

File Description	Document
Audited utilization statements	View Document
Any additional information	View Document

### 4.2 Library as a Learning Resource

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

### **Response:**

The library at DTU is a center for integrated knowledge resource stocked with books, periodicals, references, national and international journals, covering all aspects of academic studies and research

materials. The total collection of books is approx. 2,13,351 increasing daily, consisting of 1,42,315 main collection, 57,887 book bank books, 9057 SCP Book Bank and 4092 donated books. Keeping in view, the fast changes in technology, the knowledge base of library is updated regularly by adding new literature in the form of textbooks, reference books, reports, proceedings, abstracts, databooks, standards, journals and databases. All e-resources are accessible locally within the campus as well as remotely. The library regularly organizes information literacy programmes under the title "Explore the Library" for users.

University library building is centrally located, well laid out, and aesthetically designed to make it an inviting place with the ambiance that is suitable for learning and scholarship. Library buildings have provision for both individual and group studies making room for interaction, discussion and studies. Adequate space is provided for browsing and relaxed reading. Library is equipped with adequate number of sign boards and guides for smoother and convenient movement of goods, services and library has open access to its complete collection for all student, faculty and staff. To provide efficient management a constant vigil is kept on the activities of staff and users through electronic surveillance system having a 24 hrs recording facility. Library buildings have ramp and lifts for easy and convenient access to differently-abled users.

OPAC/Web OPAC is main tool to provide access to the library collection. Library website also provides information about resources, sources, rules and regulations. Library has adequate number of workstations to facilitate searching/accessing OPAC, e-resources, web browsing and for other academic works. Provision has also been made to allow downloading/printing of material from these resources. Initiatives taken by the University are given below:

- 1. Wi-Fi internet access, download and print out facility.
- 2. Central Air Conditioning in the library.
- 3. Organization of Book Review / Book Talk Sessions
- 4. Organization of Book Exhibitions / Displays of new books.
- 5. Proper system of obtaining, analysis and action pertaining to feedback from the users of library services in place at DTU.
- 6. Suggestions/ grievances through general interaction, making an offline application through suggestion box, and online through email.

• Name of the ILMS software: **KOHA** 

• Nature of automation (fully or partially): Fully Automated

• Version: v3.55

• Year of automation: 2004

File Description	Document
link for additional information	<u>View Document</u>

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

### **Response:**

A large number of encyclopaedia, handbooks, standards, reports, manuscripts, are available in the library. Books are sourced from eminent publishers like McGrawHill, Oxford, Black Wiley, Blackwell, Elsevier, Springer, etc are made available by the library. Various online databases like Science Direct, Springer Link, Indian Journals, IEEE/IEL, INDIANJOURNALS, Institute of Physics, IWA etc. have subscribed and renewed annually.

The library subscribes to TurnItIn anti-plagiarism software to check similarity in projects and papers.

The library being a member of consortia of E-ShodhSindhu and Developing Library Network (DELNET) offers various facilities of the member institutions through resource sharing. The university maintains an institutional repository of intellectual contributions made by the of the faculty and students.

Following collections are accessible through the repository:

- Papers of examination
- M.E. / M.Tech dissertation
- PhD thesis
- Research Papers
- Prospectus
- Annual Reports, etc

File Description	Document
link for additional information	View Document

### **4.2.3** Does the institution have the following

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

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

**Response:** Any 4 of the above

File Description	Document
Details of subscriptions like e-journals,e- ShodhSindhu,Shodhganga Membership etc	View Document
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: 182.2

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
313	150	207	121	120

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
Any additional information	View Document

### 4.2.5 Availability of remote access to e-resources of the library

Response: Yes

File Description	Document
Any additional information	<u>View Document</u>

### 4.2.6 Percentage per day usage of library by teachers and students

**Response:** 3.54

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

Response: 368

File Description	Document
Any additional information	<u>View Document</u>

### 4.2.7 E-content is developed by teachers:

- 1.For e-PG-Pathshala
- **2.For CEC (Under Graduate)**
- 3. For SWAYAM
- 4. For other MOOCs platform
- **5.For NPTEL/NMEICT/any other Government Initiatives**
- **6.For Institutional LMS**

Any 5 of the above

Any 4 of the above

Any 3 of the above

Any 2 of the above

**Response:** Any 2 of the above

File Description	Document
Details of e-content developed by teachers for e-PG Pathshala, CEC (UG)	- <u>View Document</u>
Give links or upload document of e-content developed	View Document

### 4.3 IT Infrastructure

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

### **Response:**

Delhi Technological University has its own computer center to cater the need for IT infrastructure and services for faculty and students. It is well-equipped with latest state-of-the-art facility/ building having specialized laboratories to provide a variety of platforms and computing environment for UG, PG, and Research students. The center possesses HP ML370, ML570 standalone servers & DL360 rack servers, Dell blade servers (PowerEdge 1000e and R630) and about 150 desktop computer systems of Dell company of latest configuration (OptiPlex 980/990, i5). These are working on Windows 7/8/8.1, server 2008 and Linux platforms. Additionally, it provides Microsoft product license for registered Windows and MS Office to DTU faculty. The center is networked through high-end intelligent CISCO/Dax/Avaya/D-Link manageable switch, and possesses round the clock two leased lines of 200 Mbps (Bharti Airtel) and 1Gbps link of NKN (shared bandwidth) for Wi-Fi connectivity in the library, academic departments, administrative and hostel blocks of the campus with internet facilities on all the nodes. Access to internet is given to end user after secure authentication. Recently, the traffic is being monitored & controlled by the full version of the checkpoint (UTM). Presently, all the 150 computers are connected through LAN in two floors of computer center providing internet access. It is providing programming facilities to all the departments of the university. The departments/ academic/ library/ administrative blocks and all the hostels of DTU are interconnected using 48 core & 6 core optical fiber cable (OFC) and Wi-Fi with 100 number of access points.

The network setup at DTU supports maximum resource sharing for the connected departments. Computer Centre maintains the DTU websites (www.dtu.ac.in), alumni portal, departments portal, library portal, faculty portal, hostel portal, student portal, DTU times portal, and other related intranet web services. The DTU website is updated by this center on regular basis. The information on the website is displayed after the approval of the concerned department, faculty or administrative offices.

Computer Centre provides email services to the university teaching communities and administrative officers. The traffic is being monitored & secured by full version of checkpoint (UTM).

File Description	Document
link for additional information	<u>View Document</u>

#### 4.3.2 Student - Computer ratio

Response: 5.34	
File Description	Document
Any additional information	View Document

## **4.3.3** Available bandwidth of internet connection in the Institution (Lease line) **?1** GBPS

**500 MBPS - 1 GBPS** 

**50 MBPS-250 MBPS** 

250 MBPS-500 MBPS

**Response:** ?1 GBPS

File Description	Document
Any additional information	<u>View Document</u>

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

**Response:** Yes

File Description	Document	
Facilities for e-content development such as Media Centre, Recording facility,LCS	View Document	
Any additional information	<u>View Document</u>	
Link to photographs	<u>View Document</u>	

### 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: 27.49

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
411	453	747	960	654

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts.	<u>View Document</u>
Any additional information	View Document

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

### **Response:**

The university follows standard operating procedures for academic and non-academic departments for their smooth functioning. It has established systems and procedures for maintaining all infrastructure through a dedicated maintenance department overseeing works related to buildings, classrooms, laboratories, hostels, sports facilities, utilities, etc.

Maintenance of infrastructure facilities, services and equipment is done as per following details:

- 1. The infrastructure facilities such as classrooms, buildings, hostels, green areas, STP/ETP, etc. are maintained by the maintenance department at each campus.
- 2. The University has power management department to ensure uninterrupted power supply and maintenance of electrical assets. The maintenance of equipment like generator sets, general lighting, power distribution system, solar panels etc. are undertaken as per their preventive maintenance schedules, guidelines by the equipment supplier.
- 3. Maintenance of Services: The University provides various services/facilities to the students, faculty, and staff which are maintained by the respective service providers as per contract: cafeterias facilities, banking / ATMs facilities & services such as laundry, gymnasium, reprography, post-office, banking, stationery, departmental store, etc.

The university has a dedicated cell to look after the repair, maintenance, and upkeep of labs of all teaching and research centres. Further, major laboratory equipment are under Annual Maintenance Contract (AMC) for their regular preventive and corrective maintenance. Campus Surveillance Cameras, CCTV, other security equipment are maintained through IT department by the equipment providers. Teaching aids such as LCD Projectors, PA Systems, Laptops, Desktops, Printers, Wi-Fi etc. are maintained by IT Helpdesk department. Fire Fighting equipment in various blocks, classroom, labs, hostels, offices, etc. are maintained by the Fire & Safety Department.

Civil & electrical infrastructure of departmental laboratories are maintained by the Engineering Cell. The process of maintenance is as per the SOP of Engineering Cell.

The equipments in the labs are maintained and utilized by the respective department as per the guidelines of the university. The requests for maintenance / utilizations is raised by the users like students, faculty and staff. The request is processed by the concerned laboratory/ facility incharge to the competent authority. The utilization report is also maintained in a logbook of the concerned lab. All the procurement and maintenance is done as per the SOP of store and purchase. The departmental and central level purchase committee of university monitor the purchase as per thre jurisdiction laid in sop.

