

## FOR

# 4<sup>th</sup> CYCLE OF ACCREDITATION

# BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE

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Submitted To

## NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

# BANGALORE

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# **1. EXECUTIVE SUMMARY**

# **1.1 INTRODUCTION**

Birla Institute of Technology & Science or BITS Pilani is an all-Indian institution for higher learning. The late Mr. G.D. Birla, a distinguished industrialist, close friend of Mahatma Gandhi, and participant in the Indian liberation struggle, founded the Institute and saw his goal realized. The Institute was initially registered as a Society under the Rajasthan Societies Registration Act of 1958 on the 13th May, 1964. Subsequently, by notification published in the Gazette of India dated the 27th June, 1964, the Ministry of Education, Government of India, declared that the Institute being an institution for higher education shall be "deemed to be a University". The Institute started functioning with effect from 1st July, 1964 with late Shri G.D. Birla as its Founder Chairman. Over the years BITS Pilani has grown into a multi-campus Deemed to be institute, with its original campus situated at Vidya Vihar campus, Pilani, Rajasthan. BITS was subsequently recognized by the Govt. of India as an Institute of eminence (April 2021).

Students from all over India who are admitted on the basis of merit have received one of the best technical education from BITS Pilani. Its alumni are located all over the world in the fields of science, engineering, and business. BITS is a representation of the growing technological proficiency and "can-do" attitude of Indian entrepreneurs, particularly in the private sector. BITSians are renowned for their capacity for original thought and value creation. The high proportion of BITSians holding CxO roles and leadership positions in Fortune 500 and Fortune 100 organizations is indicative of this. Furthermore, more and more BITSians are creating and financing their own businesses in addition to continuing to work for their degrees and certifications. This demonstrates that BITS not only develops educated workers but also cultivates an innovative and entrepreneurial culture.

Beyond the confines of a conventional curriculum, BITS offers innovative educational experience. The institute views its students as future job creators and provides them with practical experience and help in the business sector. Whichever program you select you can count on a comprehensive education that will set you up for success.

#### Vision

The vision of BITS Pilani is to be one of the leading universities in the world known for its excellence in teaching, research, industry engagement and quality of education. It aims to prepare young men and women to act as leaders for the promotion of the economic and industrial development of the country and to play a creative role in service to humanity.

#### Mission

The qualities of innovation, enterprise, commitment to excellence, adherence to merit, and transparency, have characterized the Institute during its inexorable march to eminence

The Institute is committed to generating, disseminating, and preserving knowledge, and to working with others to bring this knowledge to bear on the world's great challenges.

BITS Pilani is dedicated to providing its students with an education that combines rigorous academic study and the excitement of discovery with the support and intellectual stimulation of a diverse campus community. We seek to develop in each member of the BITS community the ability and passion to work wisely, creatively, and effectively for the betterment of humankind.

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

### **Institutional Strength**

### Strengths:

- 1. Robust Industry Connections: Strong ties with industry partners are reflected in successful Practice school (internships), pre-placement offers, and collaborations with marquee companies, providing students with valuable exposure and opportunities for real-world learning.
- 2. Research Prowess: BITS Pilani's research ecosystem demonstrates significant growth in doctoral enrolments, external research funding, patent filings, and publications, showcasing the institution's commitment to fostering a culture of research excellence.
- 3. Financial Support and Grants: The institution's ability to secure substantial external grants, both nationally and internationally, highlights its prowess in attracting financial support for research and innovation projects, thereby enhancing its infrastructure and academic offerings.
- 4. Active Alumni Engagement: Successful fundraising efforts lead to about 30 Cr endowment fund in 2023. Alumni networking opportunities enhanced and recognition of alumni achievements contribute to a strong alumni network, supporting the institution's growth and development.
- 5. Holistic Development: Beyond academics, BITS Pilani fosters holistic development through a wide range of extracurricular activities, clubs, and sports, nurturing well-rounded individuals.
- 6. Experiential Learning: BITS Pilani emphasizes hands-on learning experiences through inclusion of Project type courses, Industry exposure, internships, and industry collaborations, preparing students for real-world challenges, aligned with NEP guidelines.
- 7. Interdisciplinary Approach: BITS Pilani excels in offering interdisciplinary programs like Dual Degree, Minor program option that bridge traditional academic boundaries, fostering holistic learning and innovation, which aligns very well with NEP.
- 8. Entrepreneurship Ecosystem: With vibrant startup incubators, entrepreneurship cells, and industry partnerships, BITS Pilani nurtures a thriving ecosystem for innovation and entrepreneurship. 15 Unicorns from BITS Pilani alumni has a valuation of over USD 52 Billion.
- 9. Diversified Academic Offerings: The establishment of BITS School of Management (BITSoM), BITS Design School, and BITS Law School in Mumbai showcases BITS Pilani's commitment to offering a diverse range of academic programs, catering to emerging fields and student interests.

### **Institutional Weakness**

#### Weaknesses:

1. Internationalization Challenges: While there are collaborations with foreign universities, further efforts may be required to enhance internationalization, including promoting student and faculty exchange programs, and establishing strategic partnerships for research and academic collaboration, Capstone project concept etc.

- 2. Faculty Recruitment and Development: Ensuring the availability of and diverse faculty pool, including those of foreign origin, and providing opportunities for their professional development.
- 3. Environmental Impact: While efforts towards sustainability are underway, more proactive measures are needed to reduce the institution's environmental footprint and promote eco-friendly practices.
- 4. Financial Dependency: Reliance on tuition fees and external funding for research projects and infrastructure development makes the institution vulnerable to financial fluctuations and funding uncertainties.
- 5. Diversity and Inclusion: Despite efforts to promote diversity, inclusivity, and gender balance, there are still gaps in representation and inclusiveness particularly in engineering disciplines, necessitating targeted initiatives and policies.

### Institutional Opportunity

### **Opportunities:**

- 1. Enhanced International Engagements: Strengthening ties with international universities and organizations can facilitate global partnerships, research collaborations, and opportunities for faculty and student exchange, thereby promoting cross-cultural learning and global perspectives.
- 2. Industry Partnerships: Further engagement with industries can lead to enhanced research collaborations, funding opportunities, and avenues for technology transfer and commercialization, aligning academic research with industry needs and societal challenges.
- 3. Promotion of Entrepreneurship: Continued support for entrepreneurship and innovation through incubation programs, funding, and industry partnerships can foster a culture of innovation on campus, empowering students and faculty to translate their ideas into viable products and services.
- 4. Alumni Network Utilization: Leveraging alumni networks for fundraising, mentorship, and industry partnerships can contribute to the institution's growth and development, strengthening ties between the institution and its stakeholders.
- 5. Diversity Initiatives: Implementing diversity scholarships, outreach programs, and mentorship initiatives can attract and support students from diverse backgrounds, fostering inclusivity and diversity on campus.
- 6. Continuing Education: Offering executive education programs, professional development courses, and lifelong learning initiatives can cater to the evolving needs of professionals and alumni.
- 7. Infrastructure Development: Investing in modernizing existing infrastructure, research facilities, and student amenities can enhance the overall campus experience, research capabilities, and attract top talent.
- 8. Social Impact Projects: Engaging students in community-driven projects, social entrepreneurship ventures, and sustainable development initiatives can foster social responsibility and positive societal impact.
- 9. Digital Transformation: Leveraging technology for online learning, virtual labs, and digital resources can enhance accessibility, flexibility, and learning outcomes, catering to diverse learner needs.

### Institutional Challenge

### Challenges:

- 1. Research Competitiveness: Sustaining growth in research output and securing external funding amidst increasing competition requires strategic planning, collaborative efforts, and continuous innovation to maintain research competitiveness.
- 2. Gender Equity: Addressing gender disparity and promoting inclusivity necessitates the implementation of targeted initiatives, policies, and support systems to create a more equitable and diverse academic environment.
- 3. Faculty Retention and Development: Ensuring the retention of qualified faculty members and providing opportunities for their professional growth and development are essential for maintaining academic excellence and nurturing a supportive work culture.
- 4. Effective Technology Transfer: Successfully commercializing intellectual property and fostering collaborations between academia and industry through the TTO requires overcoming bureaucratic hurdles, building strong industry partnerships, and providing adequate support and resources.
- 5. Balancing Expansion with Quality: As the institution expands its academic programs and campuses, maintaining high standards of quality in education and research becomes crucial, necessitating careful planning, resource allocation, and continuous quality assurance measures.
- 6. Climate Resilience: Mitigating the impact of climate change, natural disasters, and environmental degradation on campus infrastructure, operations, and community welfare requires proactive environmental management and sustainability measures.
- 7. Financial Dependency: Managing budget constraints, revenue fluctuations, and funding uncertainties amidst economic volatility and competition demands prudent financial management and strategic planning.
- 8. Curriculum Relevance: Adapting the curriculum to align with industry needs, technological advancements, and changing market trends requires regular review and updating, which may be challenging to implement.

# **1.3 CRITERIA WISE SUMMARY**

### **Curricular Aspects**

The curriculum at BITS Pilani is designed to ensure that students engage with a diverse range of courses, including Discipline Core Courses, Discipline Electives, humanities courses, and specific Science and Technology courses. General awareness and professional courses, such as Principles of Economics or Principles of Management, are also integrated into the curriculum to provide students with a comprehensive educational experience. The Practice School component, which is an experience in the outside world within live project in working environment of an organization, comprising Practice School I and Practice School II, further enhances the curriculum's practical relevance by providing work-life experience before a student graduates.

BITS Pilani has established a three-tier system for curriculum and course review which is continuous. Each department has a Departmental Committee on Academics (DCA) with 5 to 8 faculty members. There is a Cross Campus Committee on Academics (CCDCA) which is a University-wide and department-specific empowered team. CCDCA enables integration and collaboration among each department across all BITS campuses. Typically, CCDCA constitutes a representation of 2 to 3 faculty members from each campus for the specific department. Curriculum review, introduction of new courses, program design, etc., are initially discussed in detail at DCA; a detailed discussion at CCDCA follows this. The final recommendations are made by CCDCA and presented to Senate for its consideration and approval.

In addition to the above, once in 5 years, the institute carries out a comprehensive curriculum review involving

external eminent domain experts and industry professionals, and prominent alumni of the institute, under the coordination of the two Academic Deans.

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

To promote effective teaching, teaching-learning workshops are conducted every year. Every department (at each campus) invites about 5 to 6 experts to provide talks. Further, at the beginning of each semester, Departmental Committee on Academics (DCA) reviews the course handouts of all the courses offered in that semester. All the classrooms at BITS Pilani are Wi-Fi enabled and have LCD projectors. BITS Pilani has also established Cisco Tele-Presence Class Room, which connects all the campuses. Every semester, around four courses are offered through this facility, thus enabling peer learning across all campuses. To promote continuous improvements in teaching, BITS Pilani has a structured student feedback process (ensuring anonymity), which facilitates collecting information on the courses taught during each semester. BITS Pilani also gathers feedback regularly from faculty, industry experts, practice school organizations, campus interview teams, alumni, and parents.

For each course, question paper standards and other parameters are reviewed by at least two faculty members of the respective department. Departmental Committee on Academics (DCA) shares the question paper review reports of all the courses (offered by the department) with Dean, Academics (UG), and Dean, Academics (PG) as applicable. Once the final evaluation is complete, the faculty member discusses the proposed grades in the Departmental Meeting and seeks the view of other colleagues. This is followed by submitting grades with Dean, Academics (UG) and Dean, Academics (PG) as applicable. Grades submitted for all the courses across all departments are discussed in depth by the Examination Committee before being declared as valid grades.

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

A rigorous written test followed by an interview is conducted to ensure high-quality student admission to the PhD program. The quality of the students admitted to the PhD program is further refined by a meticulous PhD qualifying examination. Each department has a Departmental Research Committee (DRC), which regularly supports and monitors the progress of each PhD student admitted in the specific department. Each research scholar is also provided with Doctoral Advisory Committee Members (2 faculty members who specialize in the area of research of the respective PhD candidate). It is mandatory to publish at least two papers in Scopus-Indexed Journals before submitting the PhD thesis for final evaluation. The Dean and the Vice Chancellor personally looks into the two External Examiners chosen for each Thesis submitted, ensures that they are from the top research institutes and Research Labs and that they are currently active individuals with eminent research profile.

Even though BITS Pilani does not receive any fellowship grants from Government of India, it provides fellowship support to all doctoral students. These fellowships are at par with those offered by DST and MoE. Publication quality metrics such as C-index - Citations / paper, h-index, P-index - # of papers/faculty/year, percentage of papers published /year with at least one international co-author, trends and CAGR in the cumulative and annual of number of publications, number of citations, number of publications in Q1 and Q2 journals, etc.

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

BITS Pilani has State-of-the-Art facilities for teaching - learning. viz., classrooms, laboratories, computing equipment, etc. Each Campus has one telepresence room used for multi campuses lectures. Classrooms are centrally air conditioned and are equipped with modern audio/video facilities and are well connected to the WiFi and LAN.

Modern structures with an abundance of seating accommodate the libraries on each of the BITS Pilani campuses. There are about 2,000 current journal titles and over 20,000 electronic materials available in all campus library collections. Each Campus has one telepresence room used for multi campuses lectures. Classrooms are centrally air conditioned and are equipped with modern audio/video facilities and are well connected to the WiFi and LAN.

Campuses have established advanced research laboratories for pharmacy, chemistry, computing and biology, measurement techniques labs in biology, chemistry, physics, and microbiology lab, the central analytical lab, physics research lab, pharma analysis lab, computer-aided drug design (CADD) lab, VLSI CAD lab, and EEE practice lab are set up. All other labs in civil, chemical, electrical, electronics, and mechanical engineering are operational. The structure and setup of laboratories is uniform across all campuses except for the Goa and Dubai campuses which do not have a pharmacy program. Central Sophisticated Instrumentation Facility (CSIF) is another feather in the cap of the institution.

The central computing facility of BITS Pilani, referred to as the IPC (Information Processing Centre), operates from early morning to midnight 360 days a year. The campus hosts about 3000 latest desktops/workstations (including 350 in a central location), about a dozen compute servers (Intel-based SMP Systems, IBM Blade Center with several blades), multi-Tera-byte storage (including a SAN) and a variety of peripherals (printers/scanners/plotters). The Computer center at BITS Pilani Goa Campus has a central computing lab with 300 workstations connected through LAN. The center supports a large number of software tools, a LAN of 3000 nodes and provides intranet and internet facilities. BITS Hyderabad IPC has 60 Lenovo ThinkCentre Workstations and around 200 Lenovo ThinkCentre PCs (E4600 and E7400). The Computer Science teaching Laboratories across all campuses are facilitated with dedicated computers for each student.

### **Student Support and Progression**

BITS Pilani has more than 186000 alumni through its on-campus and work-integrated learning programs offered at the undergraduate, post-graduate, and doctoral levels. The BITS Pilani alumni association (BITSAA) is the interface between the worldwide alumni and the institute and works on connecting, engaging, and raising funds from alumni.

BITSians have achieved great success in their life as distinguished corporate leaders (7400+ CEO's), pioneering entrepreneurs (6400+ Startup Founders, including those of 12 unicorns), eminent academicians (3300+ VC's, Directors, Deans, HODs in India and abroad), Professionals in Civil Services and Indian Defense Services (600+) and inspirational leaders in other walks of life – writers, film makers, social service etc. BITS Pilani confers Distinguished Alumnus awards every year to the alumni who have made extra ordinary contributions in different fields – academia 7 Research, Corporate Leadership and Entrepreneurship/Public Life/ Philonthropy.

BITSAA International organizes the BITSAA Global Meet every three years wherein alumni across the globe participate to network, and contribute back to alma mater. BITSian Day is also organized across the globe on the first Friday of August every year to celebrate BITSians success - being a proud to be a BITSian.

The Alumni Relations division (ARD) of BITS Pilani works closely with the BITSAA. The ARD is headed by an institute-wide Dean, assisted by an Associate Dean in each of the four campuses at Pilani, Goa, Dubai, and Hyderabad. The Dean and Associate Deans are supported by a 12-member professional team with responsibilities such as database, engagement, administration, events, content and outreach, and fundraising.

#### **Governance, Leadership and Management**

BITS Pilani has implemented a geographically distributed and empowered multi-campus governance structure through several divisions and units that include Academic - Undergraduate Studies Division (AUGSD), Academic - Graduate Studies & Research Division (AGSRD), Sponsored Research and Consultancy Division (SRCD), Faculty Affairs Division (FAD), Practice School Division (PSD), Work Integrated Learning Programmes Division (WILPD), International Programs and Collaborations Division (IPCD), and Alumni Relations. Each of these divisions is headed by an Institute-Wide Dean, and there is an Associate Dean at each campus for each division. There are several campus specific Faculty-in-Charges (FICs) responsible for activities at campus level such as Time Table, Centre for Innovation, Incubation & Entrepreneurship, Teaching Learning Center, Societal Development (NSS and Nirmaan), Registration & Counselling, Publications and Media Relations etc.

The decentralized structure characterized by participatory management was largely possible due to a pervasive Custom-built HD video conferencing facility. Not only we have solved the multi-campus governance problem elegantly, we also used this technology for instruction in specialized 250 capacity classrooms shared live across campuses with great success along with facilitating faculty selection and various committee meetings. This facility is also leveraged in offering a niche entrepreneurship course titled New Venture Creation taught exclusively by entrepreneurs, VCs, Startup mentors over the TP platform, which is otherwise not possible.

Corporate recruiters interview students of other campuses either from one campus location or from their own TP facility. BITS probably is the only institute in the country to have a full scale TP facility across all its campuses.

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

BITS has been a pioneer in deploying technology in all its activities – academics, governance, monitoring, data dashboards, ERP etc. To mention a few, in 2005, BITSAT, the first online entrance test one of its kind in the nation, was introduced. ERP has been implemented at full scale, integrating student life cycle, finance, and HR processes. Learning Management Systems (LMS), synchronous teaching platforms (virtual classrooms), and Virtual and Remote Laboratories are used extensively, especially in the programs offered for working professionals.

BITS has implemented a custom-built Cisco Tele-Presence HD video conferencing facility since 2013, enhancing multi-campus administration, instruction, faculty selection, and committee meetings. This facility has saved over Rs 20 Cr in travel costs and time over the past 9 years, and BITS offers over 20 courses per year. Multiple additional benefits accrue from this novel facility - corporate recruiters interview students of other campuses either from one campus location or from their own TP facility, access to guest lecturers located around the globe, enabling collaborative research and interactive learning. Such a facility is also instrumental in offering a niche entrepreneurship course titled New Venture Creation taught exclusively by entrepreneurs, VCs, Startup mentors over the TP platform, which is otherwise not possible.

In our hugely successful programs for working professionals who are located at their workplace, one of the major hurdles is usage of real labs – we solved it using the remote labs in all subject domains, operational for the last 7 years.

BITS Pilani campuses have been impacted by NSS, NIRMAAN, and Green Initiatives, promoting health and education. NSS volunteers helped women prepare masks during the Covid pandemic, established a stitching center, and planted saplings. NIRMAAN, BITS Hyderabad Chapter, undertakes various initiatives, including school adoption programs, livelihood programs, and community development. BITS Goa has conducted scholarship tests, provided rations and groceries, and launched a Distant Learning English Communication course.

