



SELF STUDY REPORT

FOR

2nd CYCLE OF ACCREDITATION

NANDHA ENGINEERING COLLEGE (AUTONOMOUS)

**ERODE- PERUNDURAI MAIN ROAD, VAIKKAALMEDU, ERODE-638052
638052**

www.nandhaengg.org

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

March 2022

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Sri Nandha Educational Trust, established in 1992, provides innovative educational environment, opportunities and experiences that would enable rural students to grow, thrive and prosper. Nandha Engineering College was established in 2001 with 3 programmes. Presently, the college is functioning with 10 UG and 6 PG programmes with the strength of 2,904. The College is located at Vaikkaalmedu on Erode-Perundurai Main Road in Erode district, Tamil Nadu. The college has been granted autonomy since 2013 by UGC and three courses, CSE, IT and ECE are accredited by National Board of Accreditation. The college aims to support the students in bringing out the best of their abilities and to train them to become successful professionals with high ethical standards. The college provides a spirit of self-learning and self-training and it is known for creativity, excellence and reliability.

Quality Engineering Education is rendered by organizing various Educational and Personality Development programmes to enable the students to become responsible citizens. College is on the path of phenomenal development in the fields of research, creativity, innovation and entrepreneurial leadership. The college provides an excellent academic ambience to the students to acquire a broad engineering background to meet the changing needs of the industry and to ensure an attractive placement immediately on completion of studies. The training offered by the In-house companies and Internships in reputed Industries and Foreign Universities further enhances the employment opportunities of the students. Good support from the Management and interdepartmental coordination makes the Institution stand proud.

Vision

To be a world class Engineering and Management Institution in leading technological and socio-economic development of the country by enhancing the global competitiveness of technical manpower and by ensuring high quality technical education through dissemination of knowledge, insights and intellectual contributions.

Mission

To provide value-based technical education and mould the character of younger generation.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

Strength

- **Autonomous status** granted by **UGC**
- Programmes accredited by **NBA**

- Permanent Affiliation status granted by affiliating University.
- Well established **choice based credit curriculum**
- Proactive management team committed to give quality education
- Opportunity for students to learn foreign languages through open electives (German, Japanese).
- Effective feedback mechanism for continuous quality improvement
- Industry based curriculum for Placement
- Centre of excellence in the departments provides knowledge and competency in their domain
- Dedicated space, network, computing and HR facilities for in-house IT companies namely Thullium InfoTech Private Ltd and iGen Technologies
- More than 10 personality and character development clubs like **NSS, YRC, trekking club**, etc...
- Highly equipped library with adequate books, journals and all the students, faculty members of our campus have registered in National Digital Library (**NDL**) to access ejournal and books
- Ten professional societies are available besides department association.
- Committed Training and Placement team to facilitate training activities for students and training starts from first year
- Dedicated career guidance and counselling cell for the benefit of students for higher studies and placement
- Research collaboration with University Teknologi PETRONAS, Malaysia under Research attachment program ((RAP) and more than 20 students have been benefited so far
- Development of **Virtual – Lab** combined with department of Chemical Engineering in **Indian Institute of Technology- Madras - (IIT- M)**.
- NPTEL/ SWAYAM local chapter
- MoU with leading industries
- Well equipped Auditorium with the capacity of 2500 and 700 respectively along with a seminar hall, conference hall and board room
- Banking, ATM and health care facilities inside the campus premises
- Lush green campus with adequate trees and plants.
- Energy conservation measures like LED lamps, solar power generation and utilization and additionally with Electric vehicle
- 24X7 campus surveillance through CCTV
- e- Governance
- Encouraging students to become entrepreneurs through our Entrepreneurship Development Cell (EDC)
- Centre for innovation and product development (CiPD) and MSME supported Bussiness Incubator

Institutional Weakness

Weakness

- Less inclination for entrepreneurship due to their financial background
- Less opportunities for faculty training at industries as our campus is located in rural area
- As we are a self supporting college less opportunities for faculty to receive funds from various funding agencies

Institutional Opportunity

Opportunities

- Ø The institute can emerge itself as a role model in the fields of Engineering and Management education by adopting the best pedagogical tools
- Ø Institute has a good scope of finding a place in NIRF ranking
- Ø Scope for self learning through online courses
- Ø Regular interaction with industries and collaborative research with leading institutions
- Ø Institute can offer Inter- disciplinary courses in emerging areas
- Ø Strengthening Alumni participation in the development of the institution

Institutional Challenge

Challenges

- As large proportion of our students are hailing from rural area, enhancing communication and employability skills of the students remains a challenge in the present day industry requirements.
- Obtaining funds from the industries for research projects
- Non availability of faculty with Ph.D qualification in emerging areas
- Due to media intervention reading habits of students is declining
- Lack of interest for higher studies among the students

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Nandha Engineering College offers quality education through an innovative curriculum based on the current technological developments. A competent curriculum is given to the students considering the guidelines from the statutory bodies like AICTE, UGC, NBA and Anna University. Stakeholder's recommendations are considered while framing the curriculum and syllabi. Outcome Based curriculum is adapted with required curricular components catering to the needs of the current industry scenario through Choice Based Credit System (CBCS) from the academic year 2015-2016.

Programme Educational Objectives (PEOs), Programme Outcomes (POs), Programme Specific Outcomes (PSOs) are framed based on the Graduate Attributes (GA) prescribed by NBA and other professional societies such as ICI, IEEE, IE(I) ISTE, IETE, etc. Course Outcomes (COs) for each course are prepared while framing the syllabus and the same has been assessed continuously through different assessment methods such as Continuous Assessment Test (CAT), Assignment, Quiz, Projects Presentation, Seminars, etc. One Credit Courses, MoUs partnered with top corporate, NPTEL-SWAYAM courses, Internships, in-plant training, Industrial Visits, Value Added Courses, Alumni interactions, and other co-curricular activities provide students

with a learning platform relevant to the National and global needs and these along with soft skills training, enable the students more competitive and industry ready.

The revision and updation of syllabus and curriculum are framed based on the recommendations and suggestions from all the stakeholders and it is reviewed and approved in the Board of Studies (BoS) meeting. It is then approved in the Academic Council and Governing Council. The curriculum include courses such as Environmental Science, Professional Ethics, Personal and Interpersonal Values, Principles of Management, Total Quality Management, etc., to address the issues related to gender, environment and sustainability.

Effective course delivery is done by the faculty through a well-planned and documented process. The Institution ensures Student-Centric Teaching-Learning Process through Revised Blooms' Taxonomy (RBT). Tutorials, guest lectures, NPTEL recordings, Conferences, Workshops and Industrial visits are all parts of the day-to-day teaching process. Revised Bloom's Taxonomy is being used to enhance student centric learning.

Teaching-learning and Evaluation

Value based technical education is provided by the faculty members to focus on the needs of the students, to achieve their goal based on Outcome Based Education (OBE). OBE is practiced through Project Based Learning (PBL), one credit courses, value added courses, hands on trainings, workshops, Internships, In-plant training, Industrial visits, NPTEL courses and ICT tools.

Academic calendar is prepared under the guidance of Principal before the commencement of every semester for smooth conduction of classes. The classes for first year start with student induction program followed by one week orientation program to enable the students familiar with collegiate environment and academic studies. Slow learners are identified through the assessments and adequate support is provided to overcome academic difficulties through additional coaching classes, practice assignments, tutorial classes and remedial class. Periodical counseling sessions are arranged for the slow learners to give them the motivation towards studying better.

Fast learners are identified and encouraged to do online courses, add on courses, projects and participate in National/International conferences, to publish journal papers and motivated to prepare for competitive examinations. Different pedagogical tools are used to encourage the students in experiential learning through MOODLE, MOOC, Edmodo, Google Classroom, Blog spot etc., From first year onwards, students are trained by a separate placement team for placement training activities. Co-curricular and extra-curricular activities are also carried out through club activities (like NSS, Trekking, Fine arts club, sports club, YRC etc.)

Feedback and grievances from the students are collected through various forums like class committee meeting, mentor meeting and mid semester academic feedback (online mode). Feedback is taken for every course from students to improve the teaching learning process. Parent-teacher meetings are conducted once in a semester to convey overall performance of the students. A good academic record are maintained by following the above methodologies which in turn produce good placement records in IT and core companies.

Research, Innovations and Extension

Nandha Engineering College (NEC) is proactive in various platforms for research, innovation and extension activities. The institution has well-defined Research Policy with Code of Ethics and outreach programmes.

Research culture is promoted in our institution with the help of Research & Development Cell. The objective of the Cell is to provide adequate facility to researcher's thereby promoting research culture in the campus. Seed money is provided to the faculty members enabling them to submit research proposals for funding and publish their finding in refereed journal for validation. Our faculty members, along with the students, carried out several research projects with various funding agencies like All India Council for Technical Education, Tamil Nadu State Council for Science and Technology. The Institution has more than 54 highly qualified Doctorates and about 35 are pursuing Ph.D. in different areas. Library resources including e-journals and e-books of repute and well equipped computer systems are made accessible to the students and faculty.

The institution encourages the faculty members to publish papers in Conferences / Journals in National and International level. Institute motivates them in authoring books, and copyrights for updating their technical familiarity. The output of these research pursuits is resulting in many research publications and patents. A guideline for plagiarism prevention is in practice and plagiarism detection is done using URKUND software. Our institution has good number of publication in Scopus/WOS/UGC indexed journals. The institution has established a good network with neighboring community through National Service Scheme (NSS), Rotaract Club, Youth Red Cross (YRC), Red Ribbon Club (RRC), Unnat Bharat Abhiyan (UBA) and other extracurricular activities. The Volunteers of NSS, Rotaract, YRC and RRC continuously conducted various extension and outreach activities like Tree Plantation, Cleaning and Awareness Camp, Blood Donation Camp, Medical camp, Eye Checkup Camp and Swatch Bharath campaign. The institution marks systematic efforts to initiate collaboration and MoU's with various industries and agencies. The institution has 66 functional MoU's and 1849 collaborative activities with reputed industries, consultancy firms and professional bodies for past five years.

Infrastructure and Learning Resources

The institution has a well-defined policy for enhancing infrastructural facilities that would aid teaching and learning process. The college, well connected to state highways, has a total built-up area of 4,43,234 square feet, with all necessary amenities. The institution houses 63 classrooms equipped with LCD/LED Projectors/Smart TVs, Personal Computers and Wired/Wireless Internet connectivity, a spacious auditorium, two conference halls, two open air theatres, staff rooms, admission and examination cells, a CiPD center and 58 laboratories with good amount of instrumentation.

The institution has a central library with over 61,144 volumes and 19,040 titles, subscription to 198 International and National print journals, 77 Technical Magazines and air - conditioned browsing area with 32 broad band connected computers. The library services are fully computerized. Online Public Access Catalogue (OPAC) terminals are also available in the library.

1,163 computers and 72 printers are available throughout the campus for students' usage. The campus has 1 GBPS internet connectivity with round-the-clock access network facility.

The institution has adequate water purifiers, power generators, first -aid kits, UPS Systems and enough wash rooms across the campus. Besides, the campus is facilitated with ATM, Stationery shop, Cafeteria and Reprographic section.

The college has a secured transport system with a fleet of 40 buses covering 70 km radius. To enhance the

ambience of the campus, the institution possesses green lawns as well as a 10-acre playground for outdoor activities and athletics.

The institute has separate hostel for boys and girls, a day care centre, girls' recreation room and numerous washrooms. The hostels have stationery shop, recreational facilities like gymnasium, yoga center and sports area. Computer facility including access to internet with wi-fi is also available 24/7 for the inmates.

The institute provides medical facilities such as regular visits of doctors, tie-up with 1 hospital (KMC, Perundurai) and facilities for medical emergencies like ambulance, etc. The institute, for effective and maintenance, employs electricians, plumbers, carpenters, A/C mechanics, adequate drivers, third party mason workers and other full time technicians. Outside experts are hired as and when required. Periodical review is done to ensure proper maintenance.

Student Support and Progression

Management of Nandha Engineering College offers several scholarships for deserving undergraduate and post graduate programmes such as merit scholarship, single parent scholarship and sports scholarship. Every year, Nandha Scholarship Test (NST) is being conducted for the benefit of students and through NST, students can avail tuition fee concession.

The institution offers a variety of programmes to help students build their potential in areas such as soft skills, life skills and technological competence. During the last five years, 83 programmes have been held in support of students to strengthen their skills. Apart from this, the college has hosted 38 programmes dedicated solely to prepare for competitive exams and career counselling.

NEC has a transparent mechanism for speedy redressal of student grievances, sexual harassment and ragging.

Training and Placement Cell provides training to shape the students in their career perspective. Students who are placed have received the maximum annual payout of 10 lakhs.

Students are interested to do post-graduation in NEC as they are already aware of the standard and culture of the institution.

NEC students have participated in Inter-University, National, International level and won prizes in various sports events. Students have exhibited their talents in Cultural event named as Rhythm.

Women Empowerment Cell works effectively to empower students, improve their understanding of women's issues, address girl students' grievances, and make the college campus a safe environment for them.

The institution's active Alumni Association makes a significant contribution to the curriculum design. Alumni Induction Days are held on a regular basis and an Alumni Decade Meet was held on March 3, 2018.

In connection with Alumni Chapter, several interactions are arranged to share career opportunities, information about the department's technological initiatives and developmental activities at Institute level for the benefit of the students.

Governance, Leadership and Management

Effective leadership by setting values and participative decision-making process is key not only to achieve the vision, mission and goals of the institution but also in building the organizational culture. The formal and informal arrangements in the Institution to co-ordinate the academic and administrative planning and implementation reflects the Institutions efforts in achieving its vision. Role of top Management, Principal and faculty in design and implementation of its quality policy and their plans both in Teaching and Services are identified and being practiced.

Management actively participates in ensuring the policy statements and action plans for fulfillment of the stated mission, formulation of action plans for all operations and incorporation of the same into the institutional strategic plan, interaction with stakeholders and reinforcing the culture of excellence in academic and research.

The various procedures adopted by the institution to monitor and evaluate policies and plans of the Institution for effective implementation and improvement from time to time are discussed. The college delegate authority and provide operational autonomy to the departments / units of the institution, work towards decentralized governance system, and the strategy of college to promote a culture of participative management are elaborated.

The internal coordination is carried out effectively by IQAC through the proceedings of various bodies such as Program Assessment Committee (PAC), Department Advisory Board (DAB) Board of Studies, Academic Council and Governing Council.

Our institution motivates faculty members in enriching their skill set by attending various training programmes in various organizations and industries. HR policy is framed considering the faculty comfort and developments. Faculty members can avail casual leave, medical leave, vacation, on-duty for Higher studies, Examination and Training. They can avail on-duty 12 days per academic year for attending these types of training. By attending various online courses many faculty members have improved their technical skills and Institution is providing financial assistance for attending these types of courses and training. Several training programs are organized in the Institution to enhance the skill of faculty members.

Institutional Values and Best Practices

Institutional values and best practices in Nandha Engineering College endeavor to transform the students as all rounded personality, committed citizen and potential engineers. The students are inculcated with moral and ethical values. To empower women, women education is accentuated by fostering gender parity. The women are safeguarded with cosy ambience to boost up their confidence. Nandha Engineering College is adapting varied techniques to conserve the energy and environment for the future generation. Our Institute has taken measures to maintain the surrounding clean and green through induction of sewage treatment plant, biogas plant, waste management, rainwater harvesting, plastic free and pedestrian friendly campus.

Nandha Engineering College brings off waste water recycling, proper discarding of solid, liquid, biomedical waste and e-waste in joining hands with NGOs and ensures quality audits on energy and environment at regular intervals. The Institute provides ramps, washrooms, and human assistance to access the campus and also provides assistive technology software and scribe assistance to support the disabled persons in academics. The clubs and committees of our Institute convene campaigns on social service, blood donation, tree plantation and health checkups outside the campus.

The Institute adheres a code of conduct for students, staff, faculty members, Head of the Institution and administrators. Students are motivated to take part in cultural festivals like Pongal, Deepavali, Ramzan, Onam, Christmas and others in order to uphold communal harmony. In order to sensitize the students about the significance of the martyrs, national leaders and events, National commemorative days are observed regularly.

Institution provides yoga and meditation classes to make the students mentally and physically fit. NEC makes special efforts to educate all stake holders on universal human values and ethical responsibilities. Most of the department functions with centre of excellence for learning through academic and research programmes.

NAAC

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	NANDHA ENGINEERING COLLEGE (AUTONOMOUS)
Address	Erode- Perundurai Main Road, Vaikkaalmedu,Erode-638052
City	ERODE
State	Tamil Nadu
Pin	638052
Website	www.nandhaengg.org

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	N.rengarajan	04294-225585	7373712234	04294-22478 7	principal@nandhae ngg.org
IQAC / CIQA coordinator	S.kavitha	04294-226393	9942215651	04294-22211 6	iqac@nandhaengg. org

Status of the Institution	
Institution Status	Private and Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	
Date of Establishment, Prior to the Grant of	24-07-2001

'Autonomy'	
Date of grant of 'Autonomy' to the College by UGC	17-08-2012

University to which the college is affiliated		
State	University name	Document
Tamil Nadu	Anna University	View Document

Details of UGC recognition		
Under Section	Date	View Document
2f of UGC	13-02-2013	View Document
12B of UGC	10-09-2015	View Document

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)				
Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day,Month and year(dd-mm-yyyy)	Validity in months	Remarks
AICTE	View Document	30-06-2021	12	

Recognitions	
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No
Is the College recognized for its performance by any other governmental agency?	No

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Erode- Perundurai Main Road, Vaikkaalmedu,Erode-638052	Rural	25	38426

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Civil Engineering	48	HSC	English	60	55
UG	BE,Civil Engineering	48	HSC	English	60	19
UG	BTech,Chemical Engineering	48	HSC	English	60	29
UG	BE,Computer Science And Engineering	48	HSC	English	120	120
UG	BE,Electronics Engineering	48	HSC	English	60	56
UG	BE,Electronics Engineering	48	HSC	English	120	95
UG	BE,Electrical Engineering	48	HSC	English	60	47
UG	BE,Mechanical Engineering	48	HSC	English	120	46
UG	BTech,Information Technology	48	HSC	English	60	54
PG	ME,Civil Engineering	24	B.E	English	18	18
PG	ME,Computer Science And Engineering	24	B.E	English	18	13
PG	ME,Electronics	24	B.E	English	18	5

	Engineering					
PG	ME,Mechanical Engineering	24	B.E	English	18	16
PG	MBA,Master Of Business Administration	24	Any Degree	English	60	37
PG	MCA,Master Of Computer Application	24	Any Degree	English	30	24

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			
Sanctioned by the Management/Society or Other Authorized Bodies	46				56				123			
Recruited	33	13	0	46	34	22	0	56	72	51	0	123
Yet to Recruit	0				0				0			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				64
Recruited	37	27	0	64
Yet to Recruit				0

Technical Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				13
Recruited	7	6	0	13
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	27	12	0	9	4	0	3	0	0	55
M.Phil.	1	0	0	2	3	0	6	12	0	24
PG	5	1	0	23	15	0	63	39	0	146
UG	0	0	0	0	0	0	0	0	0	0

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	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 Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt/LLD/DM/MCH	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

Details of Visting/Guest Faculties				
Number of Visiting/Guest Faculty engaged with the college?	Male	Female	Others	Total
		0	0	0

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

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	378	4	0	0	382
	Female	148	3	0	0	151
	Others	0	0	0	0	0
PG	Male	68	0	0	0	68
	Female	34	0	0	0	34
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years					
Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	50	45	53	83
	Female	25	20	23	25
	Others	0	0	0	0
ST	Male	0	4	0	0
	Female	0	1	0	0
	Others	0	0	0	0
OBC	Male	321	382	383	426
	Female	120	98	138	132
	Others	0	0	0	0
General	Male	79	110	12	81
	Female	39	52	3	54
	Others	0	0	0	0
Others	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Total		634	712	612	801