Library is equipped with adequate number of sign boards and guides for smoother and convenient movement of goods, services and library has open access to its complete collection for all student, faculty and staff. Library has adequate number of workstations to facilitate searching/accessing OPAC, eresources, web browsing and for other academic works. Provision has also been made to allow downloading/printing of material from these resources. Proper system of obtaining, analysis and action pertaining to feedback from the users of library services is in place at DTU. Users can also submit their suggestions/ grievances through general interaction, making an offline application through suggestion box, and online through email.

Facilities such as provisioning of DTU Email-Ids to faculty and student; internet access by access credentials for faculty/staff; dissemination of Microsoft License for Windows and MS Office is maintained by the computer center. All network related issues and establishment of new networks is also done by this centre. Computer center maintains the university website and keeps it updated regularly by uploading notification/circular/office-orders. It also provides repair/maintenance of desktops throughout the university. Computer center conducts online test for various online exams and helps the departments by providing consultation for procurement of desktop / workstation / server / network devices / ICT devices. All the subdomains of the university within the official website are maintained by this center. Further, it's the interfaces for all kind of HW/SW related functionalities and provisioning of the latest technology to enable research such as CMS, ERP, EDP, etc. Computer center has the responsibility of securing university network from internal and external cyber-attacks. It adheres to the latest policy and rules under IT ministry of Government of India and Government of NCT of Delhi.

Sports facilities, equipments and services are maintained by Director (physical education). The requests for maintenance is raised by the users like students, faculty and staff. The request is processed by the Director to the competent authority. The utilization report is also maintained in the logbook by the concerned sports center. Health center is maintained by OIC (Health Center). The requests for maintenance of health facility is raised by the users like students, faculty and staff to the doctor, and the same is processed by the OIC (Health Centre). DTU Clinic and sports facilities, etc. are maintained by the administration department as per university guidelines. Logbooks are maintained at regular basis for patients and medicines. Housekeeping services are outsourced and available on campus 24 x 7.

File Description	Document
link for additional information	<u>View Document</u>

## **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: 8.45

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
721	483	762	843	814

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

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

Response: 4.54

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
420	357	390	375	417

File Description	Document
Any additional information	<u>View Document</u>

### 5.1.3 Number of capability enhancement and development schemes –

- 1. Guidance for competitive examinations
- 2. Career Counselling

- 3. Soft skill development
- 4. Remedial coaching
- 5. Language lab
- **6.Bridge courses**
- 7. Yoga and Meditation
- **8. Personal Counselling**

7 or more of the above

Any 6 of the above

Any 5 of the above

Any 4 of the above

**Response:** 7 or more of the above

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

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

Response: 14.09

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
1156	1262	1207	1305	1147

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

## 5.1.5 The institution has an active international students cell to cater to the requirements of foreign students **Response:** The Delhi Technological University has an active Office of International Affairs (OIA) which is responsible for carrying out all activities involving addressing international students, facilitation of student and faculty exchange and other activities related to the international partnership. The OIA is responsible for the following activities: Admissions and related activities for international students at all levels, i.e., admission procedures including short-listing and conduction of interviews, facilitation of immigration in conjunction with the embassies of other countries in India, document verification at the time of admission, provision of hostel accommodation and other post-admission activities at the university 2. Framing and provision of guidelines, information brochures, language conversion booklets, and other safety and stay related documents for the international students 3. Coordination of international mobility (Indian students from the university visiting other countries for short term or middle term courses, international students visiting the university for short/middle term courses, facilitation of student internships at international universities and organizations for students at DTU faculty exchange between international universities and DTU) 4. Coordination of university activities related to global education like participation in the various education fairs organized by the EdCIL, MHRD, Ministry of External Affairs and Indian embassies at various countries. 5. Coordination of international partnership by facilitating memorandums of understanding between the university and universities across the world

6. Active association with the Foreign Embassies and Consulates in India to increase the educational

relationship between DTU and Foreign Universities

- 7. Coordination and handling of international projects funded by the Government of India at DTU
- 8. Organization of cultural programmes and events for International students at DTU
- 9. Coordination of any other activities involving international visits by international guests, researchers, and engineers

File Description	Document
Link for Additional Information	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	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

#### 5.2 Student Progression

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

Response: 60.94

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
1156	1262	1207	1305	1147

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

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

Response: 2.91

5.2.2.1 Number of outgoing students progressing to higher education

Response: 61

File Description	Document
Upload supporting data for student/alumni	<u>View Document</u>
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: 44.11

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
61	76	1	4	6

5.2.3.2 Number of students appearing 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
61	76	57	52	54

File Description	Document
Upload supporting data for the same	<u>View Document</u>
Number of students qualifying in state/ national/ international level examinations during the last five years	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: 4

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
4	0	0	0	0

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

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

#### **Response:**

The Student Activities are the essence in students' life while in the University campus. Delhi Technological University offers a large number of extracurricular activities and a student can find an interest group corresponding to almost any extracurricular activity. Plethora of Societies, Councils and clubs are operating in the campus offering many opportunities to students to hone their soft and professional skills.

The Student Welfare Department of the University functions through main three councils namely Cultural Council, Technical Council and Sports Council along with all the HODs to facilitate the students' participation in student activities under the respective domains. These Councils organize/undertake various events for the welfare of student community in and outside the University. Each council has Student council members and Faculty council members. Fifty societies and twelve innovation teams working under the umbrella of these three councils viz. cultural, sports and technical councils. These societies are formed by student teams under the guidance of a Faculty Advisor

The active DTU Student Association (DTU SA) is elected by the electoral college comprising of the Class Representatives who are elected by the students of each program of B.Tech., M.Tech. and MBA at the beginning of every academic year as per Lyngdoh Committee regulations. The DTU SA members strive hard to convey and address the requirements of students to the appropriate administrative authorities. The untiring efforts of DTU SA members help the Administration to ensure the system's efficiency and effectiveness in putting forward the interests and views of the students. The Administration is successful in implementing many welfare schemes for the students in the campus due to involvement and suggestions of DTU SA members.

The Class Representative (CR) is fundamental to student representation for each class of approximately 60 students as leaders. The Class Representatives are the major link between the Students and Faculty members. They play a major role to assess teaching, learning and support services provided to the students by the Institution.

There is a strong representation of students in the academic and administrative bodies for example, in Academic council of the University, Library committee of the Academic Departments of the University and Organizing committee of the National and International conferences organized by the University. The scheme of University Student Internship Program (USIP) being implemented in the University encourages the students to work as an Intern in administrative and academic departments of the University. Thus students get an opportunity to learn organizational skills and have representation in academic/administrative bodies of the University along with a chance to earn while learning.

The University has a student branch of NSS (National	Service Scheme), ar	n organization	aimed at	working
for social causes.				

The various activities/events organized by the societies and councils help the students to enhance the communication skills, team management skills, leadership skills, organizational skills, time-management, resource management skills and above all builds confidence in each student.

File Description	Document
Link for Aditional Information	View Document

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

Response: 88

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
109	125	77	63	66

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

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An effective, engaged and supportive alumni network is an essential component for the success of any institution. Delhi Technological University (erstwhile Delhi college of Engineering) is one of the premium institutions of this country and has the strongest and illustrious alumni network. DTU manages its interaction through well established alumni affairs office. Our alumni affairs office and associations keep on updating and tracking all alumni so that they can remain engaged and keep abreast on the progress of the university.

The primary focus of alumni office is to connect to the alumni and effectively utilize the alumni network for the benefit of students, university and nation at large.

As a connecting link office of alumni affairs is also actively participating and arranging the alumni associations meets, golden and silver jubilee events, sponsorship programme for B.Tech, M.Tech. and PhD students. The alumni meet is conducted once in a year, where the alumni from different branches of the under graduate and post graduate programs share their views and give suggestions for the betterment of their junior students. Such meetings are mutually beneficial for the University and the alumni. This provides an opportunity for the alumni to meet their friends and act as a bridge for the faculty to share their experience, knowledge and insights. Successful entrepreneurs from the alumnus are invited to talk on their success stories at various occasions of the University.

The alumni from India and abroad actively contribute academically, financially and in the governance structure of the University in a significant manner. In order to strengthen the alumni and to better connect with such a diverged flag bearer of the University, we are updating the activities of alumni portal at DTU web page and establishing many outreach efforts, for instance, over the years we have developed alumni databases, alumni affairs website, publishing newsletter, Facebook, LinkedIn, WhatsApp groups, fostering alumni visits to campus, helping alumni with University-related activities, providing job portal for alumni, encouraging alumni to donate/contribute funds for the development, sponsorships, mentoring, instituting scholarships, recognizing exceptional alumni through awards, forming national and international chapters. Currently, we have American, European, Singapore, Middle East groups apart from national/local chapters of Bangalore, Delhi and Hyderabad.

