

Annual Quality Assurance Report – 2021-2022

Criterion-I Curricular Aspects

1.1 Curriculum Design and Development

1.1.1 Programmes for which syllabus revision was carried out during the academic year		
Name of Programme	Programme Code	Dates of Revision
B.Tech	Civil Engineering	21/07/2021
B.Tech	Computer Science and Engineering	21/07/2021
B.Tech	Electronics and Communication Engineering	21/07/2021
B.Tech	Electrical Engineering	21/07/2021
B.Tech	Electrical and Electrical Engineering	21/07/2021
B.Tech	Information Technology	21/07/2021
B.Tech	Mechanical Engineering	21/07/2021
MCA	MCA	21/07/2021

1.1.2 Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the academic year		
Programme with code	Courses with code	Date of introduction
B.Tech-	7EEEDHS1- Entrepreneurship Development	2021-22 Odd
B.Tech-	7CEEPPE1-Estimating, Costing and Professional Practice	2021-22 Odd
B.Tech-	7CEIROE2- Intellectual Property Rights	2021-22 Odd
B.Tech	NRMM7E003- MARKETING MANAGEMENT	2021-22 Odd
B.Tech-	19ME6OE02T Engineering Management	2021-22 Odd
B.Tech-	19MBA6OE01 Principles of Management	2021-22 Even
B.Tech	19ME5PE03T Production and Operation Management	2021-22 Odd
B.Tech	19ME6PE08T Total Quality Management	2021-22 Even
B.Tech	19EC4PD01L- Product Development Lab	2021-22 Even

M.Tech	EEM361-Business Analytics	2021-22 Odd
M.Tech	EEM364-Cost Management of Engineering Projects	2021-22 Odd
M.Tech	CSM363-Operations Research	2021-22 Odd
MBA	19MB106-Managerial Principles and Practice	2021-22 Odd
B.Tech-All	Solid modeling using AutoCAD	Aug-2022
B.Tech-All	Multi-physics simulation using ANSYS	Aug-2022
B.Tech (ECE, EEE, EE)	VLSI Design using CADENCE	Aug-2022
All	Virtual Instrumentation using Lab View	Aug-2022
All	MATLAB	Aug-2022
All	Basics of PCB design and prototyping	Aug-2022
B.Tech / M.Tech	Entrepreneurship Development	July-2021

1.2 Academic Flexibility

1.2.1 New Programmes/ courses introduced during the academic year		
Sl. #	Programme/ course	Date of introduction
1	B.Tech-NREC7D005-ADAPTIVE DIGITAL SIGNAL PROCESSING	2021-22-Odd Sem
2	B.Tech-7EEASPE1-Advanced Control Systems	2021-22-Odd Sem
3	B.Tech-NREE7D001-ADVANCED DIGITAL SIGNAL PROCESSING	2021-22-Odd Sem
4	B.Tech-NRIT7D005-ALGORITHMS FOR BIOINFORMATICS	2021-22-Odd Sem
5	B.Tech-NRIT7D002-Big Data Analytics	2021-22-Odd Sem
6	B.Tech-NRCS7D005-Computer Vision	2021-22-Odd Sem
7	B.Tech-NRCL7E004-CYBER LAW AND ETHICS	2021-22-Odd Sem
8	B.Tech-7CSCPPE2-Cyber Security & Privacy	2021-22-Odd Sem
9	B.Tech-NRCS7D006-DEEP LEARNING	2021-22-Odd Sem
10	B.Tech-NRCI7D002-DESIGN OF CONCRETE STRUCTURES-II	2021-22-Odd Sem
11	B.Tech-7MEDCPE1-Design of Machine Components	2021-22-Odd Sem
12	B.Tech-NREC7D001-Digital Image Processing	2021-22-Odd Sem
13	B.Tech-7CSDDOE1-Digital VLSI Design	2021-22-Odd Sem
14	B.Tech-7CSDMOE3-Disaster Management	2021-22-Odd Sem

15	B.Tech-NRIT7D006-E-Commerce and ERP	2021-22-Odd Sem
16	B.Tech-7EEEEEDHS1-Entrepreneurship Development	2021-22-Odd Sem
17	B.Tech-7EEEEKMAND-Essence of Indian Knowledge Tradition - II	2021-22-Odd Sem
18	B.Tech-7CEEPPE1-Estimating, Costing and Professional Practice	2021-22-Odd Sem
19	B.Tech-NREL7D004-Flexible AC Transmission System	2021-22-Odd Sem
20	B.Tech-7CEGTOE1-Green Technology	2021-22-Odd Sem
21	B.Tech-NRCI7D005-GROUND WATER HYDROLOGY	2021-22-Odd Sem
22	B.Tech-NREL7D002-HIGH VOLTAGE SYSTEMS AND DC TRANSMISSION	2021-22-Odd Sem
23	B.Tech-NREC7D004-IMAGE AND VIDEO PROCESSING	2021-22-Odd Sem
24	B.Tech-7MEIEOE3-Industrial Safety Engineering	2021-22-Odd Sem
25	B.Tech-NRCI7D004-INTEGRATED WATERSHED MANAGEMENT	2021-22-Odd Sem
26	B.Tech-7CEIROE2-Intellectual Property Rights	2021-22-Odd Sem
27	B.Tech-7CSITPE1-Internet of Things (IoT)	2021-22-Odd Sem
28	B.Tech-7MEMVPE2-Mechanical Vibration	2021-22-Odd Sem
29	B.Tech-NREI7D003-MECHATRONICS	2021-22-Odd Sem
30	B.Tech-NRME7D006-MICRO AND NANO MACHINING	2021-22-Odd Sem
31	B.Tech-NRIT7D003-NETWORK SECURITY	2021-22-Odd Sem
32	B.Tech-7MEPEPE1-Power Plant Engineering	2021-22-Odd Sem
33	B.Tech-7EEEEPEPE2-Power Station Engineering	2021-22-Odd Sem
34	B.Tech-NRCI7D001-PRESTRESSED CONCRETE	2021-22-Odd Sem
35	B.Tech-NRME7D002-PRODUCT DESIGN AND PRODUCTION TOOLING (PDPT)	2021-22-Odd Sem
36	B.Tech-7ECREPE2-Radar and TV Engineering	2021-22-Odd Sem
37	B.Tech-NRME7D005-REFRIGERATION AND AIR CONDITIONING	2021-22-Odd Sem
38	B.Tech-7MERCPE2-Refrigeration and Air Conditioning and Cryogenic	2021-22-Odd Sem
39	B.Tech-7EEESGPE2-Smart Grids	2021-22-Odd Sem
40	B.Tech-NRCS7D003-SOCIAL NETWORK ANALYSIS	2021-22-Odd Sem
41	B.Tech-7ECSCOE3-Soft Computing	2021-22-Odd Sem
42	B.Tech-7CSSMPE2-Software Project Management	2021-22-Odd Sem
43	B.Tech-7CEWEPE2-Water Resource Engineering	2021-22-Odd Sem
44	B.Tech-19E36PE04T-Advanced Control System Engineering	2021-22-Even Sem

45	B.Tech-19ME6PE06T-Advanced Fluid Mechanics	2021-22-Even Sem
46	B.Tech-19CE6PE01T-Advanced Mechanics of Materials	2021-22-Even Sem
47	B.Tech-19CE6PC02T-Advanced Structural Analysis	2021-22-Even Sem
48	B.Tech-19CE5PE01T-Advanced Transportation Engineering	2021-22-Odd Sem
49	B.Tech-19EC5PC03T-Analog Communication Techniques	2021-22-Odd Sem
50	B.Tech-19EC6PE04T-Analog VLSI Design	2021-22-Even Sem
51	B.Tech-19ME5PC02T-Applied Thermodynamics	2021-22-Odd Sem
52	B.Tech-19IT5PE04T-Artificial Intelligence	2021-22-Odd Sem
53	B.Tech-19CE6PE04T-Building and Town Planning	2021-22-Even Sem
54	B.Tech-19CE5OE01T-Building Services and Maintenance	2021-22-Odd Sem
55	B.Tech-19ME6PE05T-Compressive Flow and Gas Dynamics	2021-22-Even Sem
56	B.Tech-19CS6PE01T-Computer Network Security	2021-22-Even Sem
57	B.Tech-19IT5OE02T-Computer Networks	2021-22-Odd Sem
58	B.Tech-19EC5PC02T-Control System Engineering	2021-22-Odd Sem
59	B.Tech-19IT6PE04T-Cyber Security	2021-22-Even Sem
60	B.Tech-19CS6OE01T-Data Analytics	2021-22-Even Sem
61	B.Tech-19EC6PC03T-Digital Communication Techniques	2021-22-Even Sem
62	B.Tech-19EC6PE01T-Digital System Design	2021-22-Even Sem
63	B.Tech-19ME5PC01T-Dynamics of Machines	2021-22-Odd Sem
64	B.Tech-19EE6PE08T-Electric and Hybrid Vehicle	2021-22-Even Sem
65	B.Tech-19EE6OE01T-Electrical Energy Utilization	2021-22-Even Sem
66	B.Tech-19EEE5PE04T-Electrical Properties of Materials	2021-22-Odd Sem
67	B.Tech-19EC5PE01T-Electronic Device Modeling	2021-22-Odd Sem
68	B.Tech-19EC5OE03T-Embedded System Design	2021-22-Odd Sem
69	B.Tech-19ME6OE02T-Engineering Management	2021-22-Even Sem
70	B.Tech-19CM5MC02T-Essence of Indian Tradition Knowledge	2021-22-Odd Sem
71	B.Tech-19CE6PE05T-Estimation and Project Management	2021-22-Even Sem
72	B.Tech-19EC6OE01T-Fundamentals of Satellite Communication	2021-22-Even Sem
73	B.Tech-19CE5OE02T-Geo-Environmental Engineering	2021-22-Odd Sem
74	B.Tech-19CE6PE02T-Ground Improvement Techniques	2021-22-Even Sem

75	B.Tech-19IT5PE02T-High Performance Computing	2021-22-Odd Sem
76	B.Tech-19EE6PE02T-High Voltage Engineering and HVDC Transmission	2021-22-Even Sem
77	B.Tech-19CE5PC01T-Hydrology and Water Resources Engineering	2021-22-Odd Sem
78	B.Tech-19EC6OE02T-Image Processing Technique	2021-22-Even Sem
79	B.Tech-19ME6PE07T-Industrial Automation	2021-22-Even Sem
80	B.Tech-19EE6PE07T-Industrial Automation and Control	2021-22-Even Sem
81	B.Tech-19EC6PE08T-Industrial Communication Protocol	2021-22-Even Sem
82	B.Tech-19EC5PE03T-Information Theory and Coding Techniques	2021-22-Odd Sem
83	B.Tech-19EEE5OE04T-Introduction to Electrical Properties of Materials	2021-22-Odd Sem
84	B.Tech-19ME6OE01T-Introduction to hybrid and Electrical Vehicles	2021-22-Even Sem
85	B.Tech-19IT6OE01T-Introduction to Operating System	2021-22-Even Sem
86	B.Tech-19CS5OE01T-Introduction to Python Programming	2021-22-Odd Sem
87	B.Tech-19EE6OE02T-Introduction to Robotics and Autonomous Vehicle	2021-22-Even Sem
88	B.Tech-19CE6PC01T-Irrigation Engineering	2021-22-Even Sem
89	B.Tech-19IT5OE01T-JAVA Programming	2021-22-Odd Sem
90	B.Tech-19IT5PE01T-Knowledge Discovery and Data Mining	2021-22-Odd Sem
91	B.Tech-19EC6PE05T-Machine Learning	2021-22-Even Sem
92	B.Tech-19ME5PC03T-Manufacturing Science-II	2021-22-Odd Sem
93	B.Tech-19BSC6OE01-Mathematics-IV	2021-22-Even Sem
94	B.Tech-19ME5PE01T-Mech. of Composite materials	2021-22-Odd Sem
95	B.Tech-19EC5PE02T-Microcontroller and Applications	2021-22-Odd Sem
96	B.Tech-19EC5OE02T-Microprocessor and Interfacing	2021-22-Odd Sem
97	B.Tech-19EC6PC02T-Microwave Engineering	2021-22-Even Sem
98	B.Tech-19EC6PE02T-Mobile Communication	2021-22-Even Sem
99	B.Tech-19EE6PE01T-Modeling and Control of Power Electronic Systems	2021-22-Even Sem
100	B.Tech-19ME5OE04T-Nanoscience and Technology	2021-22-Odd Sem
101	B.Tech-19CS6PE05T-Natural Language Processing	2021-22-Even Sem
102	B.Tech-19CE6PE06T-Open Channel Flow	2021-22-Even Sem
103	B.Tech-19CS6PC01T-Operating System	2021-22-Even Sem
104	B.Tech-19BS6OE01T-Partial Differential Equations & Numerical Methods	2021-22-Even Sem