2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Department Name	Upload Report
Chemical Engineering	View Document
Civil Engineering	View Document
Computer Science And Engineering	View Document
Electrical Engineering	View Document
Electronics Engineering	View Document
Information Technology	View Document
Master Of Business Administration	View Document
Master Of Computer Application	View Document
Mechanical Engineering	View Document

Institutional preparedness for NEP

<p>1. Multidisciplinary/interdisciplinary:</p>	<p>The Vision of National Education Policy is to provide high quality education to transform people of the nation as global citizens. Nandha Engineering College has always strived to inculcate multidisciplinary approach in its academic as well as co curricular activities. A discussion among the faculty members are initiated on the key principles of NEP such as diversity for all curriculum and pedagogy with technological innovations in teaching and learning, encouraging logical decision making and innovation, critical thinking and creativity. Moreover, Students are encouraged to undertake projects in the Multidisciplinary/ Interdisciplinary mode by formulating teams from different courses. Students are also encouraged to form teams from different disciplines to participate in various events like Hackathons, Toycathon, etc. The process of revision of curriculum is under progress for the students to be admitted in the academic year 2022-23 and onwards. Further, provisions are also made to offer new courses in emerging fields other than the parent discipline. All programmes are designed in such a way that students get maximum flexibility to choose elective courses from the curriculum of other B.E./B.Tech., programmes. Open Elective courses like Waste Management, Waste Water Treatment, Renewable Energy Technology, etc., educate the students about the pressing challenges and needs at</p>
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	<p>local, regional, national and global level. A student can opt minimum of 2 and maximum of 4 Open Elective courses. The college is proactively working towards implementation of the suggestions given in NEP.</p>
<p>2. Academic bank of credits (ABC):</p>	<p>Academic Bank of Credits, established on the lines of the National Academic Depository, have a dynamic website providing all details of Academic Bank of Credits and its operational mechanism for the use of all stakeholder of higher education. Academic Bank of Credits is essentially a credit-based, highly flexible and student-centric facility. Nandha Engineering College follows a Choice Based Credit System for all of its programmes. The Institution is in the process of getting approval to apply for registration with Academic Bank of Credits from statutory authorities such as Governing Council, Academic Council and University Authorities. Courses done by the students through online modes in the National Schemes like SWAYAM, NPTEL, etc., are also considered for credit transfer and credit accumulation. Nearly 262 students have appeared for NPTEL Examination and got benefitted for the past five years. It is planned to incorporate additional bank of credits in the forth coming Regulation (R22). Industry sponsored laboratories such as Renewable Energy Lab, Digital Product Design and Virtusa Augmented Solutions are functioning in the Institution.</p>
<p>3. Skill development:</p>	<p>Integrating vocational education with general education is the most promising way to promote holistic development of the students, equipping them with knowledge, skills and competencies which would prepare them for life and work. Nandha Engineering College enhances collaboration with industries for internship to expose the students to the work environment and to get the experience of hands-on practice. Students are given hands-on exposure to practical subjects through mini projects, in which students identify their skills and learn the concepts through experiential learning. The Institution has introduced the platforms such as Institution's Innovation Council (IIC), Centre for Innovation and Product Development (CiPD) and Business Incubator (BI) to promote the development of innovative and commercially viable products, useful for the industry and society. Employability Enhancement Course (EEC) which includes Employability Skills,</p>

	<p>Personality Development Courses, Project Work and / or Internship, Seminar, Professional Practices, Training at Industry / Research organization and online courses is offered to students to provide a platform for transforming the students into technically competent, ethically strong and qualified professionals. Nearly, 50 skill development programmes are organized every year. Bridge courses are also offered to the lateral entry students in the third semester. The Institution also encourages cross-disciplinary research. In association with Nandha College of Pharmacy, the faculty members of NEC published 36 articles, of which 12 articles were indexed in Webology, an international peer-reviewed academic journal in English devoted to the field of the World Wide Web.</p>
<p>4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):</p>	<p>NEP 2020 envisages a greater promotion of Indian Languages, Arts and Culture. The NEP document elaborates on the cultural and knowledge heritage of India, the importance of Indian Philosophy in the renewed perception, the importance of the multilanguage, multicultural background of the country and the necessity for revitalizing these realms for the betterment of the country and the world. This strategy calls for a paradigm shift in the immediate past educational system (which, in general opinion, has devalued the Indian traditional knowledge). To bring back the glory of the ancestral values and knowledge and a line with AICTE guidelines, the institution has introduced courses such as 'Constitution of India and Essence of Indian Traditional Knowledge' for all UG students. To augment the lectures in the class room, standard text books on Indian Constitution and Cultural heritage of India are given to the students. Through the efforts of Fine Arts Club, Oratorical competitions are conducted regularly in the regional language viz Tamil on topics like Environment Protection and Energy Conservation as well as topics on cultural and ethnic values of India.</p>
<p>5. Focus on Outcome based education (OBE):</p>	<p>Outcome Based Education is being adopted by the Institution since 2015 - 16. The Institution has well defined Program Outcomes (PO), Program Educational Outcomes (PEO) and Course Outcomes (CO) on our website and are displayed at prominent places in the departments. Students are assessed as per OBE attainment model. All courses are designed</p>

	<p>with outcomes centred on cognitive abilities namely Remembering, Understanding, Applying, Analysing, Evaluating and Creating. Apart from the domain-specific skills, learning outcomes at all levels ensure social responsiveness and ethics as well as entrepreneurial skills. Hence, students contribute proactively to economic, environmental and social well-being of the nation. The Course Objectives (COs) are also aligned to Program Outcome and Program Specific Outcome. Syllabi have been designed with due consideration to macro-economic and social needs at large so as to apply the spirit of NEP.</p>
<p>6. Distance education/online education:</p>	<p>All over the world, there is a noticeable change in the modalities of teaching-learning, with a considerable shift from all classroom teaching-learning to partly classroom and partly online teaching-learning. This is demonstrated by the international appeal of online education, such as MOOCs. The Institution encourages students to take MOOC courses such as NPTEL, Swayam, Coursera and others to earn equivalent credits. The necessary approvals are obtained to integrate the credit transfer scheme for the students. As a result, the credits acquired through SWAYAM-NPTEL are used as a substitute for optional courses. The list of such courses is approved by the chairperson before the beginning of the semester so that students enroll in courses that are relevant to the curriculum and are neither repetitive nor duplicative. The online courses also facilitate the students' completion of the credit requirements by the 7th and 8th semesters. Students take up full time internships in reputed industries. Online Education helps students acquire industry-required skills as well as better job opportunities.</p>

Extended Profile

1 Program

1.1

Number of programs offered year-wise for last five years

2020-21	2019-20	2018-19	2017-18	2016-17
15	16	16	16	16
File Description		Document		
Institutional data in prescribed format		View Document		

1.2

Number of departments offering academic programmes

Response: 9

2 Students

2.1

Number of students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
2819	2707	2750	02941	3052
File Description		Document		
Institutional data in prescribed format		View Document		

2.2

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

2020-21	2019-20	2018-19	2017-18	2016-17
849	634	830	847	971
File Description		Document		
Institutional data in prescribed format		View Document		

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

2020-21	2019-20	2018-19	2017-18	2016-17
2784	2666	2659	2945	3013
File Description		Document		
Institutional data in prescribed format		View Document		

2.4**Number of revaluation applications year-wise during last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
0	48	68	81	109

3 Teachers**3.1****Number of courses in all programs year-wise during last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
546	548	484	487	446
File Description		Document		
Institutional data in prescribed format		View Document		

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

2020-21	2019-20	2018-19	2017-18	2016-17
225	218	222	262	263
File Description		Document		
Institutional data in prescribed format		View Document		

3.3

Number of sanctioned posts year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
225	218	222	262	263
File Description		Document		
Institutional data in prescribed format		View Document		

4 Institution**4.1****Number of eligible applications received for admissions to all the programs year-wise during last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
734	754	533	849	697
File Description		Document		
Institutional data in prescribed format		View Document		

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

2020-21	2019-20	2018-19	2017-18	2016-17
609	663	725	770	766
File Description		Document		
Institutional data in prescribed format		View Document		

4.3**Total number of classrooms and seminar halls****Response: 63****4.4****Total number of computers in the campus for academic purpose****Response: 926**

4.5

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

2020-21	2019-20	2018-19	2017-18	2016-17
643.69	578.89	493.39	795.50	829.49

NAAC

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, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific Outcomes(PSOs) and Course Outcomes(COs) of the Programmes offered by the Institution.

Response:

Response:

Curricula and syllabi are devised in line with the emerging technologies and are revised to incorporate recent developments. Design and development of curricula and syllabi are carried out in alignment with department's Vision and Mission, Program Educational Objectives (PEOs), Program Outcomes (POs) and Program Specific Outcomes (PSOs).

The Course Outcomes of each subject, POs and PSOs are framed with the views of Internal and External stakeholders. Curriculum, COs, POs and PSOs are evaluated and analyzed every year by the Programme Assessment Committee (PAC) Members and Department Advisory Board (DAB) Members.

Curriculum is framed by involving the stakeholders (students, alumni, industries and peers) and experts in the field of studies concerned. The revision and reframing of curriculum is based on advanced technologies and suggestions from stakeholders. The suggestions are reviewed by the Chairman of Board of Studies (BoS). The recommendation from the Chairman and the expert is taken into account and the framed curriculum is submitted for approval in BoS. Standing Committee consolidates the inputs received from BoS and submits to Academic council for consideration and approval. Academic Council scrutinizes and approves the proposals of BoS with regard to courses of study, academic regulations, curricula, syllabi and modifications.

Outcome Based Education (OBE)

OBE is adopted by the Institution since 2015-16. Curriculum is designed with the inputs of Governing Body, Academic Council, BoS and stakeholders. Keeping OBE in forefront, changes in regulations, inclusion of open elective system and embedded courses are made besides introducing add/drop courses for students enabling them to study the courses in advance and to pursue internships from second year onwards. Besides, Project based Learning, offered in second and third year, gives students an opportunity to enhance their knowledge by engaging themselves in projects set around the challenges of real world.

Choice Based Credit System (CBCS)

The Institution adopts CBCS since 2015-2016 to provide freedom to students to select courses which enable them to learn at their own pace, undergo additional courses, acquire additional credits and adopt an interdisciplinary approach to learning. It provides flexibility in designing curriculum and assigning credits based on course content and hours of teaching.

Curriculum on National, Regional and Global Developmental Needs

Curriculum is developed considering the needs at the regional and national levels to promote global competencies and to resolve environmental, ethical and social issues. This target is achieved by offering courses like Soft Skills, Employability Enhancement and Analytical Skills, Waste Management, Personal Values, Professional Ethics and Human Values and also through clubs like NSS, YRC and Tree Plantation club.

Curriculum enables lifelong learning through Value added Courses, online courses and MoUs with Corporates like Virtusa and Infosys address the requirements of the current scenario. Besides, the Open Electives like Waste Management, Waste Water Treatment and Renewable Energy Technology educate the students about the pressing challenges. Furthermore, employability skills of the students are developed through In - House companies such as I GEN and Thulliam. Curriculum and training help the students to be employable at National and Global level.

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

1.1.2 Percentage of Programmes where syllabus revision was carried out during the last five years.

Response: 93.33

1.1.2.1 Number of all Programmes offered by the institution during the last five years.

Response: 15

1.1.2.2 How many Programmes were revised out of total number of Programmes offered during the last five years

Response: 14

File Description	Document
Minutes of relevant Academic Council/BOS meeting	View Document
Details of program syllabus revision in last 5 years(Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

1.1.3 Average percentage of courses having focus on employability/ entrepreneurship/ skill development offered by the institution during the last five years

Response: 76.03

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

2020-21	2019-20	2018-19	2017-18	2016-17
410	415	377	363	343

File Description	Document
Programme / Curriculum/ Syllabus of the courses	View Document
MoU's with relevant organizations for these courses, if any	View Document
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View Document
Average percentage of courses having focus on employability/ entrepreneurship(Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

1.2 Academic Flexibility

1.2.1 Percentage of new courses introduced of the total number of courses across all programs offered during the last five years.

Response: 19.2

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

Response: 482

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

Response: 2511

File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for Additional Information	View Document

1.2.2 Percentage of Programmes in which Choice Based Credit System (CBCS) / elective course system has been implemented (Data for the latest completed academic year).

Response: 100

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

Response: 15

File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for Additional Information	View Document

1.3 Curriculum Enrichment

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

Response:

Response:

Nandha Engineering College endeavors to inculcate ethics and values in students community in order to make them better citizens. Curriculum for all the programs is designed by including courses pertaining to Professional Ethics, Gender, Human Values and Environment and Sustainability. As a supplement of this endeavor, the Institution organizes various activities such as Seminars, Guest Lectures, Workshops, Awareness Programs etc, throughout the year as part of the curriculum that helps in integrating cross-cutting issues.

Professional Ethics:

The curriculum encompasses courses that address Professional Ethics such as, Business Ethics,

Professional Ethics, Corporate Social Responsibility and Governance, Personality and Character Development, Principles of Management, Ethics and Cyber Security, Human Behaviors at Work, Professional Ethics and Human Values, Ethical Hacking, Organizational Behavior, etc., These courses instill a set of ethical norms and basic values necessary for the peaceful existence of the humanity. These courses also impart the standard for professional practice and recommends appropriate technologies and management patterns to make the professional and personal life to go hand in hand. Ethical practices such as not indulging in any malpractice, maintaining ragging free environment, etc., are ensured inside the premises to uphold morality and ethics.

Human Values:

Inter Personal Values, Professional Ethics and Human Values, Personal Values, Personal and Professional Ethics, Personality and Character Development, Essence of Indian Traditional Knowledge for Engineers, etc., are the courses incorporated in the curriculum to teach the students human values. The Institution offers yoga classes for the overall wellbeing of the students and to provide mental calmness and sharpen concentration. The clubs YRC, NSS, Road Safety and Sports that are functioning under the Personality and Character Development course and Blood Donation Camp which is organized periodically inculcate the significance of service to the society, team work and leadership.

Gender Equity:

The Institution fosters gender equity by providing equal opportunities for both the genders in terms of admission, training programs, co-curricular and extra-curricular activities. Organizational Behaviour, Executive Communication, Micro Finance are the courses that deal with gender equity. The Institution also ensures parity for the women students and faculty members by designating them in various positions like Secretary, Joint Secretary and member in Department associations, clubs and in other various forums and encourages them to participate in women empowerment events. The Institution has constituted Women Development Cell and Anti Sexual Harassment Cell with a motive of promoting social respect, safety, self-dignity, rights and comfort for women inside the premises.

Environment and Sustainability:

The courses related to environmental studies such as Environmental Engineering, Energy conservation in buildings, Sustainable agriculture, Soil and Water Conservation Engineering, Human Engineering and Safety in Agriculture, Industrial Safety Engineering, Industrial Wastes Treatment and Disposal, etc., make students aware of the problems that are posing threat to the Environment. Open elective courses like Waste Management, Waste Water Treatment, Renewable Energy Technology, etc., enable the students to probe into the causes and remedial measures for varied pollutions, waste management methods and to keep track of the effects of human activities on environment.

File Description	Document
Upload the list and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum	View Document
Any additional information	View Document
Link for Additional Information	View Document

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

Response: 136

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

2020-21	2019-20	2018-19	2017-18	2016-17
20	57	25	19	15

File Description	Document
List of value added courses (Data Template)	View Document
Brochure or any other document relating to value added courses	View Document
Any additional information	View Document
Link for Additional Information	View Document

1.3.3 Average Percentage of students enrolled in the courses under 1.3.2 above.

Response: 31.05

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

2020-21	2019-20	2018-19	2017-18	2016-17
0937	1025	731	858	866

File Description	Document
List of students enrolled	View Document
Any additional information	View Document
Link for Additional Information	View Document

1.3.4 Percentage of students undertaking field projects/ internships / student projects (Data for the latest completed academic year)

Response: 58.82

1.3.4.1 Number of students undertaking field projects / internships / student projects

Response: 1658

File Description	Document
List of programs and number of students undertaking field projects / internships / student projects (Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

1.4 Feedback System

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

Response: A. All 4 of the above

File Description	Document
Any additional information	View Document
Action taken report of the Institution on feedback report as minuted by the Governing Council, Syndicate, Board of Management	View Document
URL for stakeholder feedback report	View Document
Link for Additional Information	View Document

1.4.2 The feedback system of the Institution comprises of the following :

Response: A. Feedback collected, analysed and action taken and report made available on website

File Description	Document
Any additional information	View Document
URL for stakeholder feedback report	View Document
Link for Additional Information	View Document

NAAC

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average Enrolment percentage (Average of last five years)

Response: 66.05

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

2020-21	2019-20	2018-19	2017-18	2016-17
634	712	612	801	601

2.1.1.2 Number of sanctioned seats year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
882	960	1050	1116	1110

File Description

Document

Institutional data in prescribed format (Data Template)

[View Document](#)

Any additional information

[View Document](#)

Link for Additional Information

[View Document](#)

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

Response: 82.6

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

2020-21	2019-20	2018-19	2017-18	2016-17
516	550	597	666	586

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for Additional Information	View Document

2.2 Catering to Student Diversity

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

Response:

Response

Learning Level Assessment

The college has a transparent mechanism to identify the learning levels of the students based on their academic performance. Student's learning levels are assessed by the Proctors and Academic Coordinators based on the performance in Continuous Assessment Tests and End Semester Examination results. To maximize the skill based education and to enhance student's learning outcomes, the college provides pathways for learning opportunities.

Slow learners

Students are identified as slow learners and adequate support are provided to overcome academic difficulties by arranging video presentation, additional coaching classes and practice assignments.

Tutorial classes and remedial classes are provided to facilitate slow learners. Periodic counseling sessions are arranged for the slow learners to motivate and perform well. Students are motivated to talk in English in every class hour either by recapitulation or concluding what had been taught to them. Academic problems are addressed in tutorial classes, assignments are evaluated and suggestions are given for improvements.

Students those who failed in analytical subjects are identified, particularly in Mathematics and special coaching classes are conducted during week ends. Students are allowed to undergo summer track mode to reappear for the subjects in whom they failed in previous attempts.

Every year, Lateral entry students undergo Bridge course at the beginning of the third semester.

Parent teacher meeting is conducted periodically to interact with the parents of both the slow learners and good performers to measure and monitor their performance.

Fast learners

The institution encourages high performers to participate in competitions, Workshops, Association activities, Professional society activities, Co-curricular and Extracurricular activities.

The students are encouraged to participate in National and International level competitions, conferences and Seminars. Further students are motivated to exhibit their ideas as projects in various events like Project expo, Ideathon, Hackathon, etc.

Advanced learners are allowed to take additional courses by choosing Open Electives and Professional Electives from the second year of study. Besides, the students can study one credit courses offered by industry experts and Add on course during the week ends. By acquiring equal number of credits for a course the students are given exemption from studying a regular course that featured in the curriculum and encouraged to take up self-study electives in the seventh semester.

Students those who are interested in learning additional language are allowed to study foreign languages as an elective course and credits earned after completing the course will be taken for course exemption.

Advanced learners are encouraged to undergo research attachment programme in abroad Universities during their final year of study and are allowed to do their internship at premier institutions, research organizations and leading industries.

Students with good academic excellence are encouraged to study online courses in NPTEL to acquire wide spectrum of knowledge in their domain area and to inculcate interest towards research.

Further, they are advised to publish their research work as articles in reputed peer reviewed/refereed journals. Guidance is provided to students to prepare for entrance and competitive examinations.

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

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

Response: 12.53

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

2.3 Teaching- Learning Process

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

Response:

Student-centric teaching-learning process is adopted in Nandha Engineering College by keeping the student's need in forefront. Effective Teaching Learning Process is achieved through regular course delivery to attain and to improve COs, POs and PSOs used for different level of students.