# **2. PROFILE**

## **2.1 BASIC INFORMATION**

Name and Address of the University				
Name	BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE			
Address	Vidya Vihar Jhunjhunu Dist.			
City	Pilani			
State	Rajasthan			
Pin	333031			
Website	www.bits-pilani.ac.in			

Contacts for Communication							
Designation	Name	Telephone with STD Code	Mobile	Fax	Email		
Vice Chancellor	V. Ramgopal Rao	01596-255247	9784689129	01596-24487 5	iqac_bits@pilani.bi ts-pilani.ac.in		
IQAC / CIQA coordinator	Mani Sankar Dasgupta	01596-255512	9829227459	01596-24418 3	dasgupta@pilani.bi ts-pilani.ac.in		

Nature of University	
Nature of University	Deemed University

Type of University	
Type of University	Unitary

 Establishment Details

 Establishment Date of the University
 01-01-1964

 Status Prior to Establishment,If applicable
 Image: Comparison of the University of

Recognition Details						
Date of Recognition as a University by UGC or Any Other National Agency :						
Under Section	Date	View Document				
2f of UGC						
12B of UGC						

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

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	Vidya Vihar Jh unjhunu Dist.	Rural	328	289393	First Degree Fifteen Pr ogramme s, Higher Degree Twenty Eight and PhD Prog rammes Under Thirteen Departme nts		
Off Campus	Bits Law School, 7Th Floor, H iranand ani Kno wledge Park, Powai, Mumbai -400076	Urban	60	5110	B.A. LL.B. (Hons.) and B.B.A. LL.B. (Hons.)	06-03-2023	21-03-2023
Off Campus	Bits Pilani H yderaba d Campus, Jawahar Nagar, Kapra Mandal, Medchal District- 500078	Urban	200	176398	First Degree Thirteen Program mes, Higher Degree Sixteen P rogramm es and PhD Pro grammes Under Twelve D epartmen	01-08-2008	02-08-2008

					ts		
Offshore Campus	Bits Pilani Dubai Campus, Academi c City, Dubai, United Arab Emirate s	Urban	14.7	59711	First Degree Eight Pro grammes, Higher Degree Seven Pr ogramme s and PhD Pro grammes Under Nine Dep artments	04-08-2000	05-08-2000
Off Campus	Bitsom, 8Th Floor, H iranand ani Kno wledge Park, Powai, Mumbai -400076	Urban	60	190085	Strategy Finance Marketin g Organis ational Behaviou r Operati ons Global / Contextu al Perspe ctive	27-01-2021	28-01-2021
Off Campus	Bits Pilani K K Birla Goa Campus, Nh 17B Bypass Road, Z uarinag ar, Sanc oale-403 726	Urban	180	121954	First Degree Eleven Pr ogramme s, Higher Degree Ten Prog rammes and PhD Program mes Under Ten Depa rtments	01-08-2004	02-08-2004

# **2.2 ACADEMIC INFORMATION**

### 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 Regulatory Authority (SRA)	: Yes	
SRA program	Document	
AICTE	<u>104321 13885 1 1703676403.pd</u> <u>f</u>	
PCI	<u>104321_7591_6_1639575535.pdf</u>	
PCI	<u>104321_13885_6_1702879441.pd</u> <u>f</u>	
PCI	<u>104321 13885 6 1702879441.pd</u> <u>f</u>	
PCI	<u>104321_13885_6_1702879441.pd</u> <u>f</u>	

Details Of Teaching & Non-Teaching Staff Of University

	Teaching Faculty											
	Professor			Associate Professor			Assistant Professor					
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned	268	1	1		265	1	1	<u> </u>	473	1		
Recruited	206	53	0	259	189	58	0	247	309	98	0	407
Yet to Recruit	9				18				66			·
On Contract	0	0	0	0	0	0	0	0	0	0	0	0

Non-Teaching Staff								
	Male	Female	Others	Total				
Sanctioned				980				
Recruited	803	168	0	971				
Yet to Recruit				9				
On Contract	23	3	0	26				

Technical Staff						
	Male	Female	Others	Total		
Sanctioned				249		
Recruited	199	22	0	221		
Yet to Recruit				28		
On Contract	1	1	0	2		

**Qualification Details of the Teaching Staff** 

Permanent Teachers										
Highest Qualificatio n	Professor		Associate Professor		Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	203	53	0	178	57	0	290	84	0	865
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	3	0	0	11	1	0	19	14	0	48
UG	0	0	0	0	0	0	0	0	0	0

<b>Temporary Teachers</b>										
Highest Qualificatio n			Associate Professor		Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	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
UG	0	0	0	0	0	0	0	0	0	0

	Part Time Teachers									
Highest Qualificatio n	Professor		Associate Professor		Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	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
UG	0	0	0	0	0	0	0	0	0	0

### **Distinguished Academicians Appointed As**

	Male	Female	Others	Total
Emeritus Professor	3	0	0	3
Adjunct Professor	13	2	0	15
Visiting Professor	31	7	0	38

### Chairs Instituted by the University

Sl.No	Name of the Department	Name of the Chair	Name of the Sponsor Organisation/Agency
1	Pharmacy	Shri B.K. Birla and Shrimati Sarala Birla	BKBSB Trust
2	Mechanical Department	Shri B.K. Birla and Shrimati Sarala Birla	BKBSB Trust
3	Biological Sciences Department	Shri B.K. BIrla and Shrimarti Sarala Birla	BKBSB Trust
4	Chemistry Department	Shri B.K. Birla and Shrimati Sarala Birla	BKBSB Trust

### 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
UG	Male	2187	9076	0	326	11589
	Female	734	1398	0	98	2230
	Others	0	0	0	0	0
PG	Male	156	1047	0	0	1203
	Female	44	353	0	0	397
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	268	681	0	0	949
	Female	260	509	0	0	769
	Others	0	0	0	0	0

Does the University offer any Integrated	No
Programmes?	

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

Year of Establishment	Nill
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

### Accreditation Details

Accreditation	Grade	CGPA	Upload Peer Team
			Report
Accreditation	Five Star	82.55	
			NAAC_Certificate_
			<u>2000_5Star.pdf</u>
Accreditation	А	3.71	
			NAAC-2009_Grade
			<u>A.pdf</u>
Accreditation	А	3.45	
	Accreditation	Accreditation A	Accreditation A 3.71

	NAAC Certificate
	<u>2016 3.45 A</u> <u>Grade.pdf</u>

# **2.3 EVALUATIVE REPORT OF THE DEPARTMENTS**

Department Name	Upload Report
Biological Sciences	View Document
Chemical	View Document
Chemistry	View Document
Civil	View Document
Computer Science	View Document
Economics And Finance	View Document
Electrical And Electronics	View Document
General Sciences	View Document
Humanities And Social Sciences	View Document
Management	View Document
Mathematics	View Document
Mechanical	View Document
Pharmacy	View Document
Physics	View Document

### Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:	During the early years of its inception, i.e., 1964 to 1970, the Institute, with the support of a Ford Foundation Grant, collaborated with the Massachusetts Institute of Technology (MIT), USA. It helped the Institute to bring in the semester system, modular structure of courses, continuous and internal valuation, and letter grading, to name a few, thereby making an independent mark in its pedagogy in terms
	of integrating the multidisciplinary and
	interdisciplinary nature of courses in curriculum design. The proverbial feather in the cap came in the

form of institutionalized linkages with the industries. Over a period of time, the Institute also introduced several flexibilities in its curricular structure making it dynamic and orienting it towards student excellence. After Mission 2012, a follow-up program called Mission 2015 was initiated with a focus on seven new thrust areas. Mission 2015 brought further engagement in areas like international student admission, institution-wide innovation and incubation centers and policies, interdisciplinary centers of excellence for research and application, and Teaching Learning Centres for research on new-age teaching and pedagogy. After two major transformation Missions, the leadership decided to consolidate and review the progress made thus far in the journey towards Vision 2020 and introduced periodic campus and institution reviews. These reviews are now completely institutionalized and are an excellent platform for departments and divisions across BITS to introduce interdisciplinary curriculum. A focus on design thinking, analytics, and emerging technologies. We have mandatory courses around each of these topics in both the first and second years. Students can choose up to two specializations from a set of five that includes new age specializations such as Entrepreneurship and Innovation, and e-commerce and Digital Leadership. BITS Pilani has formed a Section 8 not-for-profit company (BITS BioCyTiH Foundation) to undertake interdisciplinary research, innovation, and technology development in the domain of Bio-CPS. The Hub will be bringing together experts across the fields of biology, electronics, chemistry, computer science, etc. The Hub shall be translating academic R&D into technologies for industries such as health care, diagnostics, medical devices, wearables, biosensors, clean water, food safety and quality and monitoring, and other allied areas. 2. Academic bank of credits (ABC): A student should complete the minimum number of courses and units required in each category as well as meet the minimum requirements of courses (42) and units (144) in total. A thesis is for 16 units and a full semester duration. But a student has the option of pursuing a thesis of 9 units concurrently with

pursuing a thesis of 9 units concurrently with coursework over a full semester, in which case the additional coursework would be at least 2 courses of a total of 6 units to meet the minimum unit

	requirements. The following are the structure and requirements for M. E. and M. Pharm: (a) At least 12 courses and at least 48 credit units attributed to coursework (b) A Practice School (of at least 5½ months duration and 20 units) or a Dissertation (of at least 1 semester duration and 16 credit units) (c) A 4 unit course on Research Practice is mandatory for all students of BITS G540 Research Practice (d) Each Department may stipulate for each program a set of 4 to 5 courses (of at least 16 units and at most 20 units) per semester. This adds up to at least 12 courses and at least 48 units of coursework but with a maximum of 15 courses and at most 60 units of coursework. The nominal chart for a program: Year I Semester II Semester I year 4 to 5 courses (16 to 20 units) 4 to 5 courses (16 to 20 units) II Year 4 to 5 courses (16 to 20 units) PS / Dissertation Admission with Advanced Standing - The Institute offers admission with advanced standing to candidates with preparation beyond the minimum requirements for three tiers of education. The Institute outlines advanced credit proposals at admission, handling the matter within the Institute's normal student operation framework. Transfer-The programme offers a tier for students to seek transfer within the same tier, allowing them to transition without starting from the beginning.
3. Skill development:	BITS has a strong focus on soft skills. The Winning at the Workplace (WAW) track will offer students courses to develop their emotional intelligence and people skills, courses in liberal arts, and essential workplace skills. Ph.D students are positioned at the top of the knowledge pyramid on their subjects of interest. Due to this advantage, their ability to identify opportunities for venture creation is a low- hanging fruit within a university system, especially in specialized venture creation. The Entrepreneurship Programme for Ph.D Students at BITS Pilani, aims to fill the gaps in opportunity recognition and ideation stages and impart skills on entrepreneurship. The BITS BioCyTiH Foundation focuses on Human resource development. The TIH will create this future talent pipeline in the area of Bio-CPS through fellowships and skill training in the areas of healthcare technology, next-generation sequencing, proteomics, metabolomics, MEMS, biosensors, Bio- CPS entrepreneurship, etc. The Hub will conduct skill development programmes for various target

	segments such as industry professionals, students, faculty, etc. Fellowship programmes (UG/ PG/ PhD) in Bio-CPS will be offered and supported by the TIH. Faculty Fellowships and Chair Professorships shall also be offered by the TIH. Central Workshop provides training to students and caters to the maintenance & fabrication needs of the Institute. Through the course "Workshop Practice", all the first- degree students are trained to acquire the necessary skills related to various manufacturing processes like machining, rapid prototyping (3D printing), fitting, carpentry, smithy, foundry, sheet metal, welding, etc. and two computer-oriented exercises, a CNC Simulation software (by CIMCO) and MASTER CAM, and a Manufacturing Simulation software called FlexSim. Further, students of B.E. (Mechanical Engineering) are given in-depth training in various courses such as "Manufacturing Processes", "Advanced Manufacturing Process", "Computer-Aided Manufacturing" and for ME "Flexible Manufacturing Systems". Apart from routine maintenance and training, the workshop also provides fabrication services pertaining to the project works of students and also offers technical support for TBI works.
4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):	The Indian Knowledge System has been integrated by BITS Pilani into the 32 courses the university offers. The list of such courses is provided below: 1. BITS F214 (Science, Technology and Modernity) 2. BITS F399 (Humanistic Theories of Science and Technology 3. GS F213 (Development Theories) 4. GS F224 (Print and Audio-Visual Advertisement) 5. GS F231 (Dynamics of Social Change) 6. GS F242 (Cultural Studies) 7. GS F312 (Applied Philosophy) 8. GS F322 (Critical Analysis of Literature and Cinema) 9. GS F331 (Techniques in Social Research) 10. GS F332 (Contemporary India) 11. HSS F222 (Linguistics) 12. HSS F223 (Appreciation of Indian Music) 13. HSS F227 (Cross-Cultural Skills) 14. HSS F233 (Main Trends in Indian History) 15. HSS F235 (Introductory Philosophy) 16. HSS F246 (Philosophy of Nagarjuna) 17. HSS F249 (Politics in India) 18. HSS F326 (Humanities and Design) 19. HSS F329 (Musicology – An – Introduction) 20. HSS F330 (Appreciation of Art) 21. HSS F331 (Sankara's Thoughts) 22. HSS F333 (Comparative Religion) 23. HSS F334 (Srimad Bhagavad Gita) 24. HSS F338

	(Comparative Indian Literature) 25. HSS F340 (Post- Colonial Literatures) 26. HSS F344 (Heritage of India) 27. HSS F345 (Gandhian Thoughts) 28. HSS F347 (Introduction to Carnatic Music) 29. HSS F348 (Introduction to Hindustani Music) 30. HSS F368 (Asian Cinemas and Cultures) 31. HSS F369 (Caste and Gender in India) 32. SANS F111 (Sanskrit) The aforementioned courses concentrate on the relationship between technology and contemporary society, including how modern society's values and beliefs influence science and technology, The Dimensions of Advertising, Advertising and Marketing, Both the creative process and the creative approach. Designing a social research proposal, art and copy; feminist theory; the concept and nature of socio-cultural change; linguistics; intercultural communication; the development of Indian thought and society; cosmology; social justice; India and her ancient culture; Gandhian ideas; carnatic and hindustani music; caste and gender in India. A classical music group called 'Ragamalika' aims to encourage budding talent among the students in music and dance. It also arranges performances by leading artists in the field of classical music and dance. In addition, there is also a BITS Pilani Chapter of SPIC-MACAY which organizes programmes to promote Indian classical music and culture among Youth.
5. Focus on Outcome based education (OBE):	BITS Pilani aims to provide quality education by offering students the flexibility to choose their own courses in their interests, similar to the Choice Based Credit System recommended in the NEP 2020. The institute follows the semester system and offers modular, flexible educational programs. They also provide a Practice School, exposing students to real- world industrial experience, and aim to shape well- rounded individuals with knowledge in science, technology, humanities, languages, social sciences, and professional ethics. BITS Pilani requires students to complete Discipline Core Courses, Discipline Electives, humanities, science and technology courses, and general awareness/professional courses. They also offer Practice School, a formal method incorporating the professional environment. Students must complete at least 12 elective courses in Humanities, Discipline, and Open electives, allowing them to deepen their discipline or expand their

	horizons. Continuous evaluations are conducted for all courses to ensure transparency and success. The institute offers twelve minor programs for first- degree students, including Aeronautics, Data Science, English Studies, Entrepreneurship, Film and Media, Finance, Materials Science and Engineering, Philosophy, Economics and Politics (PEP), Physics, Public Policy, Robotics and Automation, and Water and Sanitation. Students develop concepts and problem-solving skills through core courses, discipline electives, open electives, and minor programs. The Indian Knowledge system has been integrated into the existing program through the introduction of open elective courses, allowing students to take a minimum of five courses. Institution integrate crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment, and Sustainability into the Curriculum. BITS Pilani Curriculum offers courses on Professional Ethics, Gender, Human Values, Environment, and Sustainability, with students required to choose these courses from general awareness/professional and humanities elective courses. The curricular structure ensures exposure to professional ethics, moral values, environment awareness, value education, character building, and personality development. Students are also required to work for three humanities courses out of over 100 courses.
6. Distance education/online education:	Open Athens Off Campus Access: This is the new platform implemented for the off-campus access of the digital library resources, where all the subscribed resources are integrated here and all the users are registered on this platform. The students/Research Scholars and faculty members (including WILP users) can also access all our digital resources remotely using the Open Athens platform. This platform also integrates EBSCO Discovery Service (EDS) where a single Sign-in will enable access to all our resources. It is helping all our users to access resources seamlessly and also our library to improve the digital resources usage monitoring and enhancement activities. The periodic monitoring of usage using the Open Athens reports will help the library to take corrective measures to improve the usage wherever necessary. Voice Communication - All faculty members have been provided with a

### Institutional Initiatives for Electoral Literacy

1. Whether Electoral Literacy Club (ELC) has been set up in the College?	A formal Electoral Literacy Club (ELC) has not been set up, however, BITS Pilani is contributing to the cause of Electoral Literacy of its students and staff through various initiatives and awareness drives and practices. BITS Pilani student union is an active and thriving body in campus and every year elections take place following democratic norms. BITS Pilani K K Birla Goa Campus is registered under Systematic Voters Educations and Electoral Participation (SVEEP) programs since 2016. Under this program, Two student representatives along with a nodal officer is registered with the Deputy Collector /
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	AERO. Under this, there is connect with the Booth Level officer assigned to the Assembly Constituency, 27-Cortalim, and update the voters' details residing inside the campus. The process is updated as and when reported by the ERO office. The current SVEEP (formed in Sept 2022) as conveyed to AERO, consisted Mr. Sailesh Narayan Mohanty, Joint Registrar (as a nodal officer), and 2 students Mr. Devang Umesh Sharma and Ms. Aastha (as Student Representatives). There are also various clubs, societies, and student unions that engage in activities related to electoral awareness, citizenship, youth and democracy, and the promotion of democracy and human rights. Originality and inventiveness is supported by well-thought-out teamwork. These activities are fundamental to the student body's involvement in all BITS Pilani campuses and are frequently coordinated through the Students Welfare Division (SWD) office. Local panchayat, State, and Central election voting booths are always established within the campus, and staff and eligible students are encouraged to participate in the process. A regular camp for voter list updates is also organized inside the campus.
2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs are representative in character?	The Dean of Students Welfare Division (SWD) with office support conducts this function and is active.
3. What innovative programmes and initiatives undertaken by the ELCs? These may include voluntary contribution by the students in electoral processes-participation in voter registration of students and communities where they come from, assisting district election administration in conduct of poll, voter awareness campaigns, promotion of ethical voting, enhancing participation of the under privileged sections of society especially transgender, commercial sex workers, disabled persons, senior citizens, etc.	A set of sample notifications circulated to staff and students in this regard are attached as samples. Further, the various student club activities are formulated to foster responsible citizenship, stimulate voting behavior, and build moral voting habits. In the campus, voter registration efforts are held to make sure that all eligible faculty, staff, and students are registered to vote. Initiatives are taken to educate people about the value of voting and the election process. To reach a larger audience, some students use innovative strategies including street performances and social media outreach. The students are dedicated to increasing the involvement of all eligible voters, with an emphasis on socially disadvantaged groups as well. The club offers outreach initiatives that are suited to the needs in order to accomplish this. The club expands its reach outside of the institution and increases the effect of its efforts by collaborating with NGOs.

4. Any socially relevant projects/initiatives taken by College in electoral related issues especially research projects, surveys, awareness drives, creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes, etc.	As and when any communication is received for spreading the awareness, the campus administration circulates the same to the campus community.
5. Extent of students above 18 years who are yet to be enrolled as voters in the electoral roll and efforts by ELCs as well as efforts by the College to institutionalize mechanisms to register eligible students as voters.	A voter list update camp is set up inside campus regularly in coordination with local authorities, students are encouraged to register and participate in exercising their right to vote.