105	B.Tech-19CS6PE07T-Pattern Recognition	2021-22-Even Sem
106	B.Tech-19CE6PE07T-Pavement Materials and Traffic control	2021-22-Even Sem
107	B.Tech-19CE6OE01T-Plastic Waste Management	2021-22-Even Sem
108	B.Tech-19EEE5PE01T-Power Station Engineering and Economy	2021-22-Odd Sem
109	B.Tech-19MBA6OE01-Principles of Management	2021-22-Even Sem
110	B.Tech-19ME5PE03T-Production and Operation Management	2021-22-Odd Sem
111	B.Tech-19IT5ES01T-Python Programming	2021-22-Odd Sem
112	B.Tech-19EC5OE04T-Radar System Engineering	2021-22-Odd Sem
113	B.Tech-19EEE5OE01T-Renewable Energy Systems	2021-22-Odd Sem
114	B.Tech-19EE6PE06T-Robotics and Autonomous Vehicles	2021-22-Even Sem
115	B.Tech-19EC6PE07T-Satellite Communication	2021-22-Even Sem
116	B.Tech-19EEE5OE02T-Sensors and Instrumentation	2021-22-Odd Sem
117	B.Tech-19CS6PE08T-Software Testing & Quality Assurance	2021-22-Even Sem
118	B.Tech-19EC6PE06T-Speech Processing	2021-22-Even Sem
119	B.Tech-19ME6PE08T-Total Quality Management	2021-22-Even Sem
120	B.Tech-19E36PE03T-Utilization of Electrical Energy	2021-22-Even Sem
121	B.Tech-19EC5OE01T-VLSI Design	2021-22-Odd Sem
122	B.Tech-19IT6PE08T-Wireless Sensor Network	2021-22-Even Sem
123	B.Tech-19CE6PC02L-Advanced Structural Analysis Sessional	2021-22-Even Sem
124	B.Tech-19EC5PC03L-Analog Communication Techniques Lab	2021-22-Odd Sem
125	B.Tech-19ME5PC02L-Applied Thermodynamics	2021-22-Odd Sem
126	B.Tech-19CMOP601L-ATTP	2021-22-Even Sem
127	B.Tech-19CM6HS01L-Business Communication & Interview Skills	2021-22-Even Sem
128	B.Tech-19CMOP602L-Coding Skill	2021-22-Even Sem
129	B.Tech-19EC5PC02L-Control System Engineering Lab	2021-22-Odd Sem
130	B.Tech-19CE5PC03L-Design of Concrete Structures Lab.	2021-22-Odd Sem
131	B.Tech-19EC6PC01L-Digital Communication Laboratory	2021-22-Even Sem
132	B.Tech-19ME5PC01L-Dynamics of Machines	2021-22-Odd Sem
133	B.Tech-19EE6PC01L-Electric Drives Lab	2021-22-Even Sem
134	B.Tech-19CM6HS02L-Entrepreneurship Project	2021-22-Even Sem

135	B.Tech-19CE5PC02L-Foundation Engineering Lab.	2021-22-Odd Sem
136	B.Tech-19CM6PS01T-Lab Based Project	2021-22-Even Sem
137	B.Tech-19CS5PC02L-Machine Learning Lab	2021-22-Odd Sem
138	B.Tech-19IT5PC03L-Machine Learning Lab using Python.	2021-22-Odd Sem
139	B.Tech-19ME5PC03L-Manufacturing Science - II	2021-22-Odd Sem
140	B.Tech-19CS6PC01L-Operating System Lab	2021-22-Even Sem
141	B.Tech-19IT5ES01L-Python Programming Lab.	2021-22-Odd Sem
142	B.Tech-19CM6PS01L-Research/Lab based Project	2021-22-Even Sem
143	B.Tech-19CE5PC01L-Water Resources Engineering Laboratory	2021-22-Odd Sem
144	B.Tech-19CE3ES02L-Engineering Mechanics Lab	2021-22-Odd Sem
145	M.Tech-EEM353-Advanced Control System	2021-22-Odd Sem
146	M.Tech-EEM352-Electric Vehicles	2021-22-Odd Sem
147	M.Tech-EEM351-Energy Auditing and Management	2021-22-Odd Sem
148	M.Tech-VLM353-Nano Materials and Nano Technology	2021-22-Odd Sem
149	MBA-19MB106-Managerial Principles and Practice	2021-22-Odd Sem
150	MBA-19MB210-Personality Development Lab-I	2021-22-Odd Sem
151	MBA-19MBH01-Human Resource Management Analytics	2021-22-Odd Sem
152	MCA-20MC401-AI and ML using Python	2021-22-Even Sem
153	MCA-20MC405-Big Data Analysis/Data Science	2021-22-Even Sem
154	MCA-20MC406-Computer Network Security	2021-22-Even Sem
155	MCA-20MC306-Data and Web Mining	2021-22-Odd Sem
156	MCA-20MC305-Computer Graphics and Multimedia	2021-22-Odd Sem
157	MCA-20MC402-Enterprise Web Computing with JAVA (EWCJ)	2021-22-Even Sem
158	MCA-20MC407-Software Evaluation	2021-22-Even Sem
159	MCA-20MC304-Software Testing and Quality Assurance	2021-22-Odd Sem
160	MCA-20MC408-AI and ML using Python Lab	2021-22-Even Sem
161	MCA-20MC409-Enterprise Web Computing with JAVA (EWCJ) Lab	2021-22-Even Sem
162	MCA-20MC312-Python Programming Laboratory	2021-22-Odd Sem

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1.2.2 Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the College level during the Academic year.

Names of programmes adopting CBCS	UG	PG	Date of implementation of CBCS / Elective Course System
B.Tech	✓		01 July 2021
M.Tech		✓	01 July 2021
MBA		✓	01 July 2021
MCA		✓	01 July 2021

1.3 Curriculum Enrichment

1.3.1 Value-added courses imparting transferable and life skills offered during the year

Value added courses	Date of introduction	Number of Students enrolled
Essence of Indian Knowledge Tradition	July-2021	508
Business Communication & Interview Skills	January-2022	508
Coding Skill	January-2022	508
Organizational Behavior	July-2021	554
Stress Management by Yoga	January-2022	326
Professional Ethics	January-2022	326
English for Research Paper Writing	January-2022	9
Disaster Management	January-2022	1031
Value Education	January-2022	9
Pedagogy Studies	January-2022	9
Personality Development through Life Enlightenment Skills	January-2022	9

1.3.2 Field projects / internships undertaken during the year

Project/ Programme title	No. of students enrolled for Field Projects/ internships
Summer Internship Program (MBA)	65
Pre-Placement Internship	63
IIT/NIT/IIT/CSIR research internship	12

On-site internships at various companies	78
Online internship at companies	81
Summer course at NIST	13

1.4 Feedback system

1.4.1 Whether structured feedback received from all the stakeholders.				
1. Students	2. Teachers	3. Employers	4. Alumni	5. Parents
Yes	Yes	Yes	Yes	Yes

1.4.2 How the feedback obtained is being analyzed and utilized for overall development of the institution? <p style="text-align: right;">(maximum 500 words)</p> Feedback is analyzed at different administrative levels and corrective action is taken. Student feedback: Abstract information was made available to the corresponding BCs, HoDs and subject teachers. The first instance of feedback collected during mid-term examination provides a glimpse into the regularity of classes and the response of the students to the teaching methods of the particular teacher. Teachers adjust their content delivery methods at this stage. The second instance of the feedback is collected once the end-semester examination is completed. It provides assessment to course coverage, quality of content, student satisfaction, any major challenges in classrooms or in study. Teacher feedback: Teacher feedback is collected when the course teacher submits the (i) course completion report, (ii) self-assessment report and (iii) response to student feedback report submitted by the teachers at different stages. It helps the administration/management identify the narrative of the teachers in effective conduction of classes. Employer feedback: At the end of each placement drive, the interviewers are requested to provide feedback on the student performance. This feedback is mostly technical in nature. Also, the HR/ admin persons in the companies where the students have been recruited provide feedback on outstanding performance or deficiency in the competence of the students. Employers, who hire students on PPO mode and offer internships prior to joining, provide feedback on performance of the students. The feedback collected is on technical knowledge, professional and interpersonal behavior and growth potential of the student. The placement cell consolidates the information and shares these in semester-wise/ annual review meetings in presence of the Principal and Chairman. Appropriate action items are suggested for the next academic session. Alumni feedback: Alumni are involved in the Department BoS where they take part in the syllabus formulation,

course content selection activities. They provide feedback on the actual industry needs faced by them or their peers (mostly at entry level positions) and suggest aligning courses that will benefit the fresh graduates over time. Alumni feedback on academic environment, transport, hostel, food, extracurricular activities etc. is also collected by the alumni cell coordinator. Every visiting alumni is presented with an alumni response form where they provide open ended (unstructured) suggestions for improvement of the campus and academics. Senior alumni provide feedback on the course content which will help the students take up future career positions.

Parent feedback: Parents feedback is collected over telephone calls, email, whatsapp messages etc. Visiting parents are also interviewed to take feedback on student performance, academic expectations, hostel facilities, transport facilities, teacher engagement etc. The nodal points of receiving parent feedback are batch coordinator, HoD, hostel superintendent, admission office and official telephone numbers.

Feedback review and recommendation:

The student feedback received on the internal ERP is consolidated and shared with the subject teachers for self-review and appraisal. The Periodic review of feedback is conducted by the Principal during HoD/BC meetings every month. The top management also conducts review meetings on major feedback received.