EXPERIENTIAL LEARNING

PBL/RBL (Project Based Learning/Research Based Learning)

In the curriculum few core subjects are introduced as PBL/RBL (Project Based Learning/Research Based Learning) to inculcate project skills in the domain of study. Knowledge gained through the PBL/RBL helps the students to do collaborative projects.

One Credit Courses

Skill-based courses in emerging areas are offered as One Credit Courses. These courses are handled by industry experts and faculty members. The main objectives of these one credit courses are:

- To provide students an understanding of the expectations of industry.
- To improve employability skills of engineering students.

Usage of open source tool and other Software for effective Learning

Different pedagogical tools are provided to encourage students to take part in experiential learning through MOODLE, MOOC, Edmodo and Google Class Room. Open source tools such as Pycharm, Red hat Linux, Net beans provides more flexibility to work and used for web, mobile and cloud applications.

Summer Internship

An internship is the best way to apply the classroom knowledge into practice. Undergoing an internship, the students gain experience, learn new skills and add value for their career prospects.

Industry Visits

In NEC Industrial visit is a part of education through which students visit companies and get insight into the internal working environment of the company.

Guest Lectures, Seminar, Conference and Workshops

As a part of academic development, Guest lectures, Career Oriented Lectures, Seminar, Conference and workshops are arranged by all Departments Association throughout the year. Through the association, the students are encouraged to attend the events in other reputed institutions.

PARTICIPATIVE LEARNING

Professional Society

Students are motivated to get enrolled in professional societies like CSI, ISTE, IETE, and IEI etc. Promotion of creativity and critical thinking among the students is accomplished through these forums

Club Activities

The institute organizes various activities through Fine Arts club, Sports club, Photography club, Music club, Go-green club, Road safety club, National Service Scheme (NSS), National Cadet Corps (NCC), Youth Red Cross (YRC), Women Development Cell (WDC), etc., to inculcate moral and ethical principles in students and in turn to society.

Hackathon

The students are motivated to participate in All India-Level Technical Events like Smart India Hackathon to showcase their innovative ideas.

PROBLEM SOLVING METHODOLOGY

TamilNadu State Council for Science & Technology (TNSCST) funds the student Projects that solves the problem of social relevance.

- Real time assignments and case studies enable the students to provide the solutions for real world problems.
- Students apply the theoretical Knowledge in Laboratory classes to solve specific problems.

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

2.3.2 Teachers use ICT enabled tools including online resources for effective teaching and learning process.

Response:

Response

Faculty members in the institution use Information and Communication Technology (ICT) tools very effectively to enhance the teaching-learning process among the students by creating interest in live concepts.

ICT TOOLS

- Wifi Projector
- Examly software
- Presentation Software

- Google Doc
- Google Form
- Blogs

Infrastructure

- Faculty members prepare the curriculum and specify the delivery technique as a part of the teaching-learning process before starting each semester. Theory courses are taught by using Power Point Slides, Videos and ICT tools to get visual effect for better understanding of the subjects.
- Laboratories, Classrooms, Seminar halls, Conference Rooms, Auditoriums, and Hostels are enabled with Wi-Fi internet facility with a bandwidth of 500 Mbps, which provides space for the students to learn from e-resources to update their skills.

Digital Library

Nandha Engineering Central Library (NECL) is fully automated and specially designed to motivate the learning skills of students community. The library has a unique website in the name NECL.

- It has been designed with the free accessible online open sources like books, journals, magazines, Career and Skill development, Projects, Competitive Exam portals etc by providing links.

Examly

- Nandha Engineering College uses Examly Software that provides learning contents, practice exercises and assessments to teach programming courses for improving the programming skills of students.
- Examly Software provides unique learning path for each student and to adapt the practice exercises as per the understanding of the concepts.
- End Semester Practical Examinations for Programming Languages, Placement Training Tests and One mark Online Tests are conducted through Examly Software.

Google Classroom

- Classroom helps to streamline the process of sharing materials, assignments, boost collaboration, and to faster communication. Students use classroom with many tools such as Gmail, Google Docs, and Google Calendar.

NPTEL

Students are encouraged to enroll for NPTEL courses and acquire knowledge pertaining to the domain. Course exemption is offered depending upon the credits.

Moodle Server (LMS)

Online aptitude tests, unit wise online test for all the theory subjects and objective test for laboratory subjects are conducted.

Virtual Labs

Virtual labs are online simulation-based labs for various disciplines of Science and Engineering under the initiative of the Ministry of Education. .

Youtube Video

Faculty members have their separate BlogSpot, Google sites, and YouTube channel for their course and students can access them through social media and interact with other learners outside the institution.

Telegram Group

Telegram is particularly useful outside the online classroom to encourage additional practice and skills development.

E-resources

- The e-resources like DELNET, INFLIBNET, NLIST, NDLI, ShodhSindhu, ShodhGanga, etc. are used.

Examly Links

- <https://nandha552.examly.io/login>

Web Links

The following links are provided for describing ICT enabled tools for effective teaching and learning process:

- <https://new.edmodo.com/groups/15cs701-principles-of-cloud-computing-304393390>

Name of the e-content development content

- <https://www.youtube.com/watch?v=iPIOY1VqP-M>
- http://www.nandhaengg.org/images/cse/Ball_Game.pdf

Youtube Link

<https://youtube.com/channel/UC7lLbSzZfIPqNWiuRFa38Mg>

https://youtube.com/channel/UCxc3N_WO4vjYKqXObjtVoEQ

<https://youtube.com/channel/UCMOXbLyDoiKbpxhAcxYaVxQ>

<https://youtube.com/channel/UClZeKuk4wwaZolVi7Uehi4A>

File Description	Document
Any additional information	View Document
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	View Document
Link for Additional Information	View Document

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

Response: 16.78

2.3.3.1 Number of mentors

Response: 168

File Description	Document
Upload year wise, number of students enrolled and full time teachers on roll	View Document
Circulars pertaining to assigning mentors to mentees	View Document
Any additional information	View Document
Link for additional information	View Document

2.3.4 Preparation and adherence of Academic Calendar and Teaching plans by the institution

Response:

- **Academic Calendar**

Academic calendar is prepared in discussion with the Principal, Controller of Examinations, Deans and Heads of the Departments. It is prepared well in advance for each semester of every academic year for all the years and it is circulated to the faculty members and students. A timeline for completing the syllabus and conducting the Internal and End Semester exams is suggested in the Academic Calendar. It provides adequate balance between academic and non-academic activities. It includes all important details such as commencement of classes, Parent teacher meetings schedule, Project review dates, assignment submission dates, Class committee meeting information, Academic Audit schedule, Submission of Continuous Assessment Test marks, Internal marks and Tentative date for End Semester Exam both theory and Practical, Public holidays, Festival breaks in addition to the College fests etc., Few activities are deviated due to unavoidable reasons like placement drives, declaration of holidays by the Government / Local authority.

- **Course Plan**

Curriculum and Syllabi is developed in BoS meeting and the same is approved in Academic Council Meeting. The syllabus is designed to be completed in 45 to 60 periods. Before commencement of every Semester, Head of the Departments conduct meetings with their faculty members to allocate the subject for both theory and laboratory. On the basis of academic calendar, time table and lesson plan are prepared. In the beginning of the semester, readiness team audit the course content such as lecture notes, study materials, PowerPoint presentations and laboratory for effective teaching. The subject handling faculty members prepare unit wise teaching plan, lecture notes and teaching aids for their respective subjects before commencement of the classes. If the number of regular working days is inadequate, holidays are transformed as working days. Syllabus coverage is discussed in class committee meeting and monitored by Course Coordinator, Academic coordinator, and Head of the Department.

Internal Quality Assurance Cell (IQAC)

IQAC calendar is prepared to enrich the quality and effective implementation of teaching learning process, Assessment, Research and Development activities, Placement activities, Laboratory audit and Academic audit. IQAC regularly conducts meeting with all the Department Heads to maintain quality of academic teaching and learning process. IQAC periodically collect feedback from students, faculty members and Stake holders to take necessary actions for improvement. Annual Quality Assurance Report (AQAR) provides systematic data with respect to various improvements to be taken up by the institution. The overall picture of the institutional growth in all the seven criteria of AQAR is prepared and submitted every year to NAAC.

File Description	Document
Upload Academic Calendar and Teaching plans for five years	View Document
Any additional information	View Document
Link for Additional Information	View Document

2.4 Teacher Profile and Quality

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

Response: 100

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years(Data Template)	View Document
List of the faculty members authenticated by the Head of HEI	View Document
Any additional information	View Document
Link for Additional Information	View Document

2.4.2 Average percentage of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)**Response:** 16.63**2.4.2.1 Number of full time teachers with Ph.D./D.M/M.Ch./D.N.B Superspeciality/D.Sc./D'Lit. year wise during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
55	47	41	27	22

File Description	Document
Institutional data in prescribed format (Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)**Response:** 7.04**2.4.3.1 Total experience of full-time teachers**

Response: 1583.5

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for Additional Information	View Document

2.5 Evaluation Process and Reforms**2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years****Response:** 19.48**2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year wise during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
19	20	10.8	26.3	21.3

File Description	Document
Institutional data in prescribed format (Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

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

Response: 2.15

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

2020-21	2019-20	2018-19	2017-18	2016-17
0	48	68	81	109

File Description	Document
Number of complaints and total number of students appeared year wise	View Document
Any additional information	View Document
Link for Additional Information	View Document

2.5.3 IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in Examination Management System (EMS) of the Institution

Response:

Admission and Preprocessing

The students are admitted to the college through Tamilnadu Engineering admission system followed by the Government of Tamilnadu and by the Management. The admitted students list is approved by the Directorate of Technical Education. The approved list is used for the conduct of examinations. The student

application forms are generated for the payment of examination fees. The attendance of the students is verified and only the eligible students are permitted to write examinations as per regulation. The hall tickets are issued to the students for appearing in the examinations.

Question Papers

The examiners selected for question paper setting must have a minimum of 5 years experience. The examiner list is scrutinized and approved by the respective Board of Studies. The list is also placed in the academic council. The approved list is then forwarded to the Controller of Examinations (CoE). The examiner for question paper setting list is sorted based on their qualifications and the subjects they have handled. The examiner is also instructed to follow Bloom's Taxonomy for setting the question paper. The question paper setting order is sent to the examiner through e-mail. The examiner has to type the question paper with the given template and send it to CoE through e-mail.

Prevaluation of Examination Papers

The lists of absent students are entered and the dummy number is generated. The dummy number is pasted in the answer papers. The student information part is separated and kept safely for later identification. The answer papers are shuffled and bundled for evaluation. The examiners for valuation are selected from the approved panel of examiners. The internal examiners are also selected for valuation. The appointment order is sent to the examiner through email after verifying the consent of the examiner. Prevaluation meeting is conducted to discuss about the discrepancies in the question paper. The senior faculty is appointed as chief examiner for each board.

Valuation of Examination Papers

The answer key for question paper is prepared by the faculty handling the subject. The key is provided to the examiner. A tabulator will check the total of each paper and if the examiner missed to value an answer, it will be informed and the chief examiner will notify that to the examiner. The marks are entered into the system and the list is printed. The examiner and the chief examiner verify the total marks and affix their signature in the list.

Publication of Results

The pre result passing board meeting is conducted. Head of the departments go through the tabulated mark sheet, if any abnormality is reported. The result passing board meeting is convened to discuss the results.

Post Result Process

After the publications of the results, the students who are not satisfied by the result are permitted to apply for a copy of the examination papers. The photocopy of answer script is issued to the students to verify the valuation. With the recommendation of faculty, the student can apply for revaluation. The answer paper is revalued and compared with the first valuation by external examiner and after that final decision is taken.

Impact of Reform

A single answer book with 36 pages is used for answering by the student. Each answer book will have serial number. The serial number is to identify the paper if any issue in dummy number. The examiner

enters the marks inside the paper to avoid non-valuation of answer. This system gives confidence of the students in valuation and reduces for applying revaluation. The second examiner is aware of the marks allotted by first examiner. Based on the answer key, the second examiner allots the mark. If a student is not satisfied with the revaluation, the student can apply to challenge valuation.

Processes integrating IT

- Introducing of master course from academic council data form syllabus.
- Registration of students for Regular courses.
- Generate examination application form.
- Record of question paper bank and Valuer by Head of the Department (HoD).
- Preparation of Continuous Assessment Test Time table
- Semester examination Question Paper setter and valuation entry by HoD
- Question Paper setting order sent by Controller of Examinations (CoE)
- Preparation of Examination Gallery report.
- Publication of Exam Time table through web portal.
- Examination seating arrangement in software and display for student view.
- Semester Exam Invigilation duty assignment and order printing
- Examination Valuation order mailed.
- Valuation mark entry and printing of Hardcopy of Grade sheet.
- Generation of valuation claim bill and sent through online.
- Result published in college website on the same day of Result Passing Board
- Applying for Revaluation and Retotalling.
- Revaluation result published in college website
- Award list is prepared and sent the same to University for issuing Provisional certificate and DegreeCertificate
- Printing of Grade sheet, Consolidated Mark sheet for issuing to students.

Continuous Internal Assessment System

- 1.Receiving Academic Calendar from Academic Dean.
- 2.Collecting the following details from all the departments at the time of each semester reopening :
Department wise faculty list, student namelist, time table, furniture details, classroom details CAT circular, subject order, seating arrangements and duty chart, verifying CAT questions to ensure blooms taxonomy level and Selection of question paper either the Type A or Type B by examcell coordinator for making Xerox before three hours from the commencement of CAT exams.Monitoring CAT exam is done by Squad members and Consolidation of Squad Report is forwarded to the Principal.
- 3.Ensuring the process throughout the Academic year
- 4.At the end of each semester, the exam cell supports to enter the internal marks in COE Portal.

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

2.6 Student Performance and Learning Outcomes

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

Response:

The institution is implementing Outcome Based Education (OBE) by following the guidelines of the National Board of Accreditation (NBA). In OBE, the Programme Educational Objectives (PEOs), Programme Specific Outcomes (PSO), Program Outcomes of each department are prepared and used to measure the outcomes, based on the Graduate Attributes (GAs).

The learning effectiveness of any program and course depends on the POs and Course Outcomes (COs). The PEO, PSO and PO are displayed at various prime locations in the institute premises and is also available on the website to make faculty members and students aware about the PO, PSO and PEO. In order to make students aware about Course Outcomes (COs), the department had mentioned COs in the syllabus of the respective courses.

Program Outcomes, Program Specific Outcomes are helpful in developing the framework of teaching and learning. The Course outcomes facilitate in clear understanding about the course expectations and also support the process of learning. The Course outcomes also present a clear picture of employability, skill development and entrepreneurship prospects of the course. Further the outcomes help to understand the various cross cutting issues pertaining to gender, environment, values and professional ethics. Board of Studies of all the departments and the Academic council approves the curriculum which appropriately incorporates Program Outcomes (POs), Program Specific Outcomes (PSOs) and measurable Course Outcomes (COs) for all programs offered by the institution. While framing the syllabus the scope, methodology and outcomes are also taken into consideration.

Process of Dissemination:

- College Website – www.nandhaengg.org
- Dissemination to the internal stakeholders

Displayed in all prominent places of department such as HoDs chamber, Department notice board, Faculty rooms, Classrooms, Library, Hostel, Laboratories and Newsletters.

- Communicated to students before starting of the course.
- Dissemination is ensured by proctors during the proctor meeting.
- Dissemination to the external stakeholders

Discussed in BoS meeting, Parents meeting, included in the funding agency sponsored Seminar/Workshop proposal brochures and Alumni meet.

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

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

Response:

CO Assessment Processes

Design of curriculum was carried out during the years 2013, 2015 and 2017 to meet the evolutionary requirements in the industry and business sectors in compliance with the Program Outcomes(POs) and Program Specific Outcomes(PSOs), in line with the recommendations of Program Assessment Committee through Department Advisory Board and Board of Studies.

- To identify the extent of compliance of the curriculum for attaining the POs and PSOs different methods are adopted through direct and indirect assessment methods.

Direct assessment is done by processes of analyzing performance of students by

- Continuous Assessment Test (CAT)
- Assignment
- Online Test
- End Semester Examinations(ESE)
- Project evaluation

Indirect assessment is done by conducting

- Alumni survey
- Employer survey
- Student exit survey
- Course end survey

The course coordinators periodically monitors the attainment levels of Course Outcomes (COs), POs and PSOs. Target levels of attainment of COs are set by the course handling faculty members in discussion with the course coordinator during the course coordinator meeting. Attainment of COs is determined and the loop is closed either by increasing the target level for the next offering of the course or by planning suitable improvements in the teaching - learning process to increase the actual attainment so as to reach the target. Evaluation of attainment of POs and PSOs is based on the mappings from COs to POs and PSOs. The academic programmes offered by the institution have clearly stated Program Educational Objectives (PEOs), Mission and Vision. The correlation of POs with PEOs and the Mission statements were also defined and it is integrated with institute Vision and Mission.

The attainment levels of the COs, POs and PSOs are very important parameters for the OBE system. This helps in creating an academic environment for achieving excellence. The efficiency and effectiveness of the process is continuously monitored, assessed and improved by taking inputs from the discussion/suggestion/decision taken in the meetings of the Department.

Assessment of COs for Theory and Laboratory courses:

The Assessment of COs for Theory courses are based on

- CAT
- Assignments
- Online Tests
- End Semester Examinations(ESE)

Laboratory course outcomes are evaluated based on

- Continuous Monitoring of regular Laboratory Classes,
- Model Examination.
- .ESE

Direct Attainment Calculation:

Direct Attainment for Theory= $0.6 * \text{ESE} + 0.3 * \text{CAT} + 0.05 * \text{Assignment} + 0.05 * \text{Online test}$

Direct Attainment for Laboratory= $0.5 * \text{ESE} + 0.5 * (\text{CAT} + \text{Model})$

Overall Attainment = 80% of Direct Attainment + 20% of Indirect Attainment

PO & PSO attainment = (Overall COx Attainment)* ((Mapping value of PO and PSO for CO x)/ 3)
where, x is the number of COs

Likewise the attainment for all the courses is calculated and the Direct attainment level of a PO/PSO is determined by taking average across all courses addressing that PO/PSO. The Indirect attainment level of a PO/PSO is determined based on the student exit survey, employer survey and Alumni survey. Finally the average of Direct and Indirect attainment states the Attainment of a PO/PSO.

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

2.6.3 Pass Percentage of students(Data for the latest completed academic year)

Response: 97.53

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

Response: 828	
2.6.3.2 Total number of final year students who appeared for the examination conducted by the Institution.	
Response: 849	
File Description	Document
Upload List of Programmes and number of students passed and appeared in the final year examination(Data Template)	View Document
Any additional information	View Document
Link for the annual report	View Document
Link for additional information	View Document

2.7 Student Satisfaction Survey

2.7.1 Online student satisfaction survey regarding teaching learning process	
Response: 3.62	
File Description	Document
Upload database of all currently enrolled students	View Document
Upload any additional information	View Document
Link for 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 is a well defined policy for promotion of research which is uploaded on the institutional website and implemented

Response:

The professional institution has framed a strong research policy to promote research interest and innovations in the emerging areas of Science, Engineering, and Technology to support a research culture among faculty members and research scholars to undertake interdisciplinary research. The excellence of research work directly translates to the excellence of teaching and learning in the classroom, benefiting students, society, and our country. The research activities encourage the academic programme by enriching the knowledge of the faculties in their field of expertise. The strength of the research initiatives is that they confirm to established norms and standards for the safe and ethical conduct of research. The well-defined research policy has been approved and uploaded on the college website.

R & D Cell:

Our institute has constituted research committee by Principal with the Director and all the Heads and Deans are nominated as Research Composition Committee members to monitor research activities. The R & D Cell keeps a constant check on the calls for proposals and encourages faculty members to submit proposals to government and non-government funding agencies. Research proposals must go through a multi-tiered review process that includes the research and development committee and the research ethical committee. This may be followed by a review by eminent experts from the advisory board of the R & D council. The proposal is then examined by the R & D committee before submission to the funding agency.