# **Extended Profile**

# 1 Students

### 1.1

### Number of students on rolls year wise during last five years

2022-23	2021-22	2020-21		2019-20	2018-19
15419	12328	15150		14371	13594
File Description		Document			
Institutional Data in prescribed format		View Document			

### 1.2

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

2022-23	2021-22	2020-21		2019-20	2018-19
3933	4227	3891		3301	3378
File Description		Document			
Institutional data in prescribed format		View Document			

## 2 Teachers

### 2.1

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

2022-23	2021-22	2020-21		2019-20	2018-19
913	883	867		806	777
File Description		Document			
Institutional data in prescribed format		View Document			

### 2.2

Total number of full time teachers worked/working in the institution (without repeat count) during last five years:

Response: 1074

File Description	Document
Institutional data in prescribed fomat	View Document

# **3** Institution

3.1

### Total expenditure excluding salary year wise during the last five years (INR in lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
32126	30415	44797	46229	39257

# 4. Quality Indicator Framework(QIF)

## **Criterion 1 - Curricular Aspects**

### **1.1 Curriculum Design and Development**

### 1.1.1

Curricula developed and implemented have relevance to the local, regional, national, and global developmental needs, which is reflected in the Programme outcomes (POs), and Course Outcomes(COs) of the Programmes offered by the University

### **Response:**

BITS Pilani has developed and implemented curricula that demonstrate relevance to local, national, regional, and global developmental needs, as evidenced by the clear alignment of Program Outcomes (POs), Program Specific Outcomes (PSOs), and Course Outcomes (COs) with the university's educational offerings. The institution, since its inception, has adopted a semester system with continuous and internal evaluation, fostering a modular and flexible educational environment. A few example of such courses being offered are:

- 1. Science, Technology and Modernity
- 2. Humanistic Theories of Science and Technology
- 3. Introduction to Contemporary Arts
- 4. Society, Business, and Politics
- 5. Humanities and Design
- 6. Srimad Bhagavad Gita
- 7. Gender, Science and Technology
- 8. Science and Technology Dynamics
- 9. Science and Technology Development
- 10. Language and S & T
- 11. Social Impact of S&T
- 12. Heritage of India.

One key aspect of BITS Pilani's curriculum development is its commitment to offering specialized, multidisciplinary, and interdisciplinary programs. These programs provide students with a broad-based foundation and elective options, along with the unique provision of Practice School experiences. Practice

School formalizes students' exposure to the realities of the professional environment and offers genuine industrial experience within the educational framework. The university's programs aim to produce well-rounded individuals who possess not only technical knowledge but also competencies in humanities, languages, social sciences, professional ethics, social engagement, communication, discussion, and need-based specialization.

Several noteworthy features of BITS Pilani's academic policy include academic freedom, hands-on learning, innovative pedagogy and instructional delivery methods, a strong academic-industry connection through the Practice School, and a focus on innovation, incubation, and entrepreneurship. The institution places a strong emphasis on holistic education, early adoption of digital learning spaces, and the promotion of extracurricular activities to nurture students' holistic development.

The curriculum at BITS Pilani is designed to ensure that students engage with a diverse range of courses, including Discipline Core Courses, Discipline Electives, humanities courses, and specific science and technology courses. General awareness and professional courses, such as Principles of Economics or Principles of Management, are also integrated into the curriculum to provide students with a comprehensive educational experience. The Practice School component, comprising Practice School I and Practice School II, further enhances the curriculum's practical relevance by immersing students in real-world professional settings.

Furthermore, the institution encourages students to pursue "Minor programs," which enable them to supplement their major areas of study with focused learning in other domains. These programs span various fields such as Aeronautics, Data Science, English Studies, Entrepreneurship, Film and Media, Finance, Materials Science and Engineering, Philosophy, Economics and Politics, Physics, Public Policy, Robotics and Automation, and Water and Sanitation.

In summary, BITS Pilani's curriculum development and implementation reflect a commitment to meeting the evolving educational needs of society. The institution offers a well-rounded education that combines technical proficiency with a broad knowledge base, entrepreneurial spirit, and a strong sense of social responsibility. BITS Pilani's legacy of producing high-quality graduates who excel globally is a testament to its dedication to educational excellence and innovation.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

### 1.1.2

The Programmes offered by the institution focus on employability/ entrepreneurship/ skill development and their course syllabi are adequately revised to incorporate contemporary requirements

**Response:** 

Birla Institute of Technology and Science, popularly known as BITS Pilani, stands as a beacon of academic excellence, shaping not only competent professionals but also visionary leaders. With a rich legacy and a global network of over 1.7 lakh accomplished alumni, BITS has established itself as a powerhouse in producing individuals who excel in diverse fields, ranging from industry and academia to entrepreneurship and social service.

One of the key pillars of BITS' commitment to holistic education is its unwavering focus on employability, entrepreneurship, and skill development. Recognizing the evolving needs of the professional landscape, BITS offers specialized courses that equip students with the knowledge and skills needed to thrive in the modern world. The Entrepreneurship and Innovation program and the E-commerce and Digital Leadership course are prime examples of BITS' dedication to preparing students for the challenges and opportunities of the digital age.

At the heart of BITS' entrepreneurial ecosystem lies the Center for Innovation, Incubation, and Entrepreneurial (CIIE), formerly known as the Centre for Entrepreneurial Leadership (CEL). Established in 2012, CIIE serves as a catalyst for fostering entrepreneurial spirit among students. It provides a supportive environment for translating innovative ideas into successful ventures. Through various events and initiatives, CIIE encourages students to "Ideate, Innovate, and Implement," fostering a culture of creativity and entrepreneurship across all BITS campuses in Pilani, Hyderabad, Goa, and Dubai.

An exemplary initiative recognizing student achievements is the Mantra Awards, conducted by the Center for Entrepreneurial Leadership in collaboration with BITSAA International. These awards, presented in categories such as Leadership, Innovation, Social Leadership, and Entrepreneurship, celebrate and acknowledge the outstanding contributions of BITS students in these fields. The Mantra Awards serve as a testament to BITS' commitment to nurturing well-rounded individuals capable of making a positive impact on society.

In line with its commitment to research, innovation, and skill development, BITS established the BITS BioCyTiH Foundation in 2021. This foundation envisions fostering translational research and innovation in Bio-Cyber-Physical Systems (Bio-CPS). By providing mentorship, training, and support to startups and entrepreneurs, the foundation aims to catalyze industry-academia collaborations, addressing crucial challenges in healthcare, agriculture, water, and the environment.

The Practice School Program at BITS further enhances the employability of its students by offering hands-on experience in premier organizations. Under the mentorship of seasoned professionals, students engage in internships where they can apply their theoretical knowledge to real-world scenarios. This flagship program not only hones students' multi-functional skills but also opens doors to coveted employment opportunities, setting them on a path to success in their chosen fields.

In essence, BITS Pilani's commitment to employability, entrepreneurship, and skill development is not just a part of its educational framework; it is a philosophy that propels its students toward becoming leaders, innovators, and contributors to the global community. With a focus on practical learning, cutting-edge research, and a vibrant entrepreneurial ecosystem, BITS ensures that its graduates are not only job-ready but are also equipped to shape the future in their respective domains.

File Description	Document
Upload Additional information	View Document
Provide Link for 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 programmes offered during the last five years

### Response: 20.69

1.2.1.1 Number of new courses introduced during the last five years:

Response: 251

1.2.1.2 Consolidated number of courses offered by the institution across all Programmes (without repeat count) during the last five years :

Response: 1213

File Description	Document
Subsequent Academic Council meeting extracts endorsing the decision of BOS	View Document
Provide the relevant information in institutional website as part of public disclosure	View Document
Minutes of Board of Studies meeting clearly specifying the syllabus approval of new courses	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

### **1.3 Curriculum Enrichment**

### 1.3.1

Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability and other value framework enshrined in Sustainable Development Goals and National Education Policy – 2020 into the Curriculum

### **Response:**

Crosscutting issues are the topics that cut across or reach out to most areas of development. These issues center around inclusive and sustainable efforts to optimally materialize basic needs, work opportunities, ecosystems sustenance, and peaceful and inclusive societies. The development needs to be not only progressive but also long-term. Basic public services leading to social security incites nurturing of biodiversity, land, agriculture, technology, ecosystems, education, etc. Capacity building results from workforce nurturing, talent utilization, etc.

BITS Pilani Curriculum offers a number of courses addressing cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment, and Sustainability. Students are compulsorily expected to choose these courses under the pool of general awareness/professional and humanities elective courses. The curricular structure of each first-degree programme of BITS Pilani is designed in such a way that every student of BITS Pilani gets good exposure of Professional Ethics, moral values, environment awareness, value education, character building, and personality development. By design, beyond the core subject domain and in addition to general awareness/professional courses like Principles of Economics, Principles of Management, Environmental Studies, and Technical Report Writing courses, every student of First Degree Programmes at BITS Pilani is prescribed to work compulsorily for 3 humanities courses irrespective of their disciplines out of a pool of more than 100 courses. Also, every student has the flexibility to register for humanities and soft skills courses against five open electives which are prescribed to them as part of their degree programmes. Open electives can be taken by the students from the pool of courses offered across various departments.

The list of relevant courses addressing cross-cutting issues on Professional Ethics, Gender, Human Values, Environment, and Sustainability is given in Table 1 of the supporting document. Please click here for more details.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

### 1.3.2

Number of certificate/value added courses/Diploma Programme offered by the institutions and online courses of MOOCs, SWAYAM/e Pathshala/ NPTEL and other recognized platforms (without repeat count) where the students of the institution have enrolled and successfully completed during the last five years

Response: 191

File Description	Document
Provide the relevant information in institutional website as part of public disclosure	View Document
List of students and the attendance sheet for the above mentioned programs	View Document
Institutional programme brochure/notice for Certificate/Value added programs with course modules and outcomes	View Document
Institutional data in the prescribed format (data template)	View Document
Evidence of course completion, like course completion certificate etc.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

### 1.3.3

Percentage of programmes that have components of field projects / research projects / internships during the last five years.

### Response: 100

1.3.3.1 Total Number of programmes that have components of field projects / research projects / internships (without repeat count) during the last five years

Response: 39

1.3.3.2 Total Number of programmes offered (without repeat count) during the last five years

Response: 39

File Description	Document
Sample Internship completion letter provided by host institutions	View Document
Provide the relevant information in institutional website as part of public disclosure	View Document
Program and course contents having element of field projects / research projects / internships as approved by BOS	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

### **1.4 Feedback System**

### 1.4.1

Structured feedback for curriculum and its transaction is regularly obtained from stakeholders like Students, Teachers, Employers, Alumni, Academic peers etc., and Feedback processes of the institution may be classified as follows:

**Response:** A. Feedback collected, analysed, action taken & communicated to the relevant bodies and feedback hosted on the institutional website

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Feedback analysis report submitted to appropriate committee/bodies	View Document
At least 4 filled-in feedback form from different stake holders like Students, Teachers, Employers, Alumni etc.	View Document
Action taken report on the feedback analysis and its report to appropriate committee/bodies	S <u>View Document</u>
Provide Links for any other relevant document to support the claim (if any	View Document
Link of institution's website where comprehensive feedback, its analytics and action taken report are hosted	View Document

# **Criterion 2 - Teaching-learning and Evaluation**

# 2.1 Student Enrollment and Profile

# 2.1.1

## **Enrolment percentage**

Response: 96.82

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

2022-23	2021-22	2020-21	2019-20	2018-19
4890	4353	4671	4648	4494

# 2.1.1.2 Number of seats filled year wise during last five years (Only first year admissions to be considered)

2022-23	2021-22	2020-21	2019-20	2018-19
4772	4230	4493	4464	4363

File Description	Document
Provide the relevant information in institutional website as part of public disclosure	View Document
Institutional data in the prescribed format (data template)	View Document
Document relating to sanction of intake as approved by competent authority	View Document
Admission extract signed by the competent authority (only fresh admissions to be considered)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 2.1.2

Percentage of seats filled against reserved categories (SC, ST, OBC etc.) as per applicable reservation policy for the first year admission during the last five years

2.1.2.1 Number of actual students admitted against the reserved categories in the first year of the programme year-wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
64	8	12	0	2

# 2.1.2.2 Total number of seats earmarked for reserved category as per GOI or State Government rule year-wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
64	8	12	0	2

File Description	Document
Provide the relevant information in institutional website as part of public disclosure	View Document
Institutional data in the prescribed format (data template)	View Document
Final admission list indicating the category as published by the HEI and endorsed by the competent authority.	<u>View Document</u>
Copy of the letter issued by the State govt. or Central Government Indicating the reserved categories(SC, ST, OBC, Divyangjan, etc.) to be considered as per the state rule (Translated copy in English to be provided as applicable)	<u>View Document</u>
Provide Links for any other relevant document to support the claim (if any)	View Document

# **2.2 Catering to Student Diversity**

## 2.2.1

The institution assesses the learning levels of the students and organises special Programmes to cater to differential learning needs of the student

**Response:** 

Assessing the learning levels of students

BITS Pilani offers a broad-based curriculum with a set of foundation courses in Mathematics, Physical and Life Sciences, Engineering, and Humanities to all its students at the first-degree level. The educational programmes are modular and flexible. Every year, BITS Pilani conducts a Computer Based Test known as BITSAT to select students for admission to different programmes. The BITSAT is generally organized in two sets of dates, BITSAT Session 1 and BITSAT Session 2, separated by a gap of a few weeks. The students can choose the Center, the Day, and the slot of his/her convenience to take the test. A candidate may opt to appear twice, even at the time of the first application. Each session of BITSAT is of 3 hours duration, comprising the following four parts: Part I: Physics, Part II: Chemistry, Part III: (a) English Proficiency and (b) Logical Reasoning, Part IV: Mathematics or Biology (For BPharm candidates). All programmes at BITS Pilani are designed and implemented by introducing a multidisciplinary and holistic approach to education in an integrated manner. All students are prescribed courses on Technical Report Writing, General Awareness, and Professional courses, along with a diverse mix of several foundation courses and discipline courses as described in section 1.1.1. The foundation courses prepare the student with a better understanding of basic fundamentals and shape well-rounded individuals who possess sound knowledge of science and technology, the humanities, languages, social sciences, and professional ethics through academic instructions, project-based learning, practice-based learning (tutorials & practical), social engagement, communication and counselling, and discussion.

## For more details - Click Here

https://ikac.bits-pilani.ac.in/NAAC-SSR\_2018-19\_2022-23/Criteria\_2/2.2.1/2.2.1\_For More Details.pdf

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

## 2.2.2

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

#### **Response:** 16.89

File Description	Document
List showing the number of students in each of the programs for the latest completed academic year across all semesters	View Document
Certified list of full time teachers along with the departmental affiliation in the latest completed academic year.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 2.3 Teaching- Learning Process

# 2.3.1

Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experience and teachers use ICT- enabled tools including online resources for effective teaching and learning process

## **Response:**

Since its inception, BITS Pilani has been following the semester system with continuous and internal evaluation. The educational programmes are modular and flexible. All necessary steps are being taken to strengthen assessment and evaluation system to ensure 360-degree evaluation of the students, which has been communicated to the students through course handouts by the respective faculty members of each course. Each faculty is given freedom to innovate in teaching with an aim to awaken the curiosity of the student and generate habits of rational thinking in him/her. The added role of a teacher is to help the student in comprehension of ideas and the creative use of knowledge along with the organization and correlation of facts learnt in the classroom. The faculty members of the Institute develop content and deliver their lectures in an effective manner to enrich the knowledge of the student's community. They continuously do research to evolve with innovative teaching methodologies. Some of the innovative teaching methodologies adopted are:

1. Use of the audiovisual facilities.

2. Use of special software's like Mat lab, Scilab software for Numerical Analysis and other courses, MATHEMATICA software for geometrical interpretations of the solutions.

3. Use of online submission and subsequent evaluation of the programming assignment through competitive coding platforms like hackerrank.com which helped the students get exposure to real-world programming challenges and in turn helped them in their placement process.

4. Designing tutorial problems, assignments, lecture notes, and other relevant materials through the internet via learning management systems and that can be accessed by the students at any time.

5. Task-based problem-solving and peer-oriented learning methodologies like group assignment, mini projects etc.

6. Open book tests which have questions of a problem-solving nature by keeping at least 20% of the evaluation component as the **open book** for first-degree courses and 40% for higher-degree courses.

7. At least one of the components (examination) is kept comprehensive enough to include the whole course and held at the end of the semester.

8. Sharing the performance of students through mid-semester grading.

9. Grading of performance of students (overall basis, review of borderline cases, the effect of class average, etc.) and

10. The Practice School Programme, an integral part of student's curriculum, provides students an opportunity to practice what they have learned in global organizations under the supervision of a mentor. Students work on cutting-edge technologies and could choose to Practice in their discipline of study or cross-discipline areas.

11. Use of Research articles from journals, YouTube demonstrations, animations, and lab demonstrations for flavor of the latest advancements.

The curriculum at BITS includes several structural and pedagogy components that develop skills in the student making him/her employable. These are mainly: (i) Practice School Options (I and II), (ii) Project type courses (iii) Laboratory Components, and (iv) Periodic curriculum restructuring based on feedback.

File Description	Document
Upload any additional information	View Document
Provide Link for Additional Information	View Document

## 2.3.2

## The institution adopts effective Mentor-Mentee Schemes to address academics and studentpsychological issues

## **Response:**

BITS Pilani has implemented effective mentor-mentee programs through the Academic Counseling Cell(ACC) at all campuses to address academic and psychological issues with students. The objective of the scheme is:

- 1. To serve as a support system for all students.
- 2. To mentor students: exclusively one-on-one, in a private setting, for the sake of their overall growth.
- 3. To close the communication gap between teachers and students in order to improve the academic environment on campus.
- 4. To serve as a channel for feedback on issues pertaining to students, other institution members, departments, and the campus director.

The coordinator allots mentorship to faculty members if the following conditions are met:

- 1. Teachers are ready to dedicate their time and energy to mentorship
- 2. Faculty members will study the rules of ACC and promise to abide by them
- 3. Teachers possess the ability or capacity to coach students

The faculty then sets up a meeting with the mentee as soon as possible once the mentor assignment is transmitted by the coordinator. In every meeting, the mentor and the mentee can jointly set small goals. Each goal that was established at a prior meeting needs to be monitored and followed up on by faculty. If

the mentee doesn't meet for more than a month or if the faculty believes the mentee has stopped meeting completely, they notify the coordinator.

Monthly meetings are held with the coordinator to discuss any cases. The names of the mentees are never shared in any meeting. Since faculty are required to contact the coordinator prior to the meeting, grades and mentee progress do not need to be discussed in person. However, the coordinator reserves the right to clarify anything unclear or to remind faculty to submit the information. Additionally, visiting counselors are appointed with the director's approval and are answerable to the director. Without revealing any personal information about the situation, visiting counselors may share information with the Chief Warden or coordinator to help the mentees. When on campus, visiting counselors may be invited by the ACC coordinator to participate in any meetings or events. Meetings with visiting counselors are prohibited for anyone, including survey teams of any kind including students. This is done to protect the privacy of the pupils who provide information to counselors who are in town. They could meet with the ACC coordinator, who is free to provide only pertinent details or meta-data when needed. According to the rule, no one other than the coordinator and mentors should have access to confidential case information.

The planning team of ACC meets more frequently based on needs and scheduled activities, but there are a minimum of three sessions every semester. The meeting should include two student participants, in addition to the director, counselor, and chief warden.

Since providing feedback is one of ACC's duties, the coordinator will submit a written report to the director each academic year. The coordinator also has the option to share pertinent input with ID and SWD, among other departments within the institute.