File Description		Document	
	Link for Additional Information	View Document	

### 5.4.2 Alumni contribution during the last five years (INR in Lakhs) ? 100 Lakhs

50 Lakhs -100 Lakhs

20 Lakhs -50 Lakhs

5 Lakhs -20 Lakhs

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Response: ? 100 Lakhs	
File Description	Document
Any additional information	<u>View Document</u>
Alumni association audited statements	<u>View Document</u>

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

#### **Response:** 14

#### 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
07	01	03	02	01

File Description	Document
Report of the event	View Document
Number of Alumni Association / Chapters meetings conducted during the last five years	View Document

### Criterion 6 - Governance, Leadership and Management

### 6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the University
Response:
Yes, the governance of the University is reflective of effective leadership and is in tune with the vision and mission of the University.
Vision
"To be a world class University through education, innovation and research for the service of the humanity"
Mission
To establish center of excellence in emerging areas of science, engineering, technology, management and allied areas;
To foster an ecosystem for incubation, production development, transfer of technology and entrepreneurship;
To create environment of collaboration, experimentation, imagination and creativity;
To develops human potential with analytical abilities, ethics and integrity;
To provide environment friendly, reasonable and sustainable solutions for local & global needs.

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The framework for the institutional governance for achieving its Vision and Mission is provided in the DTU act. The participation of all stakeholders has been ensured in the constitution of these committees through statutory provisions. The University has competent and effective leadership and Administrators at each level starting from University, Department, Centre, Branch, Programme to Course.

In the BoM, which is the principal decision making body of the university there is representation from academia, industry, government, regulatory bodies, teaching and non-teaching employees of the university. All decisions are generally taken with consensus but the DTU act provides for majority decisions in case a consensus decision is not arrived at. The minutes of the BoM meeting are available in public domain at website.

Academic council (AC) is the principal body in all the matters related to academic affairs of the University. In the Academic Council the DTU act provides for representation of all the stakeholders. Representation of students is also ensured in the academic council meetings. Starting of new academic programmes, changes in the ordinances and regulations related to examinations, approvals of the syllabi of different courses, approval of panel of experts for faculty recruitment, framing of the recruitment rules for faculty positions and all other matters related to academic affairs of the University are decided by the AC.

Regular inputs are taken from faculty and staff through monthly meetings of the faculty/ brain storming sessions for continuous improvement in the system. The leadership ensures the compliance of academic and administrative processes and procedures along with the continual improvement through regular systematic audits, checks and monitoring by well-defined Quality Framework.

The participation of faculty, students, and officers of the University has resulted in implementation of many new programmes such as MBA (Business analytics) and B. Design in the University in last three years. The DTU innovation and incubation centre is incubating 19 startups at present. Also the University could recruit new 92 faculty members.

University management through IQAC sets the direction for all the faculty and staff of the University to collectively work to achieve the goals of the University in line with Vision and Mission.

File Description	Document	
Any additional information	<u>View Document</u>	
Link for Additional Information	View Document	

File Description	Document
Any additional information	<u>View Document</u>
Link for Additional Information	View Document

# 6.1.2 The institution practices decentralization and participative management **Response:** DTU has developed a unique model of participative academic governance which has resulted in better functioning of the University. Monthly meeting of Deans, HoDs and other senior functionaries of the University On first working Monday of every calendar month the Vice Chancellor conducts two meetings (i) A meeting of the Dean's committee along with the CoE, Registrar, PVCs and Director IQAC. (ii) A meeting of all Deans, HoDs of the different academic departments and other administrative departments. In the first meeting new policy initiatives being planned by the University are discussed and the roadmap to implement these initiatives is discussed. The timelines for different activities are decided. In the second meetings, the day-to-day working of the University is reviewed. The specific problems of different departments are discussed in detail and a conscious effort is made in these meetings itself to resolve the problems. The problems related to purchase, student's amenities, hostel affairs, academic issues are all discussed in these Monday meetings. The minutes of these meetings are discussed in the next and subsequent meetings till the matter involved reaches a logical conclusion.

Many successful programmes of the university like Research excellence award, Teaching Excellence award, University student's internship programme (USIP), audit of question papers of mid-semester and end-semester examinations, on-line attendance system of students, have all emerged from these meetings.
The decentralization in management is practiced through various bodies at University level as well as department level such as Board of Management (BOM), Academic Council (AC), Finance Committee (FC), Building and Works Committee (BWC), Board of Studies (BOS), Department Research Committee (DRC), student research committee (SRC), Department Purchase Committee (DPC). Further committees are constituted with faculty as members where they play active role in decision making.
A case study of preparation and distribution of departmental budget
The Head of the Department calls a meeting of faculty and staff during January-February of every year to finalize proposed budget of the Department for next financial year.
The laboratory in-charges, departmental library in-charge, and other faculty are asked to submit the approximate budget required to run the laboratories, library, and other facilities in the Department.
· The faculty may also be asked to submit budget proposal for conducting any seminar, conference, workshop, faculty development programme, and guest lectures in the coming financial year.
The proposed budget is finalized after discussion with all stakeholders based on relevance of the equipment, consumables, programme etc. and the finalized budget is forwarded by the HoD to the concerned branch.
· The budget proposal from each department is further deliberated upon in the meetings of Vice

Self Study Report of DELHI TECHNOLOGICAL UNIVERSITY
Chancellor with Deans, HODs, Controller of Finance, Registrar and other Branch in charges.
· After due approval from the competent authority, the budget is distributed to all the laboratories/activities as decided.
· The Head of Department and concerned in-charges ensures that the allocated budget is utilized within the specified time-frame.
Proper record of the expenditure in maintained in University register and Departmental register.

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

### **6.2 Strategy Development and Deployment**

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

#### **Response:**

The University has drafted its perspective plan for growth and development and, the deployment documents are available taking into consideration:

Vision and Mission.

	Teaching and Learning.
•	Research and Development.
	Outreach and community engagement.
•	Industry and Alumni Interaction.
	Internationalization.
•	Human Resource planning and development.
resea	ne with vision, the strategic plan envisages transforming DTU into a world class University with arch focus, together with furthering its position in awarding Bachelor's, Master's and PhD degrees of quality.
	ne with the recommendations of the national knowledge commission of India, DTU in its Five year 2-2017) plan included followings:
(i) Tecł	Introduction of new courses at UG and PG levels in new and emerging areas of Engineering, anology and Management;

(ii)	Focus on employability;	
(iii)	Synergy between education and research;	
(iv)	Knowledge creation and innovations such as increased IPR, new product developments;	
(v)	Techno-entrepreneurship and knowledge enterprise development.	
Since 2018, the twelve years' vision 20-30 was planned with focus on the restructuring of courses of academic programmes, teaching pedagogy, up scaling research activities, interdisciplinary studies & research and University administration. Further, focus was on incorporation of flexibilities in course structure by adoption of choice based credit systems and massive open online courses (MOOCs), Innovation and Incubation, furtherance in R&D activities, faculty and staff development, industry and alumni interaction, internationalization of the University, quality assurance and assessment, professional ethics, outreach and community service, technology enablement and establishment of interdisciplinary academic programmes and addition of infrastructural support. The growth plan is reviewed annually taking the view of all stake holders and assessment of its attainment is reviewed by the competent authority on regular basis to ensure its achievements.		
All Deans/ HoDs set individual targets and accountability considering the following aspects:		
· Acad	lemic & Teaching-Learning Planning	
· Infra	structure Resource Planning	

· Faculty/Staff Resource Planning		
· Learning Resource Planning		
· Industry Interaction and Placement Planning		
· Research & Innovation Planning		
· Internationalization Planning		
· Student Development Activities Planning		
· Events & annual Calendars Planning		
The annual Targets are examined and finalized by the University. The proposed annual targets comprising of all the above mentioned aspects are placed before the competent authority (Academic Council, and Board of Management) for the approval. After the approval, the recommendations are circulated to all concerned for its implementation, compliance and review.		
File Description	Document	
Any additional information	<u>View Document</u>	
Link for Additional Information	View Document	
Strategic Plan and deployment documents on the website	View Document	

6.2.2 Organizational structure of the University including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism
Response:
The University has a clearly defined organizational hierarchy and structure to support clear, consistent and effective decision making processes. The organizational structure lends itself to sustaining institutional capacity and effectiveness of its operations through the involvement of stakeholders in various Committees/ Boards.
The Act and the statutes of the University provide for various Statutory Authorities of the University to provide policy framework and direction for the functioning of the University and for the fulfillment of its objectives.
The following statutory bodies have been prescribed:
University Court
Board of Management (BoM)
Academic Council (AC)
Planning Board
Finance Committee (FC)
Boards of Studies (BoS)
Building & Works Committee
The University has qualified and competent administrators to provide effective leadership and management at various levels.
Vice Chancellor
Pro-Vice-Chancellors
Registrar
Controller of Finance
Controller of Examination

Deans

Head of Departments/ Divisions

Director, Internal Quality Assurance Cell (IQAC

Such other authorities as may be declared by the Statutes to be authorities of the University.

The functions of various Committees/ Boards/ Authorities are defined in the University Act and Quality Manual of the University.

The following University bodies are constituted for an effective operation which includes evaluation, monitoring and providing recommendations in respect of various matters related to Institutional Management Capacity, Review, Design and Evaluation of Course Curriculum, Education and Research Effectiveness, Sponsored Research, Innovation & Incubation and Examination & Evaluation etc.