Research Laboratories:

The institution has been 3 research centres offering Ph.D programmes in different disciplines they are Computer Science and Engineering (CSE), Electronics and Communication Engineering (ECE) and Mechanical Engineering (Mech). The institution has received research funds to set up laboratories Fuel Cell Research Lab and Nano Research Lab, under the scheme of AICTE AQIS RPS and constructed Cloud Base Virtual Computing for Open Source Software Teaching and Research Laboratory under the scheme of AICTE- MODROB. The Institution has linked MoUs with industries such as Fermion Energy and Engineering Solutions (P) Ltd., SIM Info Systems (P) Ltd., Prime Industries, Imarticus Learnings, Maven Silicon Softech Private Limited, Vi Microsystems (P) Ltd., Srisairam Infotech, Escorts Training & Development Centre, TMI Systems, ICT Academy, BSNL, Roots Industries, Campus Connect Infosys etc. to promote a multidisciplinary research culture.

Library:

The institution maintains a highly stacked library for research reference. The digital library has 200 IEEE access, 2952 JGate, and 235 DELNET Pro-quest online journals, 8820 e-books, 31,535 Audio Visual courses, and 9202 Conference Proceedings with back volumes. There are 2895 e-Books and 842 e-Journals and e-Magazines on CDs, DVDs, and VCDs along with free accessible online open sources like books, journals, magazines, career and skill development, projects, scholarships, competitive exam portals etc. by providing links.

The Institution has conducted various webinars, workshops, and FDPs to promote research in the areas of patents, improving research visibility, etc. During the tenure 2016-2021, the Institute has 60 doctorates, among them 14 are research guides and 32 research scholars are pursuing their doctoral research.

File Description	Document
Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	View Document
Any additional information	View Document
URL of Policy document on promotion of research uploaded on website	View Document

3.1.2 The institution provides seed money to its teachers for research (average per year, INR in Lakhs)

Response: 1.34

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

2020-21	2019-20	2018-19	2017-18	2016-17
1.7	2.97709	0.2833	0.64663	1.083155

File Description	Document
Minutes of the relevant bodies of the Institution	View Document
List of teachers receiving grant and details of grant received	View Document
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View Document
Any additional information	View Document

3.1.3 Percentage of teachers awarded national / international fellowship for advanced studies/research during the last five years**Response:** 7.06**3.1.3.1 The number of teachers awarded national / international fellowship for advanced studies / research year wise during last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
26	22	9	5	22

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

3.2 Resource Mobilization for Research**3.2.1 Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)****Response:** 117.6**3.2.1.1 Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)**

2020-21	2019-20	2018-19	2017-18	2016-17
16.7450	22.10431	29.7425	45.7468	3.26

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

3.2.2 Percentage of teachers having research projects during the last five years**Response:** 1.34**3.2.2.1 Number of teachers having research projects during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
2	6	2	6	0

File Description**Document**

Names of teachers having research projects

[View Document](#)

Any additional information

[View Document](#)

Link for additional information

[View Document](#)**3.2.3 Percentage of teachers recognised as research guides****Response:** 6.22**3.2.3.1 Number of teachers recognized as research guides**

Response: 14

File Description**Document**

Upload copies of the letter of the university recognizing faculty as research guides

[View Document](#)

Any additional information

[View Document](#)

Link for additional information

[View Document](#)**3.2.4 Average percentage of departments having Research projects funded by government and non-government agencies during the last five years****Response:** 24.44**3.2.4.1 Number of departments having Research projects funded by government and non-government agencies during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
1	4	2	4	0

3.2.4.2 Number of departments offering academic programmes

2020-21	2019-20	2018-19	2017-18	2016-17
9	9	9	9	9

File Description	Document
Supporting document from Funding Agency	View Document
List of research projects and funding details	View Document
Any additional information	View Document
Paste link to funding agency website	View Document

3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations, creation and transfer of knowledge supported by dedicated centers for research, entrepreneurship, community orientation, Incubation etc.

Response:**Centre for Innovation and Product Development (CiPD)**

CiPD was established in Nandha Engineering College in the year 2014 with the aim of creating spark of innovation in the students' mind and to expose them to the existing problems that need to be solved. It encourages the students to come up with ideas which have innovation, Intellectual Property Right (IPR) component and potential commercial value. It connects the students with experts for mentoring. Project making, project exhibition & presentation, hackathon and participation in competitions are part of our yearly event (Innovation Day) schedule. The CiPD plays a vital role in inviting innovators, researchers, successful startups/entrepreneurs from varied fields to share their experience for problem solving and success scenarios which may benefit students/faculty members of the Institution. Further, the centre aims to build an interdisciplinary networks and teams for students and facilitate understanding of subtle aspects of innovation, IPR, startups and entrepreneurship.

Business Incubator:

Business Incubator @ Nandha Engineering College was established in the year 2016 and received Host Institution (HI) status from MSME, Government of India in the year 2018. So far, 10 products have been launched; benefitting various sectors of society. The MSME under "Support for Entrepreneurial and

Managerial Development of SMEs through Incubators scheme” had sanctioned Rs.15 lakhs to Nandha BI and supported innovators to convert their ideas into prototypes / products.

Institution’s Innovation Council (IIC):

Institution’s Innovation Council at Nandha Engineering College was started in the year 2018 to create an ecosystem for supporting young minds towards innovation and entrepreneurship. The major focuses of IIC are (1) to encourage the creative energy of student population to work on new ideas and innovation and promote them to develop products, (2) to develop better cognitive ability for Engineering/technology students and to create complete ecosystem which will inculcate the culture of Innovation, (2) to conduct various innovative and entrepreneurship-related activities prescribed by MIC in time bound fashion, (3) to identify and reward innovations and share success stories.(4) to organize periodic workshops/ seminars/ interactions with innovators / startups / entrepreneurs, professionals and create a mentor pool for students’ innovations, (5) to network with peers and national entrepreneurship development organizations.

Entrepreneur Development Centre (EDC):

Entrepreneurship Development Cell of Nandha Engineering college was established in the year 2013 with the objective of enhancing entrepreneurship awareness among the student communities. The Cell has been organizing various entrepreneurial promotional programs to transform students into entrepreneurs once they complete their graduation besides creating entrepreneurial awareness among them with funding supports from agencies like DST-NIMAT, Department of Science and Technology(DST), Ahmedabad, etc.

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

3.3.2 Number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development during the last five years.

Response: 255

3.3.2.1 Total number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
95	51	33	42	34

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

3.4 Research Publications and Awards

<p>3.4.1 The Institution ensures implementation of its stated Code of Ethics for research through the following: 1. Inclusion of research ethics in the research methodology course work 2. Presence of Ethics committee 3. Plagiarism check through software 4. Research Advisory Committee</p> <p>Response: A. All of the above</p>	
File Description	Document
Any additional information	View Document
Link for additional information	View Document

<p>3.4.2 Number of Ph.D's registered per teacher (as per the data given w.r.t recognized Ph.D guides/supervisors provided at 3.2.3 metric) during the last five years</p> <p>Response: 2.9</p>	
<p>3.4.2.1 How many Ph.Ds are registered within last 5 years</p> <p>Response: 29</p>	
<p>3.4.2.2 Number of teachers recognized as guides during the last five years</p> <p>Response: 10</p>	
File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document
URL to the research page on HEI web site	View Document

<p>3.4.3 Number of research papers per teachers in the Journals notified on UGC website during the last five years</p> <p>Response: 0.71</p>	
<p>3.4.3.1 Number of research papers in the Journals notified on UGC website during the last five years</p>	

2020-21	2019-20	2018-19	2017-18	2016-17
62	58	13	8	28

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

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

Response: 3.89

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

2020-21	2019-20	2018-19	2017-18	2016-17
122	72	221	284	226

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

3.4.5 Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed

Response: 3.04

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

3.4.6 Bibliometrics of the publications during the last five years based on Scopus/ Web of Science - h-index of the Institution

Response: 8.5

File Description	Document
Bibliometrics 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 (INR in Lakhs).**Response: 20.41****3.5.1.1 Total amount generated from consultancy and corporate training year-wise during the last five years (INR in lakhs).**

2020-21	2019-20	2018-19	2017-18	2016-17
6.125	3.3778	5.50937	2.0775	3.3165

File Description	Document
List of consultants and revenue generated by them	View Document
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	View Document
Any additional information	View Document

3.5.2 Total amount spent on developing facilities, training teachers and staff for undertaking consultancy during the last five years (INR in Lakhs).**Response: 102.85****3.5.2.1 Total amount spent on developing facilities, training teachers and staff for undertaking consultancy during the last five years (INR in Lakhs)**

2020-21	2019-20	2018-19	2017-18	2016-17
22.864	17.718	15.18	44.83825	2.24831

File Description	Document
List of training programmes, teachers and staff trained for undertaking consultancy	View Document
List of facilities and staff available for undertaking consultancy	View Document
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	View Document
Any additional information	View Document

3.6 Extension Activities

3.6.1 Extension activities are carried out in the neighbourhood community, -sensitising students to social issues, for their holistic development, and impact thereof during the last five years

Response:

Response:

The Nandha Engineering College organizes several extension activities to uplift the institute-neighborhood community to sensitise the students towards community needs. Extension programmes like NSS, Youth Red Cross, Rotaract Club, Tree Plantation Club, and Road Safety Club have been made an integral part of the curriculum to encourage students to participate in community building processes. Social outreach programmes like awareness rallies, Blood donation camps and cleaning activity programmes are organized to sensitize various sections of the society on Institutional Social Responsibility. Through its diverse community-oriented programmes and activities focused on the holistic development of students, with community.

National Service Scheme (NSS):

The National Service Scheme of Nandha Engineering College has undertaken several extension activities for the benefit of society. NSS organizes a seven-day residential camp in nearby villages and addresses the significance of social issues, which include cleanliness, tree plantation, environmental awareness, national integrity, plastic awareness programme, blood donation camp, health check-up camp, and voter awareness Programme etc. Such activities pave the way to developing volunteers' leadership, patriotism, discipline, character building, spirit of adventure and the ideal of self-service.

Rotaract club:

Our institution encourages student participation in community service through various campaigns and programmes through the Rotaract club. Programmes for planting saplings, visiting old age homes and orphanages were also organized. Camps and awareness programmes like blood donation camps, clean India activities and dengue awareness programmes were arranged outside and inside the campus. Through

this, students utilize their knowledge, and they can acquire leadership qualities and democratic attitudes and develop the capacity and skills to meet emergencies.

Personality and Character Development:

Our college is aware of the responsibility to mould students into responsible citizens by involving them through various programmes. The institution has vibrant clubs such as Green Club, Organic Farming Club, Tree Plantation Club, Trekking Club, Road Safety Club, and Youth Red Cross, which have been made an integral part of the curriculum to encourage students to participate in community building processes. Students can learn about social responsibility by participating in these clubs.

Innovation Day and Career Guidance Programme:

Every year, we host an innovation day to exhibit the various projects and share their ideas with the public and school students. This initiative promotes innovative ideas among school students. Our institution organizes social outreach programmes for school students, such as career guidance programmes, talent shows, and awareness programmes for higher studies. Through these programs, students can determine the best major for their interests and goals by guiding them through self-assessments and making them explore what they will need in the future.

All of the above activities have a positive impact on the students, and they help to improve student community relationships, leadership skills, and self-confidence. It also helped in the development of students' hidden personalities and raised student awareness. The college encourages students to participate in a well-developed neighborhood network where they can gain service-oriented training.

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

3.6.2 Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government recognised bodies during last five years

Response: 39

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

2020-21	2019-20	2018-19	2017-18	2016-17
6	11	11	7	4

File Description	Document
Number of awards for extension activities in last 5 year	View Document
e-copy of the award letters	View Document
Any additional information	View Document

3.6.3 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years

Response: 141

3.6.3.1 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
11	29	35	35	31

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

3.6.4 Average percentage of students participating in extension activities listed at 3.6.3 above during the last five years

Response: 51.33

3.6.4.1 Total number of students participating in extension activities listed at 3.6.3 above year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
692	2325	1406	1509	1336

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

3.7 Collaboration

3.7.1 Number of Collaborative activities per year for research/ faculty exchange/ student exchange/ internship/ on –the-job training/ project work

Response: 369.8

3.7.1.1 Total number of Collaborative activities per year for research/ faculty exchange/ student exchange/ internship/ on –the-job training/ project work

2020-21	2019-20	2018-19	2017-18	2016-17
264	190	252	584	559

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

3.7.2 Number of functional MoUs with institutions of national, international importance, other institutions, industries, corporate houses etc. during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 66

3.7.2.1 Number of functional MoUs with institutions of national, international importance, other Institutions, industries, corporate houses etc. year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
9	16	11	15	15

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

NVAAC

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

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

Response:

Nandha Engineering College (NEC) covers a boundary of 25 acres and is well connected to the state highways, with a 4,43,234 sq. ft area of built up structures with all essential amenities. It is equipped with modern facilities and learning resources to achieve academic excellence.

Classrooms, Laboratories, Drawing Halls and Seminar Halls

The Infrastructure includes 63 classrooms, 51 UG and 12 PG, equipped with LCD/LED Projectors/Smart TVs, Personal Computers and Wired/Wireless Internet connectivity, 4 Drawing halls of 4300 sq.ft, 3 Seminar halls of 2680 sq.ft and an Auditorium of 5655 sq.ft for conducting Department and Institution level programs and 58 laboratories for various disciplines with state of the art facilities.

Digitized Library

Nandha Central Library, a three-storey building of 10,800 sq.ft, has 61,555 Volumes, 19,263 Titles, 96 International Journals, 102 National Journals, 77 Technical Magazines and 32 General Magazines, 13 different memberships and access to 8,820 e-books and 3,324 e-journals. The Library has 30 computers with internet connectivity and provision for using laptop with LAN/Wi-fi connectivity. NEC has enabled the Digital Library for viewing e-content from NPTEL/SWAYAM portal and has also provided with a reprographic facility.

Computing Facilities

A total number of 1,163 computers, 72 printers and 10 scanners are available throughout the campus. The computers are networked lab-wise using CAT 5E and CAT 6 cables and labs are interconnected using multi paired Fiber optics. The Network Topology is being facilitated with hybrid bus architecture with proper laying. Available bandwidth of internet connection in NEC is 500 Mbps and connected with firewall secured 25 Wi-Fi connectivity access points.

Learning Management System

Google Classrooms are created for every subject and Internal Assessment and sharing of study materials and online video lectures are done here. Computing Labs are conducted in a specialized AI powered learning and assessment tool EXAMLY (www.examly.io).

Smart Nandha

Smart Nandha, an online intra campus management system supports faculty and students for booking function halls, downloading forms, providing periodical feedback, addressing grievances, etc.,

Other Infrastructure

The College has a Principal Room (352 sq.ft), Individual HOD Cabins (231 sq.ft), department wise Faculty Rooms (286 sq.ft), Controller of Examination Office (2300 sq.ft), Reception (858 sq.ft), Exam Cell (1482 sq.ft), Dining Hall (4800 sq.ft), Hostel (38724 sq.ft) and Cafeteria (3100 sq.ft). Added, NEC has a Training & Placement office, Technology Business Incubator (TBI) and Yoga Hall.

A video recording room with adequate equipment is available and provisions are enabled for recording video lectures and uploading them to various learning management systems.

NEC ties up with PALS in establishing a virtual lab namely Process Modelling and Simulation Lab. It has established two Industry Supported Labs namely Virtusa and Microprocessor Lab with Rs. 2 Lakh worth sponsor from Microsystem Pvt Ltd, Chennai. NEC's Centre for Innovation in Product Development (CiPD) with a built-up space of 2,448 square feet helps students turn their ideas into products.

NEC has a robust transport system with a fleet of 40 buses operating for both students and staff covering prominent areas.

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

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

Response:

Sports Activities

The college, with a belief that physical fitness leads to mental fitness, provides first-rate facilities on play fields for various games like Volleyball, Football, Cricket, Badminton, Hockey, Chess, Caroms etc., in the campus. The College conducts Annual Sports Meet and encourages students to participate in the Inter-Collegiate events.

Department of Physical Education

The Physical Education Department has all the facilities to promote sports and games among the students. The total area of the playground is more than 10 acres. State level and District level tournaments are periodically held on the campus.

Facilities

Volleyball	3 Courts
Cricket	1 Ground

Cricket Nets	2 sets
Football	1 field
Hockey	1 field
Kabaddi	2 Courts
Badminton	4 Courts
Table Tennis	3 sets
Carrom, Chess	10 sets
Basketball Court	1 court
Track & Field	400mts/6 lanes

Indoor Auditorium

The auditorium is built inside the college premises at the backside of Block 5 in a spanning area of 24,000 sq.ft. The auditorium is a large multi use hall with provisions for playing sports like Shuttle, Badminton, Indoor Volleyball, Indoor Basketball, Table Tennis, Carrom, Chess, etc.,. The auditorium, with its state-of-the-art facilities, affords an integrated sports facility that will cater to everything; from day-to-day training of athletes to hosting state and national events. In addition, the indoor auditorium provides space for organizing academic seminars, conferences, workshops, Annual Day, etc., The multipurpose indoor auditorium is also supplemented with allied service areas like VIP lounges, green rooms, changing rooms, media boxes, etc.

Yoga

A spacious hall is maintained for doing Meditation and Asanas in a lush green, peaceful environment. The yoga center "Temple of Consciousness" was inaugurated by Padma Shri SKM. Maeilanandhan. The College, with the aid of Erode Manavalakalai Mandram Trust, offers yoga classes for all the students and staff members. Trained full time yoga teachers are available to teach yoga.

Open Air Theater

The institute comprises two open air theaters with a seating capacity of 2,500 and 1,200 respectively to organize events like Graduation Day, Prize Distribution, etc.,

ATM

NEC has a well maintained and well managed 24x7 ATM facility within its campus, with CCTV surveillance, facilitating the students and staff members to perform all the required transactions safely.

Gymnasium

NEC has established two separate in-door gyms for boys and girls. The gym consists of Weight lifting and Power lifting sets like 32 Disc Plates under various kilograms, 36 Dumbbell rods under varied weight categories. In addition, the gym has Rods and Hammer Rods of different feet and Small Handles Push Down (V) Rod, Push Down (W) Rod, (D) Handle, Push Down Ropes, Hanging Bag (ABS), Lat Pull Down (pipe) and Seated Rowing (pipe). The gym equipment is well examined and maintained in accordance with high standards.

Medical Facilities

Tie-ups have been established between the Institution and Nandha Medical College Hospital, as well as between the Institute and Krishna Medical Center, Perundurai to provide emergency medical treatment to NEC students. Ambulance services of Nandha Medical College Hospital are also utilised by NEC to transport students for treatment.

File Description	Document
Upload any additional information	View Document
Geotagged pictures	View Document
Paste link for additional information	View Document

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

Response: 100

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 63

File Description	Document
Upload any additional information	View Document
Institutional data in prescribed format	View Document
Paste link for additional information	View Document

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

Response: 3.39

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

2020-21	2019-20	2018-19	2017-18	2016-17
0.9	3.8	30.62	51.71	28.77

File Description	Document
Upload Details of Expenditure , excluding salary during the last five years	View Document
Upload audited utilization statements	View Document
Upload any additional information	View Document
Link for any additional information	View Document

4.2 Library as a Learning Resource

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

Response:

Library is automated using Integrated Library Management System (ILMS)

Nandha Engineering Central Library (NECL) is fully automated and specially designed to motivate the learning experience of faculty members and students community. It functions in a three- storey building with an area of **1080 square feet**. The Library has a collection of books around **61,144 volumes and 19,040 titles**. For the periodical section, the Library subscribes to **198 International and National print journals**, as well as **77 Technical Magazines** and **six daily newspapers** (English papers alone).