File Description	Document
Upload any additional information	View Document
List of Active mentors	View Document
Provide Link for Additional Information	View Document

# 2.4 Teacher Profile and Quality

## 2.4.1

Average percentage of full time teachers appointed against the number of sanctioned posts year wise during the last five years

## Response: 100

## 2.4.1.1 Total Number of Sanctioned year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
913	883	867	806	777

File Description	Document
Sanction letters indicating number of posts sanctioned by the competent authority (including Management sanctioned posts).	View Document
Provide the relevant information in institutional website as part of public disclosure	View Document
Institutional data in the prescribed format (data template merged with 2.4.3 and 2.4.4)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

## 2.4.2

# Percentage of full time teachers with Ph.D./D.M/M.Ch./D.N.B/ Superspeciality/L.L.D/D.S.C/D.Litt. during the last five years

#### **Response:** 93.02

## 2.4.2.1 Number of full time teachers with Ph.D./D.M/M.Ch./D.N.B/ Superspeciality/L.L.D/D.S.C/D.Litt Superspecialist during the last five years

File Description	Document
Provide the relevant information in institutional website as part of public disclosure	View Document
List of faculty having Ph.D./D.M/M.Ch./D.N. Superspeciality/ along with particulars of the degree awarding university, subject and the year of award per academic year.	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Copies of Ph.D./D.M/M.Ch./D.N.B Superspeciality awarded by UGC recognized universities	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

Average teaching experience of full time teachers (Data to be provided only for the latest completed academic year, in number of years)

Response: 16.17

## 2.4.3.1 Total teaching experience of full-time teachers as of latest completed academic year

Response: 14766

File Description	Document
Provide the relevant information in institutional website as part of public disclosure	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	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 last date of declaration of results during the last five years

Response: 14.8

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

2022-23	2021-22	2020-21	2019-20	2018-19
20	11	10	18	15

File Description	Document
Provide the relevant information in institutional website as part of public disclosure	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# Percentage of student complaints/grievances about evaluation against total number of students appeared in the examinations during the last five years

#### Response: 0.34

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

2022-23	2021-22	2020-21	2019-20	2018-19
246	148	80	88	50

2.5.2.2 Number of students appeared in the examination conducted by the institution year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
37695	36974	36948	34566	32671

File Description	Document
List the number of students who have applied for re- valuation/re-totalling program wise and the total certified by the Controller of Examinations year- wise for the assessment period.	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 2.5.3

#### Status of automation of Examination division along with approved Examination Manual/ordinance

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

File Description	Document
The screenshot should reflect the HEI name and the name of the module.	View Document
The report on the present status of automation of examination division including screenshots of various modules of the software.	View Document
Institutional data in the prescribed format (data template)	View Document
If the EMS is outsourced, copy of the relevant contract and copies of bills of payment to be provided.	<u>View Document</u>
Copies of the purchase order and bills/AMC of the software.	View Document
Provide Links for any other relevant document to support the claim (if any)	/iew Document

## 2.6 Student Performance and Learning Outcomes

## 2.6.1

The institution has stated learning outcomes (Program and Course outcomes)/graduate attributes which are integrated into the assessment process and widely publicized through the website and other documents and the attainment of the same are evaluated by the institution

## **Response:**

BITS Pilani has evolved a system to share learning outcomes related to courses and programs through the respective websites of **Divisions/Departments and ERP portals** at all its Campuses. At BITS-Pilani, every course is run according to a well-structured course handout. The handout consists of (a) clearly stated course objectives, (b) a course description with texts and references, and (c) a module-wise plan of lectures with clearly defined learning outcomes in terms of six levels of human cognition -- remember, understand, apply, analyze, evaluate, and create. Thus, the learning outcomes of each module are defined in terms of these verbs that objectively characterize the testing of different levels of cognition. These learning outcomes are then reflected in the question papers. The course handout includes all the learning objectives set for a course. They are addressed during the teaching-learning process and are integrated into the assessment process to achieve desired learning outcomes. All course handouts are available to the students and faculty members at the AUGS/AGSR website (https://academic.bits-pilani.ac.in/), which they can access using their login credentials.

Examinations of each course are scheduled by the AUGS/AGSR Divisions of the respective Campuses of the Institute, keeping in view the course-wise requirements of invigilators and seating capacity for the Examination. The instructor-in-charge announces the evaluation scheme of his/her courses through course handouts and coordinates the examinations as per the announced schedule given by the

#### AUGS/AGSR divisions.

Students are awarded grades in each of their registered courses at the end of a given semester based on their performance in different evaluation components, such as mid-semester tests, tutorials, assignments, and Comprehensive Examinations. These evaluation components are evenly spread out in the semester. They aim to draw out a response from the student regarding various attributes like spontaneous recall, ability to apply known concepts, ability to work on his/her own, competence in conceptualized arguments, ability to face unknown situations, etc. They share the students' performance in different evaluation components of their courses from time to time using online course management tools/portals, such as NALANDA, Google Classroom, Teams, etc. At the end of the semester, they award final grades and transmit the grades/reports to the Dean, AUGS/AGSR/ within the deadline set by him/her. All grades/reports obtained by the students in their registered courses in a semester are made available as a grade sheet accessible to the concerned students at the ERP portal through their login credentials.

File Description	Document
Upload COs for all courses (exemplars from Glossary)	View Document
Upload any additional information	View Document
Provide links as Additional Information	View Document

## 2.6.2

Pass percentage of students (excluding backlog students) (Data to be provided only for the latest completed academic year)

#### Response: 97.84

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

File Description	Document
percentage of students of the final year (final semester) eligible for the degree program-wise / year wise	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Certified report from the Controller of Examinations indicating the pass	View Document
Annual report of COE highlighting the pass percentage of students	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 2.7 Student Satisfaction Survey

2.7.1		
Online student satisfaction survey regarding teaching learning process		
Response: 3.25		
File Description     Document		
Upload any additional information	View Document	

# **Criterion 3 - Research, Innovations and Extension**

# **3.1 Promotion of Research and Facilities**

# 3.1.1

The institution's Research facilities are frequently updated and there are well defined policy for promotion of research which is uploaded on the institutional website and implemented

## **Response:**

Research plays a pivotal and essential role within the framework of higher education. At BITS Pilani, there is a proactive promotion of research endeavors among both the faculty and students. Beyond fundamental research, which forms the foundation of applied research, the Institute allocates considerable importance and support to the latter.

The research activities at BITS draw upon the intellectually motivated manpower pool within the institution's staff and student body. Students, as an integral part of their educational program, engage in research projects. Simultaneously, faculty members undertake research as a fundamental aspect of their duties, as it facilitates the assimilation and dissemination of existing knowledge while contributing to the creation of new knowledge.

Moreover, BITS Pilani has implemented innovative initiatives to facilitate professionals in conducting research within their workplace while concurrently pursuing a PhD degree from the Institute. The encouragement for faculty members to publish their research findings in reputable journals and present papers at conferences is consistently emphasized. Support is extended to facilitate their participation in national and international conferences, fostering networking opportunities with experts from India and abroad.

Recent endeavors at the Institute involve assisting faculty members in filing patents, especially when the research holds potential for commercially viable products or processes. Over the past five years, BITS has experienced substantial growth in funding, predominantly from government sources. Concurrently, through existing collaborations with industries, efforts are being made to engage the corporate sector in funding research projects. This strategic approach aligns with the Institute's commitment to advancing knowledge and fostering meaningful contributions to both academia and industry.

## Promotional Efforts for Research at the Doctoral Level

We take special efforts to interest our students in research. Through various schemes, scholarships, and grants, we try and develop students into junior faculty members. Some of these schemes are:

- Faculty Development Scheme
- Various research scholarships are given by agencies like CSIR, UGC, DST, DRDO, and ICMR
- Seed Grant Scheme of the Institute
- The Aditya Birla Group scheme for research funding
- Arrangements for research at centers outside the university like CDRI, Lucknow; ITRC, Lucknow; Uniformed Services University of the Health Sciences (USUHS), Bethesda, Maryland, USA

• Ph.D. Aspirants' Scheme

## Infrastructural Support for R&D

At BITS Pilani, we are committed to fostering a thriving environment for cutting-edge research and innovation. To support this vision, we have been consistently expanding our research capabilities by nurturing a workforce of dedicated researchers. Our ongoing investments in research infrastructure underscore our commitment to advancing knowledge and providing fertile ground for innovative research experiences for both students and faculty. BITS Pilani plans to leverage its robust R&D infrastructure in several ways to promote innovation and academic excellence:

- Research Excellence
   Interdisciplinary Research
   Industry Partnerships
   Skill Development
   Knowledge Sharing
   Innovation and Entrepreneurship
   Global Collaboration
   New Centres of Excellence (APPCAIR, CREST)
   Community Engagement
- 10. Student Research Opportunities
- 11. Publication and Patents

File Description	Document
Upload COs for all courses (exemplars from Glossary)	View Document
Upload any additional information	View Document
Provide links as Additional Information	View Document

# 3.1.2

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

#### **Response:** 353.81

# 3.1.2.1 Amount of seed money provided by institution to its teachers for research year wise during last five years (INR in lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
279.90	218.50	360.67	553.26	356.70

File Description	Document
Sanction letters of seed money to the teachers is mandatory	View Document
List of faculty who have been provided with seed money for research along with the title of the project, duration and amount year-wise	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Audited Income-Expenditure statement highlighting the expenditure towards seed money endorsed by the Finance Officer	<u>View Document</u>
Provide Links for any other relevant document to support the claim (if any)	View Document

# 3.1.3

Percentage of teachers receiving national / international fellowship / financial support by various agencies for advanced studies / research during the last five years.

## Response: 46.83

3.1.3.1 Number of teachers who received national/international fellowship/financial support from various agencies, for advanced studies / research; year-wise during the last five years

Response: 503

File Description	Document
List of teachers who have received the awards along with the nature of award, the awarding agency etc.	View Document
Institutional data in the prescribed format (data template)	View Document
E-copies of the award letters of the teachers.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

## 3.1.4

Percentage of JRFs, SRFs among the enrolled PhD scholars in the institution during the last five years

#### **Response:** 70.24

# 3.1.4.1 The Number of JRFs, SRFs among the enrolled PhD scholars in the institution during the last five years

Response: 4910

#### 3.1.4.2 Number of PhD Scholars enrolled during last five years

Response: 6990

File Description	Document
List of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other research fellows along with the details of the funding agency is to be provided.	<u>View Document</u>
Institutional data in the prescribed format (data template)	<u>View Document</u>
E copies of fellowship award letters (mandatory)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

## **3.2 Resource Mobilization for Research**

## 3.2.1

Total Grants research funding received by the institution and its faculties through Governme006Et and non-government sources such as industry, corporate houses, international bodies for research project, endowment research chairs during the last five years (INR in Lakhs)

**Response:** 24919.08

File Description	Document
List of Extramural funding received for research, Endowment Research Chairs received during the last five years along with the nature of award, the awarding agency and the amount.	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
E-copies of the letters of award for research, endowments, Chairs sponsored by non- government sources	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

## 3.2.2

# Number of research projects per teacher funded by government, non-government , industry, corporate houses, international bodies during the last five years

#### Response: 1.19

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

Response: 1280

File Description	Document
List of project titles with details of Principal Investigator, amount sanctioned and sanctioning agency etc.	<u>View Document</u>
Institutional data in the prescribed format (data template merged with 3.2.1)	View Document
E-copies of the grant award letters for research projects sponsored by government agencies.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 3.3 Innovation Ecosystem

3.3.1

Institution has created an ecosystem for innovations, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the

## creation and transfer of knowledge/technology and the outcomes of the same are evident

## **Response:**

## Pilani

BITS Pilani, located on the Pilani campus, is dedicated to instilling innovation and entrepreneurship in its students from the first year. The Centre for Entrepreneurial Leadership (CEL) promotes all-round development, leadership, and entrepreneurship among students and the nationwide startup ecosystem. The BITS-Technology Enabling Centre (TEC) aims to create an ecosystem for technology development, bringing together regional academic institutes, R&D institutions, institutions, industry, MSMEs, startups, and incubators. The institute also offers a New Venture Creation (NVC) course for budding entrepreneurs, providing hands-on experience and exposure to current trends. The Pilani Innovation and Entrepreneurship Development Society (PIEDS) is a Technology Business Incubator hosted by the BITS Pilani campus, incubating over 150 startups and establishing itself as a key component of BITS's entrepreneurial story. The institute's efforts have resulted in being ranked among the top entrepreneurship cells in the country.

## Hyderabad

The Centre for Innovation, Incubation, and Entrepreneurship (CIIE) at the Hyderabad Campus comprises I-Cell, E-Cell, TEDx, and TBI to foster innovation and develop entrepreneurship skills. For 2022-23, 22 patent applications were filed, 15 published, and 7 granted. I-Cell supports student projects, enabling skills development and providing inventory through Sandbox and Tinkerers' Lab. E-Cell organized Launchpad 2023, attracting 90+ startups and hosting workshops for learning, growth, and collaboration. TEDxBITSHyderabad organized an interactive event called "Community Meet." TBI incubates startups like Abyom Technologies, Pharmagen Lab, and Cleome Innovations.

## Goa

The Institute has established the Center for Innovation, Incubation and Entrepreneurship (CIIE) and BITS BIRAC BioNEST, an incubator promoting innovation and entrepreneurship in Health & Environment. The incubator, supported by BIRAC, helps entrepreneurs ideate, incubate, and accelerate their startups. It partners with companies like Microsoft, Amazon, GitHub, HubSpot, HEADSTART, NASSCOM, i-HUB, and IIT Roorkee to create a vibrant startup ecosystem.

## Dubai

Dubai SME and Hamdan Innovation Incubator have joined forces to support the entrepreneurial ecosystem at BPDC. The Business Incubator inaugurated on 27 September 2021, aims to encourage tech start-ups and transform the university into an entrepreneurial hub. The initiative is open to all students, faculty, staff, and alumni of BPDC and provides access to mentors, business experts, and legal advisors. A hackathon was organized in October 2022 to encourage innovation among students, with 28 teams presenting their proposals to a panel of judges. The hackathon was won by Team Maverick, while Team Trojan Wave and Team Found placed third and fourth respectively. The BITS Innovation Challenge-2023 (BIC-2023) was organized to generate solutions for current issues, with 21 teams selected for the first round and the final round tentatively scheduled for October 2023. Nine teams, including the winning hackathon team, are incubated in the incubation center to work on their ideas and

develop prototypes, with the ultimate goal of transforming them into startups. The 24/7 Creative Lab (Sandbox) was also inaugurated in February 2017 to foster students' creativity.

File Description	Document
Upload any additional information	View Document
Link for Additional Informationa	View Document

# 3.3.2

# Total number of awards received for *research*/innovations by institution/teachers/research scholars/students during the last five years

## Response: 398

File Description	Document
Institutional data in the prescribed format (data template)	View Document
e- Copies of award letters issued by the awarding agency	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# **3.4 Research Publications and Awards**

# 3.4.1

The institution ensures implementation of its stated Code of Ethics for research

The institution has a stated Code of Ethics for research and the implementation of which is ensured through the following:

- **1. Inclusion of research ethics in the research methodology course work**
- 2. Presence of institutional Ethics committees (Animal, chemical, bio-ethics etc.,)
- **3.**Plagiarism check through sofware
- 4. Research Advisory Committee

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

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Copy of the syllabus of the research methodology course work to indicate if research ethics is included	View Document
Constitution of the ethics committee and its proceedings as approved by the appropriate body.	View Document
Constitution of research advisory committee and its proceedings as approved by the appropriate body.	View Document
Bills of purchase of licensed plagiarism check software in the name of the HEI.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 3.4.2

# Total number of Patents awarded during the last five years

File Description	Document
Patents granted / published in the name of the faculty with the institutional affiliation to the university working during the assessment period only to be given.	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
e-copies of letter of patent grant	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

	Other Upload Files			
	1	View Document		
3.4.3				
Nur	Number of Ph.Ds awarded per recognized guide during the last five years			
Res	Response: 1.24			

## 3.4.3.1 How many Ph.D s were awarded during last 5 years

#### Response: 693

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

Response: 560

File Description	Document	
PhD Award letters to PhD students.	View Document	
Letter from the university indicating name of the PhD student with title of the doctoral study and the name of the guide.	<u>View Document</u>	
Institutional data in the prescribed format (data template)	View Document	
Provide Links for any other relevant document to support the claim (if any)	View Document	

## 3.4.4

# Number of research papers published per teacher in the Journals as notified on UGC CARE list during the last five years

#### Response: 7.31

# 3.4.4.1 Number of research papers published in the Journals as notified on UGC CARE list during the last five years

File Description	Document
List and links of the papers published in journals listed in UGC CARE list and	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document
Link to the institutional website where the first page/full paper (with author and affiliation details) is published	View Document
Link re-directing to journal source-cite website in case of digital journals	View Document

# 3.4.5

## Number of books and chapters in edited volumes published per teacher during the last five years

## Response: 3.7

## 3.4.5.1 Total Number of books and chapters in edited volumes published during the last five years

Response: 3972

File Description	Document
List of chapter/book with the links redirecting to the source website	View Document
Institutional data in the prescribed format (data template)	View Document
E-copy of the Cover page, content page and first page of the publication indicating ISBN number and year of publication for books/chapters	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

## 3.4.6

*E-content is developed by teachers :* 

For e-PG-Pathshala
 For CEC (Under Graduate)
 For SWAYAM
 For other MOOCs platform
 Any other Government initiative
 For institutional LMS

Response: A. Any 5 of the above

File Description	Document
Supporting documents from the sponsoring agency for the e- content developed by the teachers need to be provided.	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Give links to upload document of e-content developed showing the authorship/contribution	View Document
For institution LMS a summary of the e-content developed and the links to the e-content should be provided	<u>View Document</u>
Provide Links for any other relevant document to support the claim (if any)	View Document

## 3.4.7

# Bibliometrics of the publications during the last five years based on average Citation index in Scopus/ Web of Science

## Response: 10.74

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 – h-index of the Institution

Response: 83.5

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

# **3.5 Consultancy**

# 3.5.1

## Revenue generated from consultancy and corporate training during the last five years

**Response:** 11903.9

3.5.1.1 Total amount generated from consultancy and corporate training year-wise during the last five years (INR in lakhs).

2022-23	2021-22	2020-21	2019-20	2018-19
2542.3	4168.6	2851.5	1818.3	523.2

File Description	Document
Letter from the corporate to whom training was imparted along with the fee paid	View Document
Letter from the beneficiary of the consultancy along with details of the consultancy fee.	View Document
Institutional data in the prescribed format (data template)	View Document
CA certified copy of statement of accounts as attested by head of the institution.	View Document
Audited statements of accounts indicating the revenue generated through and corporate training/consultancy.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 3.6 Extension Activities

# 3.6.1

Outcomes of extension activities in the neighborhood community in terms of impact and sensitizing the students to social issues and holistic development, and awards received if any during the last five years (Showcase at least four case studies to the peer team)

## **Response:**

## **BITS Pilani**, Pilani campus

BITS Pilani students are actively involved in social works in the village, collaborating with NSS units, PARC, and other NGOs to address issues such as gender discrimination, unemployment, drought, and

farmers' impact. The NSS team conducts awareness programs, health camps, educational programs, skill development, youth employment, and women empowerment. They also support over 135 children based on their social and financial status, reducing dropout rates in primary and secondary schools. The volunteers also teach basic skills in schools, such as coding and English. Health and hygiene are also addressed through health camps, vaccination drives, and blood donation camps. Skill development programs, particularly for women, are organized, with the Nirmaan Pilani chapter starting a stitching center and PARC establishing another. These efforts aim to make villagers self-reliant and improve hygiene.

## **BITS Pilani, Goa campus**

Various student-run NGOs, including Nirmaan, Abhigyaan, and Udaan, are actively working to promote social fulfillment among students. Nirmaan, founded in 2005 by BITS-Pilani University students, focuses on sustainable community development, education, women empowerment, and poverty eradication. Abhigyaan, a social organization in BITS Goa, teaches subjects based on the needs of campus workers and security guards. Udaan, a group of motivated students, aims to empower underprivileged women on BITS Pilani Goa Campus, working towards overall development.

## **BITS Pilani, Hyderabad campus**

On Independence Day and Grandparents Day, students visited orphanages, conducted events, and provided gifts to children. On Grandparents Day, we interacted with elderly people at Adarsh, Karthikeya, and Mothers Nest. On NSS Day, we organized a Cleanliness Drive, performed Hindustani songs, and organized a Diya decoration competition for 160 students. We educated them on eco-friendly ways to celebrate Diwali.