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CRITERIA - II

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 Student Enrolment and Profile			
2.1.1 Demand Ratio during the year			
Name of the Programme	Number of seats available	Number of applications received	Students Enrolled
B.Tech. - Computer Science and Engineering	240	-	238
B.Tech.- Electronics and Communication Engineering	120	-	35
B.Tech. - Electrical and Electronics Engineering	120	-	3
B.Tech. - Information Technology	90	-	21
B.Tech. - Mechanical Engineering	120	-	5
B.Tech. - Electrical Engineering	60	-	2
B.Tech. - Civil Engineering	60	-	2
M.Tech. - Computer Science and Engineering	18	-	2
M.Tech. - Electronics and Communication Engineering	9	-	1
M. Tech. - VLSI Embedded System's Design	9	-	-
M. Tech. - Electrical Engineering	9	-	1
M.Tech - Wireless Communication Technology	18	-	-
Master of Business Administration	60	-	60
Master of Computer Applications	60	-	60

2.2 Catering to Student Diversity					
2.2.1. Student - Full time teacher ratio (current year data)					
Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of full time teachers available in the institution teaching only UG courses	Number of full time teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2021-2022	1803	260	96	11	14

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2.3 Teaching - Learning Process
2.3.1 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of teachers on roll	Number of teachers using ICT (<i>LMS, e-Resources</i>)	ICT tools and resources available	Number of ICT enabled classrooms	Number of smart classrooms	E-resources and techniques used
121	76	LCD Projector, Laptop, Audio visual system	34	1	NPTTEL, SWAYAM, e-book, pdf, Animations, Text, Graphics, e-notes, Acadly, NIS, & Quizzee

2.3.2: Students mentoring system available in the institution? Give details. (maximum 500 words)

Number of students enrolled in the institution	Number of fulltime teachers	Mentor: Mentee Ratio
2063	121	1:17.05

As part of the program, the institution provides a student mentorship system. Students are divided into groups from the moment they are admitted and are mentored or supervised by instructors. The needs of the pupils are attended to by the appropriate faculty members. There are **2305** students and **121** faculty members available in the B.Tech, M.Tech, MBA, and MCA programs. A total of **103** groups of students are formed. A faculty member in charge mentors each group. The faculty's responsibility is to care after each student's academic needs, motivation, and wellbeing. The mentor is in charge of all activities, both scholastic and extracurricular.

2.4 Teacher Profile and Quality
2.4.1 Number of full-time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
24	17	7	17	9

2.4.2 Honours and recognitions received by teachers

(received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
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Nov 2021	Dr. Asit Kumar Panda	Assistant Professor	BPUT Foundation Day Research Award, BPUT, Odisha
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2.5 Evaluation Process and Reforms
2.5.1 Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
B.Tech. - Computer Science and Engineering	CSE	8th/2022	29/07/2022	16/08/2022
B.Tech. - Electronics and Communication Engineering	ECE	8th/2022	29/07/2022	16/08/2022
B.Tech. - Electrical and Electronics Engineering	EEE	8th/2022	29/07/2022	16/08/2022
B.Tech. - Information Technology	IT	8th/2022	29/07/2022	16/08/2022
B.Tech. - Mechanical Engineering	ME	8th/2022	29/07/2022	16/08/2022
B.Tech. - Electrical Engineering	EE	8th/2022	29/07/2022	16/08/2022
B.Tech. - Civil Engineering	CE	8th/2022	29/07/2022	16/08/2022
M.Tech. - Computer Science and Engineering	M.Tech CSE	4th/2022	29/07/2022	29/07/2022
M.Tech. - Electronics and Communication Engineering	M.Tech ECE	4th/2022	29/07/2022	29/07/2022
M. Tech. - VLSI Embedded System's Design	M.Tech VLSI	4th/2022	29/07/2022	29/07/2022
M. Tech. - Electrical Engineering	M.Tech EE	4th/2022	29/07/2022	29/07/2022
Master of Business Administration	MBA	4th/2022	23/07/2022	16/08/2022
Master of Computer Applications	MCA	6th/2022	29/07/2022	29/07/2022

2.5.2 Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

**Do not include re-evaluation/ re-totalling*

S. No.	Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage
1	-	-	-

2.6 Student Performance and Learning Outcomes
2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the web link)

B.Tech Program	MTech Program
CSE: https://nist.edu/academics/BTech_CSE.html#SYLLABUS	CSE: https://nist.edu/academics/MTech_CSE.html
ECE : https://nist.edu/academics/BTech_ECE.html	ECE: https://nist.edu/academics/MTech_ECE.html
EEE: https://nist.edu/academics/BTech_EEE.html	VLSI: https://nist.edu/academics/MTech_VLSI.html
IT: https://nist.edu/academics/BTech_CSE.html	EE: https://nist.edu/academics/MTech_EE.html

ME : https://nist.edu/academics/BTech_ME.html
 EE: https://nist.edu/academics/BTech_EE.html
 CE: https://nist.edu/academics/BTech_CE.html

MBA: <https://nist.edu/academics/MBA.html>
 MCA: <https://nist.edu/academics/MCA.html>

2.6.2 Pass percentage of students

Programme name	Programme Code	Number of students appeared in the final year examination	Number of students passed in final Semester /year examination	Pass Percentage
B.Tech. - Computer Science and Engineering	CSE	200	182	91.00
B.Tech. - Electronics and Communication Engineering	ECE	100	96	96.00
B.Tech. - Electrical and Electronics Engineering	EEE	49	43	87.76
B.Tech. - Information Technology	IT	67	65	97.01
B.Tech. - Mechanical Engineering	ME	54	45	83.33
B.Tech. - Electrical Engineering	EE	19	18	94.74
B.Tech. - Civil Engineering	CE	42	32	76.19
M.Tech. - Computer Science and Engineering	M.Tech CSE	5	5	100.00
M.Tech. - Electronics and Communication Engineering	M.Tech ECE	1	1	100.00
M. Tech. - VLSI Embedded System's Design	M.Tech VLSI	2	2	100.00
M. Tech. - Electrical Engineering	M.Tech EE	1	1	100.00
Master of Business Administration	MBA	58	56	96.55
Master of Computer Applications	MCA	26	23	88.46
Master of Computer Applications	MCA	55	55	100.00

2.7 Student Satisfaction Survey

2.7.1 Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

Link to student satisfaction survey portal: <https://nis.nist.edu/>

Student can log-in and navigate to feedback module to provide structured feedback.

Results of satisfaction survey: <https://nist.edu/IQAC/SSS/student-satisfaction.html>

Priyadarshi J. Pathy

CRITERIA – III

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION (2021-2022)			
3.1 Promotion of Research and Facilities			
3.1.1 The institution provides seed money to its teachers for research: YES			
Yes (if yes give details)			
Name of the teacher getting seed money	The amount of seed money	Year of receiving grant	Duration of the grant
Ranjan Kumar Padhy	50,000	15.12.2021	1 year

3.1.2 Teachers awarded National/International fellowship for advanced studies/ research during the year				
	Name of the teacher awarded the fellowship	Name of the Award	Date of Award	Awarding Agency
National	-	-	-	-
International	-	-	-	-

3.2 Resource Mobilization for Research				
3.2.1 Research funds sanctioned and received from various agencies, industry and other organizations				
Nature of the Project	Duration	Name of the funding Agency	Total grant sanctioned	Amount received during the year
Major projects	1 year	DST CORE DST WOSA DST WOSA	2123000 2079200 2673200	834500 0 0
Minor Projects	-	-	-	-
Interdisciplinary Projects	-	-	-	-
Industry sponsored Projects	-	-	-	-
Projects sponsored by the University/ College	1 year	NIST Autonomous Berhampur	15797	15797
Students Research Projects (other than compulsory by the College)	-	-	-	-
International Projects	-	-	-	-
Any other(Specify)	-	-	-	-
Total	-	-	-	-

Priyadarshi Inpathy

3.2.2 Number of ongoing research projects per teacher funded by government and non-government agencies during the years

03

3.3 Innovation Ecosystem
3.3.1 Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of Workshop/Seminar	Name of the Dept.	Date(s)
IPR Awareness (AICTE-KAPILA-NIPAM)	ECE	20-06-2022
IPR Awareness Program	ECE	17-11-2021

3.3.2 Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of the Awardee	Awarding Agency	Date of Award	Category
International Neighborhood best Hardware Project	Debasish Panda	Major League Hacking	Sep-21	Hardware
International Neighborhood best Hardware Project	V Roshan Patra	Major League Hacking	Sep-21	Hardware
Entrepreneurship Cell, IIT Kharagpur	V Roshan Patra	Entrepreneurship Cell, IIT Kharagpur	Oct-21	Hardware
Entrepreneurship Cell, IIT Kharagpur	Debasish Panda	Entrepreneurship Cell, IIT Kharagpur	Oct-21	Hardware
16th edition of GlobalLogic_30Hacks	S Sovan Kumar	GlobalLogic (A Hitachi Group Company)	Mar-22	Hardware
16th edition of GlobalLogic_30Hacks	Rohit Raj Padhi	GlobalLogic (A Hitachi Group Company)	Mar-22	Hardware
16th edition of GlobalLogic_30Hacks	V Roshan Patro	GlobalLogic (A Hitachi Group Company)	Mar-22	Hardware

3.3.3 No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Centre	Name	Sponsored by
-	-	-
Name of the Start-up	Nature of Start-up	Date of commencement
-	-	-

Pradyumani J. Patil

3.4 Research Publications and Awards
3.4.1 Ph. Ds awarded during the year

Name of the Department	No. of Ph. Ds Awarded
-	-

3.4.2 Research Publications in the Journals notified on UGC website during the year

	Department	No. of Publication	Average Impact Factor, if any
National	NA	NA	NA
International	CHEM	06	2.01
	CSE	06	4.35
	ECE	18	2.41
	EE	7	2.14
	MATH	02	1.02
	MBA	01	2.79
	ME	01	2.43
	PHYS	06	2.62

3.4.3 Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	No. of publication
CHEM	1
CSE	5
ECE	2
EE	2
MATH	-
MBA	-
ME	-
PHYS	-

3.4.4 Patents published/awarded during the year

Patent Details	Patent status Published/Filed	Patent Number	Date of Award
A model driven engineering platform for designing multi paradigm cyber physical systems	Published	2021106573A4	23-08-2021

A Qualification And Labeling Procedure For Inverters For Photovoltaic Systems Connected To The Electrical Grid	Published	202131050804	10-12-2021
Power Softening Of Wind Generation Using Fuzzy Logic And Energy Storage System	Published	202131061655	04-02-2022
The Mediating effect of Employee Engagement - Employee Job satisfaction- organizational Climate and in relationship between HRD Practices and Employee job performance	Published	202241029668	03-06-2022

3.4.5 Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or Pub Med/ Indian Citation Index

Title of the paper	Name of the author	Title of the journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citations
Oxidation of triethanolamine by ceric ammonium sulfate in aqueous sulfuric acid: spectrophotometric kinetic and mechanistic study	Padhy R.K., Sahu S.	Asian Journal of Chemistry	2022	3	Yes	3
Removal of congo red dye from aqueous solution using zinc oxide nanoparticles synthesised from Ocimum sanctum (Tulsi leaf): a green approach	Nayak A., Sahoo J.K., Sahoo S.K., Sahu D.	Journal of Material Cycles and Waste Management	2022	30	Yes	29
Kinetic investigation of oxidation of alkanolamine by Cerium(IV) in acidic medium: catalytic effect of Mn(II)	Padhy R.K., Sahu S.	Materials Today: Proceedings	2022	6	Yes	6
A Portable Biometrics System Based on Forehead Subcutaneous Vein	Bhattacharya S., Ranjan A., Reza M.	Monatshefte für Chemie	2022	3	Yes	3