The air-conditioned digital library is implemented with **32 desktop** systems and **20 Laptop** usable desks for accessing **200 IEEE, 2952 JGate, 130 ProQuest** online journals, **8820 e-books, 31,535 Audio Visual courses** and **9202 Conference Proceedings** with back volumes. These can be accessed inside the campus on **24/7 basis via Wi-Fi** and also through **remote access** by using **User name and Password** for IEEE and J-Gate. There are 3005 e-Books, 852 e- Journals and e-Magazines as CDs, DVDs and VCDs. It also includes more than 292 NPTEL courses for teaching and learning purposes.

Name of the Software – Campes – i Lib : The Digital Librarian

Nature of automation – Fully Automated with Barcode tag

Version – 7.0.2

Year of automation – 2006

The software is an integrated multi user package which can be accessed by the library users. It has the facility to take reports like

1. Statistics of Acquisition
2. Transaction
3. Periodicals
4. Book reservation
5. Members dues

- 6. Entry register
- 7. Best users
- 8. Transactors

The users can avail Online Reservation, Daily News Clippings, Members' individual record and they can search for CDs, VCDs and Back volumes through Online Public Access Catalogue (OPAC).

A **50 inch TV** is installed along with Doordarshan dish to telecast **32 educational channels** launched by **Swayam Prabha** to support Massive Open Online Course (**MOOC**) facility in the Periodical Section.

The library has a unique **website** which has been designed with the help of **free accessible online open sources** like books, journals, magazines, career and skill development, projects, scholarships, competitive exam portals etc. by providing links. A **Whatsapp broadcast group** has been created for faculty members to deliver new arrivals, news clippings (articles, educational reports, other college news etc), e-books, etc.,

The library has **20 years digitized question papers** that are being sent to faculty members and the student community as per the request through email. The library has procured unavailable and **rare books by using membership with Developing Library Network (DELNET)**.

File Description	Document
Upload any additional information	View Document
Paste Link for additional information	View Document

4.2.2 Institution has access to the following: 1. e-journals 2. e-ShodhSindhu 3. Shodhganga Membership 4. e-books 5. Databases 6. Remote access to e-resources

Response: A. Any 4 or more of the above

File Description	Document
Upload any additional information	View Document
Institutional data in prescribed format	View Document
Details of subscriptions like e-journals, e-books , e-ShodhSindhu, Shodhganga Membership etc	View Document

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

Response: 21.04

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

2020-21	2019-20	2018-19	2017-18	2016-17
9.56	24.21	24.07	25.43	21.92

File Description	Document
Details of annual expenditure for purchase of and subscription to journals/e-journals during the last five years	View Document
Audited statements of accounts	View Document
Any additional information	View Document

4.2.4 Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the latest completed academic year

Response: 25.95

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

Response: 790

File Description	Document
Details of library usage by teachers and students	View Document
Any additional information	View Document

4.3 IT Infrastructure

4.3.1 Institution has an IT policy covering wi-fi, cyber security, etc., and allocated budget for updating its IT facilities

Response:

Our Campus had focused consistently deployed best-in-class IT infrastructure and Applications development for Academic and Research support. The college is enabled with broadband and leased line internet services of 500 Mbps to caters the needs of the student and faculty. All the computers are properly newtorked in hybrid bus architecture. the LAN connectivity is made through CAT 5e and CAT 6 cables. The WAN architecture is made of fibre optical cables for about 2 km length. this ensures proper internet with Class A connectivity and parallel lines to ensure 24*7 services.

25 -WIFI access points are available, with highly secured internet firewall security(cyberroam 750-ING) and Sophos Antivirus protection for all systems inside the campus. This stops sophisticated application-layer threats right at the network layer, ensuring Application Security. Secured internet service with login credentials are provided to everyone in the campus which logs usage pattern, time chart and

bandwidth allotment. proper policies are framed on time to time to control internet usage in the campus.

The Automation Centre maintains the Servers and Networks which provide Computing facility with Network connectivity, across the college and other buildings of the campus including hostels and staff quarters. The Automation Centre consisting of all the systems and staffs works under one roof taking care of all the Network, Hardware, Software, Projector and UPS maintenance activities of the Institution. Email- ids for the students and staffs are created by the Automation center.

NEC is equipped with wired and wireless internet access which require to access internet from class room to library to labs and residential areas such as hostels and staff quarters. Xenon servers and Rack servers are mainly used for internet connectivity in our campus for high speed internet access.

we have made Microsoft campus Agreement and it permits the usage of Microsoft Windows OS throughout the campus and renewed yearly. Appropriate softwares for the laboratories are purchased by the respective department and the campus encourages the usage of open source tools mostly. perpetual licences are available for all proprietary softwares.

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

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

Response: 3.04

File Description	Document
Upload any additional information	View Document
Student - computer ratio	View Document

4.3.3 Bandwidth of internet connection in the Institution.

Response: 750 MBPS

File Description	Document
Upload any additional information	View Document
Details of available bandwidth of internet connection in the Institution	View Document

4.3.4 Institution has the following Facilities for e-content development

1. Media centre

2. Audio visual centre
3. Lecture Capturing System(LCS)
4. Mixing equipments and softwares for editing

Response: A. All of the above

File Description	Document
Upload Additional information	View Document
Institutional data in prescribed format	View Document
Link for Additional information	View Document

4.4 Maintenance of Campus Infrastructure

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

Response: 6.7

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)

2020-21	2019-20	2018-19	2017-18	2016-17
8.28	91.31	35.39	37.85	37.25

File Description	Document
Upload any additional information	View Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts	View Document

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

Response:

The Institution has designed its own maintenance policy procedure that includes several methods to achieve the effective maintenance of physical, academic and other facilities.

Methods

Effective maintenance is being achieved by using the following methods.

- 1.Reformation site
- 2.Class Committee Meetings
- 3.Periodical visits by the supervisors concerned
4. WhatsApp group

MAINTENANCE SECTION

A centralized maintenance section, headed by a maintenance manager and supported by skilled technicians such as electricians, plumbers, carpenters and masons is in practice. This section takes care of the maintenance of infrastructural facilities that include plumbing, electrical, carpentry, masonry and sewage works. The section receives maintenance requirements from the departments and other sections and undertakes the necessary work following internal operating procedures under the directions given by the supervisors concerned, without disturbing the regular activities.

INTERNAL OPERATING PROCEDURE:

Any problem that persists in a department is represented through the below mentioned methods.

- 1.The complaints are posted in college reformation site
2. The supervisor/ skilled person/technician is summoned to rectify the problem
3. The technician resolves the problem on site if no additional material is required.
4. In case of material requirements, the materials are received from the maintenance section

after the approval of the store manager.

- 1.If the material is to be procured from outside, permission is to be obtained from the maintenance coordinator / administrative officer and arrangements are made for procurement of the material to resolve the problem.
- 2.The completed work is inspected by the supervisors concerned and the status of work completion is updated in the reformation site.

1. Physical Facilities

Electrical Maintenance:

· Monthly monitoring of electrical equipment such as Generator, UPS, and Batteries is done and its status is entered in the maintenance register. The suppliers/service providers are approached in case of any major fault. In case of any damage spots in the electrical equipment, quotations are invited and the part is procured as per the purchase procedure.

· The work done by the service provider is verified by the respective authorities and a report on the completion of work is submitted to the maintenance officer. Required support is obtained from external agencies and TNEB whenever required.

Building Maintenance:

· An approver third party civil engineer and his team are responsible for new construction works and the maintenance of buildings, including laying, painting, plumbing, and sanitary fittings following the campus protocols.

Furniture Maintenance:

· Periodically, monitoring of furniture such as chairs, tables, windows, and doors is done on a regular basis, and the status is entered in the register. In the event of any damage or replacement noted on the reformation site, the suppliers/service providers are approached to rectify it at regular intervals.

Network / Wi-Fi Maintenance:

· Functioning of the college intranet and internet facility is monitored and maintained by the hardware technicians in association with system administrators of the college. Any upgrades or modification to the existing network model is carried out by inviting quotations from external agencies following guidelines from the CSE department.

2. Academic Facilities:

Library:

1. Damaged books are collected by the librarian for hard binding on a regular basis.
2. Rare and High volume books are maintained in the reference section.
3. Journals and Magazines subscribed annually are bound as a book volume.
4. The entire library is cleaned weekly.
5. Book shelf rectification is performed every semester by using the book call number
6. The library's digital section systems are formatted and maintained every semester.

Laboratories:

1. Equipment in the laboratories is maintained and calibrated periodically.
2. In-house maintenance and repairs are addressed by the respective qualified and trained department technicians.
3. Major problems and repairs are addressed in consultation with the suppliers following the advice of the HoD concerned and the Principal.
4. Computers and software in the laboratories are maintained by computer hardware technicians under the supervision of system administrators.

Classrooms:

1. Every Department has a furniture incharge who periodically checks the condition of classrooms and laboratory amenities like benches, chairs, black boards, fans, lights, and electronic equipment.
2. The incharge resolves the problem through the Head of the Department following the procedure.

3. Supporting Facilities:

Sports:

Athletic field tracks are refilled once in every five year and playgrounds such as volleyball, cricket, Handball, Koko, Kabaddi, and Throwball fields are filled on an annual basis by the skilled manpower under the supervision of the Physical Director.

Sporting equipment is purchased according to the lifetime of the material by the Physical Director.

4. Transport Facilities:

1. Minor damage/ repairs in the buses are rectified using the skilled manpower inside the campus under the supervision of the Transport Manager.
2. Major damage/ repairs in the buses are rectified by the skilled third-party service team tied up with the institution.
3. An adequate number of spare buses are available in the 10:1 ratio of the buses that can be used in case of bus breakdown.
4. An adequate number of drivers are available for all the buses. Additional drivers are also available in the 10:1 ratio for buses to alter the bus drivers in case of driver's medical emergency/ personal leave.
5. Every year, all the buses are sent to the RTO office to check the fitness of the buses and the Fitness certificate of all the buses is maintained properly.
6. A Speed limiter of 60km speed is fixed on all the buses.

5. Other Facilities:

1. The Institute has an RO plant that provides 24X7 drinking water facility. Sufficient number of water points are available in the departments to provide clean drinking water. Periodically, the quality of water is tested by external vendors.
2. Adequate manpower is employed to maintain the cleanliness of the campus, classrooms, staff rooms, seminar halls and laboratories, etc. The washrooms and restrooms are well maintained.
3. The green cover of the campus is well maintained by full time gardeners.
4. Surveillance Cameras are fixed in and around the Campus for security purposes and they are maintained by the system administrators.

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

Criterion 5 - Student Support and Progression

5.1 Student Support

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

Response: 60.81

5.1.1.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2020-21	2019-20	2018-19	2017-18	2016-17
1766	1709	1657	1732	1805

File Description	Document
upload self attested letter with the list of students sanctioned scholarships	View Document
Upload any additional information	View Document
Institutional data in prescribed format	View Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document

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

Response: 20.04

5.1.2.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2020-21	2019-20	2018-19	2017-18	2016-17
1005	840	171	444	373

File Description	Document
Upload any additional information	View Document
Number of students benefited by scholarships and freships besides government schemes in last 5 years	View Document
Institutional data in prescribed format	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) 4. Awareness of trends in technology

Response: A. All of the above

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

5.1.4 Average percentage of students benefited by career counseling and guidance for competitive examinations as offered by the Institution during the last five years.

Response: 40.96

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

2020-21	2019-20	2018-19	2017-18	2016-17
2063	920	898	939	1009

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

5.1.5 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
Upload any additional information	View Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

5.2 Student Progression

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

Response: 50.4

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

2020-21	2019-20	2018-19	2017-18	2016-17
413	320	424	400	530

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

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

Response: 4.36

5.2.2.1 Number of outgoing student progressing to higher education.

Response: 37

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

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

Response: 95.41

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

2020-21	2019-20	2018-19	2017-18	2016-17
36	41	39	19	17

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

2020-21	2019-20	2018-19	2017-18	2016-17
38	43	40	20	18

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

5.3 Student Participation and Activities

5.3.1 Number of awards/medals 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) during the last five years.

Response: 85

5.3.1.1 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) year - wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
7	20	24	19	15

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

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

Response:

Students Association:

Each department has its own association besides that professional bodies like CSI, ICT, IE, IEEE, IETE, IChE, ISOI, ISTE, IWCS and SAE to accomplish students' technical abilities. The Secretary, Joint Secretary, Treasurers, and Executive members are elected by the student members to carry out the association activities. Experts reputed institutions and leading industries have been invited to deliver academic and industrial seminars, workshops, and career guidance programs for placement and higher education to remain updated with emerging technologies and bridge the gap between industry and institute.

Class Committee:

The Class Committee Meeting (CCM) provides a place for students to discuss their issues related to teaching – learning process as well as amenities. The meeting will be held twice a semester and will include the Convener, Chairperson, and a maximum of eight students (a mix of boys and girls, day scholars, hostellers, academic toppers, and fast and slow learners) who will represent the entire class. The complaints will be sent to departments for correction to the relevant department, they will be resolved, and the action being taken will be updated in the reformation portal.

Women Development Cell:

Women Development Cell has both the faculty and students of the College as its members and works with an aim to create a gender sensitized community. It has been organizing varied health awareness programs for the upliftment of girl students and disseminating the real importance of gender equality in society. In the interest of WDC, International Women's Day is celebrated every year inviting famous personalities and orators as Chief Guests. As a part of the celebration, Women achievers of various fields are identified and honored with Kalki Award.

Clubs:

Various clubs are formed by the institution for extra-curricular, cultural and social activities for the betterment of the students. The club activities are offered for all the students as mandatory but non-credit course "Personality and Character Development" from first semester to fourth semester in their curriculum. The students in Cultural, Fine arts, Music and Photography the clubs are involved in various activities to build character, leadership and management qualities. Many social awareness programs are conducted through NSS, YRC, Tree plantation and Road Safety clubs where they learn to coordinate with the team to complete the work. Sports club provides opportunity to play like Cricket, Football, Basketball, Volleyball and other indoor games which help in maintaining mental and physical fitness. Trekking is an adventure sport; it encourages students to become more self-reliant. Fine arts club brings out the cultural talents in the students every year through the cultural event "Rhythm".

File Description	Document
Upload any additional information	View Document
Paste link for Additional Information	View Document

5.3.3 Average number of sports and cultural events / competitions organised by the institution per year

Response: 12

5.3.3.1 Number of sports and cultural events / competitions organised by the institution year - wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
17	10	11	7	15

File Description	Document
Upload any additional information	View Document
Report of the event	View Document
Number of sports and cultural events / competitions organised per year	View Document

5.4 Alumni Engagement

5.4.1 The Alumni Association / Chapters (registered and functional) contributes significantly to the development of the institution through financial and other support services.

Response:

Nandha Engineering College (Autonomous) is an esteemed and well- respected self-financing higher educational Institution that aims to achieve excellence in Engineering education with a strong emphasis on equipping rural students. NEC Alumni have prestigious positions across the world. The Institution maintains a close relationship with its former students.

Nandha Alumni Association has been registered as “Nandha Poriyiyal Kalluri Munnaal Maanavargal Sangam” (Sl. No. : 100 / 2014) dated on 4th December 2014. It is envisioned and formed as a lifetime platform for the welfare of the Nandha student Community. This global platform will not only facilitate effective and faster communication among the alumni members but also provide an opportunity to “Learn, Leap and Lead” throughout their life.

Nandha Alumni Association website designed by Vaave, enriching Alumni relationships. NEC Alumni in all over the world who have enrolled in the college Vaave web portal. Vaave Alumni Portal assists in bringing the alumni community together on a shared platform in order to provide members with a new channel of personal and professional support through ‘self help’ within the community. **“My Alumni Network”** is the **Mobile App** powered by Vaave that allows Alumni, Students, Faculty members and Stakeholders to access the institution’s official alumni network on Mobile.

NEC Alumni Association coordinates and supports alumni activities:

- To promote the Institution’s Teaching – Learning process, soft skill of the student, Industry interface, placement / internship, research and outreach programmes.
- To facilitate communication with alumni and to strengthen bonds of fellowship, professional association and institutional affiliation.
- To encourage alumni to stay connected in attaining the missions and goals of their respective departments and ensure their talent and financial resources to the Institution’s improvement.

Reunion:

Reunion interaction helps to be aware of new opportunities in placement and other fields in every year. It plays a vital role to develop students in recent technology. The Institution conducted Silver Jubilee

Reunion during November 2018.

Mentorship Programs:

Alumni Connect – To interact with Students on Career Guidance.

Objectives:

- Prepare the next generation Leaders and Entrepreneurs.
- Provide motivation and mentorship to guide in career path options.
- Create a support system which can be used beyond college days for career development, work life integration, etc.

Benefits:

- Develop leadership skills in potentials.
- Students can get exposure to recent trends in Industry.
- Establish a sustainable framework between Colleges, Alumni & Students.

Participation of Alumni in Academic and Industrial Interaction:

- Member in Board of Studies, Academic Council, Governing Body and Project evaluation.
- Resource person for one credit / Two credit courses, Seminar, Symposium, Conference and Workshop.

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

2020-21	2019-20	2018-19	2017-18	2016-17
2	2	3	2	2

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

5.4.2 Alumni financial contribution during the last five years (in INR).

Response: A. ? 15 Lakhs

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

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

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

Response:

Vision:

To be a world class Engineering and Management Institution in leading technological and socio-economic development of the country by enhancing the global competitiveness of technical manpower and by ensuring high quality technical education through dissemination of knowledge, insights and intellectual contributions.

Mission:

To provide value-based technical education and mould the character of younger generation.

Nature of Governance:

Nandha Engineering College, as a self-financing reputed autonomous institution, strictly adheres to UGC autonomous guidelines since 2012. All the autonomous process is decentralized, democratic and transparent. The Principal and the Chairman of Governing Council plan the activities for the year and forwards the same to the departments for implementation supported with adequate finance and infrastructure. Initiating new programs, start of new research centres, introduction of academic reforms (Choice Based Credit System, Relative Grading), implementation of e-governance and submission of SAR for several accreditation processes are a few such endeavours. To introduce CBCS in the curriculum number of meetings is held among several functional heads to implement CBCS for all UG and PG programmes. The progress is monitored and actions are made based on the feedback from students, employers, parents and other quality assurance processes. Every employee has an opportunity to contribute his/her innovative ideas leading to give higher quality results. This is achieved through the committees operating at strategic levels of management.

Governing Council (GC) monitors and evaluates all the activities in accordance with UGC guidelines, the Academic Council and other statutory committees. The GC ensures that all decisions on admission, budget, infrastructure, teaching-learning process, and placements are in line with the Institute's vision, mission, and quality policy. The GC meets once in a year to assess performance and actively contributes to the organization's growth.

Institute Quality Assurance Cell (IQAC):

All the activities are done through the Institute Quality Assurance Cell (IQAC). The IQAC is led by the Principal, the Chairman of IQAC and consists of three senior administrative officers, one nominee from the local society, two members from management, one nominee from employers/industrialists/stakeholders,

Industry Expert, IQAC Coordinator, all HODs, two senior faculty members, and a placement officer. The objective of IQAC is to build a structure for making deliberate action to progress the institution's academic and administrative performance.

Statutory and Non- statutory Committees:

Several statutory and other committees are in place to manage various activities related to academic, administrative, and extension programmes in addition to the Governing Council. To promote sustainable socio-economic development through global competitiveness, the Institute places a value on the social impact and responsibility of its research and development. The functions of non-statutory committee are planning evaluation, academics, placement, student centric activities, co-curricular and extra-curricular activities and Industry Institute Partnership.

Finance Committee:

The Finance Committee provides financial analysis, advice, and oversight of the organizations budget. The sole responsibility of the committee is to ensure the financial resources and also scrutinizes the budget submitted by the different departments and monitors the utilization of department budget. The committee also proposes the budget for the financial year of departments and institute.