Operation	Different operational Entities	
Planning & Review	Planning Board	
	Finance Committee	
	University IQAC	
Admission	Academic Council	
	Admissions Committees	
Fee	Academic Council	
	Finance Committee	
Course Curriculum	Academic Council	
Development		
	Board of Studies	
Examinations	Board of studies	
	Unfair Means Committee	
	Examination Committee (exam & evaluation)	
	Results Moderation Committee	
Research	Student Research Committee (SRC)	
	Department Research Committee (DRC)	
	Department resourch Committee (Drec)	

	Dean Academic (PG)
Sponsored Research &	Dean (IRD)
Consultancy	
Purchase	Departmental Purchase Committee
	Central Purchase Committee
	Technical Evaluation Committee
Library	Library Committee
Scholarship	Scholarship Award Committee
Placement	T & P Cell
	Placement coordinators
Finance	Finance Committee  Board of Management
Estate	Housing Allotment Committee
	Engineering Cell
	Building & Works Committee
Discipline	Board of Discipline
2 isospinio	Anti-Ragging Monitoring Committee
L	Chief Warden
Hoster	Cinei warden
	Wardens Council
	Hostel Allotment Committee
Sports & Extracurricular	Sports Council
Activities	Cultural Council
	Technical Council
	Literary Council
	National Service Scheme (NSS)
	Dean Student Welfare
Grievance redressal	Ombudsman
	University Court
	Women complain cell
	Equal Opportunity Cell





External members often opt as part of various Councils and Committees for bringing transparency and fairness in the system. Students are also invited to the committee meetings to represent the student community.

Service Rules, Recruitment Rules, and Promotion Policies are very well defined and approved by the competent authority. The operation and maintenance of the policies are carried out by the Establishment Branch. The University has a well-structured system for the professional development of the faculty and staff. Achievements of faculty and staff are recognized with financial and non-financial incentives.

Faculty and Staff related grievances are handled by the University to keep their morale high so that they can perform efficiently.

File Description	Document
Any additional information	<u>View Document</u>
Link to Organogram of the University webpage	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

All 5 of the above

Any 4 of the above

Any 3 of the above

Any 2 of the above

**Response:** Any 4 of the above

File Description	Document
Screen shots of user interfaces	<u>View Document</u>
ERP Document	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:**

The University has various Authorities/Bodies/Cells/Committees at various levels for effective functioning of the University and decision making as stated in the key indicator 6.2.2.

All the Authorities/Bodies/Cells/Committees regularly meet to consider the various agenda points and discuss their resolution. The frequency of the meetings of various Statutory Authorities, Bodies and Committees is given as additional information. The minutes of the meeting of all the meetings are maintained in the respective department/ office such as Registrar, Controller of Examination, Dean Student Welfare, Administration, Admission, Finance, IQAC, etc. The minutes of the meetings are invariable circulated in text, through e-mail and important information are also uploaded on the DTU website.

#### **Case Study**

University in its 3rd monthly meeting of Deans, HODs and Branch in-charges held on 15 May 2017 resolved to go for ISO 9001:2015 certification before going for NAAC. Accordingly, a committee was formed on 7 July 2017 to coordinate the activity. Training of the team was organized for ISO document preparation and internal auditors, and were trained. Different committees were constituted to prepare the Quality manual & standard operating procedures (SOPs), related forms and formats on 28 September 2017. Several meetings were held to review the progress of the work by Pro VC and Director, IQAC. The internal audits were performed between 13 June to 10 July 2018. Management review was held on 14 September 2019 and based upon the review, final documents were prepared for external audit by STQC. The external audits were performed by STQC in two stages in September 2018 and October 2018 and finally, Delhi Technological University was awarded the ISO 9001:2015 certification on 27 November 2018.

The resolution adopted in the monthly meeting was effectively implemented by IQAC through regular review and assessment resulting in to implementation of the ISO 9001:2015 which is evident through minutes of the meetings and related documents.

File Description	Document
Any additional information	<u>View Document</u>
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:**

http://www.dtu.ac.in/Web/establishment/estd/downloads/University has taken several welfare measures for teaching and non-teaching staff as listed below.

There is a provision for professional development fund, for supporting the research work. Initial grant of Rs. 2 Lakhs is provided.

- Provision for attending the conferences, workshops and faculty development programme (FDP). Up to Rs. 2 Lakh for attending above programme is valid for a period of 3 years.
- Provision for reimbursement of books, membership fee, tuition fee, medical bills, leaves, etc.
- · Provision for procurement of advance equipment related to the research and teaching.
- Provision of child care leave and maternity leave for female employees.
- DGHS facility is available to faculty and staff. Dispensary is equipped with doctors with multiple specialization and are available in the campus.
- Provision for faculty welfare committees.
- · Faculty and staff are covered under group insurance scheme.
- Provision for research awards to promote research. Award categories:-

#### **Outstanding Research Award:**

A cash prize of Rs. 5,00,000/- is awarded along with certificate of merit. Selection Criteria: The paper must be a SCI/SSCI journal paper of impact factor at least two, and published in the. following:

- Nature Journal
- Science
- Harvard Business Review

#### Premier research award:

A cash prize of Rs. 1,00,000/- is awarded along with certificate of merit.

Selection Criteria: The paper must be a journal paper of impact factor at least 3 for IEEE Transaction and one for all other indexed in SCI or SCI expanded

#### Commendable research award:

A cash prize of Rs. 50,000/- is awarded along with certificate of merit.

Other welfare measure taken by the University are listed below.

Provision for organizing various events/conferences/seminars.

- There is well defined promotional policy and service rules. Promotions under CAS are done on regular basis.
- There is grievance redressal mechanism for staff and faculty. There are committees for addressing issue related to women employees at workplace.
- Provision for sponsoring the faculty for higher education programme, e.g. QIP for full time PhD programme. Technical staff also gets the opportunity to pursue higher studies.
- The university has facilities of Bank, Post-office, sports ground.
- Accommodation is available for faculty and staff within campus, thus provide a secure environment.
- · Provision of LTC is there as per Govt norms.
- On campus sports facilities are available.
- Internet facility is available in all offices as well as residential complex
  - CCTV is installed most areas of campus to ensure security including residential areas.

File Description	Document
Any additional information	View Document
Link for 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: 31.17

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

2017-18	2016-17	2015-16	2014-15	2013-14
166	129	118	79	41

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

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

Response: 9.8

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
19	4	13	7	6

File Description	Document
Details of professional development / administrative training programs organized by the University 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: 9.79

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
61	56	35	26	0

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:** 

# DTU has a performance-based appraisal system for the assessment of teaching and non-teaching staff. The Appraisal report is based on the Annual performance of the employee by their academic, research developments and extra-curricular activities.

The purpose of this Annual Performance Assessment Report System (APAR) is to develop and maintain acceptable levels of performance with the students, colleagues and non-teaching staff. Performance Appraisal is an evaluation process based on established criteria and performance standards. The Performance Based Appraisal Reports (PBAs) provide good feedback to faculty members and help them in understanding the need of students. All the faculty members fill prescribed Performa for self-appraisal. Performance Appraisal System (PAS) encourages faculty members to make excellent performance in teaching-learning and research.

The above set performance appraisal report is to be filled by the employee, research scholars in the given prescribed performance which includes all the above set related to points and sub-points. During the period of evaluation, the immediate supervisor evaluates the employee's performance level based on the criteria defined in the "Performance Appraisal Plan". The views of the employee filled in the prescribed Performa are reviewed by Head of the Department (HOD) and vice chancellor of the university. The chairman of the governing body further reviews the overall report on PBS, and final performance functioning status is confidentially recorded in the office.

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APAR System of DTU is divided into six parts. In the first part of APAR faculty Personal Data is required. The second part is the devoted to Self-Appraisal, i.e., a brief description of duties like teaching loads (Lectures, Tutorials, Practical's, and seminars), courses taught at various levels (undergraduate as well as postgraduate). The third part is a very important part for an academic report of faculty because in this section faculty have to give details about research publication, participation in conferences/ seminars/ workshops. This part also includes information about summer program, refresher or orientation courses attended or conducted by faculty as well as Ph. D. Guidance and Sponsored Research Guidance. Details of industrial interaction/ professional consultancy/ patent obtained/ Membership of professional/ academic Societies etc. are also covered.

In the fourth part, faculty has to give information about the contribution to the Corporate Life of the institution like curriculum development, details of courses development/ revised, Laboratory Development and experimental set up (the details of Preparation of Laboratory manual design of new experimental set up and new facility added during the period), Cultural/ extracurricular activity, Sports/ Community and Extension services/N.S.S, Administrative Assignment or any other information's which are missing.

The fifth part has to fill-up by reporting officer, and the Numerical grading is to be awarded by reporting and reviewing authority which should be on a scale of 1-10, where 1 refers to the lowest grade and 10 to the highest. In the sixth and final section reviewing officer has to give Remarks based on the annual record of the faculty.

File Description	Document	
Link for Additional Information	View Document	

#### **6.4 Financial Management and Resource Mobilization**

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

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Res	NUL	13C.

DTU has been established by the Govt. of National Capital Territory (NCT) of Delhi by reconstituted Delhi College of Engineering vide Delhi Act 6 of 2009 as passed by the legislative assembly of Govt. of NCT of Delhi on 1st July, 2009 which has come into force with effect from July 15, 2009 with its notification in the Official Gazette. DTU, an institution of eminence in the seminal role country, has played a skilled technical manpower to the nature and committed to attract best of mind for its faculty and students, ensure high academic standards and encourage research and innovations in the areas of relevance to industry and society.