## **BITS Pilani, Dubai campus**

The MAD Club at BITS Pilani, Dubai Campus (BPDC) is dedicated to promoting socially relevant activities and raising awareness against social issues. The club organizes Blood Donation Campaigns, Campus Clean-up drives, and volunteer activities for various organizations. In March, the club participated in the Al Noor-Zurich Family Fun Fair 2023, promoting inclusion for persons with disabilities. In March, the club visited the SNF Development Centre to celebrate World Down Syndrome Day and Earth Day. In April, the club planted a Jasmine plant in the SNF premises. The club also held Pink Day and organized Spoken English Classes for support staff, recognizing their hard work. On International Women's Day, the MAD Club participated in the #EmbraceEquity global campaign and the 'Bridge of Hope' relief campaign for families affected by earthquakes in Turkey and Syria.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

Number of extension and outreach programs conducted by the institution through organized forums like NSS/NCC with involvement of community year wise during the last five years

Response: 301

3.6.2.1 Number of extension and outreach programs conducted by the institution through organized forums including NSS/NCC with involvement of community year wise during the last five years.

2022-23	2021-22	2020-21	2019-20	2018-19
47	13	62	111	68

File Description	Document
Institutional data in the prescribed format (data template)	<u>View Document</u>
Geo-tagged Photographs and any other supporting document of relevance should have proper captions and dates.	<u>View Document</u>
Detailed list and report for each extension and outreach program to be made available, with specific mention of number of students participated and the details of the collaborating agency	<u>View Document</u>
Provide Links for any other relevant document to support the claim (if any)	View Document

# **3.7 Collaboration**

3.7.1

Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years

File Description	Document
Summary of the functional MoUs/linkage/collaboration indicating start date, end date, nature of collaboration etc.	<u>View Document</u>
List of year wise activities and exchange should be provided	View Document
List and Copies of documents indicating the functiona MoUs/linkage/collaboration activity-wise and year-wise	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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

# 4.1 Physical Facilities

# 4.1.1

The institution has adequate infrastructure facilities for

a. teaching - learning. viz., classrooms, laboratories,

b. ICT enabled facilities such as smart classes, LMS etc.

c. Facilities for cultural and sports activities, yoga centre, games (indoor and outdoor) gymnasium, auditorium etc.

Describe the adequacy of facilities within a maximum of 500 words

**Response:** 

## Pilani Campus

The university utilizes ICT-enabled facilities for teaching and learning, including immersive telepresence classrooms, Google Meet Professional licenses, and Microsoft Teams. These tools allow for collaborative teaching, live-streaming lectures, and online assessments. Google Forms is used for quizzes and explanatory answer-based questions, while Microsoft Teams is used by faculty members for meetings, assessments, and group-based activities. The Learning Management System (LMS) is tailored to the university's needs, providing a comprehensive selection of online assessment modules and features for managing teaching-learning activities. The secure exam browser and scalability of the LMS ensure efficient administration and student feedback.

## K.K Birla Goa Campus

BITS Pilani Goa Campus offers a range of classrooms, seminar halls, and conference rooms with LCD projectors, audio and video facilities, and WiFi and LAN connectivity. The telepresence classroom and telepresence classroom are used for lectures and interactive classes across BITS campuses. The campus also features a computer center with 300 workstations connected through LAN, a library with access to digital libraries, and a centrally air-conditioned auditorium. The Student Activity Center (SAC) is equipped with indoor games offices, music rooms, and a gym fitness center. BITS Goa also has a BCCI-supported cricket ground, an AIFF-endorsed football ground, standard volleyball courts, and basketball courts. The shopping center includes a supermarket, book store, stationery shop, and a variety of shops. The Medical Centre provides primary medical care, including outpatient care, emergency room care, specialty clinics, and a collection center for laboratory service. In-house pharmacy is also available.

## **Hyderabad Campus**

The institute utilizes various teaching aids, including LCD projectors, Tablet Monitors, Document Projectors, and OHP Projectors, to enhance teaching and learning. The Student Activity Centre (SAC) offers various indoor and outdoor sports facilities, including tennis, basketball, volleyball, and more. The

campus also provides a gym with state-of-the-art equipment for strength and weight training. The auditorium, with a seating capacity of 2500, is used for organizing events and screening movies. Biometric attendance is also a key feature.

## Dubai Campus

The institute provides a range of IT facilities, including computers, cameras, audio devices, projectors, interactive devices, and Wi-Fi/LAN connectivity, to support online, hybrid classes, and on-campus classes. Google Classroom is used for assignments, while Google Meet is used for on-campus classes. Labs are equipped with dedicated computers for each student, and all labs are equipped with essential software applications like MATLAB, NETSIM, and AUTOCAD. GPU workstations are available for students to perform Artificial Intelligence/Machine Learning programming and simulations. Webex hands-on labs are used for virtual laboratory sessions, and Virtual Desktop Infrastructure (VDI) is implemented for centralized access. Classrooms and labs are equipped with comfortable furniture, whiteboards, and adequate storage facilities. The academic year 2022-23 saw triumphs in various sports events, such as the RAKMHSU Sports Festival, Sparks 2022, Treble, and BITS Sports Festival. The institute also organized a sci-fi-themed escape room and secured positions as finalists and semifinalists in the Mirchi Jam event.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

# 4.1.2

Percentage of expenditure excluding salary, for infrastructure development and augmentation year wise during the last five years

## Response: 58.26

# 4.1.2.1 Expenditure for infrastructure development and augmentation, excluding salary year wise during last five years (INR in lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
13789	14673	29917	30311	23651
13789	14673	29917	30311	23651

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for infrastructure augmentation should be clearly highlighted)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 4.2 Library as a Learning Resource

4.2.1

Library is automated with digital facilities using Integrated Library Management System (ILMS), adequate subscriptions to e-resources and journals are made. The library is optimally used by the faculty and students

**Response:** 

## **BITS Pilani, Pilani campus**

The library has made significant strides in efficiency and user-friendliness since adopting the LibSys ILMS in 2005. In 2014, it transitioned to the open-source ILMS "KOHA" and developed a comprehensive repository using DSpace. The library portal, launched in 2014, facilitated interactions, feedback, and recommendations. The library subscribes to 11,700 e-Journals, 2 citation databases, 11 databases, and 237,000 eBooks, providing students and faculty with a wealth of knowledge across diverse fields. The library also subscribes to prestigious repositories like RSC Gold eJournals and IOP's eJournals. The library's research capabilities are amplified by databases like MathSciNet, SciFinder, and Web of Science. The library's services have increased significantly, with a surge in usage and an Interlibrary Loan service. OpenAthens SSO enables remote access, enabling convenient retrieval of materials from anywhere and at any time.

## **BITS Pilani, Goa campus**

Library Management has been fully automated since 2004, with the adoption of KOHA Library Management System. KOHA is a free library automation package used worldwide, enabling various functions such as acquisitions, circulation, cataloging, serials management, and reporting. The library is fully Wi-Fi enabled, with 7 Wi-Fi repeaters in various halls. During the pandemic, the library faced challenges in overcoming IP-based access to online resources, but successfully moved to a platform called 'Shibboleth' provided by INFLIBNET. To improve performance, the Library Management Software (KOHA) and Institutional Repository software Dspace 5.6 were upgraded. The library website is well-designed and informative, facilitating searching for books and e-resources like online journals and databases. The digital Library subscribes to 16 e-journal packages and 5 databases, providing access to

over 19000+ journals, thesis and dissertations, and question papers.

## BITS Pilani, Hyderabad campus

KOHA's Hyderabad campus has implemented an automated library system, utilizing the Integrated Library Management System (ILMS) since 2008. Shibboleth, a federated sign-on framework, allows users to access e-resources remotely, eliminating the need for multiple passwords. The library also implemented RFID technology in July 2016, providing quick and efficient circulation operations, enhanced security, seamless inventory management, and an emerging technology experience for staff and patrons.

## **BITS Pilani, Dubai campus**

The Dubai Campus Library, part of BITS Pilani, has implemented a comprehensive library management system, including the AUTOLIB Library Management Software (LMS), which has integrated features such as acquisitions, cataloging, serial controls, and archiving of previous year question papers. The library also offers a web-enabled Library OPAC, allowing users to access library resources, check account details, and download question papers. The library has also subscribed to e-journals, e-books, and e-magazines, providing access to all subscribed e-resources. The library also has a self-service kiosk for circulation of library resources, and an institutional repository (DSpace) software for accessing research publications. The library also has a dynamic website for accessing library brochures, virtual tours, collections, services, and more. The library has also established a Memorandum of Understanding with Al Ain University of Science and Technology in UAE to facilitate interlibrary loans of resources.

File Description	Document
Upload any additional information	View Document
Provide the Paste link for additional information	View Document

## 4.2.2

# Percentage of expenditure for purchase of books/ e-books and subscription to journals/e-journals year wise during the last five years

## Response: 3.18

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

2022-23 20	2021-22	2020-21	2019-20	2018-19
1326 12	294	1214	1257	1049

File Description	Document
Institutional data in the prescribed format	View Document
Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for purchase of books/ e-books and subscription to journals/e-journals should be clearly highlighted)	<u>View Document</u>
Provide Links for any other relevant document to support the claim (if any)	View Document

# 4.3 IT Infrastructure

## 4.3.1

Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection

Describe IT facilities including Wi-Fi with date and nature of updation, available internet bandwidth within a maximum of 500 words

## **Response:**

All four campuses of BITS Pilani have an Information Processing Centre (IPC) or Computer Centre (CC) that provides various facilities to support and enhance the educational vision and mission of the university. The IPC/CC hosts and manages the computing/networking infrastructure for each campus. The infrastructure includes local and external connectivity, including email, as well as computer services. All campuses have high-speed wired and wireless networks, providing secure access to the internet and intranet. The campus-wide network offers internet and intranet services to the entire campus community. Each campus has multiple internet service providers (ISPs), with optical fiber leased lines used for internet needs. Wireless access points are available on the campus to facilitate wireless network connections. To improve security and fairness, all campuses use firewall authentication for protected access and offer protection against worms, viruses, malware, data loss, and identity theft. Each user has a UTM account, and concurrent device allowances vary from campus to campus. All campuses have a campus-wide security system using CCTV cameras that are installed at corridors, and entry and exit points of buildings. The IPC/CC at each campus studies the requirements for new IT facilities and implements the expansion of existing IT resources to meet the demand for IT resources by its administration, faculty, and students. Budgets are allocated for the maintenance of existing IT resources and to expand the same, looking out for any new technology that can enhance network availability, security, and management.

To improve the resource utilization of the Computer Centre with maximum fairness, every year a document containing policies is circulated. The purpose of the policy is to ensure that all users (faculties, staff, students, and third parties) use Campus computing facilities in an effective, efficient, ethical, and lawful manner. Security breaches could result in reporting to a disciplinary committee when any

individual is indulged in violating the IT policy or rules of the institute and Govt. regulations (IT Act 2000 / 2008 / Amendments in 2012). After receiving the policy document, by continuing to use the institute's IT infrastructure, it is assumed that the user has agreed to the terms and conditions of the IT Usage Policy.

Computer Centre has budgetary provisions for extending and maintaining IT Infrastructure/ services. This includes a CAPEX expenditure and an OPEX expenditure. The CAPEX expenditure is made for (i) extending LAN infra coverage like installation of new NW switches, routers, Wi-Fi access points, etc. (ii) purchasing Laptops/Desktops for faculty, staff, and Labs, (iii) purchasing SW licenses for general and academic purposes (iv) replacing end-of-life NW HW/equipment, etc.

Similarly, the OPEX expenditure covers –(i) renewing SW licenses (ii) AMC contracts for critical SW/HW/equipment (iii) repairs (iv) purchasing Internet bandwidth from ISPs.

Updates are done to IT Facilities on a regular basis to–(i) SW licenses (Firewall, Load-balances, DNS/DHCP Servers, Server SW, Routers, NW Switches, and SW used for academic purposes; and (ii) update to HW-like NW switches, routers, Wi-Fi Access points, computer systems, etc.

All the campuses also have CISCO telepresence room for virtual meetings and discussions.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

## 4.3.2

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

**Response:** 4.92

# 4.3.2.1 Number of computers available for students usage during the latest completed academic year:

File Description	Document
Stock register/extracts highlighting the computers issued to respective departments for student's usage	View Document
Purchased Bills/Copies	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

# 4.3.3

Institution has the following Facilities for e-content development and other resource development

Audio visual center, mixing equipment, editing facilities and Media Studio
 Lecture Capturing System(LCS)
 Central Instrumentation Centre
 Animal House
 Museum
 Business Lab
 Research/statistical database
 Moot court
 Theatre
 Art Gallery
 Any other facility to support research

Response: A. Any 7 or more of the above

File Description	Document
Videos and geo-tagged photographs of each of the facilities available in the HEI. Details of the structures of each of the facilities available in the HEI.	<u>View Document</u>
Purchase Bill / stock register, entry for lecture capturing system, mixing equipment, software for editing	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Copy of the subscription letter for database is essential for Option Research/Statistical Databases	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

## 4.4 Maintenance of Campus Infrastructure

## 4.4.1

Percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, during the last five years

Response: 38.56

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)

2022-23	2021-22	2020-21	2019-20	2018-19
17011	14449	13666	14662	14556
File Descriptio	n		Document	
Institutional data in the prescribed format (data template)			View Document	
Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for maintenance of infrastructure should be clearly highlighted)			View Document	
Provide Links for any other relevant document to support the claim (if any)			View Document	

# 4.4.2

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

Describe policy details of systems and procedures for maintaining and utilizing physical, academic and support facilities within a maximum of 500 words

## **Response:**

## Pilani Campus

The Institute maintains physical, academic, and support facilities through separate units like the Placement Unit and Academic sections. These units maintain the infrastructure with qualified staff, AMCs, and in-house technical teams. Health, entertainment, and food facilities are available on campus, including sports facilities, a unique movie display, and various food restaurants. The Institute also offers a variety of services for family gatherings and parties, including tea, coffee, cold drinks, and snack kiosks for each hostel.

## Hyderabad Campus

AMC provides a variety of classroom setups, including lecture recording systems, immersive telepresence classrooms, and online platforms like Microsoft Teams. The campus features biometric attendance, teaching aids, and a Video Camera with a Tripod stand for effective learning. The library is automated using ILMS and RFID technology. The campus also features a Student Activity Centre and a state-of-the-art auditorium.

## Goa Campus

Cisco is a key player in the education sector, providing a range of technologies and services to enhance the learning experience. The institute's centralised lab facility features over 300 desktops for academic lab sessions, online examinations, quizzes, and placement prelims. The institute also offers high-tech audio-visual facilities, including Inch Intelligent Interactive Panels, Computers, Lapel Mikes, Digital Clocks, Projectors, and Sound Systems. The TelePresence Conference room facilitates virtual meetings using Cisco architecture and technology. The institution's commitment to innovation and excellence in education is evident in its innovative learning solutions.

## Dubai Campus

The BITS Pilani, Dubai Campus Library operates entirely automated using the AUTOLIB Library Management Software, ensuring quick and easy access to resources. The library subscribes to e-resources such as e-books, e-journals, e-magazines, and e-newspapers, and offers support through email, phone, and physical interaction with staff. The library also provides research support assistance and has an annual maintenance contract for AutoLib Library Management Software, SIP 2 protocol software for RFID Kiosk, DSpace for Institutional Repositories, RFID Gates with Eco-reader, Staff Station, RFID Kiosk, Inventory Handheld scanner, and software updates.

Transport services are provided to various emirates, with around 348 students currently using 15 buses. The library also provides complete fire alarm and firefighting system equipment, as per Dubai Civil Defence regulations. A third-party contractor is appointed for cleaning services, ensuring the cleanliness of the premises, offices, classrooms, laboratories, and outdoor sports fields.

The campus is fully air-conditioned and has uninterrupted electricity and water supply, maintained by an internal team and third-party service providers. The library has a yearly contract with MEP, providing services for day-to-day complaints and planned preventive and reactive maintenance.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

# **Criterion 5 - Student Support and Progression**

### 5.1 Student Support

#### 5.1.1

Percentage of students benefited by scholarships and freeships provided by the institution, government and non-government bodies, industries, individuals, philanthropists during the last five years

Response: 75.86

5.1.1.1 Number of students benefited by scholarships and freeships provided by the institution, Government and (NGOs)non-government bodies, industries, individuals, philanthropists year-wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
5222	9715	14893	13447	10476

· · · · · · · · · · · · · · · · · · ·	
File Description	Document
Year-wise list of beneficiary students in each scheme duly signed by the competent authority	View Document
Upload Sanction letter of scholarship and free ships (in English).	<u>View Document</u>
Upload policy document of the HEI for award of scholarship and freeships.	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

## 5.1.2

# Efforts taken by the institution to provide career counselling including e-counselling and guidance for competitive examinations during the last five years

#### **Response:**

BITS Pilani offers skill enhancement programs to enhance students' employability, covering areas such as communication skills, leadership development, and entrepreneurship. These programs supplement academic learning and prepare students for the demands of the workforce. Alumni engagement activities, such as mentorship programs and networking events, offer students valuable guidance and networking opportunities.

A seminar on "Career Opportunities after graduation" will be conducted by T.I.M.E., a national leader in aptitude training. A Master's Degrees seminar with North-eastern University's College of Engineering will be conducted on 27th Jan'23. A guest talk on project management and job opportunities in the industry sector will be held on 9th Feb'2023. A Public Policy Workshop will be organized on 25th March'23 to help students understand public policy and its impact on daily lives.

BITS Pilani's career services division is dedicated to helping students navigate their career paths. They provide comprehensive career counseling, coaching, and resources to help students make informed decisions about their careers. The division collaborates with industry professionals, domain experts, and training providers to organize career talks and workshops focused on leadership, soft skills, and career guidance. The Center for Higher Education at the Dubai Campus offers guidance and support for students' higher education aspirations. Personalized counseling sessions are available for employment and higher studies, and students can book appointments with the career services team for guidance. Additionally, BITS Pilani offers practical work experience through virtual work experience programs partnered with Forage.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

## 5.1.3

Following capacity development and skills enhancement activities are organised for improving students' capability

1.Soft skills

2. Language and communication skills

**3.**Life skills (Yoga, physical fitness, health and hygiene, self-employment and entrepreneurial skills)

4. Awareness of trends in technology

Response: A. All of the above

File Description	Document
Report with photographs on soft skills enhancement programs	View Document
Report with photographs on Life skills (Yoga, physical fitness, health and hygiene) enhancement programs	View Document
Report with photographs on Language & communication skills enhancement programs	View Document
Report with photographs on ICT/computing skills enhancement programs	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 5.1.4

The institution adopts the following for redressal of student grievances including sexual harassment and ragging cases

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

Response: A. All of the above

File Description	Document
Report of Organisation wide awareness and undertakings on policies with zero tolerance	View Document
Proof related to Mechanisms for submission of online/offline students' grievances	View Document
Proof for Implementation of guidelines of statutory/regulatory bodies	View Document
Institutional data in the prescribed format (data template)	View Document
Details of statutory/regulatory Committees (to be notified in institutional website also)	View Document
Annual report of the committee monitoring the activities and number of grievances	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

## 5.2 Student Progression

#### 5.2.1

#### Percentage of placement of outgoing students during the last five years

#### Response: 78.6

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

2022-23	2021-22	2020-21	2019-20	2018-19
2825	3248	3011	2441	2329

File Description	Document
Number and List of students placed along with placement details such as name of the company, compensation, etc and links to Placement order (the above list should be available in institutional website)	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

### 5.2.2

# Percentage of graduated students who have progressed to higher education year-wise during last five years

#### Response: 22.66

#### 5.2.2.1 Number of outgoing students progressing to higher education

20	22-23	2021-22	2020-21	2019-20	2018-19
46	52	198	211	26	208

File Description	Document
List of students progressing for Higher Education, with details of program and institution that they are/have enrolled along with links to proof of continuation in higher education. (the above list should be available in institutional website)	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 5.2.3

Percentage of students qualifying in state/ national/ international level examinations out of the graduated students during the last five years

#### (eg: NET/SLET/ Civil Services/State government examinations etc.)

#### Response: 1.95

# 5.2.3.1 Number of students qualifying in state/National/International level Examination during last five years (eg. SLET, NET, UPSC etc)

Response: 366

File Description	Document	
List of students qualified year wise under each category and links to Qualifying Certificates of the students taking the examination	View Document	
Institutional data in the prescribed format (data template)	View Document	
Provide Links for any other relevant document to support the claim (if any)	View Document	

#### **5.3 Student Participation and Activities**

#### 5.3.1

Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/national/international events (award for a team event should be counted as one) during the last five years

#### Response: 68

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

2022-23	2021-22	2020-21	2019-20	2018-19
44	2	19	3	0
44	2	19	3	0

File Description	Document
Provide the relevant information in institutional website as part of public disclosure	View Document
list and links to e-copies of award letters and certificates	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 5.3.2

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

# Describe the Student Council activity and students' role in academic & administrative bodies within a maximum of 500 words

#### **Response:**

The Student Welfare Division (SWD) is dedicated to the welfare of the on-campus students. We encourage a student's overall development, whether academics or beyond academics, within the framework of the campus rules. We inspire and help our students learn the best practices of humankind and achieve new heights in their respective lives. The division comprises Associate Dean, Chief Warden, Wardens, Superintendents, and Attendants.