Pattern and Periocular Biometric Pattern						
Data center network energy consumption minimization: a hierarchical FAT-tree approach	Mishra J., Sheetlani J., Reddy K.H.K.	International Journal of Environmental Analytical Chemistry	2022	2	Yes	2
An Efficient Fog Layer Task Scheduling Algorithm for Multi-Tiered IoT Healthcare Systems	Behera R.K., Patro A., Reddy K.H.K., Roy D.S.	Journal of Chemical Sciences	2021	1	Yes	1
A multi-objective Covering Salesman Problem with 2-coverage	Tripathy S.P., Biswas A., Pal T.	IEEE Sensors Journal	2022	6	Yes	6
Efficient multichannel EEG compression by optimal tensor truncation	Das S., Kyal C.	International Journal of Information Technology (Singapore)	2022	6	Yes	6
Simplified Face Quality Assessment (SFQA)	Bhattacharya S., Kyal C., Routray A.	International Journal of E-Health and Medical Communications	2022	3	Yes	3
Phase transformation driven enhanced photocatalytic activity of capped CeS ₂ -CdS composites	Nahak B.K., Roshan R., Roy S.D., Patra A., Sahu A., Panda S., Panda S., Mahato S.S., Mahata S.	Applied Soft Computing	2021	4	Yes	4
Influence of current conduction paths and native defects on gas sensing properties of polar and non-polar GaN	Dash A., Sharma A., Jain S.K., Patra B.S.K., Gundimeda A., Mallik S., Gupta G.	Biomedical Signal Processing and Control	2021	12	Yes	11
Experimental and simulation study of charge transport mechanism in HfTiO _x high-k gate dielectric on SiGe	Maiti P.P., Dash A., Guhathakurata S., Das S., Bag A., Dash T.P.,	Pattern Recognition Letters	2021	4	Yes	3

heterolayers	Ahmad G., Maiti C.K., Mallik S.					
Advanced centralized and distributed SVM models over different IoT levels for edge layer intelligence and control	Pattnaik B.S., Pattanayak A.S., Udgata S.K., Panda A.K.	Journal of Materials Science: Materials in Electronics	2022	1	Yes	1
An efficient direction-of-arrival estimation of multipath signals with impulsive noise using satin bowerbird optimization-based deep learning neural network	Gantayat H., Panigrahi T., Patra P.	Journal of Alloys and Compounds	2022	0	Yes	0
Bovine Serum Albumin-Based Thin-Film Capacitors for Flexible Electronic Applications	Mukherjee P., Acharyya A., Mallik S.	Bulletin of Materials Science	2022	0	Yes	0
An efficient RBF-DCNN based DOA estimation in multipath and impulse noise wireless environment	Gantayat H., Panigrahi T., Patra P.	Evolutionary Intelligence	2022	1	Yes	1
An Outlier Detection and Feature Ranking based Ensemble Learning for ECG Analysis	Ardeti V.A., Kolluru V.R., Varghese G.T., Patjoshi R.K.	Expert Systems	2022	2	Yes	2
Cap layer effect in DC and RF characteristics of InP based n-p-n metamorphic δ -doped heterojunction bipolar transistor	Jena M.R., Diwarkar A., Panda A.K., Dash G.N.	IETE Journal of Research	2022	0	Yes	0
CSRR Embedded CPW Band-Stop Filter	Panda A.K., Pattnaik M., Swain R.	Transactions on Emerging Telecommunications	2022	6	Yes	5

		Technologies				
A Holistic Experimental Static Bias Point Identification Method for Low Power Wireless RF Amplifier	Patro S.K., Mishra R.K., Panda A.K.	International Journal of Advanced Computer Science and Applications	2022	1	Yes	1
Potential soluble substrates for transient electronics applications: A review	Mohanty S., Arya A., Jena D., Guhathakurata S., Manik N.B., Ahmad G., Mallik S.	International Journal of Electronics Letters	2022	11	Yes	10
Biomimicking of phyto-based super-hydrophobic surfaces towards prospective applications: a review	Deo D., Singh S.P., Mohanty S., Guhathakurata S., Pal D., Mallik S.	IETE Journal of Research	2022	6	Yes	6
Performance enhancement of armchair graphene nanoribbon resonant tunneling diode using V-shaped potential well	Mishra M., Das N.R., Sahoo N., Sahu T.	IETE Journal of Research	2022	5	Yes	5
Li-care: A labview and iot based ehealth monitoring system	Swain K., Cherukuri M., Mishra S.K., Appasani B., Patnaik S., Bizon N.	AIP Advances	2022	6	Yes	6
Electron mobility in asymmetric GaN/AlGaIn quantum well transistor structure: Effect of alloy disorder scattering	Panda S., Dora K.T., Panda A.K., Sahu T.	Journal of Materials Science	2022	5	Yes	5
Cap-layer and charge sheet effect in InP based pnp δ -doped heterojunction bipolar transistor	Jena M.R., Panda A.K., Dash G.N.	Physica Scripta	2021	3	Yes	3

Computationally efficient scheduling methods for MIMO uplink networks	Pattanayak P., Sarmah D., Mishra S., Panda A.	Electronics (Switzerland)	2021	6	Yes	5
Resiliency Estimation of Synchronphasor Communication Networks in a Wide Area Measurement System	Appasani B., Jha A.V., Swain K., Cherukuri M., Mohanta D.K.	Physica Scripta	2021	3	Yes	3
A k-nearest neighbor-based averaging model for probabilistic PV generation forecasting	Tripathy D.S., Prusty B.R., Bingi K.	Microsystem Technologies	2021	6	Yes	5
A Novel Optimal Robust Design Method for Frequency Regulation of Three-Area Hybrid Power System Utilizing Honey Badger Algorithm	Khadanga R.K., Nayak S.R., Panda S., Das D., Prusty B.R., Sahu P.R.	Soft Computing	2021	4	Yes	4
Design and Analysis of FOPID-Based Damping Controllers Using a Modified Grey Wolf Optimization Algorithm	Kar M.K., Kumar S., Singh A.K., Panigrahi S., Cherukuri M.	Frontiers in Energy Research	2022	7	Yes	7
Power Quality Disturbance Detection and Monitoring of Solar Integrated Micro-Grid	Pattanaik D., Swain S.C., Samanta I.S., Dash R., Swain K.	International Journal of Numerical Modelling: Electronic Networks, Devices and Fields	2022	22	Yes	21
Modified grasshopper optimization algorithm optimized adaptive fuzzy lead-lag controller for coordinated design of FACTS controller with PSS	Sahu P.R., Hota P.K., Panda S., Long H.V., Allahviranloo T.	International Transactions on Electrical Energy Systems	2022	4	Yes	4

Prayadanki Tripathy

Selection of Smart Manure Composition for Smart Farming Using Artificial Intelligence Technique	Ather D., Madan S., Nayak M., Tripathi R., Kant R., Kshatri S.S., Jain R.	International Transactions on Electrical Energy Systems	2022	6	Yes	5
An EOQ Model for Items having Fuzzy Amelioration and Deterioration	Padhy B., Samanta P.N., Paikray S.K., Misra U.K.	WSEAS Transactions on Power Systems	2022	6	Yes	6
An exponential economic piece-wise inventory mathematical model for demand-dependent productions with partial back-ordering	Rajendra Kumar M., Dash J.K., Bhaula B.	Journal of Intelligent and Fuzzy Systems	2022	0	Yes	0
Analysis and develop a novel multi-piece-split-cavity mold for the fabrication of bipolar femoral head	Sriram S., Reddy B.S.	Journal of Food Quality	2022	1	Yes	1
Micro-structural and mechanical characterization of stir cast AA5052/B4C metal matrix composite	Patel M., Sahu S.K., Singh M.K., Dalai N.	Applied Mathematics and Information Sciences	2022	11	Yes	10
Performance of Minimum Quantity Lubrication (MQL) and its effect on Dry Machining with the addition of Nano-particle with the biodegradable base fluids: A review	Panda D., Kumari K., Dalai N.	Journal of Interdisciplinary Mathematics	2022	5	Yes	4
Applications of blockchain in government education sector: a comprehensive review and future research potentials	Dash M.K., Panda G., Kumar A., Luthra S.	Materials Today: Proceedings	2022	11	Yes	10

Abrasive wear behaviour of orange peel (biowaste) particulate reinforced polymer composites	Naik P., Acharya S.K., Sahoo P., Pradhan S.	Materials Today: Proceedings	2022	15	Yes	14
Examining Risk Absorption Capacity as a Mediating Factor in the Relationship between Cognition and Neuroplasticity in Investors in Investment Decision Making	Behera Y.D.P., Nanda S.S., Sharma S., Sahoo T.R.	Materials Today: Proceedings	2022	1	Yes	1
Fingertip Touch-based Non-invasive Glucose Sensor Using Visible Laser Light in a SiO ₂ -AuSiO ₂ Coated Prism: Design and Implementation Using the Matrix Method	Dash S.P., Hota M., Triapthy S.K.	Journal of Global Operations and Strategic Sourcing	2022	-	Yes	-
Flexible Ta ₂ O ₅ /WO ₃ -Based Memristor Synapse for Wearable and Neuromorphic Applications	Rajasekaran S., Simanjuntak F.M., Chandrasekaran S., Panda D., Saleem A., Tseng T.-Y.	Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology	2021	9	Yes	8
Coherent elastic neutrino-nucleus scattering (CEv NS) event rates for Ge, Zn, and Si detector materials	Kosmas T.S., Kota V.K.B., Papoulias D.K., Sahu R.	International Journal of Financial Studies	2022	2	Yes	2
Asymmetric doping induced nonlinear electron mobility in double V-shaped quantum well based FET structure under	Jena D., Palo S.K., Sahu T., Panda A.K.	Lasers in Engineering	2022	-	Yes	-

external electric field						
Multiple SU(3) algebras in interacting boson model and shell model: Results for (β, γ) bands and scissors 1^+ band	Kota V.K.B., Sahu R.	IEEE Electron Device Letters	2022	4	Yes	4
Nonlinear Lorentzian-type standing wave solutions of ac-driven sine-Gordon equation	Soloman Raju T.	Physical Review C	2021	2	Yes	2
Feasibility and Environmental Compatibility of Concrete using Chromium Bearing Wastewater	Biswal S.S., Panda C., Dash P., Jena T., Parida S.R., Sahu D.	Physica Scripta	2021	2	Yes	2
Study of chromium immobilization behavior in unbound and concrete bound ferrochromium slag	Panda C., Biswal S.S., Dash P., Jena T., Panda K.C., Sahu D.	Nuclear Physics A	2021	4	Yes	3
Size quantization effect in water-dispersible LEEH capped ZnSe nano crystals	Nayak A., Tripathy S.K., Dalai N., Nayak S.K., Sahu D.	Physics Letters, Section A: General, Atomic and Solid State Physics	2021	-	Yes	-

3.4.6 h-index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the paper	Name of the author	Title of the journal	Year of publication	h-index	Number of citations excluding self-citations	Institutional affiliation as mentioned in the publication
Oxidation of triethanolamine by ceric ammonium sulfate in aqueous sulfuric acid: spectrophotometric kinetic and mechanistic study	Padhy R.K., Sahu S.	Asian Journal of Chemistry	2022	39	3	Yes