In accordance with section 35 of DTU Act 2009, the Annual accounts and balance sheet of the University shall be prepared under the directions of BOM of DTU and shall, at least, once every financial year at intervals for not more than fifteen months be audited by the Comptroller and Auditor General (CAG) of India or such person or persons as he may authorize in this behalf.

The Audit of Annual Accounts of the University is being carried out by the three tier system:

The internal Audit of Annual Accounts is being carried out by the Chartered Accountant appointed by the BOM, DTU.

The Audit of Local Fund Accounts (LFA) is carried out by the Directorate of Audit, Govt. of NCT of Delhi for the funds received from Finance Department of NCT Delhi in the form of Grant in Aid through Directorate of Training & Technical Education, NCT of Delhi being administrative department of the University.

The CAG of India carried out statutory Audit of the University as per the provisions of section 35 of DTU Act 2009.

Accounts of DTU are auditable under Section 14 of Duties, Power and condition of Service (DPS) Act (CAG of India) as per which following records are auditable.

Advances Sanctioned

Outsource and Sanitation Services

Outsource of Manpower

Purchase of Consumable and Non consumable items

Maintenance of Funds Accounts

Investment Policy

Misc. expenditure – Civil and Electrical

Internal Audit is carried out by Examiner- local funds accounts -Govt. of Delhi as regular funds received in form of Grant-in-Aids. Audit of CAG and Directorate of Audit, Govt. of NCT of Delhi have already been carried out up to the financial year 2016-17. CAG Audit specifically covers the sphere of policy decisions of the organization like creation and utilization of capital assets, utilization of revenue, recruitment etc. whereas internal audit by NCT, Delhi addresses like salaries, utilization of Grant and income tax etc.

Audit observations raised by AG/ Delhi Govt. have been suitably replied for settlement emphasizing action taken as per rules and regulations/ instructions issued by Govt. of India/ Delhi Govt. General Financial Rules/CPWD works manual /Instruction issued time to time by the Finance Deptt. govt. of Delhi. However, procedural observations of the audit have been noted for compliance in future. Outstanding audit paras are likely to be settled shortly.

File Description	Document
Link for 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: 87.84

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
35.42	25.18	9.28	9.46	8.5

File Description	Document
Details of Funds / Grants received from non- government bodies during the last five years	View Document

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

#### **Response:**

Delhi Technological University is a publicly funded university established by the government of the NCT of Delhi in 2009 by an act of the legislature of the NCT of Delhi which has currently around 10500 students on its two campuses. The funding requirements of the university is primarily met by the following sources.

Internal resource mobilization

Govt funding

#### **Internal resource mobilization:**

- a) Students fee receipt is the major component of the internal resource mobilization by the University. With effect from the academic year 2015-1016, the university adopted a fee structure in which there is an automatic provision for a fixed annual increment in the fee to compensate for the inflation and rise in the input costs. Now the university is able to meet most of the recurring expenditure from the fee receipts. In the current academic year, the academic receipt was Rs. 68.08 crores.
- b) Donations from alumni: DTU has a very rich alumni base spread throughout the globe. The university has during the last couple of years started tapping this base for resources for general/specific development projects. In the recent past the university has received a donation of Rs. 5.0 crores from alumni for the purpose of construction of a multipurpose exposition hall. The University maintains a wall of donors on its website. The university is continually reaching out to its alumni for generous contributions in the development of their alma meter.
- c) Income from consultancy and sponsored projects: The University is actively involved in carrying out sponsored project and consultancy. The combined income received by the university under these heads (consultancy, sponsored projects and other miscellaneous receipts) during the last year was Rs. 1.096 crores.

#### Govt. Funding:

Since DTU is a publicly funded institution all the capital expenditure is met by the GIA from the Govt. of NCT of Delhi. The University also receives GIA for covering the shortfall in the income over the recurring expenditure. But this dependence of the University on the Govt for GIA for covering the RE is decreasing gradually and thus the university is inching towards its goal of financial self-sufficiency.

File Description	Document
Link for Additional Information	View Document
Internal Quality Assurance Syste 6.5.1 Internal Quality Assurance Cell (	em IQAC) has contributed significantly for institutionalizing th
quality assurance strategies and proces	
Response:	
	has been involved in planning, guiding and monitoring Quality
	vities of the University. The IQAC has a dedicated team of coordinators. The meetings of IQAC at University level is hele
regularly and decisions are presented to a	ll the statutory bodies of the University. After the approval of t
Competent authority, the matter is sent to implementation on ground.	the concerned Department/ Support Offices for further
	The form the state of a many desiries of the Haring with
The following decisions of IQAC is place	ed before the statutory authorities of the University:
	ed before the statutory authorities of the University:
a) Annual Report	
<ul><li>a) Annual Report</li><li>b) Results of audits and observations of</li></ul>	
<ul><li>a) Annual Report</li><li>b) Results of audits and observations of</li><li>c) Stakeholder's feedback</li></ul>	
<ul> <li>a) Annual Report</li> <li>b) Results of audits and observations of</li> <li>c) Stakeholder's feedback</li> <li>d) Process Performance &amp; Conformity</li> </ul>	f external agencies.
<ul><li>a) Annual Report</li><li>b) Results of audits and observations of</li><li>c) Stakeholder's feedback</li></ul>	f external agencies.
<ul> <li>a) Annual Report</li> <li>b) Results of audits and observations of</li> <li>c) Stakeholder's feedback</li> <li>d) Process Performance &amp; Conformity</li> </ul>	f external agencies.

IQAC has worked for implementation of Quality manual of the University and Standard Operating Procedures for all academic and administrative processes leading to ISO 9001:2015 certification. IQAC has trained internal auditors to conduct regular audits of all the academic and administrative processes of all the departments. The plan, develop, check and apply (PDCA) cycle is implemented by IQAC to meet the quality objectives of the departments. Following procedure is adopted for the audit.
The results of the internal quality audits are recorded by IQAC and report is given to concerned functional Head.
Timely action on the reported non-conformities (NCs) is planned and taken by concerned functional Head.
Follow-up audit is conducted in-order to verify and record the implementation and effectiveness of the corrective action(s) taken.
Root-cause analysis for NCs is done to ensure the nonoccurrence of NCs in future.
The audit reports are placed before the University management for review and reforms suggested are communicated to the departments for implementation.
This activity helps the University to meet the set goals in line with the Vision and Mission of the University.

#### **Activity 2**

The Vision, Mission and Quality Policy of the University are documented after vide consultation with different stake holders and approved by competent authority of the University. The vision, mission and quality policy are documented and displayed at all the prominent places in the University and website.

The Quality objectives of every Department is developed after consultation with all stakeholders. The quality objectives are analyzed and evaluated each year with a view to ensuring the enhancement of the Departments with emerging trends and changes in technical world and society. The degree of achievement of each objective of the Department is then graded based on the weightage given to each objective towards achievement of the said Department's vision and mission and the rating based on the execution of each objective. This evaluation of the objectives is evolved through a process of discussion and deliberation coordinated by the Head of the Department and all faculty members of the Department.

File Description	Document
Link for Additional Information	<u>View Document</u>

### 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:**

IQAC of DTU has been monitoring the quality of teaching learning process, structures and methodologies of operations and learning outcomes at periodic intervals during meetings. The IQAC is supported by various offices and departments as mentioned below:

- i. Academic Affairs (AA-PG/UG)
- ii. Student Welfare (SW)
- iii. Industrial Research and Development (IRD)
- iv. Computer Center (CC)

The Programme Structure, Course Syllabus, Course Plan, Time-table are made available to the students before the commencement of the semester. Daily monitoring of conduct of the classes is done by the Head of Department in each department and centrally by a Committee chaired by Vice Chancellor. A transparent mobile application based online attendance system is in place which generate daily report and send SMS to the parents and students. Regular meetings of course faculty are held with HoD to review the course delivery and student learning progress. Feedback from students is also taken through CR meetings, online feedback system and corrective measures are taken accordingly to improve the teaching-learning processes. IQAC regularly conducts various satisfaction surveys and corrective actions are taken based on the report of the survey. The continuous assessment is done for assessing various student learning outcomes. The analysis reports generated from this data are shared with Vice Chancellor, HODs and University IQAC to review the teaching-learning processes. Monthly management reviews are done and the various aspects of teaching-learning are discussed during those reviews. The university presents Annual Reports based on the reports received from the departments.

Two examples of institutional reviews and implementation of teaching learning reforms facilitated by the IQAC:

- 1. Choice Based Credit System (CBCS) reforms
- 2. Adoption of 'MOOCS' courses for various programmes of the University
- 3. Automation of Examination and student registration process.

The frequency of the IQAC meetings are planned by Chairperson according to the calendar/Time Table uploaded and approved by the competent authority. Also, all the processes right from admissions to convocation are monitored for compliance (pre, conduct and post) by IQAC and external agency during internal audits, checks and visits.