The Students' Union, BITS Pilani, is a student body comprising elected members from the GBM and is headed by the President and the General Secretary. It is a channel of communication between the student body and the administration. Its various roles include managing college fests, student bodies, clubs, departments, and associations on campus. The Union earnestly represents the interests of students of BITS Pilani. The Union helps students to improve campus life through the creation and continuation of viable and effective student services, to preserve and protect the traditions and legends of the University, and to support students and student organizations in their academic and community endeavors.

The Student Council of BITS Pilani, Dubai Campus aims to serve as a forum for student opinion and bridge the institute management with students. The council consists of 13 members, including the General Secretary, President, Vice President, Ex. Officio, 5 Hostel Representatives, and 4 Day-Scholar Representatives. Over the past five years, the council has undertaken initiatives such as maintaining the auditorium, forming a student relief fund, arranging extra transportation during exams, maintaining prayer rooms, and addressing issues in Practice School II. Initiatives include e-library resources, extra printers, water dispensers, and a fee portal. The council also seeks to improve student productivity, increase clinic consultation hours, and implement peer-assisted learning services.

The Students' Union Council, SMC, and Election Commission are crucial for student interest and

communication. The SMC, consisting of five members, serves as a communication channel between the Union and mess caterers. The Election Commission, consisting of six Union members, is monitored by the EC. The EC also appoints a faculty member as a faculty advisor and an ex-officio member for advisory purposes. General elections are called for positions such as President, General Secretary, Cultural Secretaries, Sports Secretaries, Technical Secretary, Hostel Representatives, Higher Degree representatives, and members of the Students' Mess Council. Clubs must submit budget proposals and objectives for each semester.

File Description	Document	
Upload any additional information	View Document	
Provide the link for additional information	View Document	

## 5.3.3

The institution conducts / organizes following activities:

- **1.Sports competitions/events**
- 2. Cultural competitions/events
- **3. Technical fest/Academic fest**
- 4. Any other events through Active clubs and forums

Response: A. All four of the above

File Description	Document
Report of the Technical fest/academic fests along with photographs appropriately dated and captioned year- wise.	View Document
Report of the Sports competitions/events along with photographs appropriately dated and captioned year- wise.	View Document
Report of the Cultural competitions/events along with photographs appropriately dated and captioned year- wise.	View Document
Report of the Any other events through active clubs and forums along with photographs appropriately dated and captioned year- wise.	View Document
List of students participated in different events year wise signed by the head of the Institution.	View Document
Institutional data in the prescribed format (data template)	View Document
Copy of circular/brochure indicating such kind of activities	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### **5.4 Alumni Engagement**

5.4.1

Alumni contribution during the last five years to the University through registered Alumni Association

Response: 6239

5.4.1.1 Total Amount of alumni contribution during the last five years (INR in lakhs) to the institution year wise through registered Alumni association:

3025 1239 818 837	
3025     1239     818     837	320
3023 1239 818 837	320

File Description	Document
List of alumnus/alumni with the amount contributed year-wise	View Document
Annual audited statements of accounts of the HEI highlighting the Alumni contribution duly certified by the Chartered Accountant/Finance Officer.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 5.4.2

Alumni contributes and engages significantly to the development of institution through academic and other support system

#### Describe the alumni contributions and engagements within a maximum of 500 words

#### **Response:**

BITS Pilani has more than 186000 alumni through its on-campus (73,000+) and work-integrated learning programs (112,000+), offered at the undergraduate, post-graduate, and doctoral levels. The BITS Pilani Alumni Association (BITSAA International and BITSAA India is the interface between the worldwide alumni and the institute and works on connecting, engaging, and raising funds from alumni.

BITSians have achieved great success in their life as distinguished corporate leaders (7400+ CEO's), pioneering entrepreneurs (6400+ Startup Founders, including those of 12 unicorns), eminent academicians (3300+ VC's, Directors, Deans, HOD's in India and abroad), Professionals in Civil Services and Indian Defense Services (600+) and inspirational leaders in other walks of life – writers, film makers, social service etc. BITS Pilani confers Distinguished Alumnus awards every year to the alumni who have made extra ordinary contributions in different fields – academia 7 Research, Corporate Leadership and Entrepreneurship/Public Life/Philonthropy.

BITSAA International organizes the BITSAA Global Meet every three years from 2011 onwards wherein alumni across the globe participate to network, and contribute back to alma mater. Similarly, BITSian Day is also organized across the globe on the first Friday of August every years to celebrate BITSians success - being a proud to be a BITSian.

Key work of BITSAA international and Alumni Relations Division (ARD)

- Guest lectures
- Assists in the career mentorship program
- Batch meets
- Chapter Meets in various cities
- Funding and promoting Start-ups
- Golden, silver, and bronze jubilee reunion celebrations

The Alumni Relations Division (ARD) of BITS Pilani works closely with the BITSAA. The ARD is headed by an institute-wide Dean, assisted by an Associate Dean in each of the four campuses at Pilani, Goa, Dubai, and Hyderabad. The Dean and Associate Deans are supported by a 12-member professional team with responsibilities such as database, engagement, administration, events, content and outreach, and fundraising.

https://www.bitsaa.org/fundraising

File Description	Document	
Upload any additional information	View Document	
Provide the link for additional information	View Document	

# **Criterion 6 - Governance, Leadership and Management**

#### 6.1 Institutional Vision and Leadership

#### 6.1.1

The institutional governance and leadership are in accordance with the vision and mission of the Institution and it is visible in various institutional practices such as NEP implementation, sustained institutional growth, decentralization, participation in the institutional governance and in their short term and long term Institutional Perspective Plan.

#### **Response:**

Pedagogy in BITS Pilani is aligned with its Vision and aspirations. Since its inception, BITS Pilani has been following the semester system with continuous and internal evaluation. This gave students the freedom to select the courses that best suit their interests. BITS Pilani also offers a number of academic flexibilities, a large number of elective courses to choose from and an enablement of opting courses across disciplines and doing minor in emerging areas. These are in in complete compliance with the NEP 2020's suggested Choice Based Credit System. BITS Pilani has also promoted an outcome-based education approach, which is seen in the consistently high number of entrepreneurs among graduated students from this institution.

BITS Pilani has implemented a geographically distributed and empowered multi-campus governance structure through several divisions and units that include Academic - Undergraduate Studies Division (AUGSD), Academic - Graduate Studies & Research Division (AGSRD), Sponsored Research and Consultancy Division (SRCD), Faculty Affairs Division (FAD), Practice School Division (PSD), Work Integrated Learning Programmes Division (WILPD), International Programs and Collaborations Division (IPCD), and Alumni Relations. Each of these divisions is headed by an Institute-Wide Dean, and there is an Associate Dean at each campus for each division. There are several campus specific Faculty-in-Charges (FICs) responsible for activities at campus level such as Time Table, Centre for Innovation, Incubation & Entrepreneurship, Teaching Learning Center, Societal Development (NSS and Nirmaan), Registration & Counselling, Publications and Media Relations etc. The Academic Governing Council of Deans receives ideas from the Departments, ensuring decentralised conversation at different levels. Non-academic professionals are responsible for important non-academic tasks, such as placement and the WILP. The Institute has a flexible academic structure, managing student life cycle complexities and supporting functions like student accounts, HR, and payroll. Each campus has a Dean, and students participate in various Institute functions as volunteers and core members.

The decentralized structure characterized by participatory management was largely possible due to a pervasive Custom-built [Cisco Tele-Presence] HD video conferencing facility (launched in 2013). Not only we have solved the multi-campus governance problem elegantly, we also used this technology for instruction in specialized 250 capacity classrooms shared live across campuses with great success along with facilitating faculty selection and various committee meetings. This facility is also leveraged in offering a niche entrepreneurship course titled New Venture Creation taught exclusively by entrepreneurs, VCs, Startup mentors over the TP platform, which is otherwise not possible.

Corporate recruiters interview students of other campuses either from one campus location or from their own TP facility. While few corporates have it, BITS probably is the only institute in the country to have

a full scale TP facility across all its campuses.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

#### 6.2 Strategy Development and Deployment

#### 6.2.1

The institutional perspective plan is effectively deployed and functioning of the institutional bodies are effective and efficient as visible from policies, administrative setup, appointment, service rules, and procedures, etc

#### **Response:**

#### **Human Resource Management**

BITS Pilani encourages its faculty members to present papers and attend reputed conferences, seminars, workshops, conclaves, and training programs to promote peer interaction of faculty members with faculty members, researchers, and industry professionals. In this regard, the following policies are in practice.

- **Reimbursable Professional Allowance for the Faculty:** Allowance of Rs. 1 L/year for Assistant Professor at Academic Level L12 or above. Typically, 50% or more of such allowance should be used to present paper(s) at Tier 1 or Tier 2 Conferences identified by the Departments.
- Sabbatical Leave: A faculty member shall avail a one-year sabbatical Leave after completion of six years of continuous service at Assistant Professor Academic Level L12 or above. They can avail this once every six years of continuous employment. During the period of Sabbatical Leave, the faculty member is entitled to full salary (50% of the compensation paid during the Sabbatical Leave, while the balance will be paid in 4 equal installments over the next two years together with interest calculated @ 6%/Yr) and allowances admissible under the standard rules but will not be provided traveling allowance or any other allowance in India or abroad.
- Extra-ordinary Leave (EOL): To enrich the experience of the faculty members, which in turn help BITS Pilani in teaching, research, consulting, and administration, a faculty member is allowed to avail Extra-ordinary Leave (EOL) without pay for up to 2 years subject to conditions.
- **Consultancy Assignments/Projects:** Faculty members of BITS Pilani have expertise in various areas to provide intellectual inputs and significant contributions for solving problems faced by the industry and other organizations. The institute has a comprehensive policy and guidelines that encourage faculty members to engage in consultancy assignments.

#### **Faculty and Staff Recruitment**

**Teaching Staff Recruitment** 

To ensure that top-quality faculty members are recruited across all levels (for tenured positions at oncampus and off-campus/WILP), BITS Pilani has a well-defined, structured and rigorous recruitment process. The recruitment process involves four levels. The lowest/starting level is the **Department Level** Application Short-listing Committee (DLSC) which is constituted for each department at every campus. Typically, at least three faculty members are part of this committee. This is followed by the Campus Level Short-listing Review Committee (CLSC), which is campus-specific and headed by the Director (of the specific campus), Chairperson (nominated by the campus Director), two or more Professors (appointed by the campus Director), Associate Dean - Faculty Affairs Division (of the respective campus), all other Professors and Associate Professors from the Department. The next level is the University Level Short-listing Review Committee, which has the Vice-Chancellor or his nominee as Chairman, Dean of Faculty Affairs as Convener, and, Directors of all Campuses. The final level is the University Level Selection Committee, where the Vice-Chancellor is the Chairman, the Dean of Faculty Affairs as Convener, two eminent external experts in the concerned discipline/sub-area, the Director of one of the four campuses (nominated by the Vice-Chancellor), Directors of the remaining BITS campuses (as Special Invitees), Chairmen of the Department Level short-listing committee from one of the campuses in the concerned department/discipline.

File Description	Document
Upload any additional information	View Document
Strategic Plan and deployment documents on the website	View Document
Provide the link for additional information	View Document

#### 6.2.2

Institution implements e-governance in its operations. e-governance is implemented covering the following areas of operations:

- 1. Administration including complaint management
- 2. Finance and Accounts
- 3. Student Admission and Support
- 4. Examinations

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

File Description	Document
Screen shots of user interfaces of each module reflecting the name of the HEI	View Document
Institutional expenditure statements for the budget heads of e-governance implementation ERP Document	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Annual e-governance report approved by the Governing Council/ Board of Management/ Syndicate Policy document on e-governance	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

### **6.3 Faculty Empowerment Strategies**

#### 6.3.1

# The institution has performance appraisal system, effective welfare measures for teaching and non-teaching staff and avenues for career development/progression

#### **Response:**

The *Faculty Performance Management System (PMS)* has been designed to encourage periodic constructive discussions between the faculty and his/her HoD regarding performance and progress during the assessment period. The PMS has been instituted to enhance the professional growth and development of the faculty members and has the following key activities in a cycle:

# Key Activity (KA)

1. Goal Setting for the Academic Year (AY) based on Performance Expectation Grid

- 2. Self-appraisal for the previous year(s)
- 3. Annual Performance Review (APR) with the HoD
- 4. Review by Cross Campus Faculty Appraisal Committee (CCFAC)
- 5. Review by Leadership and Release of Appraisals

# **Performance Expectation Grid**

All faculty members are expected to perform in the areas of (i) Teaching, (ii) Research and

(iii) Institutional Contribution. Performance Expectation Grid in these 3 areas differ and are clearly defined for the positions of Assistant Professor Gr-I, Associate Professor, and Professor. Faculty members are expected to apportion their involvement in these 3 areas in terms of % workload.

# **Promotional Avenues for Faculty**

Tenured faculty members (regularized as on a certain date), at the level of Assistant Professors, Associate Professors, and Professors, provide information on their contributions in teaching, research, industry engagement, and other institutional contributions.

# Performance Appraisal & Promotional Avenues for Non-Teaching Staff (NTS):

At BITS Pilani, we have 21 levels of NTS designations which gives enough avenues and opportunities for career growth both vertically and laterally.

NTS performance is evaluated under *Development Oriented Performance Management System* DOPMS) where employees undertake self-evaluation that is reviewed and rated by the reporting manager. Campus-level committees evaluate the ratings and recommendations to remove any biases in the manager's evaluation that is further reviewed by a University level committee and approved by the management.

Employees at BITS Pilani get an annual increment of 3%. Through DOPMS, undertaken in alternate years, employees are given additional increments/promotions based on performance and potential. The latest cycle was implemented in Jan 2021 where out of 542 employees eligible for assessment 183 (33.8%) were promoted and 180 (33.2%) were given additional increments.

# **Benefits & Welfare Measures**

Apart from the annual 3% increment, the DA is revised immediately and as per Central Government notification, usually twice a year. The statutory benefits of PF & Gratuity,

Maternity benefits etc. are followed. Employees are provided with 15 Casual Leaves, 20 Half Pay Leaves per calendar year. Vacation leave (in summer months) of 30 days with an additional 50% salary is payable for the detained period during vacation. Leave Travel Concession of 100% travel expenses once (to home town) in a block of 2 years for self and family by train. Medical expenses, both Out Patient & Hospitalisation are reimbursed to an extent of 90% as per BITS Medical policy (including dependent parents). On Campus Medical Centres with provision of OPD and observations along with pathological laboratories and a Pharmacy are available at all campuses for diagnosis & treatment of the employees.

File Description	Document	
Upload any additional information	View Document	
Provide the link for additional information	View Document	

#### 6.3.2

Percentage of teachers provided with financial support to attend conferences/workshops and

#### towards membership fee of professional bodies during the last five years

#### Response: 29.23

# 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

2022-23	2021-22	2020-21	2019-20	2018-19
282	265	189	310	195

File Description	Document
Policy document on providing financial support to teachers	View Document
Institutional data in the prescribed format (data template)	View Document
E-copy of letter/s indicating financial assistance to teachers and list of teachers receiving financial support year-wise under each head	<u>View Document</u>
Audited statement of account highlighting the financial support to teachers to attend conferences/workshops and towards membership fee for professional bodies.	<u>View Document</u>
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 6.3.3

Percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDPs)/ Management Development Programmes (MDPs) during the last five years

Response: 8.1

6.3.3.1 Total number of teachers who have undergone online/ face-to-face Faculty Development Programmes (FDP)/ Management Development Programs (MDP) during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
158	44	66	13	63

File Description	Document
Refresher course/Faculty Orientation or other programmes as per UGC/AICTE stipulated periods, as participated by teachers year-wise.	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
E-copy of the certificates of the program attended by teachers.	View Document
Annual reports highlighting the programmes undertaken by the teachers	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 6.4 Financial Management and Resource Mobilization

#### 6.4.1

Institutional strategies for mobilisation of funds other than salary and fees and the optimal utilisation of resources

Describe the resource mobilisation policy and procedures of the Institution within a maximum of 500 words

#### **Response:**

The Institute's financial management follows a structure that imbibes the best of professional practices from the leading corporate houses, instilling efficiency, transparency, and agility. The Accounts and Finance team is led at various levels by top professionals who are qualified Chartered Accountants and equivalently qualified professionals.

The institute makes a *strategic plan* for 10 years with focus on growth in research, teaching, entrepreneurship, infrastructure, starting of new courses, opening of new off campus centres etc. Based on key focus areas, a financial plan is made covering various sources of funds and a plan for utilization of the same. As a policy, the institute ensures that the planned expenditure is within the overall plan for fund mobilization. The strategic plan is reviewed at a regular frequency and updated based on actual scenarios.

Apart from this, a detailed budget is drawn at the beginning of the year, which includes the operating expenditure and capital expenditure plan for the year. Considering the budget expenditure, a plan for the mobilization of funds is made. The sources of funds include student fees, research grants from the government and industry, contributions from Alumni, CSR funds from corporates etc. The utilization of funds is carefully planned earmarking funds for salaries, scholarships, research, and other important operations of the institute. The Annual Budget is presented to the Finance Committee and subsequently to the Board of Governors for approval.

Once the budget is approved by the Board, there is a structured process for ensuring adherence to the budget. Before spending any approved budget expenditure, the Finance officer and his team check the availability of balance budget against the respective line items. Any unbudgeted expenditure has to undergo the requisite approval process with approving authorities defined at the campus level and university levels.

The Finance Officer plays an important role in ensuring overall financial discipline across the university. There are adequate internal controls to ensure proper utilization of funds for the stated purpose. The institute appoints internal auditors every year and assigns 4-5 focused areas to the internal auditors for a deep dive into specific processes to identify any inefficiencies and suggest process improvements. The progress on observations made by the internal auditors is monitored by the institute leadership team at a regular frequency.

The institute also appoints statutory auditors amongst the top 4 global auditing companies. The statutory audit team checks the various revenue and expenditure items to ensure the same is proper and accounted for as per applicable rules and regulations. Physical verification of various assets and stores items is done on a periodical basis to ensure the same is matching as per books of accounts.