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

6.1.2 The effective leadership is reflected in various institutional practices such as decentralization and participative management.

Response:

Decentralization:

Management encourages faculty members by including them in the statutory bodies such as Governing Council, Academic Council, Finance Committee, Board of Studies, Disciplinary Committee, Anti Ragging Committee, etc. Heads of the department are responsible for the academic and administrative matters of concern department. The head of the department allot the workload with the respective faculty based on their area of specialization. All academic activities are planned by faculty members at department level in line with college goals.

Participative management:

Management conducts periodical review meetings to discuss about the department activities related to students and faculty. Students' performance related to Enrolment Ratio, Academic performance, Graduate

outcome, Career guidance, Training and Placement, Industry visit, In-plant training, Internship and sports achievements are discussed and the plans are discussed in the meeting. Faculty activities like Teaching Learning process, Development/Training programs, publication, copyright, patent are monitored in that review meetings. Department activities include Singing MoU, Stakeholder visit, planning and implementation of Strategic plan and events organised are established to train the faculty and students to enhance their skills in recent trends and techniques. Best performing departments are highly appreciated. Faculties and students are encouraged to do online MOOC courses in the reputed forums like NPTEL, GUVI, HACKER RANK, HACKER EARTH, Infosys Spring Board, TCS ion, Udemy. Institution concentrate very much on establishing various centre of excellence and industry supported laboratories for developing learners skillset. Class committee meeting minutes and action taken reports are discussed in the review meeting. All the issues relevant to the academic, infrastructure, transport, canteen and other resources are faced out with the help of class committee meeting. departments are encourage to

Institutional practices:

The Value Added Course (VAC) is initiated to the students to meet the gap between the Industry needs and Institutions Curriculum. Syllabus for VAC is suggested by industry employees to faculty members in par with the current IT trends for the benefits of the students. Totally 30 hours are allotted for one credit. The feedbacks are received from students through class committee meetings, from employees, alumni and industry people. Assessment is done by course conducting industry person and grades are provided with certificates. Various club activities namely Cultural & Fine Arts Club, Social Club and Sports club are implemented under Personality and Character Development course for the overall development of the students.

Academic and Research:

The college adapts Outcome Based Education (OBE) from the academic year 2015-16 onwards. It results in changes in regulations, inclusion of open elective system, blending of theory with practice through embedded courses, besides introducing, add/drop course options for the students enabling them to study the courses well in advance and provides opportunity to pursue internships in the final semesters. Considering the dynamic transformation of higher education in terms of expansion, enrolment, quality and access, NEC would like to position itself in the top100 Engineering Institutions at National level. To accomplish the same, the institution follows strategies in Governance, Teaching-Learning process, Quality and Ranking, R&D, faculty development, Student care and Stakeholder participation.

File Description	Document
Any additional information	View Document
Link for strategic plan and deployment documents on the website	View Document
Link for additional information	View Document

6.2 Strategy Development and Deployment

6.2.1 The institutional Strategic / Perspective plan is effectively deployed

Response:

Strategic planning and evaluation committee:

Nandha Engineering College, as a self-financing reputed autonomous institution, framed strategic plan for five years (2016-2021) for the improvement of the institution. The strategic planning is a guiding document for the upcoming five years to assess and improve the institution towards delivering quality education there by earning due recognition. The main focus of strategic plan is on good governance, best in class teaching learning, research & innovation and preparing employable students who act as brand ambassadors for the institution. Based on Institution's Vision & Mission, the strategic goals and strategies are formed with action plans. The strategic planning committee is constituted by the Principal of the Institute.

In strategic planning committee meeting the following discussions are carried out to enhance the quality education.

STRATEGIC PLAN

Planning Cycle: 2016 -2021 (5 years)

Goals and Objectives:

GLOBAL COMPETITIVENESS

- Strengthening of research publications
- Establishing Centre of Excellence (CoE)
- Revenue generation through consultancy works.
- Improving research activities by leveraging the grant-in-aid of external funding agencies
- Quality improvement through accreditation
- Introducing new programs

HIGH QUALITY TECHNICAL EDUCATION

- Active involvement of faculty in industry interaction:
- FINE (Faculty Industry Education)
- Promoting culture of innovation, idea incubation and establishing Business Incubator
- Creating awareness about IPR for faculty and student members
- Encouraging filing of IPRs (Patent & Copyright)

Efficient teaching erudition procedures

- Academic planning and preparation of academic calender
- Preparation of lesson plan based on CO and PO mapping
- Conduct training based on current demand analysis
- Constant assessment to measure outcomes
- provide mentoring and individual support
- Follow a transparent feedback system
- Implementation of best practices for students

Effective Governance

- To review the smooth running of the administrative activities of the college, discussing approval of new programs
- To review the examinations results(internal as well as external of all programmes, result analysis and their improvement strategies
- To approve upgradation and maintenance and infrastructure of the institution
- To establish E- governance
- Establishing internal audit committee

Institute industry interaction cell

- Industrial research and consultancy
- Short term training programs
- Collaborative Educational Programmes
- Participation of industrial experts in curriculum design
- Student internships and industrial visit
- Providing carrier guidance

Constant growth in research and innovation

- Fund generation through project proposal
- Apply for government/non-government industry, sponsored funds
- Collaborations with government and private institutes, universities and research organisations

Centres for Excellence as Tool for Capacity Building of an Educational institution:

Nandha Engineering College has joined hands with IT company to establish the centres for excellence in the institution and enhance the business knowledge for the student society. Three in-house companies namely IGEN services & solution, Thulliam InfoTech Private limited, Entuple technologies Private limited, Virtusa are established inside the college premises for the better understanding of business culture. Centre for excellence offers training to the students from II year onwards. Students are selected on the basis of their academic performance. Our institution introduces new emerging subjects that are not included in our curriculum as value added course such as CVAC so that students can complete this competitive world.

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

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

Response:

Organization Structure:

Nandha Engineering College is a self-financing Autonomous Institution under the Nandha Educational Trust. The Managing Body of the Trust and the Governing Council play an important role in academic decision-making, administration, and the overall growth of the institution. The institute's organizational structure clearly defines the guidelines of the institution's organogram. The secretary and correspondent are the highest authority in the organization. IQAC team plays a vital role to escalate and implement the decision making and develops the projects suggested by the Secretary and Correspondent.

Governing Council

The Governing Council is the highest governing body of the college, and it is the final decision-making body in all matters. A meeting of the college's Governing Council is held once a year. Several issues pertaining to various academic and administrative matters are discussed and debated in the governing Council, and an appropriate decision is reached while keeping student development as the primary focus of its deliberations and decisions. The Governing Council strongly believes that students should achieve their desired outcomes and as a result, makes all necessary efforts (including the use of appropriate educational methods such as outcome-based education, infrastructure, equipment, and tools) to create a student-centric environment. It adheres to the guidelines established by apex bodies such as the University Grants Commission, the AICTE, and the Anna University in Chennai, and does so with utmost sincerity. The Governing Council monitors the strategic plan on a continuous basis and provides appropriate advice and direction to the administration for the implementation and development.

Appointment and service rules

College ensures that the selection process for direct recruitment for various post carried out annually to maintain required faculty members. The selection committee prepares the job description and a job profile for the candidate to be hired. The committee members shortlist the candidates through screening test, classroom demonstration and interview. The committee shortlisted the candidates and submit their recommendation along with candidates profile to the principal and chairman. The eligibility of the appointment is based on AICT norms and appointment letter is offered by the chairman

Statutory and Non- statutory Committees:

Various activities related to academic, administrative, and extension programmes in addition to the Governing Council administer by the various statutory and other committees. As a result, the Governance of the college is more participatory, with the governing Council serving as its leader. This makes all student stakeholders to experience academic growth and career development. To contribute and promote sustainable socio-economic development through global competitiveness, the Institute places a high value on the social impact and responsibility of its research and development activities.

Institute level committees

- Governing body
- Academic council

- Board of studies
- Finance committee
- IQAC and NIRF
- Planning and Monitoring
- Grievance redressal
- Admission Committee
- Research and development
- Academic audit
- Women Development Cell
- Anti ragging Committee and squad
- Program Assesment Committee
- Traning and Placement cell
- Oline courses
- Entrepreneurship Development
- Student Welfare Committee
- Sexual Harassment Committee

File Description	Document
Any additional information	View Document
Link to Organogram of the Institution webpage	View Document
Link for additional information	View Document

6.2.3 Implementation of e-governance in areas of operation

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

Response: A. All of the above

File Description	Document
Screen shots of user interfaces	View Document
Institutional data in prescribed format	View Document
ERP (Enterprise Resource Planning) Document	View Document
Any additional information	View Document
Link for additional information	View Document

6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures for teaching and non-teaching staff and avenues for career development/ progression

Response:

The institution provides financial benefits for technical publications for teaching staff for their growth in professional career:

- Faculty is encouraged to attend conferences / workshops / Faculty Development Programmes and training programmes every year.
- Sponsorships to attend training programmes and present papers in conferences.
- To enhance the faculty skill set several Faculty development programs (FDP) are also organized.
- Internet and free Wi-Fi facilities are available in campus for staff.

General Facilities

- The institution has sports, gym, and yoga facilities; the campus has ATMs.

Leave Benefits

Type of leave / On Duty	Teaching	Non-Teaching
Casual Leave (CL)	12 Days / year	12 Days / year
Medical Leave (ML)	10 Days / year for hospitalization (Above 3 years service)	10 Days / year for hos (Above 3 years service)
Maternity Leave (MAL)	3 Months with half pay (3 to 5 Years service)	3 Months with half pay (3 service)
	3 Months with Full pay (Above 5 Years service)	3 Months with Full pay (Above 5 Years service)
Vacation (V)	Winter - 2 Weeks Summer – 2 Weeks	Winter - 1 Week Summer – 1 W
On Duty (OD)	12 Days / year (Not limited)	12 Days / year (Not limited)
Higher Study OD	6 days / Semester	6 days / Semester

Permissions

1.Total two permissions / late attendance (up to 15 minutes in the morning) for all teaching, academic support and administration staff for coming one hour late or leaving one hour early will be permitted in a month.

Other Benefits

- 1.Group Insurance
- 2.Emergency advance for Medical Treatment
- 3.Sponsorship for Higher Studies – Ph.D. Full Time / Part Time, PDF
- 4.Sponsorship to attend Seminar / Paper presentation / Conference – in India & Abroad
- 5.Sponsorship to attend quality improvement and faculty development programme
- 6.Revenue sharing by staff in consultancy / testing (60:40 and 40:60)
- 7.Free Lodging facility to staff members who are staying in hostels
- 8.Bank Loan facility at concessional interest rates through the Indian Bank
- 9.School fee concession in Nandha Schools.
- 10.Free transportation

To enhance the employee profile, the institution provides various welfare schemes through the assistance of Indian Bank, which offers credit options to college employees such as personal loans, educational loans, housing loans, vehicle loans, and employee provident fund schemes.

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

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

Response: 35.72

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

2020-21	2019-20	2018-19	2017-18	2016-17
56	124	67	88	87

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

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

Response: 29

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

2020-21	2019-20	2018-19	2017-18	2016-17
36	21	36	36	16

File Description	Document
Reports of the Human Resource Development Centres (UGC ASC or other relevant centres).	View Document
Reports of Academic Staff College or similar centers	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for additional information	View Document

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

Response: 81.24

6.3.4.1 Total number of teachers attending professional development Programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
221	185	168	185	202

File Description	Document
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	View Document
IQAC report summary	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

Internal Auditing Procedure

The internal audit is conducted twice a year by third party, to ensure the accuracy of bills and vouchers. The internal auditor thoroughly verifies the income and expenditure details. During the process of auditing, initially, the audit team meticulously examines the income of the institute which includes collection of tuition fees, hostel fees, bus fees, exam fees, placement fees, consultancy fees, seminar and project grant, alumni fees and other miscellaneous charges. Further, the audit team ensures the bills and vouchers of the recurring and non-recurring expenses which include infrastructure, furniture, laboratory equipment, software, laboratory consumables, library, sports, R&D, maintenance and spares, training and travelling, salary for teaching and non-teaching faculty, function expenses, autonomous and affiliation expenses and other miscellaneous expenses. The compliance report of internal audit is submitted to the management of the institution through Principal. If any discrepancy is found, the same is brought to the notice of the Principal to resolve it. The same process is followed in every financial year. A legal audit is usually performed at the end of every year. The management team examines the audit report. The accounts department audits and approves the disbursement statements before they are submitted to the Principal. The college is responsible in ensuring smooth conduct of the audit.

External Auditing Procedure :

The Chartered Accountant plays a vital role in auditing the accounts of the college as per the government norms. The auditor ensures that all payments are duly authorized after the audit and the report is sent to the management for review. Any queries, in the process of audit would be attended immediately along with the supporting documents within the prescribed time limits. Finally, the audit statement and balance sheet will be prepared by the chartered accountant for the institute to provide transparency at all levels. The institution had not come across with any major audit objection during the preceding years. All these mechanisms exhibit the transparency being maintained in financial matters and adherence to financial discipline to avoid misuse deduction of funds or properties of the institution at all levels. The audited

statement is duly signed by the authorities of the management and chartered accountant.

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

6.4.2 Funds / Grants received from non-government bodies, individuals, philanthropists during the last five years (not covered in Criterion III and V) (INR in Lakhs)

Response: 61.56

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

2020-21	2019-20	2018-19	2017-18	2016-17
0.3	7.22	29.642	21.019	3.38

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Annual statements of accounts	View Document
Link for additional information	View Document

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

Response:

Mobilisation of funds:

The Institution is poised to grow and make its mark in global scenario by providing requisite funds and optimal use of resources. Financial resources are mobilized by fee collected from the students. Apart from this, the institute also generates funds from projects sponsored by government agencies and consultancy services. The Institute also receives grants from AICTE, UGC, CSIR, DST, NCW, ICMR, etc., to organize Seminars, FDP, etc. The fund is also mobilised through the alumni, who also provide financial and non-financial support for various activities in the institute and also by leasing out the infrastructure facilities to various commercial utility services. In addition to this, placement fee, bus fee, book fee, exam fee, hostel

fee and other miscellaneous charges are generated. These generated funds are used to support the society and for the students through research and laboratory development.

Optimal utilisation of funds:

A constructive financial resource monitoring is done through the following procedures.

Before the commencement of every financial year, all the heads of the department instruct the concerned in-charges to provide the budget required for the upcoming academic year. The in-charges concerned provide both recurring and non-recurring expenses which include infrastructure, furniture, laboratory equipment, software, laboratory consumables, library, sports, R&D, maintenance and spares, training and travelling, salary for teaching and non-teaching faculty, function expenses, autonomous and affiliation expenses and other miscellaneous expenses. The Head of the Institution submits a budget proposal that incorporates the above recommendations of all department heads within the Institution, to the management after getting approval from the finance committee of an organisation.

The finance committee plays a vital role in presenting meticulous report of income and spending information. The Finance Committee meets at least once in a year and it ensures the ratification of the budget utilization of previous financial year and simultaneously approves the budget proposal for the next financial year. The minutes of the meeting is prepared immediately by finance committee chairman and it is submitted to the governing body for further approval. Finally, the fund is allocated for utilization by the Governing body.

The allotted funds are effectively utilized for up-gradation of lab facilities in various departments and to renovate classrooms, labs and faculty rooms. The adequate funds are also utilized for the development and maintenance of infrastructure of the Institution and also to enhance the facilities of library to augment learning practices. Funds are optimised for student's amenities which include student's projects, internship, and extra-curricular activities. The allocated funds are utilized properly as per the academic requirements. Sufficient funds are allocated for effective teaching-learning practices that include Induction and Orientation Programs, Workshops, Inter-disciplinary activities, Training programs, Faculty Development Programs, Conferences and industry-academia interactions. The main motto of resource mobilization and optimal utilization of resources is to set Nandha Engineering College, a bench mark, in tune with quality teaching and unique growth of students.

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

6.5 Internal Quality Assurance System

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

Response:

IQAC

The IQAC is led by the Principal, the Chairman of IQAC and consists of the following members: Director, IQAC Coordinator, all HODs, team of Senior Faculty Members, and a Placement officer. The IQAC will hold a meeting every Tuesday with all the Heads of the Department. The main objective of IQAC is to develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution.

Post Accreditation Improvements

The following are the accomplishment/academic development wherein the IQAC laid its stamp of excellence practice: The Institution becomes autonomous in the year 2013 and a choice-based credit system is established. Outcome-Based Education is administered as per AICTE-NBA. The college has received NBA Accreditation under Tier-I in the year (2021-2024) for 3 UG programs: CSE, IT & ECE in (cycle-IV); in the year (2016-2019) CSE & ECE (cycle-III), CIVIL (Cycle-I).

Teaching –Learning

Student learning is assessed through Continuous Assessment Tests, Periodic Assignments, Quizzes and an End of Semester Examination administered during their direct and indirect assessment tools. Quality ensured at every phase of student learning is not only to assess but also to show progress in them continuously. Consecutively to sustain the quality standards, each procedure is meticulously scrutinized through a wide-range of testing tools, audits, surveys, and feedback channels through the college quality cell.

Improvements during 5 years:

3 New programmes and 3 Research centres are initiated after procuring NBA accreditation under Tier-I. New courses like AI, Biomedical, Agriculture and Chemical Engineering are offered. Faculty retention ratio, Publications and Publications with annexure are increased. Recognised Research Supervisors can be seen. Also in-house labs are established.

Accreditation Quality initiatives:

Strategies for the improvisation includes

- Research sharing and networking with other institutions in India and Abroad.
- Plan to offer new programmes, as per AICTE norms.
- Improvement in Centre of Excellence.
- Placement payscale above 10 lacs.
- Industry oriented curriculum.
- MoU with Premier Institutions and Industries.

Academic Improvements

Some of the significant academic achievements includes

- Doctorate faculty members
- Technical papers published in reputed national and international journals - 225
- 80% of campus placements in all academic years.
- Received external grants as follows:
 - Number of teachers having research projects during the last five years – 16
 - Number of departments having Research projects funded by government and non-government agencies during the last five years – 11
 - Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs) – 49.75646 (INR in Lakhs)
 - Number of teachers recognised as research guides - 53
 - In 2016-17 (8 Projects) – ISTE, NABARD, IETE, EVI, ISRO, National Human Rights Commission, DST-SERB.
 - 2017-18 (15 Projects) – TNSCST, ICMR, AICTE-FDP, AICTE-RPS, CSIR, AICTE-PMKVY, National Human Rights Commission, National Commission for Women.
 - 2018-19 (18 Projects) TNSCST, AICTE-GOC, AICTE-FDP, AICTE-STTP, ISRO, CSIR, AICTE-PMKVY T1, IETE, EDI, National Human Rights Commission.
 - 2019-20 (12 Projects) – EDI, TNSCST, NCW, AICTE-RPS, AICTE-MODROV, AICTE-RPS, AICTE-STTP, DST SERB, AICTE-GOC, TNSGST.
 - 2020-21 (2 Projects) – TNSCST, AICTE AQIS RPS.

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

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

Response:

Committees for Quality Improvement:

Syllabus is an abstract or programme of knowledge. The Calibre of teaching can be procured only by means of interpreting the syllabus. Periodical modification of curriculum enriches the pedagogy. This process is monitored on continual basis by Institutional Quality Assurance Cell (IQAC) through Programme Assessment Committee (PAC) and Department Advisory Board (DAB). Academic audits are periodically done for course file. Course Outcome, attainment process are reviewed recurrently. All Course Co-ordinators conduct 3 meetings, each semester for the analysis of course standard by comparing the results and teaching methodologies with previous outputs. The results get reflected in the Semester attainment. In addition, the IQAC also initiates essential steps to measure the quality of education through regular and continuous follow-up actions. The role and responsibilities of the IQAC committee are the same as defined by the NAAC.