File Description	Document
Link for Additional Information	View Document

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

Response: 0

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

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

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

# 6.5.4 Quality assurance initiatives of the institution include

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

Any 4 of the above

Any 3 of the above

Any 2 of the above

Any 1 of the above

**Response:** Any 4 of the above

File Description	Document
e-copies of the accreditations and certifications	View Document
Details of Quality assurance initiatives of the institution	View Document
Annual reports of University	View Document

6.5.5 Incremental improvements made during the preceding five years	(in case of first cycle) Post
accreditation quality initiatives (second and subsequent cycles)	

Response:	R	es	n	O	n	S	e	•
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DTU has adopted an effective internal and external quality enhancement mechanism. The Internal academic and administrative processes are monitored continuously and are audited periodically through a robust three tier audit system. The University also undergoes external quality audits of its processes by way of external audits, accreditations and inspections by legally constituted controlling bodies. The reports of these bodies form an input to the Internal Quality Assurance processes thus resulting in improvement.

Incremental continuous improvement is an ongoing effort in the University to improve our systems and processes. The observation given by the external agencies are followed up rigorously till they are closed and further benchmarked for next higher level PDCA.

Two areas where incremental improvements have been made over the last 5 years.

### Examination

To ensure a comprehensive and continuous evaluation, for any course, the University gives only 40% to 50% weightage to the end-semester examinations while 50% to 60% of the marks are allotted to insemester continuous assessment based on class tests, individual assignments, group presentations and lab classes. This has motivated the students to study continuously.

### Research

Continuous efforts are made to improve the Research climate in the university through awareness building sessions on quality publications, use of software for detecting plagiarism, conducting workshops on Research Methodology, promoting Collaborative research with premier Research Institutions, establishing a Professional Development Fund for encouraging research projects, etc. Our focus is on institutionalizing Research Innovation which shall lead to the creation of patents and Intellectual Property Rights and consultancy in the University thorough DTU IIF, IPR Cell and IRD.

The h-index of the University over the past 5 years is from Scopus (38) and Web of Science (37); 393 collaborative activities have been conducted in research and faculty exchange; 380 linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities; 62 functional MoUs are in place with institutions of national, international importance and other universities, industries, corporate houses.

File Description	Document		
Any additional information	<u>View Document</u>		
Link for 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: 14

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
6	4	2	2	0

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

# 7.1.2 Institution shows gender sensitivity in providing facilities such as

- a) Safety and Security
- b) Counselling
- c) Common Room

### **Response:**

DTU is dedicated towards the promotion and practice of the ideals of social and natural justice, human dignity and rights of all human beings without prejudice of caste, creed, religion and gender. Therefore, it realizes the significance and the need for having an "Anti-Sexual Harassment" Policy, establishment of the "Women Cell DTU" and "Equal Opportunity Cell". The foremost role and responsibility of these cells are to create an atmosphere free from any form of discrimination and sexual harassment. It aims at attaining social security, gender equality through counselling and awareness. DTU also follows reservation policy for Single Girl Child in every branch of UG course. Safety and security issue is addressed through master-class, social campaigns workshops and seminars. DTU ensures that complaints of gender-bias are dealt with sensitive, equitable, fair, timely and confidential manner.

Lectures are organized with an aim to provide insight into the success stories of top-notch social workers in order to motivate and stimulate the awareness for gender equality and to create an environment that lead to an accomplished life. Students get the opportunity to know about the real world experiences of their role models and a subtle opportunity to interact with them directly. Students are encouraged for early reporting of any experience regarding sexual harassment or gender conflict in DTU. To ensure safety of the students Hostels are provided with boundary and gates, manned by security guards on 24X7 basis. All the hostels have faculty wardens, residential warden, and attendant. Girl's hostel is manned by female guards. The second layer of security is provided by security personnel throughout the campus. Also Police van patrols during day and night in the campus. University campus is monitored by CCTV network. Health centre and ambulance service is provided in the campus which is available 24 hours. Several Hospitals are in contract to provide immediate medical assistance to the students.

Though the University has policy to engage in counseling at various levels like "Mentor-Mentee" system, it also engages professional counselors. DTU takes pro-active role in creating social, physical and psychological environment and awareness. In order to train the faculty members in counselling, skills workshops are organized from time to time to give them theoretical input and practical guidelines for dealing with gender related issues and reporting sexual harassment cases and also dealing with such victims. Youth empowerment Seminar is organized regularly for students to train them in mind control, emotional stability, meditation, stress management etc.

To keep the privacy as well as to eliminate unwanted incidents, University maintains separate common room for boys and girls. Apart from these, every department of the University has separate common room for Faculty members.

File Description	Document			
Any additional information	<u>View Document</u>			
Link for Additional Information	View Document			

# 7.1.3 Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 17.16

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

Response: 472

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# 7.1.3.2 Total annual power requirement (in KWH)

Response: 2750

File Description	Document
Details of power requirement of the university 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: 64.88

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

Response: 846

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 1304

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

# 7.1.5 Waste Management steps including:

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

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# **Solid Waste Management**

Ø Delhi Technological University has set-up **500 kg per day kitchen waste biogas plant in the backyard of main canteen.** This is based on **Nisargruna technology**, developed by BARC which is a method of processing biodegradable waste. It is an environment friendly technology, which delivers two valuable products i.e. flammable methane and organic manure. The waste generated in the main canteen is fed into the installed biogas Plant. This plant was installed and commissioned in April 2014. Initially, the

system started functioning with about 50 kg wastes per day and slowly it moved to more than 100 kg per day and in due course of time it will reach to its full capacity i.e. 500 kg per day. An equal amount of water is mixed with the waste and grinded and then slurry is fed to the plant. The methane gas so generated by this plant is supplied to the kitchen of the main canteen. DTU is in contact with some other organizations to provide consultancies in this area. DTU students have already produced some research papers. Few students are doing their B. Tech., M.Tech and PhD projects in this area.

# **Liquid Waste Management**

Ø DTU has its own STP and waste to energy (WTE) plants. The operation of plants is in accordance with the CPWD specifications with all the listed safety procedures. The effluents are treated as per DPCC norms. Water is tested for pH, TSS, COD, BOD, ammoniacal nitrogen, nitrate, grease, and oil. Bioassay of treated water and inlet water to STP is done by DPCC approved laboratory on quarterly basis.

# **E-Waste Management**

 $\emptyset$  Delhi Technological University takes care of all the e-waste by e-auction trough MSTC ecommerce.

Electronic Waste (e-waste) comprises of wastes generated from used electronic devices and house hold appliances which are not fit for their original intended use. To take proper care of all the e-waste generated in the campus, DTU takes MSTC support by e-auctioning the e-waste. MSTC acts as a Selling Agent for disposal of redundant/obsolete scrap and surplus stores etc including e-waste materials on behalf of various ministries/Govt. Departments. More than 200 PSU's, State Electricity boards, and other Govt. Departments etc through its e-auction on website. Guidelines, Notifications issued by MoEF, CPCB, SPCB etc. from time to time are strictly implemented & portal customized accordingly by MSTC.

Major Steps involved in e-waste disposal by this system are:

} For participation the buyers and sellers have to register on the website www.mstcecommerce.com/auctionhome.

File Description	Document	
Any additional information	<u>View Document</u>	
Link for Additional Information	View Document	

# 7.1.6 Rain water harvesting structures and utilization in the campus

# **Response:**

Rain water harvesting system is adequately placed in the University. More than half of the area of University is open and direct percolation of rainwater takes place. Apart from it, there is an underground tank of a capacity of 1000 kilolitres which collects the rain water from roof-top of academic blocks. The water so- collected is used for horticultural purpose, and is stored for fire-fighting application. The University also has a pond with an area of approximately 10000 square metres. The pond collects rainwater and surface runoff which is produced during rains. Groundwater recharge from the pond takes place for rest of the period throughout the year. Water from the pond recharges the groundwater, and it is being used in horticulture at times. During winters, the water from the pond is sprayed along roadside to arrest resuspension of dust, and to wash the deposited dust from over the vegetation.

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

### 7.1.7 Green Practices

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

# **Response:**

- Roof top solar energy harvesting (472 KW)
- Solar water heaters for hostels (50 in number)
- Waste to Energy plant (1.0 TPD)
- Biogas generation from food waste (0.5 TPD)
- In-house composting of plant biomass (Yard waste)
- Rain-water Harvesting (1000 kilolitres)
- Sewage Treatment Plant (1.0 MLD)

- Bio-diesel Plant (100 Litres per day)
- Plantation drives
- Recycling of plastic and paper
- Use of shared Cycles in campus (Ofo Co.)

The University realises its responsibility towards environment and believes in the development of green and sustainable society. There have been several initiatives since its inception including transportation, plastic free campus, paperless office, Green landscaping, water recycling, solar systems installations and so on.

The university buildings are open and designed in such a way that sun/natural light is available during the day time. Solar water heaters have been installed in the hostel buildings and also in some of the residential buildings. The solar street lamps have also been used in the campus. The 472 KW solar-plant is installed on the roof of many departments which are contributing towards savings in power consumption.

The university has also developed own **Bio-gas plant** where food waste from canteen and mess is utilized as input for generating bio gas which is utilized the university canteen. The food waste from the mess is utilised in a **Waste to Energy (WTE)** plant of the capacity of 1.0 tonne per day. Apart from it, the rain water falling over the roofs is collected in a1000 kilolitres underground **RWH tank**. The surface run-off is collected in large sized **University-lake to recharge the groundwater**.