Bank reconciliations and other reconciliations are done at a regular frequency to avoid any surprises at the end of the year. The applicable taxes (GST, TDS) are deducted/deposited with respective authorities to ensure statutory compliance. The annual audited financial statements are presented to the board for approval.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

#### 6.4.2

Funds / Grants received from government bodies/non government and philanthropists during the last five years for development and maintenance of infrastructure (not covered under Criteria III and V )

**Response:** 2966.28

6.4.2.1 Total Grants received from government and non-government bodies and philanthropists for development and maintenance of infrastructure (not covered under Criteria III and V) year-wise during the last five years (INR in *Lakhs*)

2022-23	2021-22	2020-21	2019-20	2018-19
129.80	761.11	1042	885.80	147.57

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Copy of the sanction letters received from government/ nongovernment bodies and philanthropists for development and maintenance of infrastructure	<u>View Document</u>
Annual audited statements of accounts highlighting the grants received.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 6.4.3

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

Enumerate the various internal and external financial audits carried out during the last five years with the mechanism for settling audit objections within a maximum of 500 words

#### **Response:**

#### The institution conducts internal and external financial audits regularly

BITS PILANI follows the accrual system of accounting and complies with the Indian Accounting Standards (Ind AS) recommended by the Institute of Chartered Accountants of India.

The Institute has a smooth and error-free internal control system and the system is continuously reviewed for operational efficiency at regular intervals through a thorough internal audit of the institute by a reputed internal audit firm of the country.

The institute follows a robust budgetary system coupled with strict internal controls and the financial activities are reviewed every quarter through a Management Information System (MIS) along with budgetary controls.

#### **Internal Audit**

The Internal Audit is conducted every year by M/s. Aneja and Associates, Mumbai for all the campuses, including Dubai, which includes a detailed scrutiny of controls and processes of various activities like Admissions, Purchases, Student Welfare Divisions, Administration etc.

#### **Typical Internal Audit Observations:**

1. Internal audit control implemented through online approval system so that purchase orders/work orders can be made only after online approval from the Dean Admin and Director.

2. Streamlined the process of awarding the outsourcing contracts through a committee with Chief Purchases and other faculty members including finance and accounts.

#### **Statutory Audit**

The statutory audit is conducted every year by M/s. S R Batliboi & Associates LLP, Chartered Accountants, Gurgaon. The audit commences in the month of July for all the campuses of BITS Pilani and is concluded by the end of August every year.

The statutory audit of BITS Dubai is conducted every year by M/s. K P M G Lower Gulf Ltd. The audit commences in the month of September and is concluded by the end of October every year.

The Accounts and Finance section of each campus of BITS Pilani plays a pivotal role in the conduct of audits and providing supporting and other evidence and answers to audit observations and queries.

The financial statements of BITS Pilani are finalized in Pilani campus and reviewed by the senior management and then the Income Tax returns are filed before the due date every year.

#### The below statutory audit suggestions were implemented in the last five years:

- 1. TDS reconciliation with 26AS
- 2. GST implementation
- 3. Digital documentation of vouchers and other important documents for audit purposes

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

#### 6.5 Internal Quality Assurance System

#### 6.5.1

Internal Quality Assurance Cell (IQAC)/ Internal Quality Assurance System (IQAS) has contributed significantly for institutionalizing the quality assurance strategies and processes, by constantly reviewing the teaching-learning process, structures & methodologies of operations and learning outcomes, at periodic intervals

Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes visible in terms of –

• Incremental improvements made for the preceding five years with regard to quality (in case of first cycle)

• Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives (second and subsequent cycles)

Describe two practices institutionalized as a result of IQAC initiatives within a maximum of 500 words

#### **Response:**

#### Two best practices promoted by IQAC and Institutionalised:

- 1. In a proactive effort towards enhancing the academic experience and fostering innovation among undergraduate students, the Internal Quality Assurance Cell (IQAC) of BITS Pilani embarked on a quality improvement initiative. This initiative, initially discussed across various administrative levels and subsequently approved by the appropriate authorities, allocated a total of 50 lakhs INR as funding support for undergraduate students' projects during the academic year 2018-19 across the three Indian campuses of BITS Pilani. The scheme garnered significant interest and appreciation from students, leading to its institutionalization as a standard practice. Under the astute guidance of the Dean Academics, a dedicated committee was formed to oversee and monitor the implementation of this initiative. Over time, there has been a notable increase in the participation of undergraduate students in the application process, reflecting a growing enthusiasm for research and innovation within the student body. Through a rigorous and competitive selection process, an increasing number of students have been granted financial support of up to 50 lakhs from the institute's fund, facilitating the realization of their innovative projects. The meticulous attention to detail is evident in the attachment of the minutes of meetings of the grant committee, ensuring transparency and accountability in the allocation of resources. This initiative not only empowers students to pursue their academic interests but also reinforces BITS Pilani's commitment to fostering a culture of research and innovation among its undergraduate community.
- 2. Recognizing the significance accorded to the quantity and caliber of active Memorandums of Understanding (MOUs) by esteemed accrediting bodies such as the National Assessment and Accreditation Council (NAAC) and the University Grants Commission (UGC), the Internal Quality Assurance Cell (IQAC) of BITS Pilani initiated a quality enhancement endeavor. This initiative underscored the necessity of formalizing MOUs in cases where faculty or students were already engaged in academic or research and development collaborations with counterparts at other reputable universities. Subsequently, this imperative was institutionalized through the establishment of a Dean position dedicated to overseeing and facilitating the process of signing formal MOUs. As a result of these concerted efforts, there was a discernible and progressive increase in the number of active MOUs. This strategic approach not only reflects BITS Pilani's commitment to aligning with best practices endorsed by accreditation agencies but also demonstrates its proactive stance in fostering fruitful collaborations and partnerships with other academic institutions. By formalizing these agreements, BITS Pilani not only enhances its academic and research ecosystem but also expands its global network, thereby enriching the learning experiences of its faculty and students alike. This initiative stands as a testament to the institution's dedication to continuous improvement and its pursuit of excellence in academic endeavors.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

### 6.5.2

Institution has adopted the following for Quality assurance:

- 1. Academic and Administrative Audit (AAA) and follow up action taken
- 2. Conferences, Seminars, Workshops on quality conducted
- **3.** Collaborative quality initiatives with other institution(s)
- 4. Orientation programme on quality issues for teachers and students
- 5. Participation in NIRF and other recognized ranking like Shanghai Ranking, QS Ranking Times Ranking etc
- 6. Any other quality audit recognized by state, national or international agencies

Response: A. Any 5 or more of the above

File Description	Document
Supporting documents pertaining to NIRF (along with link to the HEI's ranking in the NIRF portal) / NBA / ISO as applicable and valid for the assessment period.	<u>View Document</u>
List of Orientation programmes conducted on quality issues for teachers and students along with geotagged photos and supporting documents	<u>View Document</u>
List of Conferences / Seminars / Workshops on quality conducted along with brochures and geo- tagged photos with caption and date.	<u>View Document</u>
List of Collaborative quality initiatives with other institution(s) along with brochures and geo-tagged photos with caption and date.	<u>View Document</u>
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 6.5.3

Incremental improvements made for the preceding five years with regard to quality (in case of first cycle NAAC A/A)

#### Post accreditation quality initiatives (second and subsequent cycles of NAAC A/A)

#### **Response:**

#### Implementation of an IT policy

https://www.bits-pilani.ac.in/wp-content/uploads/BITSUserITPolicy.pdf

#### For more details about given below points:

https://ikac.bits-pilani.ac.in/NAAC-SSR\_2018-19\_2022-23/Criteria\_6/6.5.3/6.5.3\_write-up.pdf

#### 1. Compliance to Deemed University UGC Regulation: No pending compliance issues presently.

The following three formal UGC compliances were completed by 2018:

a) Goa Campus Approval

b) Hyderabad campus approval

c) WILP approval

#### 2. Research Methodology course to be offered to all Ph.D. scholars:

A compulsory Research Methodology course is part of the requirements for all Ph.D. students.

#### **3. IQAC Functioning, AQAR Submission:**

IQAC is functioning smoothly. The UGC structure followed in the Committee structure. All AQAR submissions as per norms completed till 2022-23.

#### 4. Research Metric improvement as per internationally recognized indices:

A new external grant of Rs. 54.66 cr was received in FY23. The 5-year average annual grant increased by 306% from Rs. 18.5 cr/yr (FY13-17) to Rs. 74.2 cr/yr (FY18-23). In FY 2023, 41 patent applications were filed and 16 patents were granted this year. The annual number of publications has grown with a CAGR of 23% since 2017 and the CAGR for an annual number of citations is nearly 35%. Of our indexed publications, over 37% have at least one international co-author, and over 42% have at least one national co-author.

#### **5.** Contribution to National Mission projects

BITS Pilani is a recipient of two major grants during 2020-23: the DBT-BUILDER grant of Rs. 21.75 cr to establish Interdisciplinary Research Centres in Life Sciences and the DST-PURSE grant of Rs. 23.4 cr.

#### 6. Strengthen Alumni network to maximize the potential:

- a) Alumni registered on database [Almaconnect]: 15,903 (Dec 2018): 70470 (2022-23)
- b) Alumni & CSR fundraising: Rs. 0.7 Cr (2015-16) 32.6 Cr (2022-23)

#### 7. PhD enrolment and output:

Doctoral student enrolment has grown at a CAGR of over 20% in the last 5 yrs, now it is 18782 - 47.3% of which are female. the Institute fellowship today supports around 44% of the PhD students. Graduation: AY 2016-17: **91** ; AY 2022-23: **195**.

#### 8. Documentation on the students' social diversity profile:

This is properly collected at the time of admission and is part of the ERP profile data. Customised reports can be generated.

#### 9. Functionalizing the MoUs signed to result in annual activities and outcomes:

35 MOUs are in active use for various collaborative activities (e.g. bilateral research work, student mobility for internships, faculty visit programmes) by BITS Faculty Members and students at the leading foreign universities. BITS has started BITS RMIT Higher Education academy and has admitted students in 4 disciplines in UG and PhD program.

#### **10.** Translational research to benefit the society and to improve the economy:

Translational research at BITS Pilani serves as a dynamic force for societal advancement and economic growth. With a commitment to innovation and collaboration, BITS Pilani's translational research initiatives aim to bridge the gap between academia and industry, translating cutting-edge discoveries into practical solutions that benefit society and drive economic prosperity.

#### (a) Medical Technologies

- (b) Biomedical Interventions
- (c) Industry Partnerships
- (d) Startup Ecosystem
- (e) Sustainable Technologies
- (f) Social Impact Initiatives

#### **11. ERP** implementation as an all-pervading tool to benefit all operations

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

# **Criterion 7 - Institutional Values and Best Practices**

#### 7.1 Institutional Values and Social Responsibilities

#### 7.1.1

Institution has initiated the Gender Audit and measures for the promotion of gender equity during the last five years.

Describe the gender equity & sensitization in curricular and co-curricular activities, facilities for women on campus etc., within 500 words

#### **Response:**

#### **BITS Pilani, Pilani campus**

BITS Pilani is dedicated to promoting gender equity and sensitization among students, faculty members, and staff. The institute has initiated several initiatives, including an orientation program for newly admitted students on gender equality and awareness, a policy document on gender and sexual diversity, and participation in the GATI (Gender Advancement for Transforming Institution) initiative. In 2023, BITS Pilani was recognized as a "GATI Achiever" by the Department of Science & Technology (DST) Govt. of India. The institute also offers a dedicated elective course on gender studies for undergraduate students, and conducts research on gender-specific issues. Additionally, the institute organizes various talks on gender equity and sensitization for all students, faculty members, and non-teaching staff.

#### **BITS Pilani, Hyderabad Campus**

RMIT and BPHC have collaborated with gender champions to promote gender equity in curricular activities. The HSS department at BITS Pilani Hyderabad campus offered courses like Intro to Gender Studies, Caste and Gender in India, Local Governance and Participation, and Pop liter. & cult. of Asia. Gender champions also organized lectures on gender issues, such as "From patchy traces to bold contours" by Dr. Nazia Akhtar, "From patchy traces to bold contours" by Prof. Thomas Waugh, and "Supporting climate resilience among the urban poor: Experiences from Honiara, Solomon Islands" by Dr. Serene Ho, respectively. They also screened a movie, "Battle of the Sexes," and published an article on women's sports challenges. Gender champions also organized a poster making competition on Women's Day, raising awareness about the relationship between rights and duties in gender equity. They also collaborated with the Department of Visual Effects, BPHC, to compile and edit gender sensitizing advertisements.

#### **BITS Pilani, Goa campus**

BITS, Goa Campus is a residential campus dedicated to promoting gender equity and preventing sexual harassment. The institute has established an Internal Complaints Committee to address complaints and promote gender sensitization among students. Permanent posters are displayed on campus to highlight the various categories of sexual harassment. A Gender Champion cell is also present, organizing consciousness-raising programs and events. Anchor, a student organization, aims to create a campus free from homophobic ideas and actions. The institute is working on a DST project, Gender Advancement in Transforming Institutions, to eliminate gender biases and bring about systemic changes. Initiatives

include sessions on sexual harassment prevention, awareness sessions, gender sensitization talks, and International Women's Day celebrations.

#### **BITS Pilani, Dubai campus**

The institute offers gender equity in child care, with female employees entitled to two additional breaks per day for 18 months after delivery. A day care centre is available for employees' children, providing TV, toys, books, and a pantry. A clinic with a doctor and 24/7 nurse is available for all stakeholders. A separate hostel block is available for female students, with well-equipped toilets. Female employees can combine maternity leave with annual leave and can take leave without pay for 100 consecutive days due to illness. Maternity leave is 45 days, with full pay for one year of continuous employment. Paternity leave is 5 working days for full-time employees.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

## 7.1.2

The Institution has facilities for alternate sources of energy and energy conservation measures 1. Solar energy

- 2. Biogas plant
- 3. Wheeling to the Grid
- 4. Sensor-based energy conservation
- 5. Use of LED bulbs/ power efficient equipment
- 6. Wind mill or any other clean green energy

Response: A. Any 4 or more of the above

File Description	Document
Permission document for connecting to the grid from the Government/ Electricity authority.	View Document
Institutional data in the prescribed format (data template)	View Document
Geo-tagged photographs of the facilities.	View Document
Bills for the purchase of equipment's for the facilities created under this metric	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

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

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

#### **Response:**

#### Pilani

M/s. Cleanmax IPP 1 Pvt. Ltd. has installed an ongrid rooftop solar power plant with a total capacity of 994 kWP, providing power to 14 blocks on the campus. The plant is commissioned in Capex mode and has a capacity of 2 Ton per day. The campus also has a solid waste management facility with a 2 Ton per day capacity organic waste processing plant. The by-product is organic manure used as a soil improviser. The campus has two Sewage Treatment Plants (STP) with capacities of 1 MLD and 1.5 MLD each, working round the clock to treat sewage generated by the campus residents. Flushing water is sourced from the in-house sewage treatment plant, and the sludge generated at STP is transferred to a drying bed. Water conservation measures include material issued through building stores and nine groundwater recharge points across the campus. The total cost of these measures is Rs.16,84,554/-.

#### Dubai

BITS, Pilani Dubai is committed to waste management, focusing on solid, liquid, and biodegradable waste. Solid waste is deposited in dustbins and collected by housekeeping staff, while liquid waste is recycled through the Dubai Municipality's Sewage Treatment Plant. Biomedical waste is disposed of through Globalex Enviro LLC, while e-waste is collected centrally on campus and donated to EnviroServe. BITS Pilani participates in UAE's Largest E-Waste collection drive through Sharaf DG, which includes e-waste bins for students to contribute. The waste recycling system includes different types of bins, segregated paper and cardboard waste, and hazardous chemicals and radioactive waste. The institute stores hazardous chemicals in separate fire-rated cabins, with lower concentrations used in Chemistry and Chemical Engineering labs. Hazardous waste is segregated and stored in labelled separate boxes for disposal according to Dubai Municipality guidelines. The initiative aims to create enthusiasm for waste management and promote responsible waste disposal.

File Description	Document
Relevant documents like agreements/MoUs with Government and other approved agencies	View Document
Geo-tagged photographs of the facilities	View Document
Any other relevant information	View Document

### 7.1.4

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

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

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

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Green audit reports on water conservation by recognised bodies	View Document
Geo-tagged photographs of the facilities.	View Document
Bills for the purchase of equipment's for the facilities created under this metric.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 7.1.5

#### Green campus initiatives include

Describe the Green campus initiative of the institution including Restricted entry of automobiles, Use of Bicycles/ Battery powered vehicles, Pedestrian Friendly pathways, Ban on use of Plastic, landscaping with trees and plants etc in 500 words

#### **Response:**

The institute has paved the way for a greener future with a multipronged strategy that includes green campus initiatives and an abundance of eco-friendly activities.

BITS Pilani's green campus projects are the mainstay of its sustainability efforts. The institute has used renewable energy sources, such solar electricity, to make substantial progress in energy conservation. Many of the buildings have rooftop solar panels, which lessen the institute's dependency on fossil fuels while also generating sustainable energy. The effect is further amplified by energy-efficient appliances and lighting systems, which guarantee that every watt of electricity is used carefully.

One of the cornerstones of our Green Campus initiative is the restricted entry of automobiles. Landscaping plays a crucial role in our Green Campus initiative. The institute has more than 700 trees

and 100 indoor plants. All the plants, landscaping areas, and trees are maintained by treated water (recycled water) from the municipality. The institute has the world's second largest Terratium as center of attraction and it sounds the sustainability. It is the biggest terrarium in MENA region. Campus green space is improved and afforestation initiatives help when tree planting drives are arranged in partnership with neighborhood environmental organizations. Instilling a sense of environmental responsibility, clean-up efforts encourage participation from academics, staff, and students in maintaining the surroundings' visual appeal and cleanliness. The campus offers plenty of greenery and safe settings, making it a suitable home for peacocks. Minimizing disruptions to nesting locations, offering sufficient food supplies, and educating the campus community about the value of living in harmony with nature are some of the initiatives being undertaken. Frequent monitoring promotes a healthy habitat where these magnificent birds can thrive by ensuring the well-being of the peacock population. One indication of BITS Pilani's responsibility as an environmental steward is the organization's commitment to peacock conservation.

	-
File Description	Document
Policy document on the green campus/plastic free campus.	View Document
Institutional data in the prescribed format (data template)	View Document
Geo-tagged photographs/videos of the facilities.	View Document
Circulars and report of activities for the implementation of the initiatives document	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

#### 7.1.6

Quality audits on environment and energy are regularly undertaken by the institution

The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environmental audit

- 2. Energy audit
- 3. Clean and green campus recognitions/awards
- 4. Beyond the campus environmental promotion and sustainability activities

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

File Description	Document
Report on environmental promotional activities conducted beyond the campus with geo-tagged photographs with caption and date	<u>View Document</u>
Policy document on environment and energy usage Certificate from the auditing agency.	View Document
Institutional data in the prescribed format (data template)	View Document
Green audit report of all the years from recognized bodies	View Document
Certificates of the awards received from recognized agency (if any).	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

### 7.1.7

#### The Institution has Differently-abled (Divyangjan) friendly, barrier free environment

Write description covering the various components of barrier free environment in your institution in maximum of 500 words

- Built environment with Ramps/lifts for easy access to classrooms
- Divyangjan friendly washrooms
- Signage including tactile path, lights, display boards and signposts
- Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment
- Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading

#### **Response:**

At BITS Pilani campuses, a concentrated effort has been undertaken to establish a welcoming environment for students with disabilities, in order to guarantee inclusivity and accessibility for all students.

Every campus has a variety of buildings and amenities that are built to accommodate people of all abilities. To make it easier for students with physical disabilities to get about, this includes wheelchair ramps, elevators, and accessible toilets. Except single-story building all the essential buildings like Academic buildings and Library are facilitated with Lifts and Ramps. Every Hostel & Mess is provided with ramps. Rest all the ongoing buildings have a provision of both. All the academic buildings and

renovated hostels are provided with Disabled friendly washrooms

Every building and road segment is adorned with appropriate signage and display boards with proper illumination.