Removal of congo red dye from aqueous solution using zinc oxide nanoparticles synthesised from Ocimum sanctum (Tulsi leaf): a green approach	Nayak A., Sahoo J.K., Sahoo S.K., Sahu D.	Journal of Material Cycles and Waste Management	2022	53	29	Yes
Kinetic investigation of oxidation of alkanolamine by Cerium(IV) in acidic medium: catalytic effect of Mn(II)	Padhy R.K., Sahu S.	Materials Today: Proceedings	2022	69	6	Yes
A Portable Biometrics System Based on Forehead Subcutaneous Vein Pattern and Periocular Biometric Pattern	Bhattacharya S., Ranjan A., Reza M.	Monatshefte fur Chemie	2022	69	3	Yes
Data center network energy consumption minimization: a hierarchical FAT-tree approach	Mishra J., Sheetlani J., Reddy K.H.K.	International Journal of Environmental Analytical Chemistry	2022	48	2	Yes
An Efficient Fog Layer Task Scheduling Algorithm for Multi-Tiered IoT Healthcare Systems	Behera R.K., Patro A., Reddy K.H.K., Roy D.S.	Journal of Chemical Sciences	2021	58	1	Yes
A multi-objective Covering Salesman Problem with 2-coverage	Tripathy S.P., Biswas A., Pal T.	IEEE Sensors Journal	2022	145	6	Yes
Efficient multichannel EEG compression by optimal tensor truncation	Das S., Kyal C.	International Journal of Information Technology (Singapore)	2022	23	6	Yes
Simplified Face Quality Assessment (SFQA)	Bhattacharya S., Kyal C., Routray A.	International Journal of E-Health and Medical Communications	2022	15	3	Yes
Phase transformation driven enhanced	Nahak B.K., Roshan R., Roy	Applied Soft Computing	2021	171	4	Yes

photocatalytic activity of capped CeS ₂ -CdS composites	S.D., Patra A., Sahu A., Panda S., Panda S., Mahato S.S., Mahata S.					
Influence of current conduction paths and native defects on gas sensing properties of polar and non-polar GaN	Dash A., Sharma A., Jain S.K., Patra B.S.K., Gundimeda A., Mallik S., Gupta G.	Biomedical Signal Processing and Control	2021	94	11	Yes
Experimental and simulation study of charge transport mechanism in HfTiO _x high-k gate dielectric on SiGe heterolayers	Maiti P.P., Dash A., Guhathakurata S., Das S., Bag A., Dash T.P., Ahmad G., Maiti C.K., Mallik S.	Pattern Recognition Letters	2021	170	3	Yes
Advanced centralized and distributed SVM models over different IoT levels for edge layer intelligence and control	Pattnaik B.S., Pattanayak A.S., Udgata S.K., Panda A.K.	Journal of Materials Science: Materials in Electronics	2022	88	1	Yes
An efficient direction-of-arrival estimation of multipath signals with impulsive noise using satin bowerbird optimization-based deep learning neural network	Gantayat H., Panigrahi T., Patra P.	Journal of Alloys and Compounds	2022	200	-	Yes
Bovine Serum Albumin-Based Thin-Film Capacitors for Flexible Electronic Applications	Mukherjee P., Acharyya A., Mallik S.	Bulletin of Materials Science	2022	81	-	Yes
An efficient RBF-DCNN based DOA estimation in multipath and impulse noise wireless environment	Gantayat H., Panigrahi T., Patra P.	Evolutionary Intelligence	2022	30	1	Yes
An Outlier Detection and Feature Ranking based Ensemble	Ardeti V.A., Kolluru V.R.	Expert Systems	2022	249	2	Yes

Learning for ECG Analysis	Varghese G.T., Patjoshi R.K.					
Cap layer effect in DC and RF characteristics of InP based n-p-n metamorphic δ -doped heterojunction bipolar transistor	Jena M.R., Diwarkar A., Panda A.K., Dash G.N.	IETE Journal of Research	2022	30	-	Yes
CSRR Embedded CPW Band-Stop Filter	Panda A.K., Pattnaik M., Swain R.	Transactions on Emerging Telecommunications Technologies	2022	54	5	Yes
A Holistic Experimental Static Bias Point Identification Method for Low Power Wireless RF Amplifier	Patro S.K., Mishra R.K., Panda A.K.	International Journal of Advanced Computer Science and Applications	2022	35	1	Yes
Potential soluble substrates for transient electronics applications: A review	Mohanty S., Arya A., Jena D., Guhathakurata S., Manik N.B., Ahmad G., Mallik S.	International Journal of Electronics Letters	2022	13	10	Yes
Biomimicking of phyto-based superhydrophobic surfaces towards prospective applications: a review	Deo D., Singh S.P., Mohanty S., Guhathakurata S., Pal D., Mallik S.	IETE Journal of Research	2022	30	6	Yes
Performance enhancement of armchair graphene nanoribbon resonant tunneling diode using V-shaped potential well	Mishra M., Das N.R., Sahoo N., Sahu T.	IETE Journal of Research	2022	30	5	Yes
Li-care: A labview and iot based ehealth monitoring system	Swain K., Cherukuri M., Mishra S.K., Appasani B.,	AIP Advances	2022	73	6	Yes

	Patnaik S., Bizon N.					
Electron mobility in asymmetric GaN/AlGaIn quantum well transistor structure: Effect of alloy disorder scattering	Panda S., Dora K.T., Panda A.K., Sahu T.	Journal of Materials Science	2022	25	5	Yes
Cap-layer and charge sheet effect in InP based pnp δ -doped heterojunction bipolar transistor	Jena M.R., Panda A.K., Dash G.N.	Physica Scripta	2021	91	3	Yes
Computationally efficient scheduling methods for MIMO uplink networks	Pattanayak P., Sarmah D., Mishra S., Panda A.	Electronics (Switzerland)	2021	62	5	Yes
Resiliency Estimation of Synchronphasor Communication Networks in a Wide Area Measurement System	Appasani B., Jha A.V., Swain K., Cherukuri M., Mohanta D.K.	Physica Scripta	2021	91	3	Yes
A k-nearest neighbor-based averaging model for probabilistic PV generation forecasting	Tripathy D.S., Prusty B.R., Bingi K.	Microsystem Technologies	2021	70	5	Yes
A Novel Optimal Robust Design Method for Frequency Regulation of Three-Area Hybrid Power System Utilizing Honey Badger Algorithm	Khadanga R.K., Nayak S.R., Panda S., Das D., Prusty B.R., Sahu P.R.	Soft Computing	2021	102	4	Yes
Design and Analysis of FOPID-Based Damping Controllers Using a Modified Grey Wolf Optimization Algorithm	Kar M.K., Kumar S., Singh A.K., Panigrahi S., Cherukuri M.	Frontiers in Energy Research	2022	52	7	Yes
Power Quality Disturbance Detection and Monitoring of Solar Integrated Micro-Grid	Pattanaik D., Swain S.C., Samanta I.S., Dash R., Swain K.	International Journal of Numerical Modelling: Electronic	2022	33	21	Yes

		Networks, Devices and Fields				
Modified grasshopper optimization algorithm optimized adaptive fuzzy lead-lag controller for coordinated design of FACTS controller with PSS	Sahu P.R., Hota P.K., Panda S., Long H.V., Allahviranloo T.	International Transactions on Electrical Energy Systems	2022	51	4	Yes
Selection of Smart Manure Composition for Smart Farming Using Artificial Intelligence Technique	Ather D., Madan S., Nayak M., Tripathi R., Kant R., Kshatri S.S., Jain R.	International Transactions on Electrical Energy Systems	2022	51	5	Yes
An EOQ Model for Items having Fuzzy Amelioration and Deterioration	Padhy B., Samanta P.N., Paikray S.K., Misra U.K.	WSEAS Transactions on Power Systems	2022	16	6	Yes
An exponential economic piece-wise inventory mathematical model for demand-dependent productions with partial back-ordering	Rajendra Kumar M., Dash J.K., Bhaula B.	Journal of Intelligent and Fuzzy Systems	2022	73	-	Yes
Analysis and develop a novel multi-piece-split-cavity mold for the fabrication of bipolar femoral head	Sriram S., Reddy B.S.	Journal of Food Quality	2022	54	1	Yes
Micro-structural and mechanical characterization of stir cast AA5052/B4C metal matrix composite	Patel M., Sahu S.K., Singh M.K., Dalai N.	Applied Mathematics and Information Sciences	2022	44	10	Yes
Performance of Minimum Quantity Lubrication (MQL) and its effect on Dry Machining with the addition of Nano-particle with the biodegradable base fluids: A review	Panda D., Kumari K., Dalai N.	Journal of Interdisciplinary Mathematics	2022	18	4	Yes

Applications of blockchain in government education sector: a comprehensive review and future research potentials	Dash M.K., Panda G., Kumar A., Luthra S.	Materials Today: Proceedings	2022	69	10	Yes
Abrasive wear behaviour of orange peel (biowaste) particulate reinforced polymer composites	Naik P., Acharya S.K., Sahoo P., Pradhan S.	Materials Today: Proceedings	2022	69	14	Yes
Examining Risk Absorption Capacity as a Mediating Factor in the Relationship between Cognition and Neuroplasticity in Investors in Investment Decision Making	Behera Y.D.P., Nanda S.S., Sharma S., Sahoo T.R.	Materials Today: Proceedings	2022	69	1	Yes
Fingertip Touch-based Non-invasive Glucose Sensor Using Visible Laser Light in a SiO ₂ -AuSiO ₂ Coated Prism: Design and Implementation Using the Matrix Method	Dash S.P., Hota M., Triapthy S.K.	Journal of Global Operations and Strategic Sourcing	2022	27	-	Yes
Flexible Ta ₂ O ₅ /WO ₃ -Based Memristor Synapse for Wearable and Neuromorphic Applications	Rajasekaran S., Simanjuntak F.M., Chandrasekaran S., Panda D., Saleem A., Tseng T.-Y.	Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology	2021	63	8	Yes
Coherent elastic neutrino-nucleus scattering (CEvNS) event rates for Ge, Zn, and Si detector materials	Kosmas T.S., Kota V.K.B., Papoulias D.K., Sahu R.	International Journal of Financial Studies	2022	22	2	Yes
Asymmetric doping induced nonlinear electron mobility in double V-shaped quantum well based FET structure under external electric field	Jena D., Palo S.K., Sahu T., Panda A.K.	Lasers in Engineering	2022	18	-	Yes

Multiple SU(3) algebras in interacting boson model and shell model: Results for (β, γ) bands and scissors 1+ band	Kota V.K.B., Sahu R.	IEEE Electron Device Letters	2022	166	4	Yes
Nonlinear Lorentzian-type standing wave solutions of ac-driven sine-Gordon equation	Soloman Raju T.	Physical Review C	2021	229	2	Yes
Feasibility and Environmental Compatibility of Concrete using Chromium Bearing Wastewater	Biswal S.S., Panda C., Dash P., Jena T., Parida S.R., Sahu D.	Physica Scripta	2021	91	2	Yes
Study of chromium immobilization behavior in unbound and concrete bound ferrochromium slag	Panda C., Biswal S.S., Dash P., Jena T., Panda K.C., Sahu D.	Nuclear Physics A	2021	170	3	Yes
Size quantization effect in water-dispersible LEEH capped ZnSe nanocrystals	Nayak A., Tripathy S.K., Dalai N., Nayak S.K., Sahu D.	Physics Letters, Section A: General, Atomic and Solid State Physics	2021	182	-	Yes

3.4.7 Faculty participation in Seminars/Conferences and Symposia during the year : 2021-2022

No. of Faculty	International level	National level	State level	Local level
Attended Seminars/ Workshops	1	26	-	1
Presented papers	7	2	-	-
Resource Persons	-	-	-	-

3.5 Consultancy
3.5.1 Revenue generated from Consultancy during the year

Name of the Consultant(s) department	Name of Consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
-	-	-	-

3.5.2 Revenue generated from Corporate Training by the institution during the year

Name of the Consultant(s) & Department	Title of the Programme	Agency seeking training	Revenue generated (amount in rupees)	Number of trainees
-	-	-	-	-

3.6 Extension Activities
3.6.1 Number of extension and outreach programmes conducted in collaboration with industry, community and Non-Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year.