Students participate in campaigns like "Adopt a Tree", "Plantation Drive", "awareness against deforestation", "conserve native species of plants and trees". The campus has green landscaping and more than half of its area is under green cover. The yard trimmings from the campus are decomposed in composting pits to produce compost for horticultural use. Moreover, to achieve **Zero Liquid Discharge** (**ZLD**), the University has an in-house **Sewage Treatment Plant** of capacity of 1.0 million litres per day.

The University has a tie up with OFO CYCLE Co. to promote use of **shared bicycle in the campus**. Roads are neat, clean, wide, and pedestrian friendly. In addition, the **University runs the bus from nearest metro station** to motivate students and staff using public transport.

The university has established a Centre for Advanced Studies & Research in Automotive Engineering (CASRAE) with an objective to explore utilization of **biodiesel** in diesel engines. The centre has contributed in the research and also developed **biodiesel vehicles running in the campus**.

The University offers the Bachelors and Masters programmes in Environmental Engineering along with research in this area. Environmental studies is also the compulsory course for the first year undergraduate students. The university has taken initiatives towards **plastic free campus** and along with minimization of use of paper. The university has **online attendance system** eradicating completely the use the paper registers. Paper cups, glass, plates are used in the canteen avoiding use of plastic.

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

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

Response: 2.27

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
88.20	48.9	50.43	39.01	45.82

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

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

- 1. Physical facilities
- 2. Provision for lift
- 3. Ramp / Rails
- 4. Braille Software/facilities
- 5. Rest Rooms
- 6. Scribes for examination
- 7. Special skill development for differently abled students
- 8. Any other similar facility (Specify)
- A. 7 and more of the above
- B. At least 6 of the above
- C. At least 4 of the above
- D. At least 2 of the above

**Response:** B. At least 6 of the above

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

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

Response: 69

# 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
15	15	14	13	12

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	<u>View Document</u>

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

Response: 25

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
7	6	8	2	2

# 7.1.12

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

Response: Yes

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

# 7.1.13 Display of core values in the institution and on its website Response: Yes File Description Document 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	View Document
consciousness about national identities and symbols	

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

Response: Yes

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

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

Response: Yes

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

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

Response: 24

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
3	5	6	4	6

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

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

# **Response:**

India is a country of great diversity and since students are coming to DTU from far and wide, it serves as the perfect pot pourri for various cultures and traditions. The national festivals are like Lohri, Pongal, Eid, Holi, Diwali, and the birth/death anniversaries of great Indian personalities are celebrated in the campus of University.

National festivals like Republic Day (26<sup>th</sup> Jan) and Independence Day (15<sup>th</sup> Aug) are celebrated and flag hoisting is done by the Vice Chancellor of University followed by the national anthem. The birth/death anniversary of eminent freedom fighters are also celebrated to inculcate the feeling of national pride among its students, faculty and staff. The birth anniversary of the father of nation Sh. Mahatma Gandhi (2<sup>nd</sup> October) is celebrated as *Swachchta Diwas* in the campus; and the NSS unit of DTU observes cleanliness campaign in adjoining villages/slum colonies. The 31<sup>st</sup> October is celebrated as *Rashtriya Ekta Diwas* as a tribute to Sardar Vallabhbhai Patel on his birth anniversary. Kavi Sammelan is held regularly on 23<sup>rd</sup> March (*Shahidi Diwas*- National Martyr's Day) to commemorate the sacrifice of Bhagat Singh, Rajguru, and Sukhdev towards the freedom of nation. 25<sup>th</sup> December is celebrated as *Sushasan Diwas* (Good Governance Day) as a mark of respect to the immensely acclaimed former Prime Minister, Shri Atal Bihari Vajpayee. Former Prime Minister Sri Rajiv Gandhi's birth anniversary 20<sup>th</sup> August is also celebrated as *Sadbhawana Diwas* on our campus to pledge peace and harmony.

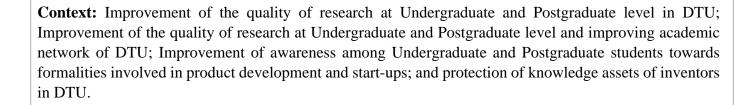
DTU being a technological University, encourages students to incorporate a scientific temperament

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	and vision, and <b>National Science Day</b> is celebrated on 28 <sup>th</sup> February to commemorate the birth anniversary of Sir C. V. Raman. DTU community is equally sensitive towards the ecological environment and celebrates <b>World Environment Day</b> (5th June) by planting saplings in the campus as a pledge for a green tomorrow. <b>Earth Day</b> is also celebrated on 22nd April. On 21st June we pledge our commitment to health and wellness by celebrating <b>International Yoga Day</b> .
	7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions
	Response:
	Financial Transparency
1.	All the financial activities are transparent. An external audit of Accounts Department is conducted annually by the auditors of Delhi Govt./CAG for financial expenditure every year and it is reported to the Department of Finance, Govt. of Delhi NCTD on regular basis.
2.	Every department has their own Departmental Purchase Committee (DPC). Before purchasing anything, including the laboratory instruments, the proposal is to be passed through the DPC. The order is placed to the competent authority only after approval of the DPC.
3.	The salary and payment of the employee are completely transparent and shown on the Ultrasoft. An employee can see the complete details of his salary and miscellaneous deduction online.
	Academic Transparency

1.	The University has introduced online Choice-Based Credit System (CBCS) for the students.
2.	Students can opt for Online MOOCs (NPTEL/Swayam etc.).
3.	Enterprise Resource Planning (ERP) has been implemented for Academic section for attendance record accessible to students, teachers, and parents.
4.	The answer sheets/evaluation sheets of the examinations (Mid Term, End term, and continuous evaluation) are shown to the students.
5.	Feedback of students and parents is obtained during syllabus/scheme revision.
6.	Student grievances about any academic issue are instantly resolved by the Academic/Examination Branch of DTU.
	Transparency in Administrative and other auxiliary Functions
1.	The University is ISO-9001:2015 certified and all the official procedures are published in three volumes of Standard Operating Procedures (SOPs) duly approved by Board of Management.
2.	E-governance is implemented in Administration, Finance & Accounts, Student Admission Support, and Examination Section.

3.	All the important works involving the significant investment are done through the e-tendering, GEMS-
	portal, and online auction process. The tender is normally published in the National News Papers.
7.	2 Best Practices
	7.2.1 Describe at least two institutional best practices (as per NAAC Format)
	Response:
	The two Best institutional practices are
	1. Title: Strong Research and Incubation Ecosystem
	Research Excellence Awards for faculty; financial assistance to students for attending seminars/conferences; DTU-Innovation and Incubation Foundation (DTU-IIF); and Intellectual Property Rights (IPR) Cell
	<b>Objectives:</b> To promote the quality of research, and improve the infrastructure related to; To promote the academic and research exposure of students, and to improve the academic networking; To promote the business ideas among students, and to support the start-ups financially; and to protect the IPRs of inventors of DTU.



**The Practice:** Unique in terms of recognition of faculty and students for commendable research output (publications) and cash prizes in lieu of; unique in terms of financial assistance to students for attending seminars/conferences/short term courses in India and abroad; DTU-IIF unique in terms of financial assistance to students for initiating a business idea, product development, and start-up; and IPR cell unique in terms of promotion and protection of IPRs of inventors (be it student or faculty) with full financial liability of DTU.

**Evidence of Success:** Comes from the fact that Rupees 37.0 lakhs were distributed as prize money for research excellence awards for 82 research publications during the year 2017; comes from the fact that almost all the student applicants have got financial assistance for the respective activity in the past years; comes from the fact that a significant number of applications are received; 19 start-ups have come up; and number of events have been conducted to familiarise/sensitize the students for start-ups; and success of IPR cell comes from the fact 19 patents have been published/granted.

**Problems encountered and Resources Required:** The problem encountered with research excellence Awards was setting the minimum standards for screening of credentials related to the publications, and setting up criteria for shortlisting the number and quality of research papers, and a good number of resource persons were required for the same. Problem encountered for financial assistance to students was screening of quality credentials related to the programmes/events, and setting up criteria for shortlisting the number of applications received. Again, a good number of resource persons/subject-experts was required to evaluate the technical content of research papers to be presented. The problem encountered in DTU-IIF was screening of credentials of business idea related to the start-up, and setting up a suitable infrastructure

to support the ideas formally, legally, and financially. The problem encountered in IPR cell is about training and capacity building of employees of IPR cell. Hiring of a legal firm is the resource required to expedite the process of patent filing, review, and award.
Title: Dynamic Response towards Academic Reforms supplemented with co-curricular activities
<b>Objectives:</b> To offer diversity of courses as per the demand of industry and to strengthen the prepare the students for international competitive environment; and promote the participation, interaction, skills, and team spirit among students for their all-round development.
Context: Improvement of the knowledge, skills, and communication of students as per the international standards; and improvement of physical, social, cultural, emotional, and literary environment for all-round development of students.
<b>The Practice</b> : It is unique in terms of offering foundation electives of language (French/German/Spanish <i>etc.</i> ) and sports; and in terms of equal provision for sports and extra-curricular activities along with academic and research exposure.

2.

**Evidence of success:** It comes from the fact that a substantially high number of students (across different disciplines) have got registered for electives and foundation courses of languages and sports; and from the fact that number of regular sports and cultural activities are being held in the past years. Several awards/accolades have also been won at state and national levels.