File Description	Document	
Upload supporting document	View Document	

#### 7.1.8

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

#### **Response:**

BITS Pilani is committed to being inclusive and has a diverse population of students, faculty, and staff hailing from different parts of the country and abroad. The Institute takes proactive efforts to provide an inclusive environment and has an open policy of selection for its students and employees based on merit alone. There are no discriminatory policies and no provision exists for reservation based on caste, ethnicity or religion. Meritorious students, highly acclaimed faculty, and competent staff join BITS from different parts of the country and abroad making the campuses extremely rich in diversity.

BITS Pilani is one of the few institutions which has been awarded **Project GATI** (Gender Advancement for Transforming Institutions) – Framework Development for Advancing Gender Equality in Science and Technology and Higher Education in India with a UK partner University. GATI is an innovative overarching Pilot Project supported by DST, GoI. It ushers a new intervention programme for gender equality in S&T institutes.

With a broader perspective of gender diversity, BITS Pilani has set up an 'ANCHOR- Gender and Sexuality Cell' which is the first of its kind. This cell formed by BITSians is a group for Queer, Questioning, and Supporting members. It was founded in 2012 to raise awareness about LGBTQ+ issues and has evolved to cover issues of Gender & Sexuality – becoming the Gender and Sexuality Cell, led by BITSians.

BITS Pilani actively promotes and participates in several regional and cultural activities which are conducted all year round. All religious and cultural festivals are celebrated with great enthusiasm and fervour in its campuses. There are more than **fifteen regional cultural associations** that aim to enrich the social and cultural life on the Institute campuses. These associations arrange various cultural programs on music, dance, and drama to celebrate our cultural diversity and also arrange food festivals showcasing their respective local cuisines.

Students annually **organize 'OASIS' which is one of the largest cultural festivals** in the country. Apart from the annual cultural event, students also conduct technical and sports events which are open to all colleges and institutions. Our faculty, staff, and students regularly participate in the activities conducted

by various clubs and departments in the institute like the **music**, **drama**, **arts**, **painting**, **and photography clubs**. Social, cultural, economic, and scientific campaigns and activities conducted by these clubs and NSS promote harmony, create awareness on national issues and showcases our rich culture and heritage.

Contributing to the unique diversity of our nation through different cultural associations and also creating necessary awareness, rests with today's youth and our students fully realize this. BITS Pilani strives to contribute to **"Ek Bharat Shreshtha Bharat"** – a programme which aims to enhance interaction & promote mutual understanding between people of different states/UTs through the concept of state/UT pairing.

BITS Pilani, actively encourages its students to participate in various socio-cultural activities to build an inclusive environment where they can learn and share to be tolerant and harmonious towards cultural, regional and linguistic groups.

File Description	Document
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View Document
Any other relevant information	View Document

#### 7.1.9

Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens

Describe the various activities in the Institution for inculcating values for being responsible citizens as reflected in the Constitution of India within 500 words.

#### **Response:**

A responsible and informed community can be established by making students and staff aware of their rights, duties, obligations, and values as outlined in the constitution.

Constitution: Our rights, obligations, and responsibilities as citizens are outlined in the Indian Constitution. Every year, a number of regional and national celebrations are held, including Founders Day, National Unity Day, Gandhi Jayanti, Independence Day, and Republic Day. On national holidays such as Independence Day and Republic Day, a national promise is given. Through their patriotic songs, the students eloquently convey India's unified diversity, rich cultural legacy, and ardor of patriotism.

Values: Students' environment studies course covers forest acts and environmental issues, promoting democratic principles. World Environment Day reasserts the importance of sustainable development initiatives, while International Day of Yoga encourages yoga practices and conversations. To promote cultural values, regional groupings organize cultural events.

Rights: Sexual Harassment and Gender Equity are crucial issues in education, with students actively participating in election campaigns and promoting gender parity through initiatives like the Gender Champion cell. Seminars and workshops on citizen rights, obligations, and responsibilities, such as Right to Information, are also held.

Duties: Acknowledging their responsibilities can help workers and students grow into responsible members of society. Numerous student organizations, including the Social and Environment Club, NSS, Nirmaan, and Rotaract, actively organize activities to foster civic virtues and encourage contributions to the benefit of our nation. Their dedication to societal concerns is demonstrated by yearly events including the MANTHAN NGO conference, IGNITE social fest, project Parishkar, an education support program, and SPECTRUM, an event for exceptional children.

Responsibilities: Teaching staff members and students about their obligations can foster a feeling of civic engagement and encourage them to take an active role in society. Student groups have partnerships with national non-governmental organizations (NGOs) like Nirmaan, through which staff members and students engage in active support of national causes such as underprivileged children's education, contributions to Prime Minister care funds for flood relief, etc. It's usual to visit orphanages, assist migrant workers, organize clothing and book drives, hold health camps, raise awareness of pollution, observe Air Force Day and celebrate World Water Day.

In addition, a number of organizations, societies, and student unions participate in initiatives pertaining to civic engagement, youth and democracy, voting awareness, and the advancement of democracy and human rights. Well-planned teamwork fosters originality and ingenuity. These events, which are usually organized by the Students Welfare Division (SWD) office, are essential to the involvement of the student body on all BITS Pilani campuses. Voting booths for local panchayat, state, and federal elections are always set up on campus, and staff members as well as qualified students are invited to take part. On campus, a regular camp is also held to update voter lists.

File Description	Document
Details of activities that inculcate values necessary to nurture students to become responsible citizens	View Document
Any other relevant information	View Document

#### 7.1.10

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

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

<b>Response:</b> A. All of the above					
File Description	Document				
Report on the student attributes facilitated by the Institution	View Document				
Policy document on code of ethics.	View Document				
Institutional data in the prescribed format (data template)	View Document				
Handbooks, manuals and brochures on human values and professional ethics	View Document				
Document showing the Code of Conduct for students, teachers, governing body and administration as approved by the competent authority.	View Document				
Constitution and proceedings of the monitoring committee.	View Document				
Circulars and geo-tagged photographs with date and caption of the activities organized under this metric for teachers, students, administrators and other staff.	View Document				
Provide Links for any other relevant document to support the claim (if any)	View Document				

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

#### 7.2 Best Practices

#### 7.2.1

Describe two best practices successfully implemented as per NAAC format provided in the Manual.

**Response:** 

#### **Objectives of the Practice**

By providing a conducive innovation and entrepreneurial ecosystem to the brightest young minds and faculty to translate ideas into successful ventures and solutions to real world problems.

#### The objectives of this practice are:

- 1. To develop managerial and technical capabilities and entrepreneurial mindset in students and faculty
- 2. To enable students to create new ventures contributing to innovation and employment generation

3. To enable faculty and research students to translate their research outcome into a market-oriented solution in terms of new products/processes/ technologies

#### The Context

One of the greatest strengths of BITS Pilani lies in the intellectual capabilities of its students and faculty members. In order to channelize these capabilities to create innovations, new ventures, employment, and solutions for market / societal problems requires a conducive innovation and entrepreneurial ecosystem within the institute to overcome individual (fear of failure, avoidance of risk, lack of confidence, and exposure) and structural barriers (access to a seed fund, mentoring, infrastructure support, legal processes, and services). The priority to this requirement was given in a mission mode as a part of BITS Pilani's strategic road map towards its Vision 2020 that led to various dedicated initiatives namely – university-wide administrative structure and offices (CIIE – Centre for Innovation, Incubation and Entrepreneurship) across campuses, setting up of TTO (Technology Transfer Office), Incubators across campuses, Tinkering labs, strengthening alumni connect for mentoring, providing seed fund etc.

#### The Practice

Student's related practices and its uniqueness: For developing innovative and entrepreneurial skills among students great emphasis has been given on academic curriculum that involves structured & experiential learning-based courses namely – new venture creation, creating and leading entrepreneurial organization, product design, sustainable manufacturing, marketing research, digital marketing, design thinking, minor in entrepreneurship, etc. Apart from these structured courses, students are encouraged to take semester-long project-oriented and thesis courses that help them to investigate and deepen their understanding about entrepreneurship.

The innovative and entrepreneurial ecosystem is further strengthened for the students to take part in the incubation program where the student teams are provided office space facility, mentoring, legal services, and seed fund support (range Rs. 5 lakhs to Rs. 50 lakhs. The student body is given a free hand under the Center for Entrepreneurial Leadership (CEL) to run various programs within and outside campus to promote entrepreneurial culture through their various projects such as international-level events named "Conquest", summer in start-up, rural entrepreneurship development, entrepreneurship week, etc.

The academic courses are unique in terms of their experiential learning component that varies from 40% to 100% depending on the course. This experiential learning component is further enriched with continuous mentoring and feedback both from alumni and faculty.

Faculty-related practices: BITS Pilani encourages faculty members to translate their research output into a product/process/technology to meet the market needs. In order to make this happen faculties are encouraged to work on collaborative interdisciplinary research projects. The institute has a well-defined IPR policy having clear clauses related to IPR ownership and revenue sharing.

File Description	Document
Best practices as hosted on the Institutional website	View Document
Any other relevant information	View Document

#### 7.3 Institutional Distinctiveness

#### 7.3.1

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

#### **Response:**

#### Area: Industry Engagement

Industry engagement is one of the cornerstones of the educational philosophy of BITS Pilani. BITS Pilani views education as a continual engagement and experience and ensures that the learning experience is integrated seamlessly not only across its classrooms and laboratories but also in the industry, as exemplified by two of its largest and most successful such programmes, **Work Integrated Learning Programmes (WILP) and Practice School (PS)** which are outstanding models of industry-academia cooperation. WILP enables Employed professionals to pursue formal educational programs at BITS while they are working whereas Practice School (PS) is an innovation seeking to link industry experience with university instruction for students studying at the different campuses of BITS.

We believe no other institute in the country has implemented industry engagement at this scale and eminence – it is by far the best. The summary statistics is given below:

**PS:** No. of PS-II industry stations: 576. Number of Pre-placement Offers: 1461 (40% of batch) – by far the highest in the country. Total stipend received by the students from the companies: Rs. 115 cr.

**WILP:** Enrolment: 36,500. Alumni: 105000+. 1100+ Faculty members. 38 Programs. Programs for Organisations: in 9 sectors of the industry. MBA in 8 contemporary specialisations.

Practice School orients education to

(a) meet the rapidly changing needs and challenges of a professional workplace,

(b) enable students to acquire learning by applying the knowledge and skills they possess, in unfamiliar, open-ended real work life situations, and

(c) bear an economic relevance to society.

These objectives are achieved by bringing the reality of the world of work into the process of education, thereby creating a sound base for experiential and cooperative learning. The students work on relevant assignments with the guidance of professional experts from the industry, and under supervision of

#### faculty.

The programme is organized in two stages, PS-I for eight weeks during the summer following the second year, and PS-II for 22 weeks during the final year. The first course provides a first exposure to the industry, an opportunity for learning by observation, and to develop skills in data collection, organization, analysis, and presentation. The second course provides an opportunity for students to work in teams on live, challenging assignments in their domains, using the latest technologies, and honing their problem-solving skills. The programme helps develop qualities of teamwork, initiative, leadership, and self-reliance in the students', and prepares them for a rapid and smooth transition from campus to the professional world. The responsibility of identifying suitable industry partners and assignments for the students rests with the Institute and its faculty members, who also ensure that the students make the necessary academic connection between the concepts learned in the classroom and the assignments they work on in the industry.

The success of the programme over the last forty years has been ensured by the value that it brings to all the stakeholders. For the industry, the programme offers a continuous stream of well-educated and skilled manpower leading to increased productivity, an opportunity for branding and attracting potential recruits, and access to expertise from academia. For the student, it is an opportunity to learn by doing, for career planning, for overall personality development, and an aid to a smooth transition to the world of work. A spin-off benefit is a significant number of pre-placement offers of employment. For the Institute, the programme offers the means for its faculty members to engage with industry, obtain valuable feedback on its educational programmes, and potentially build partnerships.

#### **Work Integrated Learning Programmes**

BITS Pilani has been offering continuing technical education programmes leading to formal educational qualifications to working professionals for over forty years. In line with the educational philosophy of the Institute of integrating theory with practice, the student's own work environment provides an ideal ground for a meaningful combination of the two through assignments, case studies, work experience, and projects. The interplay of work or practice and educations is ensured since students are admitted only to a programme that is in line with their work profiles, and with the endorsement and active support of the employer. The programmes terminate in a capstone project or dissertation with the problem drawn from the work environment. In a world of rapidly evolving technologies, these programmes represent a successful model to meet the consequent need for continuous education and skill up-gradation.

The programmes are industry-focused, with a highly contemporary curriculum; individual courses are taught at the same level of rigor as on-campus programmes. The academic requirements are largely on par with, and the same as for corresponding programmes on campus, the difference lying principally in the pedagogy adopted. Instruction is delivered at the workplace, using a judicious combination of asynchronous electronic means, and synchronous, faculty-led classes conducted either physically or through the use of technology. Extensive use is made of remote and virtual laboratories and projects drawn from the workplace for experiential learning.

PS & WILP, together and in tandem, offer the ideal ground for evidence-informed practice in the general sense. For the student in the campus-based programmes, PS offers the opportunity to participate in putting formal education to practice. More specifically, for students interning in organizations in the biology, pharmacy, and healthcare sectors, assignments serve as a means for participating in translational research, be it by way of the design and synthesis of a biologically active molecule, large-scale

production of life-saving drugs, the process of clinical trials, or the efficient delivery of health care by health systems.

Similarly, in the WILP, the exposure of the working professional to the latest findings of academic research provides them an opportunity to integrate these into their work, and thus put them into practice leading to enhanced performance, cost-effectiveness, and quality. Again, more specifically the programmes offered in the pharmaceutical or health systems areas provide the opportunity for work that directly impacts the quality of human health and well-being. For the faculty members, these programmes serve as a vehicle for enhancing the quality of instruction and student satisfaction, using evidence in the workplace, and also stimulating and enabling the selection of relevant problems for investigation.

File Description	Document
Appropriate webpage in the Institutional website	View Document
Any other relevant information	View Document

# **5. CONCLUSION**

# **Additional Information :**

• BITS Pilani has one of the best placement metrics in the country, competing with leading IITs. The process is managed by a balanced centralised team and decentralized campus teams.

• The university-wide Chief Placement Officer and dedicated Placement Managers oversee operations, while a student team of Placement Committee volunteers ensures smooth functioning.

• Almost 100% of students secure jobs before graduation. Two placement seasons are conducted annually, with contemporary HR practices and technology deployment enabling continuous monitoring and course correction.

• BITS Pilani encourages faculty members to present papers and attend conferences to promote peer interaction. Faculty members receive a reimbursable professional allowance of Rs. 1 Lakh per year, with 50% used for presenting at conferences.

• Faculty members can also avail a one-year sabbatical leave after six years of continuous service, with full salary and allowances. Extra-ordinary leave (EOL) is allowed for up to two years to enrich faculty experience.

• Faculty members can engage in consultancy assignments and testing projects for industry or external stakeholders. The institute has a comprehensive policy encouraging faculty members to contribute to the institution's growth.

• BITS Pilani offers a unique Practice School (PS) for full-time students, requiring a structured 5.5-month program. Faculty members visit various organizations to identify projects and assignments, creating a problem bank to help students choose the right PS station.

# **Concluding Remarks :**

In the words of our founder Chairman Late Shri. G.D. Birla, "What do we propose to do here? We want to teach real science whether it is engineering, chemistry, humanities, physics or any other branch. We want to develop a scientific approach in Pilani, which means there would be no dogma. There will be a search for the truth. What we propose to do here is to cultivate a scientific mind."

# **6.ANNEXURE**

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

Metric ID	Sub Questions and Answers before and after DVV Verification							
1.3.2	Number of certificate/value added courses/Diploma Programme offered by the institution online courses of MOOCs, SWAYAM/e Pathshala/ NPTEL and other recognized platform (without repeat count) where the students of the institution have enrolled and successfully completed during the last five years							
	Answer before DVV Verification : Answer After DVV Verification :191							
Remark : DVV has made changes as per prescribed format shared by HEI and v downgraded due to repetitive names.						shared by HEI and values have been		
1.3.3	Percentage of pr internships duri			component	s of field p	rojects / research projects /		
	<ul> <li>1.3.3.1. Total Number of programmes that have components of field projects / research projects / internships (without repeat count) during the last five years <ul> <li>Answer before DVV Verification: 39</li> <li>1.3.3.2. Total Number of programmes offered (without repeat count) during the last five years</li> <li>Answer before DVV Verification: 40</li> <li>Answer after DVV Verification: 39</li> </ul> </li> <li>Remark : DVV has made changes as per prescribed format shared by HEI and values have been downgraded due to repetitive names.</li> </ul>							
2.4.1	Average percent wise during the	0		ers appoint	ed against	the number of sanctioned posts year		
		Number of fore DVV V		v	e during th	e last five years _		
	2022-23	2021-22	2020-21	2019-20	2018-19			
	1006	970	932	889	851	_		
	Answer Af	ter DVV V	erification :			_		
	2022-23	2021-22	2020-21	2019-20	2018-19			
	913	883	867	806	777	_		
	Remark : DVV has made changes as per supportings shared by HEI.							
3.1.3	Percentage of to various agencies		0			llowship / financial support by e last five years.		

	<ul> <li>3.1.3.1. Number of teachers who received national/ international fellowship/financial suffrom various agencies, for advanced studies / research; year-wise during the last five year Answer before DVV Verification : 686         Answer after DVV Verification: 503</li> <li>Remark : DVV has made changes as per prescribed format shared by HEI and values have be decomposed ad due to constitute percent.</li> </ul>						
3.6.2	downgraded due to repetitive names.         Number of extension and outreach programs conducted by the institution through organized forums like NSS/NCC with involvement of community year wise during the last five years						
	3.6.2.1. Num organized foru five years.	ber of exten ns includinş	nsion and o g NSS/NCC	utreach pro C with invol	ograms con	ducted by the institution through community year wise during the la	
		efore DVV V			2010 10		
	2022-23	2021-22	2020-21	2019-20	2018-19		
	57	20	62	112	69		
	Answer A	fter DVV Vo	erification :				
	2022-23	2021-22	2020-21	2019-20	2018-19		
	47	13	62	111	68		
5.2.3	graduated stude (eg: NET/SLET 5.2.3.1. Num	ents during 7/ Civil Serv ber of stude	the last fiv ices/State g nts qualifyi ET, UPSC	e years government ing in state/. etc)	t examinati	ional level examinations out of the ons etc.) ternational level Examination durin	
	Answer af	efore DVV V iter DVV Ve	rification: 3	366			
	Answer be Answer af	efore DVV V ter DVV Ve V has made	rification: 3	366	ed format s	hared by HEI and values have been	
5.3.1	Answer be Answer af Remark : DV downgraded due Number of awar	efore DVV V ter DVV Ve V has made to repetitive rds/medals pr-university.	changes as changes as e names won by stud /state/natio	366 per prescrit lents for ou nal/interna	tstanding po	hared by HEI and values have been erformance in sports/cultural s (award for a team event should be	

	Answer be	fore DVV V	Verification	:		
	2022-23	2021-22	2020-21	2019-20	2018-19	
	196	99	11	71	54	
	Answer Af	ter DVV Ve	erification :			-
	2022-23	2021-22	2020-21	2019-20	2018-19	
	44	2	19	3	0	
			-			hared by HEI and values have been and team awards has been counted as
6.3 confe the las	.2.1. Numb rences/wor st five year	ber of teach kshops and	ers provid l towards r	ed with fin nembershij	ancial supp	ast five years oort to attend fessional bodies year wise during
	2022-23	2021-22	2020-21	2019-20	2018-19	
	429	396	284	514	301	
	Answer Af	ter DVV Vo	erification :	·		-
	2022-23	2021-22	2020-21	2019-20	2018-19	
	282	265	189	310	195	
		V has made to repetitive	-	per prescrit	bed format s	hared by HEI and values have been

## **2.Extended Profile Deviations**

ID	Extended Questions
1.2	Total number of full time teachers worked/working in the institution (without repeat count)
	during last five years:
	Answer before DVV Verification: 1076
	Answer after DVV Verification : 1074