Title of the Activities	Organising unit/ agency/ collaborating agency	Number of teachers co-ordinated in such activities	Number of students participated in such activities
Annual Training Camp	NIST NCC	2	21
Poshan Abhiyaan	NSS UNIT-1 NIST Autonomous	2	80
Old Age Home Visit	NSS UNIT-1 NIST Autonomous	2	78
Blood Donation Camp	NSS UNIT-1 NIST Autonomous in collaboration with Sambad Ama Odisha	2	85
Campus Cleanliness Drive	NSS UNIT-1 NIST Autonomous	2	77
Navodaya 4.0	NSS UNIT-1 NIST Autonomous	2	82
Orphanage Visit	TEAM NSS NIST (UNIT-1)	2	84
Eye Camp	NSS UNIT-1 NIST in collaboration with Ruby Eye Clinic, Berhampur	2	50
Free Eye Checkup Camp	NIST NCC	2	200
Rashtriya Ekta Divas	NIST NCC	2	20
Fresh Enrollment of Cadets	NIST NCC/1(O)NU NCC	2	30
Mega Blood Donation camp at PMEC	NIST NCC/1(O)NU NCC	2	10
NCC Day Celebration	NIST NCC	2	30
Road Safety Awareness	NIST NCC/Public	2	30
Surprise Visit of CO & Gp Cdr	NIST NCC/1(O)NU NCC/Group HQ	2	45

National Youth Day	NIST NCC	2	24
Simulator Firing	NIST NCC/2 Bn NCC	2	40
Republic Day Parade	NIST NCC	2	50
Tree Plantation	NIST NCC/Public	2	50
Simulator Firing	NIST NCC/2 Bn NCC	2	40
World Water Day	NIST NCC	2	35
Simulator Firing	NIST NCC/2 Bn NCC	2	42
EP Sailing(Rigging Practice)	NIST NCC/1(O)NU NCC	2	22
.22 Live Firing	NIST NCC/1(O)NU NCC	2	28
Punit Sagar Abhiyan at Gopalpur	NIST NCC/1(O)NU NCC	2	7
Interaction with DDG	1(O)NU NCC	2	1
Punit Sagar Abhiyan at Sunapur	NIST NCC/1(O)NU NCC/ICG/Odisha Forest Dept.	2	14
Awariness Rally Mission Life (Life Style for Environment)	NIST NCC/1 (O) NU NCC	2	15
World Ocean Day	NIST NCC/1 (O) NU NCC/Public	2	15
International Day of Yoga	NIST NCC/1 (O) NU NCC	2	10
Annual Training Camp	NIST NCC/1 (O) NU NCC	2	30

3.6.2 Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the Activity	Award/recognition	Awarding bodies	No. of Students benefited
Annual Training Camp-II, NCC	Recognition	1 (O)NU NCC	21

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3.6.3 Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/ agency/ collaborating agency	Name of the activity	Number of teachers co-ordinated such activities	Number of students participated in such activities
-	-	-	-	-

3.7 Collaborations
3.7.1 Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of Activity	Participant	Source of financial support	Duration
Summer research internship	3 students	CSIR IMMT Bhubaneswar	60 days

3.7.2 Linkages with institutions/industries for internship, on-the-job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration (From-To)	participant
-	-	-	-	-

3.7.3 MoUs signed with institutions of national, international importance, other institutions, industries, corporate houses etc. during the year

Organization	Date of MoU signed	Purpose and Activities	Number of students/teachers participated under MoUs
Maven Silicon Softech Pvt. Ltd.	Aug-2021	Research/ Internship	-
Pipli Technologies Pvt. Ltd.	Dec-2021	Research/ Internship	-
IG Drones	Apr-2022	Research/ Internship	-
Protonix Tech. Pvt. Ltd	Apr-2022	Research/ Internship	-

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CRITERIA – IV

CRITERION IV–INFRASTRUCTURE AND LEARNING RESOURCES (2021-2022)	
4.1 Physical Facilities	
4.1.1 Budget allocation, excluding salary for infrastructure augmentation during the year	
Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development (in INR)
76,00,000	91,11,077

4.1.2 Details of augmentation in infrastructure facilities during the year		
Facilities	Existing	Newly added
Campus area	37.08 Acre	-
Classrooms	86	-
Laboratories	75	-
Seminar Halls	16	-
Classrooms with LCD facilities	14	-
Classrooms with Wi-Fi/LAN	24	-
Seminar halls with ICT facilities	3	-
Video Centre	1	-
No. of important equipments purchased (≥ 1 -0lakh) during the Current year.	-	5
Value of the equipment purchased during the year (Rs. In Lakhs)	-	8.26
Others	-	-

4.2 Library as a Learning Resource			
4.2.1 Library is automated{Integrated Library Management System(ILMS)}			
Name of the ILMS software	Nature of automation (fully or partially)	Version	Year of automation
Online Library Information System	Fully	NIST Developed	1998

4.2.1 Library Services:						
	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	60,376	2,28,00,813	6	1,945	60,382	2,28,02,758
Reference Books	708	35,27,405	0	0	708	35,27,405
e-Books	-	-	-	-	-	-
Journals	-	-	-	-	-	-
e-Journals	-	-	-	-	-	-

Digital Database	-	-	-	-	-	-
CD & Video	253	-	-	-	253	-
Library automation	1	-	-	-	1	-
Weeding (Hard & Soft)	-	-	-	-	-	-
Others(specify)						

4.2.2 E-content developed by teachers such as: e-PG-Pathshala, CEC (under e-PG-Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System LMS) etc

Name of the teacher	Name of the module	Platform on which Module is developed	Date of launching e-content
Dr. B. Sambhi Reddy	Mechanics of Solids	YouTube	7 th May 2021

4.3 IT Infrastructure
4.3.1 Technology Upgradation(overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Available bandwidth (MGBPS)	Others
Existing	-	-	-	-	-	-	-	-	-
2021-22	1000	14	1000	1	1	3	1	1 GBPS	-
Added	-	-	-	-	-	-	-	-	-
2021-22	-	-	-	-	-	-	-	-	-
Total	1000	14	1000	1	1	3	1	1 GBPS	-

4.3.2 Bandwidth available of internet connection in the Institution (Leased line)

1 GBPS

4.3.3 Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and Recording facility
SONY XD CAM	https://nist.edu/IQAC/econtent.html

4.4 Maintenance of Campus Infrastructure
4.4.1 Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned budget on academic facilities (in INR)	Expenditure incurred on maintenance of academic facilities (in INR)	Assigned budget on physical facilities (in INR)	Expenditure incurred on maintenance of physical facilities (in INR)
9,42,27,000	1,18,39,620	8,13,00,000	2,28,97,088.98

4.4.2 Procedures and policies for maintaining and utilizing physical, academic and support facilities-laboratory, library, sports complex, computers, classrooms etc. (maximum 500words) (information to be available in institutional Website) (information to be available in institutional Website)

Link to policy document: <https://www.nist.edu/about/resource-usage-policy.html>

At NIST-Autonomous, we place significant emphasis on providing cutting-edge IT facilities tailored to the diverse needs of our esteemed faculty and students. Committed to staying abreast of the latest technological advancements, we ensure that our IT infrastructure is reliable, robust, and capable of meeting the escalating demands of the digital age. To commence, we offer a seamless and high-speed internet connection of 1 GBPS throughout our campus. The institute has invested in a powerful network infrastructure that provides ample bandwidth to accommodate a large number of users simultaneously. This guarantees that our faculty and students can access online resources, engage in virtual learning, and collaborate effectively through various online platforms. For connectivity within the campus, NIST has implemented a secure and reliable Wi-Fi network. Our Wi-Fi infrastructure covers all academic buildings, libraries, common areas, and student accommodations. This enables users to effortlessly connect their laptops, tablets, and smartphones to the internet, providing them with the flexibility to work or study from any location within the campus environment. In addition to Wi-Fi connectivity, NIST has equipped our classrooms, seminar halls, and meeting rooms with modern LCD projectors and screens. These audio-visual facilities enhance the teaching and learning experience, allowing faculty members to deliver engaging presentations, and students to have a clear view of instructional content. The integration of LCD technology promotes interactive and multimedia-rich learning, enabling a more immersive educational experience. To ensure the seamless functioning of our IT facilities, NIST has established a dedicated IT support team. This team is responsible for the maintenance, troubleshooting, and timely resolution of any technical issues related to hardware and software. Faculty and students can seek assistance from this team in case of any IT-related challenges, ensuring uninterrupted access to technology resources and services. Our IT facilities include licensed software and applications commonly used in various academic disciplines, such as programming languages, statistical analysis tools, design software, and more. These software resources enable students to acquire hands-on experience in utilizing industry-standard tools, preparing them for their future endeavors. Our IT infrastructure is fortified with advanced firewalls, antivirus software, and intrusion detection systems to protect against potential threats and unauthorized access. Additionally, we educate our faculty and students about cyber-security best practices, encouraging them to adhere to secure online behavior. In conclusion, NIST-Autonomous is dedicated to maintaining top-notch IT facilities that align with the contemporary needs of our faculty and students. Our high-speed internet connection, campus-wide Wi-Fi, LCD projectors, and reliable IT support ensure a seamless and enriching experience for all users. The institute boasts an adequate computer facility, maintaining a computer ratio of 1:1, which significantly enhances the educational experience.

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CRITERIA – V

CRITERION V - STUDENT SUPPORT AND PROGRESSION (2021-2022)			
5.1 Student Support			
5.1.1 Scholarships and Financial Support			
	Name /Title of the scheme	Number of students	Amount in Rupees
Financial support from institution	Sibling Scholarship	1	10,000
Financial support from other sources			
a) National	PMS for OBC/ SEBC	90	18,00,000
	PMS for EBC	2	40,000
	PMS for SC/ ST	17	11,90,000
	e-Medhabruti B Tech	56	22,40,000
	e-Medhabruti MBA	10	2,00,000
	e-Medhabruti MCA	18	3,60,000
	e-Medhabruti MSc	11	1,54,000
	NS to Minorities	9	3,60,000
	NS to General Students	12	2,40,000
	AICTE Scholarship	20	10,00,000
	NS to Other Categories	6	1,20,000
b) International	--	--	--

5.1.2 Number of capability enhancement and development schemes such as soft-skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,			
Name of the capability enhancement scheme	Date of implementation	Number of students enrolled	Agencies involved
Soft skill development and English communication	March 22	550	Career Launcher, NO 241,2nd floor,6th cross,1st stage ,cmh road , Near to KFC opposite to spice hotspot, Above positive homeopathy, Bangalore, Mrs. Priya
Career Guidance	18 th July 2021	150	Mr. Srikant Sathapathy, Bureau Veritas India, Sr. Surveyor Mr. Mahaveer Prasad, Godrej & Boyce Mfg. Co. Ltd., Assistant Manager Mr. Deepak Kumar, Tata Consultancy Services, Assistant Software
Software Development and Software Design Life Cycle	17 th July 2021	120	Er. Rudra Prasad Tripathy, Enterprise Architect , Tech Mahindra Ltd.