Choice Based Credit System

The institution follows Choice Based Credit System (CBCS) and adopted the AICTE model Curriculum of 160 credits since 2018-19. The curriculum was designed by the faculty of the College following a lot of brainstorm sessions involving various stake holders including the current students undergoing the programme. The students were given more lab/practice-based courses. To expose the students to global learning methods and learn the human skills to reflect upon societal needs, few new courses (four credits) such as universal Human Values and Indian Constitution were introduced in the curriculum. All the suggested changes in the curriculum by the departments and their BOS are put forth to the academic council for approval.

Identification of Slow Learners and Fast learners

After CAT1, the students are divided into two categories, Category-I (fast learners) and Category-II (slow learners). For enhancing the academic performance, remedial coaching and counselling for the slow learning students and project-based alternate assessment for the fast learning students is being carried-out.

This helps the students to upgrade their knowledge levels. This process of continuous assessment has resulted in the students to learn and reflect on the learning that they do in the classroom. At the end of the semester, the students undergo the End semester Examination (ESE) which results in awarding the SGPA based on their performance in each examination.

Innovative Methodologies in TLP

For continuous assessment and evaluation, activity-based learning is encouraged for all courses. Several activity based learning methods are adopted by the faculty members. Mind mapping, polling in video conference tools, conducting quizzes in various mobile applications and tools, conducting experiments in VLab, and peer instructions are followed by the faculty members as a part of their teaching.

Modern Technology in TLP

The institution is moving towards problem-based learning as a solution to produce innovative graduates, can think critically, analytically, and are able to solve problems. The institution mostly focuses on multimedia technology as an innovative teaching and learning strategy in a problem-based learning environment by giving the students a multimedia project to train them in this skill set. The purpose is to access the students' skills in framing and solving problems using multimedia technologies.

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

6.5.3 Quality assurance initiatives of the institution include:

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

Response: All of the above

File Description	Document
Upload e-copies of the accreditations and certifications	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Paste web link of Annual reports of Institution	View Document
Link for additional information	View Document

NVAAC

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

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

Response:

Introduction:

Nandha Engineering College dedicates itself in organizing various programs and events such as seminars, debates, group discussions and awareness campaigns at regular intervals in order to deal with issues pertaining to the relationship between men and women, struggles with discrimination, sexual harassment, new forums for justice and to spread awareness about gender equity.

Activities:

In Nandha Engineering College, for the welfare of girl students and female faculty members, Women Development Cell was established in the year 2012. The Cell accentuates the general well being of the girl students, teaching and non teaching women staff of Nandha Engineering College. WDC conducts various awareness programmes which support physical and mental health as well as to create social awareness about the problems of women in general and gender discrimination in particular by means of Health Awareness Programmes, Legal Rights Programmes and Webinars. These programmes help to identify Women Welfare Laws in order to inculcate self reliance among girl students.

Mechanical department of Nandha Engineering College, along with National Commission for Women (AICTE) conducted a program that focused on the study of gender equality, women empowerment and existing laws relating to women. WDC joins hand with NGOs functioning in and around the area to encourage the development of women through various programmes.

Awards and Recognitions:

International Women's day is being celebrated every year with the presence of chief guests from various fields like medicine, agriculture, advocate etc., The Women Achievers are being specially awarded with KALKI AWARD on International Women's day every year. As a part of the celebration various games and events are being conducted. Fees Concessions are provided to the girl students those who are willing to join in core programmes like mechanical and Civil.

Counseling and Mentoring:

Apart from that, a Counsellor has been appointed by the college for assessing the regular activities of the girls and to identify their problems and help them to settle down their issues. Periodically, Counselling has also been given to all women faculty members mainly in the aspect of academic, career and behavioural patterns. Parents and tutors are timely informed before and after the counselling and the same reports will be handed over by the counsellor to the parents at the earliest. Protective and secure rooms have been allocated to ensure good health and hygiene of the students. Well furnished rooms with necessary facilities with separate cots and pillows, mirror, chair, table, wash basin, dustbin, etc., To reduce the burden of

women employees and to take care of their wards, child care system has been implemented in association with a nearby play school.

Safety and Security:

Surveillance cameras are installed in prominent of the campus for monitoring student's movements inside the college. The security personal is deployed across the college premises for any kind of security issues and offers strict vigilance. Usage of Helmets is mandatory for two wheel riders to enter and exit the campus. The anti ragging committee regularly monitors at scheduled timing in different places to make the campus free from ragging.

File Description	Document
Specific facilities provided for women in terms of: a.Safety and security b.Counselling c.Common Rooms d. Day care center for young children e. Any other relevant information	View Document
Annual gender sensitization action plan	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

Response: A. 4 or All of the above

File Description	Document
Geotagged Photographs	View Document
Any other relevant information	View Document

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

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

Response:

Preamble:

The college is very keen in minimizing the waste and recycling it by passing through the scientific ways that enable the used materials to be recycled ensuring that less natural resources are used. Waste generated in the campus is segregated as solid waste, liquid waste and e-waste and taking the social clubs have played a prominent role in this by organizing various awareness programs, conducting tree plantations and various other activities. In our campus the following initiatives are taken towards the management of wastes. They are as follows:

Solid Waste Management:

For the collection of regular solid waste, garbage bins are kept at different places in the campus. Biodegradable organic wastes such as dry leaves, yard trimmings, and waste from kitchen are subjected to the composting process. To convert these wastes into soil additives, a Vermicompost pit has been constructed on a relatively small scale of 9x3x3 feet near Crop and Animal Husbandry Laboratory. The organic manure thus obtained is used for cultivation.

Liquid Waste Management:

Sewage Treatment Plant with the purification capacity of 2, 00,000 litres per day has been installed near Boys Hostel for treating the liquid waste which is being collected from college, hostel and food court. Nearly 1, 84,000 litres of water is discharged from the plant after purification. The recycled water is used mainly for gardening.

E-waste Management:

Electronic goods are put to optimum use; the minor repairs are done by the laboratory assistants but the major repairs are handled by the technical Assistant and are reused. The waste compact discs and other disposable non-hazardous items are used by students for decoration during college fests as creative means of showcasing the waste management practice.

The Computer maintenance team identifies the e-waste that is accumulated in all departments on a regular basis and stores them in a specified place. The collected e-waste is sold to the proper agency for recycling.

Bio medical Waste management:

In the department of bio medical engineering, used needles and sharps are destroyed using an electrical device called Sharps and Needle destroyer.

Yellow bins are placed at several points inside the campus to collect used mask and other Bio waste materials.

Water Recycling System:

Recycled water acts as an alternate for existing water supplies and be used to enhance water security,

sustainability and resilience. Recycling water can be a significant part of an Institutional pollution prevention program.

Waste water from boy's hostel and mess is recycled in the waste water recycling plant and used for gardening, irrigation purposes and watering lawn. This reduces usage of fresh water supply. It has been designed with the inflow of 2 Lakhs litre per 24 hours and stock capacity of 1.80Lakhs litre and outflow capacity of 1.60 Lakhs litre per 24 hours.

Handling of Hazardous Chemicals and radioactive wastes

Policies are framed to manage the hazardous chemicals in chemical laboratories. Students and faculty members are instructed to use chemicals by following the standing operating procedures like handling chemical with face mask and gloves etc.,

File Description	Document
Relevant documents like agreements/MoUs with Government and other approved agencies	View Document
Geotagged 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 all of the above

File Description	Document
Geotagged photographs / videos of the facilities	View Document
Any other relevant information	View Document
Link for any additional information	View Document

7.1.5 Green campus initiatives include:

1. Restricted entry of automobiles
2. Use of Bicycles/ Battery powered vehicles
3. Pedestrian Friendly pathways
4. Ban on use of Plastic

5. landscaping with trees and plants**Response:** A. Any 4 or All of the above

File Description	Document
Various policy documents / decisions circulated for implementation	View Document
Geotagged photos / videos of the facilities	View Document
Any other relevant documents	View Document

7.1.6 Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:

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

Response: A. Any 4 or all of the above

File Description	Document
Reports on environment and energy audits submitted by the auditing agency	View Document
Certification by the auditing agency	View Document
Certificates of the awards received	View Document
Any other relevant information	View Document

7.1.7 The Institution has disabled-friendly, barrier free environment

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

Response: A. Any 4 or all of the above

File Description	Document
Policy documents and information brochures on the support to be provided	View Document
Geotagged photographs / videos of the facilities	View Document
Details of the Software procured for providing the assistance	View Document
Any other relevant information	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 other diversities (within 500 words).

Response:

Initiatives for cultural and regional diversity

The Institution provides an inclusive environment for everyone by advocating tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities. Various activities like Annual day, Women's day, Unity day, Science day, Yoga, etc are organized to promote an inclusive environment. Further Socioeconomic awareness programs like Youth awakening day, Helmet awareness for public, Book day rally, Blood donor camp and various rallies are organized to the general public which in turn inculcate the students with some responsibilities within them. Religious festival like Onam is celebrated inside campus and Diwali is celebrated with orphanage children and the funds raised from the college are being donated to orphanages. A variety of clubs like NSS, Road Safety, YRC, Tree plantation, etc are included in the curriculum under Personality and Character Development (PCD) course so that every student must indulge in any one activity for each semester. Clubs are added to curriculum and are functioning under the PCD.

The Institution believes in equality of all cultures and traditions as it is evident from the fact that students belong to different caste and religion are studying in the college without any discrimination. The students feel safe and secure at the Institution as there is no segregation of students on the basis of their lingual or communal background. The harmonious life of multi-ethnic communities in our country reflects in the institutional ambience which creates goodwill among the students towards maintaining peace and national integration.

Opportunities in Programmes and Activities

Equal opportunities are provided to the students in various activities conducted throughout their course of study irrespective of their caste, creed, and religion. The clubs are included in the syllabus with the motto of inculcating the sense of unity, discipline and harmony. Regular visits are arranged to Orphanages and Homes for Aged to strengthen values of love and compassion.

Initiatives for Linguistic diversity, Communal diversity & Socio economic diversity

English is utilised as a medium of teaching in all the classrooms to bridge the gap between the region specific teaching and the expectations of the students of the other states. To enable the students to work across the world, the other foreign languages like German, Japanese and Hindi have been taught in the campus for our students. The students and the faculty of all the communities and religions are a part of this temple of learning which shows that the Institution strives to provide good-natured environment for all. Moreover, so far there have been no riots in the history of the Institution related to any issue. The students hail from poor family to rich, from the rural areas, study in the Institution. To overcome the socioeconomic barriers, the Institution has facilitated the students to receive the following scholarships: 5,300 BC/MBC students, 1,238 SC/ST students, 6,010 first graduate students and in total, 8, 669 students have got benefitted from various scholarship schemes for the last five years.

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 (within 500 words).

Response:

Nandha Engineering College organizes various events to sensitize students and employees of the Institution to the Constitutional Obligations: Values, Rights, Duties and Responsibilities of citizen. The value of Human was realized more specifically during pandemic period and it became essential to create awareness about corona virus, and as an initiation social cause pamphlets were created and uploaded in social media. The Institution believes in providing holistic all round education to the students. Sensitizing students on the constitutional rights, values, duties and responsibilities of primary education have been given in the institute through various means.

Sensitization of students and employees of the Institution to the constitutional obligations is done through curriculum as well as through extra-curricular activities. In curriculum, the subjects which sensitize the students about the constitutional obligations are Essence of Indian traditional knowledge and Also, Constitutions of India, etc. Further a course on Environmental Studies is being offered to give insight into environment acts, wildlife protection act, forest act and global environmental concerns.

Awareness Programme

Besides, many regular programs are conducted in the Institution to educate women about their rights. Also seminars and workshops are conducted on days of national importance on various rights, duties and responsibilities of citizens. Every year police personnel are invited to share their experience and to inspire and motivate young minds to contribute in building the nation. Seminars on topics like Right to Information, sexual harassment are conducted periodically.

The various programs organized are:

- NSS unit of the institution conducts a cleanliness drive to mark the occasion of Swachh Bharat Abhiyan in the nearby village areas. An oath is being taken by all students and faculties to keep their surroundings clean.
- Environmental awareness programs - Guest lectures, rally, competition, planting trees programs
- Awareness camps - For girl students and female faculty, awareness on polycystic ovaries.
- The Blood Donation Camp (**Nandha's Uyir thuli**) was conducted by the NSS Club of Nandha Engineering College jointly with Lion's Blood Bank, Erode at college campus and motivated volunteers to donate blood.
- The students to be aware of their rights and duties Courses like Essentials of Indian Traditional Knowledge and Constitutions of India were added to the curriculum and various seminars were conducted on rights and duties.
- Village cleaning programs were organized by departments under NSS club have provided platform to understand the live hood of village and made our students to understand their responsibilities.
- During natural disasters(Kerala flood relief mission , Gaja cyclone relief fund raiser activity), students are permitted to collect funds/ materials and distribute them to the affected people
- A few department students have visited orphanage and old age homes and provided the fund which they collect from faculty, staff and students for Independence Day, Republic Day are celebrated to create awareness among the students about Social responsibility.
- As a Tribute to **General. Bipin Rawat** on his sad demise. Students of Nandha Engineering College mourned and observed 2 minutes silence on 10.12.2021

File Description	Document
• Details of activities that inculcate values; necessary to render students in to 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 Code of Conduct is displayed on the website**
- 2. There is a committee to monitor adherence to the Code of Conduct**
- 3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff**
- 4. Annual awareness programmes on Code of Conduct are organized**

Response: A. All of the above

File Description	Document
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programs etc., in support of the claims	View Document
Code of ethics policy document	View Document
Any other relevant information	View Document

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

Response:

At Nandha Engineering College, all national festivals are celebrated with great enthusiasm to inculcate a sense of patriotism in the students. Every year students come together and perform cultural programs like dance, skits highlighting societal problems. The students also prepare videos and speeches to share their thoughts on these days. Every year legal awareness programmes are organized to educate students to know about the fundamental rights and duties.

National unity day is such event which has been celebrated every year. The day is celebrated to mark the birth anniversary of Sardar Vallabhai Patel. During National Youth day, all the participants are taking oath every year. National flags are distributed to faculty, staff and students to instil sense of pride amongst them.

Independence and Republic are celebrated every year and the students have been participating in various events depicting the different cultures of our country. The NSS unit and the students' association organise many cultural programs to address prevailing social issues. The student staff and alumni participate and rejoice during this celebration with great patriotic fervour.

The Institution also commemorates the birth / death anniversaries of great Indian personalities like Dr.A.P.JAbdul Kalam, Dr. Babasaheb Ambedkar, Chatrapati Shivajimaharaj, and Mahatma Gandhi. The students share the principles of these eminent personalities through speeches and posters. During Teachers day, the students' of all the departments puts up a show to express their love and gratitude for their teachers.

Engineers' day is being celebrated every year and the departments are conducting various technical events like seminars and symposiums. To inculcate the importance of Yoga among Yoga, International Yoga day is celebrated and faculty and students are performed Yoga and meditation. Women's day is celebrated on International Women's day i.e. March 8 to show respect towards women in all the efforts taken by them to manage the personal and professional life and for their contributions. In this regard, an Award named "**Kalki Award**" is awarded to women for significant achievement in their field.

To pay due respect to the sacrifices of our Indian soldiers, Kargil Day has been celebrated. Besides all these commemorative days, seminars and guest lectures are regularly organized to inculcate a sense of national pride and gratitude towards sacrifices of great leaders of our country. Voters' awareness day is

also another event that has been celebrated recently to insist voting in elections.

File Description	Document
Geotagged photographs of some of the events	View Document
Any other relevant information	View Document
Annual report of the celebrations and commemorative events for the last five years	View Document

7.2 Best Practices

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

Response:

Best Practices – (1)

Title of the Practice

In - House Companies

1. Goal

In - house companies draw the attention of the students as it provides industrial platform during their academic tenure. A target is essential for each student who aspires to get placed. Setting realistic goals for individual students give them a sense of direction and purpose, and help them improve productivity levels. In-house team suits the companies ready to invest in the recruitment processes, in the development of the team and ready to organize amicable work environment for students. Nandha Engineering College aims to bridge the gap between industry and academia. Students are able to gain industrial experience, its culture, norms and the tools of the real time projects.

2. The Context

Nandha Engineering College is focusing on developing the employability skills of the students. The In – House companies act as a reference guide for each skill set and then provide training that is adapted to ensure its trainees development, according to the companies’ expectations. i GEN and Thulliyam are the two In - house companies functioning inside the campus. The In – House companies are functioning with the mission of reinforcing company’s culture and identity. It can even help to cope up with changes implemented by a company's leadership. The management of the institute is generous in providing ample opportunities for the upliftment of the students.

3.The Practice

All placement willing students are allowed to attend In - house company interview from II year onwards. The In – house companies shortlist the students through the selection process that includes online assessments, programming assessment, group discussion and personal interview. The selected students are given a four month T24 Technical Consultant Training on Arrangement Architecture (AA Core), Versions, Vr Routines, Multi threaded, Design studio, Routines, Templates, Core JED, Directories, Infobasic, COB, TAFC vs TAFJ Basics, BRD/ FSD/ TSD process, Enquires, COS, Tabbed, OFS, HMM/ DLD/ BCON, and a 2 week of “Functional Induction” on Banking Basics, Accounting Basics, T24 and other products, T24 navigation and functional overview. In Thulliam, training on Java OOPS Concepts, Streams and File Handling in Java, Web Services, Introduction Spring Framework, Introduction to Spring Boot, RESTful Web Services with Spring and Spring Boot, RESTful APIs, and Introduction to MySql is provided to the students. During the training process, the modules are assigned to students either individually or as group. The progress of the modules assigned to the students is monitored by the trainers of the company.

As a part of In House Company Training, programs such as, Industrial Seminar on MYSQL database, Faculty Interaction Industry Exchange Program, Training Activities, Internship and Seminar on Mobile Websites are conducted.

Facilities Provided

The Institution provides a well furnished spacious room of 660 sq.ft with 14 HP computers that are connected by 24 Port Cisco Switches to Thulliam Infotech Pvt Ltd. Further, the company is provided with the system specification of HP Pavilion p2-PC/Core i3, Intel H61 Chipset Motherboard, 4 GB DDR 3 RAM, 500 GB SATA HDD, Memory Card Reader, Atheros AR152 Ethernet Controller and HP LV 1911 18.5 inch LED Monitor.

For iGEN, The Institution also provides a 1,232-square-foot room with 24 HP computers with the same specification as Thulliam Infotech Pvt Ltd. A dedicated Intel server processor (HP DL 360e G8 E5 2403V2) with 8 GB RAM is provided to host high - traffic websites, web applications and for other hosting scenarios.

Each In – House company is provided with two air conditioners to control the temperature and humidity of the server room so that the equipment functions in an efficient manner.

4. Evidence of success

Through i GEN, around 20 students are getting placed every year. The details are as follows:

S.No	Year	No of students got placed
1	2018	21
2	2019	14
3	2020	14
4	2021	33
5	2022	23

In 2018, 21 students got placed in Techmill and Aspire Systems, 14 students got recruited in Techmill, Maveric and Stoics in 2019, in 2020, 14 students got offer from Buzzworks / Temenos and Stoics, in June 2021, 17 students got recruited in Maveric, Buzzworks / Temenos, 16 students got placed in ITSS in Sep

2021 and currently 23 students are undergoing training for GCI Consulting, Australia.

In 2018 – 2019, 14 students got placed in Thulliam and in 2019 – 2020, 5 students underwent Internship training.

5. Problems Encountered and Resources Required

Allocating training slots for students /faculty training during the academic process are challenging.

Establishing relationship and signing of MoU with reputed industries is a challenge for the rural based Institution. Follow up activities to retain the partnership becomes a demanding one.

Establishing In – house Companies with high – tech infrastructure is expensive.