**The problem:** Problem encountered was with respect to availability of expert faculty for foundation electives; and availability of extra classrooms; and another problem encountered is organising these megascale events smoothly; and setting up a fool-proof system for limiting external interferences.

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

# 7.3 Institutional Distinctiveness

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

# **Response:**

**University Student Internship Program (USIP)** 

USIP was approved in the 19th meeting of Board of Management held on 07.06.2016 with the motive of engaging the students of the university in various activities to improve and refine the assorted processes involved in the administration and various other Departments. The impetus of the program is to provide an opportunity to expose students to the real-life environment and to help the university in improving their processes and outcome of the activities undertaken from time to time. The students have become a major part of the processes and initiatives taken up by the university for its students.

This initiative has imparted a sense of giving back to the institution which has played a crucial role in the building up of a student's career and personality. A total number of 100 internships with a stipend of Rs. 2500/- per month have been sanctioned wherein intern has to work for 6-8 hours/week including weekends and holidays. For students, the internship program has given them an opportunity to work in the fields of their interest and learn about processes and programs taken up in the university. The students can develop

their skills, working together with the administration. For the university, deployment of interns in various departments has provided a helping hand to the HODs and Deans. The students have now become a part of the administrative bodies which implement different schemes and programs for the university students. The offices now can look at things through students' perspective and implement programs in ways they may benefit more from. Overall, this program has reduced the gap between the university students and the administration, which had for long been increasing in DTU. The students are now more aware of different steps and programs being taken up by the university.

The work done by the interns can be classified broadly into- report and documentation; website development; event and coordination; etc. Some of the astounding accomplishments achieved by the interns are website development, implementation of online attendance, passport services in DTU, student MediClaim Insurance Program (DTU), Joint Admission Committee, and department brochures. Till the date, 218 student interns have been deployed with services worth 564 intern months, and disbursement of Rupees 13,40,000/- has been made as internship scholarship.

File Description	Document
Any additional information	View Document

# 5. CONCLUSION

# **Additional Information:**

- Generous fee concession for students including PhD fellows, faculty and staff
- Organized large number of Global Initiative on Academic Network (GIAN) courses in various disciplines where faculty from different countries delivered the lectures
- Participated in TEQIP II project of MHRD and mentor institute in TEQIP III projects
- Hosted many National and International Conferences funded by government agencies with large participation from country and abroad

More details available at http://dtu.ac.in/Web/IQAC/miscellaneous/

# **Concluding Remarks:**

Delhi Technological University (DTU) is research and innovation driven University, seeking to develop graduates of international repute by providing high quality education and global exposure to students. DTU is an ISO 9001:2015 certified University, committed to the highest levels of excellence and quality assurance in all systems and processes, academic and non-academic. The DTU's quality aspect extends to ensuring and enhancing the quality of students through enriched curriculum by providing knowledge, skill, and character to the students.

DTU always strives to remain at the forefront of cutting edge technology and scientific research, applicable for betterment of Society. It has a strong R&D infrastructure and labs with state of the art equipment. Faculty at DTU is one of the finest in the country with long teaching and research experience. The alumni engagement with DTU is excellent in terms of funding and decision making. University continues to leverage ICT to its fullest for continual improvement of quality and relevance of teaching, research, and academic administration. The University is aware of its social responsibility and is engaged with local communities and marginal sections of society for capacity building to bring into the mainstream.

Self Study report (SSR) for accreditation (1st Cycle) is collectively prepared by University IQAC based on inputs academic and non-academic Departments, keeping in mind our target to equip students with the best education and infrastructure, to help them achieve nothing but the best in life. The SSR has been discussed at various levels to ensure capture the views of all stakeholders.

DTU is committed to nation building and aspires to engage in overall development of students through

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theoretical, experiential learning experiences, providing opportunities for research, innovation, and entrepreneurship, thereby contributing to the growth of nation and society.

# **6.ANNEXURE**

### 1. Metrics Level Deviations

1.Metrics	Level Devia	tions					
Metric ID	D Sub Questions and Answers before and after DVV Verification						
1.1.2	Percentage of programs where syllabus revision was carried out during the last five years 1.1.2.1.						
	How many programs were revised out of total number of programs offered during the last five years						
	Answer before DVV Verification: 24						
	Answer after DVV Verification: 24						
	1.1.2.2. Number of all programs offered by the institution during the last five years						
	Answe	r before DVV	Verification	: 56			
1.3.4	Percentage of	students unde	rtaking field	l projects / i	nternships		
	1.3.4.1. N	umber of stude	nts undertak	ing field pr	ojects or int	ernships	
		r before DVV					
	Answe	r after DVV Vo	erification: 1	1509			
	Remark:	Revised as per	clarification	from HEI			
2.4.4	Percentage of full time teachers who received awards, recognition, fellowships at State, Nation International level from Government, recognised bodies during the last five years  2.4.4.1. Number of full time teachers receiving awards from state /national /international leftrom Government recognised bodies year-wise during the last five years  Answer before DVV Verification:					the last five years state /national /international level	
	2017-	18 2016-17	2015-16	2014-15	2013-14		
	104	4	8	4	4		
	Answer After DVV Verification :						
	2017-	18 2016-17	2015-16	2014-15	2013-14		
	0	0	0	0	0		
	Remark : Awards given by parental institution cannot be considered						
3.1.3	Number of teachers awarded international fellowship for advanced studies/ research during the five years					ced studies/ research during the last	
	3.1.3.1. The number of teachers awarded international fellowship for advanced studies / rese year-wise during the last five years  Answer before DVV Verification:						
	16	15	13	8	6		
	Answe	r After DVV V	erification :			-	
						]	

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

- 3.1.4 Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates, other research fellows in the university enrolled during the last five years
  - 3.1.4.1. The Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other research fellows in the university enrolled year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
52	38	14	24	28

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
52	38	14	24	28

- Percentage of departments with UGC-SAP, CAS, DST-FIST, DBT, ICSSR and other similar recognition by government agency
  - 3.1.6.1. The Number of departments with UGC-SAP, CAS, DST-FIST ,DBT,ICSSR and other similar recognition by government agency

Answer before DVV Verification: 14

Answer after DVV Verification: 1

Remark: DST FIST alone is considered

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
73.3	90.59	56.88	100.00	66.16

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
57.46	84.66	56.88	142.92	66.16

3.2.2 Grants for research projects sponsored by the government sources during the last five years

3.2.2.1. Total Grants for research projects sponsored by the government sources year-wise during the last five years(INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
326.86	201.12	219.88	214.80	494.28

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
326.86	201.12	219.88	314.80	494.18

- Number of awards for innovation won by institution/ teachers/ research scholars/students during the last five years
  - 3.3.3.1. Total number of awards for innovation won by institution/teachers/research scholars/students year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
244	10	6	5	2

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
21	13	9	6	5

The institution provides incentives to teachers who receive state, national and international recognition/awards

Answer before DVV Verification : Yes Answer After DVV Verification: Yes

- 3.4.3 Number of Patents published/awarded during the last five years
  - 3.4.3.1. Total number of Patents published/awarded year-wise during the last five years Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
7	3	1	2	6

Answer After DVV Verification:

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

3.4.5 Number of research papers per teacher in the Journals notified on UGC website during the last five

years

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
292	353	313	244	186

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
267	269	240	167	112

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
10	00	01	02	01

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
2	00	01	1	01

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

Answer before DVV Verification: 224 Answer after DVV Verification: 159

- 4.2.7 E-content is developed by teachers :
  - 1. For e-PG-Pathshala
  - 2. For CEC (Under Graduate)
  - 3. For SWAYAM
  - 4. For other MOOCs platform
  - 5. For NPTEL/NMEICT/any other Government Initiatives
  - 6. For Institutional LMS

Answer before DVV Verification: Any 5 of the above Answer After DVV Verification: Any 2 of the above

# Remark: Revised as per supporting document

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)

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
61	76	57	52	54

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
61	76	1	4	6

5.2.3.2. Number of students appearing in state/ national/ international level examinations (eg: NET/SLET/GATE/GMAT/CAT, GRE/TOEFL/ Civil Services/State government examinations) yearwise during the last five years

Answer before DVV Verification:

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

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
137	63	35	09	02

Answer After DVV Verification:

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

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
258	138	202	189	197

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
61	56	35	26	0

Remark: Certificates issued by the parental institution are not accepted.

- Funds / Grants received from non-government bodies, individuals, Philanthropists during the last five years (not covered in Criterion III) (INR in Lakhs)
  - 6.4.2.1. Total Grants received from non-government bodies, individuals, philanthropists year-wise during the last five years (INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
31.6	29.84	8.98	9.46	8.5

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
35.42	25.18	9.28	9.46	8.5

- 6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year
  - 6.5.3.1. Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

Answer before DVV Verification:

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

Answer After DVV Verification:

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

Remark: No Copy of circular/reports/newsletter/invitation letter/brochure per event

6.5.4 Quality assurance initiatives of the institution include

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

Answer before DVV Verification: Any 3 of the above Answer After DVV Verification: Any 4 of the above

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
12	7	6	5	3

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
6	4	2	2	0

# 2.Extended Profile Deviations

ID

**Extended Questions** 1.2 Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during the last five years

# Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
1653	1336	1148	1174	1176

### Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
1652	1336	1148	1174	1176