Recent advances in multidisciplinary aspects of civil engineering	24 th July 2021	110	Dr. Arpan Pradhan, CHRIST (Deemed to be University), Bangalore Dr. Sanjukta Sahoo, KIIT Polytechnic, Bhubaneswar
Hardware Acceleration and Network Virtualization Trends	28 th August 2021	80	Aditya Kumar Patra, IP Logic Design Engineer, Intel
An Introduction to Scrum	4 th September 2021	35	Mr. Deepak Behera, Principal Technical Specialist, Nokia
Advanced 5G Communication	18 th September 2021	50	Dr. Ashutosh Dutta, Professor, John Hopkins Univ USA
Processing of Tungsten heavy alloys for strategic applications	18 th September 2021	60	Dr Ajit Panigrahi, CSIR IMMT Bhubaneswar
H2 Energy and Fuel Cell Technologies at NMRL	18 th September 2021	50	Dr. Manoranjan Patri, Naval Materials Research Laboratory, Ambemath, India
Beyond horizons - expanding the understanding of crisp sector and its potential	8 th December 2021	120	Prof. (Dr.) Rajesh Goyal, Professor & Dean (NICMAR), PhD (IIT Roorkee), PDF (Germany, Czech Republic) Dr. Sachin Batra, Associate Prof., NICMAR, PhD
Advancement in EV and EHV Technology	17 th March 2022	40	Dr. Nishant Patnaik, Dept. of EEE,CBIT Hyderabad
Design of CMOS based image sensor	23 rd March 2022	60	Mr. Abhijeet Pattnaik, Associate Design Engineer, Intel Corporation, USA
rf/microwave sensor technology	22 nd May 2022	38	Dr. Prashant K Singh, Associate Prof. UCET, Hazaribag
The origin of bio-potentials and the problems of its capture, conditioning and processing	19 th June 2022	130	Dr. Biswajit Bhattacharyya, Associate Professor of Department of Electrical Engineering, Jadavpur University, Kolkata
Awareness on IPR	20 th June 2022	65	Dhiren Pattnayak, Examiner of Patents and Designs, Patent Office, Kolkata
Conselling	3-12-2021	363 of 2021 Batch (1 st Year)	NIST
Mentorship	22-09-2021	357 of 2020 Batch (2 nd Year)	NIST
Language Lab	3-12-2021	363	NIST

Yoga	3-12-2021	363	NIST
Role play using Theatre 60	07-07-2021	146	Dept. of English, NIST
Working in Teams	19-7-2021	51	Dept. of English, NIST
Story Board Writing	8-1-2021	121	Dr. E. Raja Rao, Retd. Professor, Dept.of English, BU
Questioning skills for Better Engagement	8-11-2021	249	Dept. of English, NIST
PGM for Management Students	14-11-2021	90	Dept. Management, NIST
Writing a Resume for Career 5.0	26-11-2023	387	Dept. Management, NIST
Soft Skill Training	17-03-2023	136	Dept. of English, NIST

5.1.3 Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the Scheme	Number of benefited students by Guidance for Competitive examination	Number of benefited students by Career Counselling activities	Number of students who have passed in the competitive exam	Number of students placed
2021	GATE Classes for Civil Engineering	22	-	2	-
2021	GATE Classes for EE and EEE	35	-	-	-
2021	GATE Classes for ECE	30	-	2	-
2021	GATE Classes for ME	10	-	-	-
2021	Career Guidance	-	180	-	CE 9(10)
	Career Opportunities in Defense Sector	-	90	-	CSE 162 (293)
	Career Counselling	-	90	-	ECE 66 (112)
					EE 9 (12)
					EEE 29 (35)
					ME 22 (33)
					IT 37 (61)
					M.TECH 2
					MBA 31 (46)
					MCA 12 (15)
					379 (619)

5.1.4 Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	No. of grievances redressed	Average number of days for grievance redressal
1	1 (Ragging cases)	3
-	0 (Sexual harassment)	Same day
-	0 (Indiscipline cases)	5 days

5.2 Student Progression
5.2.1 Details of campus placement during the year 2021 - 2022

Name of Organizations Visited	Number of Students Participated	ON Campus	OFF Campus
		Number of Students Placed	Number of Students Placed
Capgemini	170	41	-
Infosys (HackWithInfy)	79	6	-
Wipro	210	100	-
ThoughtFocus	162	12	-
ValueLabs	75	9	-
Incture Technologies	99	5	-
PWC	187	2	-
Yudiz Solutions	97	2	-
CSG International	170	1	-
Western Digital	38	1	-
Virtusa Neural Hack	46	5	-
Areteans Technology Solutions	73	21	-
Qspiders	116	18	-
CoreEL Technologies <Phase I>	134	3	-
EnvestnetYodlee	51	1	-
Comviva	130	28	-
Happiest Minds	152	43	-
Knowledge Lense	116	13	-
Cognizant	220	108	-
Accolite Digital(Women Special Drive)	159	1	-
Zensar	107	1	-

Marquee Semiconductor	158	1	
IndusInd Bank	146	-	13
NEXIONPRO SERVICES LLP	47	7	-
SMBXL	68	9	-
AabSys	168	-	6
Kaynes Technologies	44	3	-
Ace Pipe Line	71	5	-
Zenus Group	160	9	-
Scaledge India (PerfectVIPs)	167	9	-
Hansa Solutions	102	2	-
Windcare India	153	2	-
Spikewell (Category I)	142	12	-
ICICI Bank (Phase I)	60	11	-
JusPay	171	2	-
ADANI Group	160	5	-
Neebal Technologies	171	3	-
ICICI Prudential	60	3	-
Strategic Research Insight	90	3	-
CAPE Electrical	124	2	-
ATOS Syntel	146	1	-
Bhash Software Labs	132	11	-
Dhal Information System	139	6	-
Kingfa Science & Technology (India) ltd	175	-	3
Vishal bearings	87	1	-
Panigrahy Co.	44	2	-
ICICI Bank (Phase II: Technical)	179	9	-
Live Digital	85	5	-
Translab Technologies	100	2	-
SakRobotix Lab Pvt Ltd	198	8	-
LiuGong India <Phase II>	174	1	-
Net Tantra Technologies	185	2	-
Galacon infrastructure and projects pvt ltd	168	1	-
VV Autotest Systems Pvt Ltd	110	2	-
iServeU Technology	169	8	-
Tech Mahindra "Cerium Systems"	68	1	-
Queens Elevator & Escalators Pvt. Ltd	96	2	-
Virtue e-Varsity	85	2	-
Unschool	107	2	-
GITAM University	184	-	1

Infosys	107	-	1
Hexaware Technologies	170	-	1
Flipkart	82	-	1
TCS	48	7	-
Rucha Engineers Pvt Ltd	40	-	1
Amiti Software Technologies	50	-	1
Traexn Technologies Limited	66	-	1
Capgemini (Superset)	183	-	1
Informatica	191	1	-
Black Box	43	1	-
Intellipaat	164	2	-
Reliance Retail Limited	74	3	-
		589	30
TOTAL			619

5.2.2 Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Department graduated from	Name of institution joined	Name of Programme admitted to
2021	28	B.Tech	EEE, ECE. ME, CE, CSE	Annexure_2021-22	MS/MBA/ Ph.D.

5.2.3 Students qualifying in state/ national/ international level examinations during the year (eg: NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Item	No. of Students selected/ qualifying	Registration number/roll number for the exam	
NET	-	Annexure_2021-22	
SET	-		
SLET	-		
GATE	7		
GMAT	-		
CAT	5		
GRE	1		
TOFEL	2		
Civil Services	-		Annexure_2021-22
State Government Services	2		
Any Other			

5.2.4 Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Participants
Foundation Day 2021 (Silver Jubilee of NIST)	Institute	2000
Intra college sports fest 2021	Institute	400

5.3 Student Participation and Activities
5.3.1 Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/ medal	National/ International	Sports	Cultural	Student ID number	Name of the student
2022	SONIC SHOWDOWN, OTR BHUBANESWAR	National	NA	Cultural	202010081, 202010131, 201910506, 201910260, 201910188, 201910107, 201910515, 201940462	Team NMS: Shovan Mishra, Dilsekh Pattnaik, B Durgamadhab Prusty, V Kameswar Avinash, Surya Prakash Das, Abhineet Nayak, Pritesh Kumar Maharana, Mangala Charan Panda
2022	Best Performer Award Berhampur Mahanagar Mahotsav	State	NA	Cultural	202010081, 202010131, 201910506, 201910260, 201910188, 201910107, 201910515, 201940462	Team NMS: Shovan Mishra, Dilsekh Pattnaik, B Durgamadhab Prusty, V Kameswar Avinash, Surya Prakash Das, Abhineet Nayak, Pritesh Kumar Maharana, Mangala Charan Panda
2022	PMEC Dance battle 2k21 runners	State	NA	Cultural	202044069 202041019 202012264	Dibya Ranjan Sahoo K. Saloni Aryan Choudhary

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5.3.2 Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

Students actively participate in various academic and administrative bodies and committees within the Institute, playing a crucial role in coordinating events related to academics, as well as co-curricular and extra-curricular activities. Their involvement extends to key decision-making forums such as the Curriculum Review Committee and Board of Studies (BOS), where they contribute suggestions for updating syllabi.

Within department associations, students assume roles such as President, Secretary, and Treasurer, taking charge of organizing Intercollegiate Meets, Conferences, and Seminars. In matters related to hostel life, student nominees on the Hostel Welfare and Mess Committee advocate for the concerns of residents to the Warden, actively contributing to the effective functioning of the hostels. Additionally, students represented in the Anti-Ragging Committee, alongside administrators, work diligently to maintain a ragging-free environment on campus.

Class Representatives are tasked with monitoring disciplinary activities within each class and serving as liaisons between students and Heads of Departments (HODs) to address grievances. Students involved in Extension Activities such as National Cadet Corps (NCC), and National Service Scheme (NSS) Units participate in outreach programs aimed at contributing to the welfare of the local community and fostering a sense of social responsibility among students.

Furthermore, students actively engage in various clubs and committees, including the Cloud Computing, Club Excel, Multimedia club, Data Science club, Renewable Energy club, Robotics club, NIST Musical Society, NIST Astronomy club, CAT club, Electronics Hobby club, Civeng's club, NIST Counselling services, Sports Committee, Alumni Association, Sexual Harassment Cell, Library Committee, showcasing their proactive involvement in diverse aspects of campus life.

5.3.3 Number of sports and cultural events / competitions organized by the institution:

1. Sports Competition: NA
2. Cultural Competitions: NA
3. Technical Fest/ Academic Fest:
4. Any other events through active clubs and forums:

5.4 Alumni Engagement**5.4.1 Whether the institution has registered Alumni Association? Yes/No, if yes give details (maximum 500 words): Yes**

Yes, Institution has registered Alumni Association named as National Institute of Science & Technology Alumni Association (NISTAA) registered under society Act 1860 on date- 3rd February 2020, having its office inside the campus of National Institute of Science & Technology. Every year it is conducting its regular General Body & Governing Body meeting as per its Bye- Law.

The aims and objectives of the society are to

1. Promote an active Alumni Association of National Institute of Science & Technology, Berhampur
2. Promote fraternization amongst alumni of the Institute.
3. Promote the Socio-Cultural interaction between the alumni and their family.

4. Build active network of alumni across India
5. Help the institute collaborate with the industry for better student placements and faculty upgrade. To create an awareness about the achievements, contribution, and the rich of heritage of the institute with in the media as well as the industry.
6. Institute and organize scholarship funds to help the needy and deserving students of the institute.
7. Institute prizes and awards for outstanding project work, research papers and other professional activities by the faculty, alumni, and the students of the institute, and to suitably recognize outstanding social and community services rendered by them.
8. Create CHAIRS in the institute for promoting Research and Development.
9. Establish closer interaction amongst members of the society and the industries.
10. Work with like-minded organizations to foster better community building.
11. Mobilize resources for supporting the objectives of the society.
12. Undertake all such activities as are conducive or incidental to the attainment of the above objectives and are beneficial to the interests of the institute of technology and/or its alumni.