6. Notes (Optional) : Nil

Best Practices – (2)

Title of the Practice

Personality and Character Development (PCD)

1. Goal

Development of the all-rounded individual is the principal goal of PCD in colleges. PCD aims to develop character with competence and also emphasizes on invoking hidden skills which are very vital to deal with the current scenario of challenging competitions. The experiences, the students gain through PCD, positively influence their emotional, intellectual, social, and inter-personal development. Taking part in the out-of-the-classroom activities helps students to understand the importance of critical thinking, time management, academic and intellectual competence and connect them with society. Working with diverse groups of individuals allows the students to gain more self-confidence, autonomy and appreciate others' differences and similarities. Moreover, the students learn to negotiate, communicate, manage conflicts and lead others.

2. The Context

Good personality benefits the students with better social and professional life. Personality includes the qualities like character, behavior and attitude which promote the students' confidence, self – esteem and positive attitude. Taking this into consideration, to enhance the traits of personality and character among the students, Personality and Character Development course is introduced in Nandha Engineering College. Under PCD, clubs like Cultural & Fine Arts club, NSS, Tree plantation club, Road Safety club, Youth Red Cross (YRC), Trekking club, Music club, Photography club and Sports club are functioning effectively. Through the club activities, students are made to aware of their roles and responsibilities in elevating of society.

3. Practice

All students should enroll in any one of the personality and character development program and attend 30 hours of activities.

- National Service Scheme (NSS) was introduced in NEC with the objective of developing the personality and character of the students through voluntary community service. The NSS volunteers involve themselves in several activities in the villages in and around. The students plant saplings, conduct medical camp for the welfare of the people, create awareness among school students and village people on health, clean water tanks and streets, etc.,
- Sports Club encourages the enrolled students to take part in the Sports and Games in which they are interested. The club functions with the motive of developing confidence, leadership qualities and team spirit in students. The Sports club of NEC offers Basketball, Volleyball, Throw ball, Badminton, Carrom, Chess, Kabadi, Cricket, etc.,
- Youth Red Cross (YRC) of NEC organizes activities related to social services like Blood Donation Camp, Eye Camp and Awareness rallies.
- Tree Plantation Club makes arrangements for planting saplings in Erode District by joining hands with social welfare organizations.
- Road Safety Club creates awareness among the students about the traffic rules and regulations by conducting classes and photo exhibitions by the experts from motor vehicles department. Further, conducts awareness programmes for Pedestrians, two and four wheeler riders in the areas in and around Perundurai.
- Music club helps the students to learn playing different musical instruments by appointing trainers.
- Photography Club students are trained under professionals for taking eye capturing pictures.
- Trekking Club gives opportunities to the students to explore nature and be a part of it and enables the trekkers to adjust themselves in new environment with unforeseen eventualities.
- Fine Arts Club motivates the students to bring out their hidden talents, creativity and Innovation.

- Every student should have minimum of 75% attendance in the club activities. The club activities will be completed during the first year of the program. However, for valid reasons, the Principal may permit a student to complete this requirement in the second year.

Students Industrial Preparatory Wing

Students Industrial Preparatory Wing (SIP) of the Institution joins hands with industries to enhance technical and social skills of the students and also to prepare them industry ready. Syllabus is framed to reduce the sizable gap between the industry and the Institution and acquaint the students with the recent trends in industries by obtaining inputs from industrial experts. Through institute industry collaborative training programme, the Institution provides opportunity for the students to get industrial exposure during the tenure which ensures creation of industry ready engineers. The subjects relevant to Industries are given due importance and are taught as hands-on practical sessions with real time examples by well-trained faculty members. Keeping this in forefront, the industry relevant subjects handling faculty members are given training in industries and they in turn train the students through the practical sessions.

Centre of Excellence refers to a team, a shared facility or an entity that provides practices, research, support and training for the specific sectors. It facilitates the collection of standards and practices in an institution to develop the skills of team members and to transform the institution to the next level. It works in partnership with industry, to raise training standards, boost productivity, address emerging skill gaps and align training & research to meet out the industry needs. Aiming towards it, the Institution has signed MoU with reputed organizations like Infosys – Campus connect, Vectra Technosoft, (Redhat Linux), PALS, ICT

Academy, TMI systems, Prashan Medical Technologies, ABB power projects, Chennai, Nexware Technologies, Coimbatore, Kulothung Automation, Erode, Calibre Instruments, Coimbatore, Pantech Solutions, Coimbatore, Vi Microsystems Pvt. Ltd., Chennai, BSNL, Erode., LIVEWIRE-A Division of CADD Centre, Sustainable Communities India Pvt. LTD, The Creator Industries, Bhavani, Jeyam CNC CAD/CAM Design Technologies, Chennai, Common Effluent Treatment Plant(CETP), SIPCOT, Shakthi Knitting Private Limited, Fermion Energy & Engineering Solutions Pvt. Ltd., Sim Infosystems Private Ltd, Chennai and EEDISSIA. Promoting Employability Skill is mandatory to meet out the requirements of the industries. It is imperative for the students of higher educational institution to have an effective mix of knowledge, skills and personal attitudes in order to be employed initially and function successfully in the required roles. Keeping this in view, Placement and Training cell of the college provides meticulous training and organizes career guidance programmes for all the students to enhance their employability skills of the students. Further, the placement cell provides training on interview skills, group discussions, communication skills, etc., Moreover, the student chapters of various national and international professional bodies provide enough scope for students to shape their professional skills. The Technical Association in each department acts as an additional platform for the students to enhance the technical and organizational skills. Being supported by these trainings, the students are placed in reputed National and International software and hardware companies like TCS, CTS, Wipro Technologies, Capgemini, Hexaware, Infosys, LGB Groups, LMW, Purple State, Virtusa, DXC Technology, etc.

4. Evidence of success

Active involvement and participation in various PCD activities made the students exhibit their innate positive character and enhanced classroom behavior. The same is being witnessed in their co-curricular activities.

In Placement, NEC has produced a high track record in the past five years: 530 students got placed in the academic year 2016 – 2017, 400 students got placed in the academic year 2017 – 2018, 424 students got placed in the academic year 2018 – 2019, 320 students got placed in the academic year 2019 – 2020 and 412 students got placed in the academic year 2020 – 2021.

5. Problems Encountered and Resources Required

Allocating schedules for students during the academic process are challenging.

Proper maintenance of the planted saplings is the need of the hour.

Resources Required - Transport facilities are being provided to take the students outside the campus. Additional Musical instruments are in need to train the students. The following are the list of Clubs:

S.NO	LIST OF CLUBS
1.	National Service Scheme (NSS)
2.	Sports Club
3.	Youth Red Cross (YRC)
4.	Tree Plantation Club

5.	Road Safety Club
6.	Music club
7.	Photography Club
8.	Trekking Club
9.	Fine Arts Club
10.	Student's Industrial Preparatory Wing

6. Notes (Optional) : NIL

File Description	Document
Best practices in the Institutional web site	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:

Institution Distinctiveness

Centre for Innovation and Product Development (CiPD)

Acceleration in the technological advancement in recent times urges the students to be industry-primed by acquiring eclectic skills while graduating from the institutes of higher education. The advancements encourage, inspire and nurture young students by exposing them to new ideas and processes resulting in innovative activities. In line with the above, Technical Institutions started to establish forums to enable students to employ their novel and creative ideas originating from fundamental concepts learnt in the classroom and to perpetuate the hands-on knowledge gained in the laboratory into a new product.

To ensure Innovation as a prime kingpin, Nandha Engineering College has introduced the following platforms to build the culture of innovation and to transform dream ideas into reality.

- Institution's Innovation Council (IIC)
- Centre for Innovation and Product Development (CiPD)

- **Business Incubator (BI)**

The afore mentioned wings at Nandha Engineering College aim to develop new products that have a societal impact by leveraging exhaustive technology.

Institution's Innovation Council (IIC)

Nandha Engineering College, as per the guidelines of Ministry of Human Resource Development Innovation Cell (MIC), has constituted Institution's Innovation Council in the year 2018. IIC mainly focuses in encouraging, inspiring and nurturing young students by exposing them to new ideas and processes resulting in innovative activities in their formative years.

The major focus of IIC is

- To encourage the creative energy of student population to work on new ideas and innovation and promote them to develop products.
- To develop better cognitive ability for Engineering/technology students and to create complete ecosystem which inculcate the culture of Innovation.
- To conduct various innovative and entrepreneurship-related activities prescribed by MIC in time bound fashion.
- To identify and reward innovations and share success stories.
- To organize periodic workshops/ seminars/ interactions with innovators /startups / entrepreneurs, professionals and create a mentor pool for students' innovations.
- To network with peers and national entrepreneurship development organizations.

Centre for Innovation and Product Development (CiPD)

CiPD was promoted in Nandha Engineering College in 2015 with the aim of creating spark of innovation in the students' mind and to expose them to the existing problems that need to be solved. It encourages the students to come up with ideas which have innovation, Intellectual Property Right (IPR) component and potential commercial value. It connects the students with experts for mentoring. Project making, project exhibition & presentation, hackathon and participation in competitions are part of our yearly event (Innovation Day) schedule. The CiPD plays a vital role in inviting innovators, researchers, successful startups/entrepreneurs from varied fields to share their experience for problem solving and success scenarios which may benefit students/faculty members of the Institution. Further, the centre aims to build an interdisciplinary networks and teams for students and facilitate understanding of subtle aspects of innovation, IPR, startups and entrepreneurship.

PROGRESS OF CiPD

- Motivating the students to think laterally and out-of-the-box to generate innovative ideas
- Transforming innovative ideas into products of societal needs
- Providing required technical guidance by mentoring the students to carry out the project
- Filing patents and commercialization of the products in the long run work flow of CiPD.

Business Incubator (BI)

NEC Business Incubator (BI) is an Institutional mechanism providing a conducive ecosystem to promote innovation, product development, startups and entrepreneurship. Nandha Engineering College was officially approved by MSME (Govt. of India, Delhi) as a Host Institution (HI) for idea incubation from 2018.

It aims to encourage students with innovative ideas & entrepreneurial spirit to become entrepreneurs by imparting skills via training Programmes. Besides students, general public with inclination for novel idea-based business ventures and existing companies interested in incubating unique spin of ideas towards commercialization can also avail the BI platform. MSME is providing funding support up to INR 15 Lakh per approved idea through the business incubators.

Ranking

IIC of Nandha Engineering College has been awarded five star and four star rating by the Ministry of Education (MoE) for innovation and startups for the year 2019-2020 & 2020-2021 respectively.

Grants

BI of NEC has been funded with Rs.15 lakh for the idea Roll and Pull Uprooting Machine which is helpful to the small and marginal farmers to harvest Tapioca with less manpower. The product development is in the verge of completion and is expected to be completed in July 2022.

Patents and Copy rights

21 patents have been obtained by faculty and students for their invention and 30 copyrights have been granted for the creative work of faculty and students.

Product Launch - Automatic Sanitizer Dispenser and Automatic Hand Sanitizer developed by Mr.M.Seenivasan, AP/ ECE and Mr.R.K.Boopesh of second year ECE were launched.

- A project titled Automatic Alert for Sleepy Drivers was done by Mr.S.Premnath, Ms.R.Dhivyarani and Mr.L.Mohanasundar of Second year EEE through CiPD. It alerts the drowsy driver to avert accidents.
- Automatic Seed Sowing Farobot Using Arduino was developed by Jobin Joseph, A.J.Arsha, C.M. Drishya and P.Nayana of second year Agriculture Engineering students to overcome the problem of labour shortage.
- Solar Inverter was developed by Mr. M.Arunprasath, Mr. P.S.Karthickh Raghunath, Mr. S.Kavin Kumar and Mr. K.C.Santhosh of III year EEE with the guidance of faculty members Mr.S.Prabhakaran, AP/EEE and Mr.P.Krishnagandhi,AP/EEE.

Programmes Organized

In order to nurture innovation culture, entrepreneurship and Intellectual Property Rights among the students, CiPD of NEC organizes various awareness programmes, workshops and seminars by inviting experts and officials as resource persons.

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

NAAC

5. CONCLUSION

Additional Information :

Nandha Engineering College, one of the best known self-financing institutions aims to achieve excellence in Engineering education, with a strong emphasis on the uplift of rural students who have only limited avenues for higher education.

The following are our credentials:

NBA Accreditation: In our institution, three courses CSE, IT and ECE are accredited in Tier-I by National Board of Accreditation with the score of 675 and above

NIRF Participation: The College has participated in NIRF ranking process for the last three consecutive years.

Competition Success Review: Ranked **15th** among the Outstanding Engineering Colleges for Excellence and also ranked **11th** among the Top Engineering Colleges in Tamilnadu.

DataQuest Ranking: The College has been ranked as 65th position among Top 100 T schools in India.

The Week Ranking: Ranked as 112th position among best private Engineering colleges all over India.

Research Centers: The College has three recognized research centers from Anna University, Chennai.

Student Exchange with foreign University: Our students had undergone Research Attachment Program at University Teknologi Petronas (UTP), Malaysia.

Centre of Excellence: The College provides facilities to run two in-house startup companies' iGen Technologies and Thulliam Infotech Pvt Limited.

Memorandum of Understanding (MoU):

The College has 9 functional MoU's with various industries which includes MoU with Virtusa and Infosys for enriching practical skills and imparting industry relevant course curriculum to students of all engineering disciplines in the field of Information Technology ("IT").

R&D and Consultancy: The institute has received Rs.117.06 lakhs as grant from Govt. and Non Govt. funding agencies and generated Rs 14.8968 lakhs as consultancy revenue during last five years.

Eco-friendly campus:

The entire campus has been maintained with full of greeneries such as trees, plants and landscapes. Adequate measurements have also been taken to maintain the campus as pollution free environment. Energy environment and green audit are conducted every year. The solid waste management within the campus is used as manure for vegetable cultivation land which is maintained by our Agriculture Department. The campus lighting is gradually being replaced with LED bulbs and sensor based devices are installed in electrical equipments to reduce the power consumption.

Concluding Remarks :

NEC coordinates all of its actions in order to fulfill its vision. The Institution assures that the students receive an excellent curriculum delivery. Besides, the institution also encourages students to develop industry readiness skills. The institution organizes variety of programmes to help students get better employment opportunities. Students are also encouraged to take MOOC courses such as NPTEL, Swayam, Udemy, etc to earn equivalent credits. Students are encouraged to participate in paper presentations, workshops, seminars, internships, and student exchange programmes. The institution offers ICT-enabled classrooms for carrying out teaching and learning process in an innovative way. In addition, the Institution has enough infrastructure facilities including an auditorium, conference halls, and seminar halls etc., for conducting co-curricular and extra-curricular activities.

To provide financial assistance to the students of economically poor background, scholarships are offered through Government / Non- Government schemes throughout the degree program.

The Institution has all statutory committees such as Governing Body, Academic Council, Boards of Studies, Finance committee and other non-statutory committees that take care of policy decisions related to academic and non-academic activities and their implementation. Institution has well defined strategic plan drafted in line with the institute vision, mission and is monitored by periodic reviews among the senior functionaries.

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																				
1.1.2	<p>Percentage of Programmes where syllabus revision was carried out during the last five years.</p> <p>1.1.2.1. Number of all Programmes offered by the institution during the last five years. Answer before DVV Verification : 17 Answer after DVV Verification: 15</p> <p>1.1.2.2. How many Programmes were revised out of total number of Programmes offered during the last five years Answer before DVV Verification : 14</p>																				
1.1.3	<p>Average percentage of courses having focus on employability/ entrepreneurship/ skill development offered by the institution during the last five years</p> <p>1.1.3.1. Number of courses having focus on employability/ entrepreneurship/ skill development year-wise during the last five years.. Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>410</td> <td>415</td> <td>377</td> <td>363</td> <td>343</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>410</td> <td>415</td> <td>377</td> <td>363</td> <td>343</td> </tr> </tbody> </table>	2020-21	2019-20	2018-19	2017-18	2016-17	410	415	377	363	343	2020-21	2019-20	2018-19	2017-18	2016-17	410	415	377	363	343
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2020-21	2019-20	2018-19	2017-18	2016-17																	
410	415	377	363	343																	
1.3.3	<p>Average Percentage of students enrolled in the courses under 1.3.2 above.</p> <p>1.3.3.1. Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>937</td> <td>1025</td> <td>731</td> <td>858</td> <td>866</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>0937</td> <td>1025</td> <td>731</td> <td>858</td> <td>866</td> </tr> </tbody> </table> <p>Remark : Input edited as per documents provided by HEI.</p>	2020-21	2019-20	2018-19	2017-18	2016-17	937	1025	731	858	866	2020-21	2019-20	2018-19	2017-18	2016-17	0937	1025	731	858	866
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2020-21	2019-20	2018-19	2017-18	2016-17																	
0937	1025	731	858	866																	
2.6.3	<p>Pass Percentage of students(Data for the latest completed academic year)</p> <p>2.6.3.1. Total number of final year students who passed the examination conducted by</p>																				

Institution.

Answer before DVV Verification : 828

Answer after DVV Verification: 828

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

Answer before DVV Verification : 845

Answer after DVV Verification: 849

Remark : Input edited with as par with EP 2.2.

3.1.2 The institution provides seed money to its teachers for research (average per year, INR in Lakhs)**3.1.2.1. The amount of seed money provided by institution to its faculty year-wise during the last five years (INR in lakhs).**

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
1.7	2.97709	0.2833	0.64663	1.083155

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
1.7	2.97709	0.2833	0.64663	1.083155

3.2.1 Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)**3.2.1.1. Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)**

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
16.7450	22.10431	29.7425	45.74688	3.26

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
16.7450	22.10431	29.7425	45.7468	3.26

Remark : Input edited as per given observation .

3.2.4 Average percentage of departments having Research projects funded by government and non-government agencies during the last five years**3.2.4.1. Number of departments having Research projects funded by government and non-government agencies during the last five years**

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
1	4	2	4	0

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
1	4	2	4	0

3.2.4.2. Number of departments offering academic programmes

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
10	10	10	10	10

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
9	9	9	9	9

Remark : INPUT EDITED AS PER METRIC 3.2.1.

3.4.2 Number of Ph.D's registered per teacher (as per the data given w.r.t recognized Ph.D guides/supervisors provided at 3.2.3 metric) during the last five years

3.4.2.1. How many Ph.Ds are registered within last 5 years

Answer before DVV Verification : 25

Answer after DVV Verification: 29

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

Answer before DVV Verification : 7

Answer after DVV Verification: 10

Remark : Input edited as per research scholars registered in the institution as 29 instead of 25 during the last five years

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

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
63	59	15	8	27

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
62	58	13	8	28

Remark : Input edited as per given observation.

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

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
123	78	229	284	226

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
122	72	221	284	226

Remark : input edited as per given observation , he books and chapters having ISBN/ISSN numbers only will be considered.

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

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

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
60.58	93.47	110.97	233.95	199.58

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
0.9	3.8	30.62	51.71	28.77

Remark : Input edited as per documents provided by HEI.

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

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)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
98.28	191.31	235.39	337.85	237.25

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
8.28	91.31	35.39	37.85	37.25

Remark : Input edited as per documents provided by HEI.

2.Extended Profile Deviations

ID	Extended Questions																				
1.1	<p>Number of students year-wise during last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>2819</td> <td>2707</td> <td>2750</td> <td>2941</td> <td>3052</td> </tr> </tbody> </table> <p>Answer After DVV Verification:</p> <table border="1"> <thead> <tr> <th>2020-21</th> <th>2019-20</th> <th>2018-19</th> <th>2017-18</th> <th>2016-17</th> </tr> </thead> <tbody> <tr> <td>2819</td> <td>2707</td> <td>2750</td> <td>02941</td> <td>3052</td> </tr> </tbody> </table>	2020-21	2019-20	2018-19	2017-18	2016-17	2819	2707	2750	2941	3052	2020-21	2019-20	2018-19	2017-18	2016-17	2819	2707	2750	02941	3052
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