5.4.2 No. of registered Alumni: 26

5.4.3 Alumni contribution during the year (in Rupees) : 0

5.4.4 Meetings/activities organized by Alumni Association : 6

CRITERIA – VI

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

Vision

Focused on high-quality teaching, creative innovation, entrepreneurship, and universal partnership.

Mission

A research institute committed to academic excellence, fundamental research and innovation, nurturing global citizens, and collaborative engagement.

Core values

Belief: In respect, integrity, compassion, diversity, and teamwork

Excellence: In academics and research

Encouragement: For freedom of thought, expression, and viewpoint

Spirit: of community, nation-building, inclusive growth, and recognition of individual uniqueness.

Truth: In the pursuit, dissemination, and application of knowledge

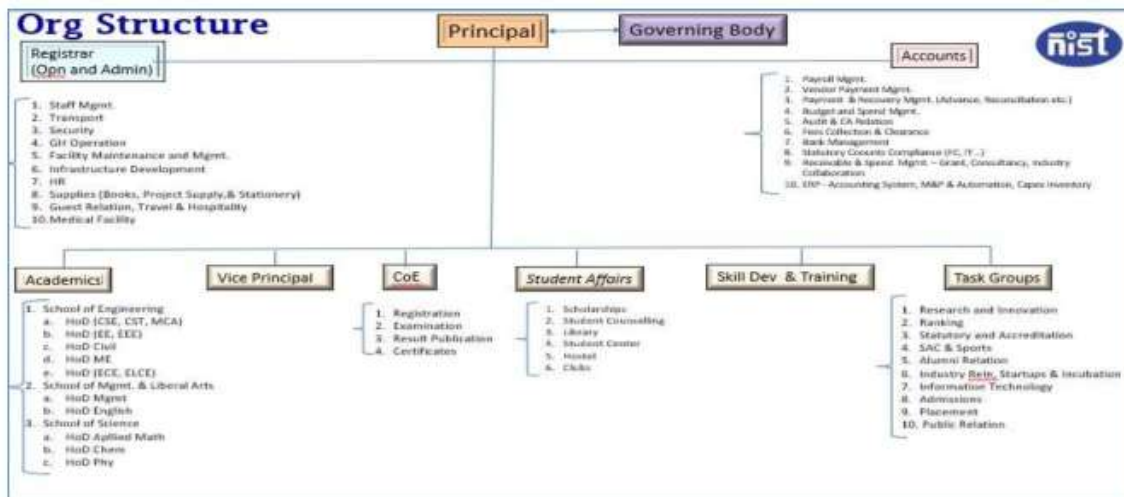
Leadership

It is guided by the Founder Chairman of the institute, Dr. Sukant K Mohapatra, the leadership team represents diverse functions, and are committed to collaboratively serving significant organizational purposes for which they hold themselves mutually accountable. They bring together and lead staff and faculty and ensure aligned action. The figure.1 indicates the leadership team.



6.1.1 Mention two practices of decentralization and participative management during the last year

The Institute has decentralized and participative management practices. The below-mentioned organizational structure provides concrete information on various levels of decentralization. The institution follows participative management in every functional area of operation such as various academic affairs are taken care of by the head of the department, and controller of examination with the support of deputy controllers. Various groups are formed to modulate the decisions taken for effective implementation.



6.1.2 Does the institution have a Management Information System (MIS)?

- **YES- The link for accessing is pasted below**

<https://www.nist.edu/nis/index.php>

6.2 Strategy development and deployment:

The institute formulates a strategic plan to visualize and accomplish its vision and mission, through the formulation of curriculum development, development of teaching and learning strategies, formulation of examination and evaluation policies, policies for library, ICT and physical structure/Instrumentation, emphasis on human resource management practices and policies, industry collaboration and procedure for admission of students.

6.2.1 Quality Improvement Strategies adopted by the Institution for each of the following

- **Curriculum Development:**

Teachers are the key stakeholders who are involved in the process of developing and structuring the curriculum for various subjects. The teachers develop, analyze, and evaluate the course structure and finalize it after proper discussion with the head of the department for further processing. The institute through the conduction of the Board of Studies (Bos) develops the curriculum of the subjects, the board of studies consists of subject experts from the department, with active involvement of alumni in the process. The passed course structure is further submitted to various internal bodies to be implemented.

- **Teaching and learning:** Each subject teacher is required to develop their course file based on the allotted subject. The institute follows a checklist that every teacher needs to maintain, and the departmental head verifies it at the end of each semester.

Sl No	Item	Remark
1	Syllabus	Subject syllabus page
2	Teaching Plan	As per the format given
3	Time table	Concerned subject timetable only
4	Study Materials	ppts, e-book, Q&A booklet, etc whatever you give to students

5	Case Discussed	As per the lesson plan. One case per module
6	Guest Lecture	One guest lecture per subject. Invitation email, Confirmation email from guest, GI tagged photo of session, thank you letter from the host
7	Mid-semester question paper	With CO-PO
8	Scanned copy of answer scripts	Best 3 and worst 3 full script scans
9	Result analysis	Result of Mid Sem in Excel sheet, analysis of results highlighting the slow learners, Action taken report for slow learners
10	University result analysis	if available in NIS, take a copy
11	Assignment, Quiz, Surprise Test question copies, etc	As per the internal marks composition of the institute
12	Seminar details	Scanned copy of your markings
13	Mentoring details	As submitted to the mentoring coordinator
14	Final mark sheet submitted to CoE	in excel sheet
15	Course completion report	from NIS duly signed by HoD

- Examination and Evaluation:** The institute has a separate centralized examination cell for the conduction of examination and it is controlled by the controller of examination (CoE), deputy controller, and exam superintendents. For each batch, an exam superintendent is designated to conduct the exam. The central examination cell has a separate process for evaluating the answer scripts. The CoE is responsible for the smooth conduction of exams as per the academic calendar and the evaluation of answer scripts in a proper manner. The CoE adheres to the provided list of paper setters, moderators and examiners duly passed and approved by the Bos.
- Research and development:** The institute has a research and development cell, headed by a Rand D coordinator. Each department nominates a departmental member to the research and development cell for the smooth conduction and passing of various research activities. The Institute has various research groups such as the Novel Material Research Laboratory, VLSI Embedded System and IOT Group, Nano Science and Technology Group, Microwave and Antenna Group, Embedded System Design, Materials Research & Characterization Group, and various centers of excellence in Industrial Automation, the center of excellence in network vision and network security, the center of excellence in renewable energy, and the center of excellence in mechatronics. The total number of SCOPUS publications in various national /international journals are 235 and no of patents are 18.
- Library, ICT, and Physical Infrastructure/Instrumentation:** The institute has a central library with a self-developed Online Library Information System. The library has four different units for different streams such as central, MBA, MCA, and competitive sections. The library has an internal regulation system for transactions and

a library circulation system. The library opens for students from 9 A.M. to 8 P.M. Our library has clear guidelines for borrowing materials, accessing electronic resources, using study areas, and maintaining a conducive environment for studying. The library has a facility of drop box for books to be dropped so that students can have a time-saving approach. The institute has various academic and administrative buildings like the Lecture Hall complex, Galleria, OCTAGON, and ATRIUM.

- Human Resource Management:** NIST has implemented an ERP system (NIST Information System/ NIS) developed in-house. The same is accessible on the intranet as well as from outside. For effective HR management, the ERP has modules for Leave approval which provide information on leave count, class adjustment, and multi-level leave recommendation/ approval. The attendance is captured with a biometric attendance system (facial and fingerprint). There is an HRD module that gives detailed information about each of the staff and faculty members.



- Industry Interaction/Collaboration:** NIST has standing MoUs with 13 numbers of Companies/ Industry houses. The scope of the MoUs includes training, collaborative product development, consultancy work, pre-placement offers, etc. Resource persons from the industries have been invited to deliver motivational talks to the newly inducted and outgoing students. They have been actively involved in the syllabus revision/ updating activities through the BoS. Some of the industry experts are BoS members and some are invited to provide crucial feedback on market-driven syllabus framing. Students have been availing internships at the partner industries.
- Admission of students:** NIST intimates the eligibility criteria, fees, and admission process for each course to whoever calls us for an inquiry. NIST receives admissions through OJEE counseling only. A student needs to participate in the OJEE counselling process. Whoever gets the final allotment reports to the institute within the given period. They need to submit the final allotment letter, the original leaving or transfer certificate from the previous institute, and a set of photocopies of the documents uploaded for OJEE counselling. After that, they pay the institute fee and receive the identity card. Students with ID cards are only allowed to attend the classes. The institute intimates their registration numbers after receiving them from the university. For anyone who

cancels their admission before the UGC-set deadline, NIST strictly adheres to the UGC refund policy.

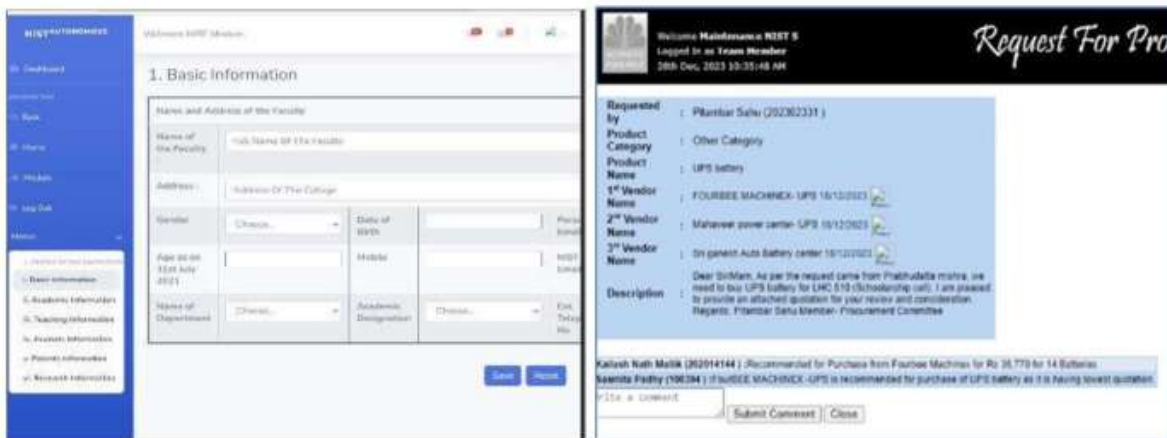
6.2.2 Implementation of e-governance in areas of operations:

NIST has developed its Enterprise Resource Planning (ERP) system which is called as NIST information system. It has various modules such as academic, financial, administrative, facility, employee desk, HRD, and student desk.



- **Planning and Development:**

The NIS took a proactive approach and directed its attention towards a wide range of planning and development endeavors, employing diverse methodologies such as the creation and enhancement of multiple modules, including but not limited to procurement and the National Institutional Ranking Framework (NIRF). To ensure comprehensive exploration and examination of the diverse elements entailed in the growth and progress of these modules, a specialized committee was established, with the primary purpose of engaging in extensive discussions and deliberations on various aspects pertaining to their development.



- Administration:** The institute under the administrative head maintains information on a bulletin board, which provides information on various notices given by the faculty members and staff members of the institute, it also has various other modules such as a procurement management system. The procurement management system modulates all the requisitions for the procurement of accessories. The project management system maintains information regarding project details, uploading reports, uploading PPTs, maintaining marks, and project clearance. The grievance cell maintains the grievances raised by the students, and faculties and forms various teams the grievances are addressed for timely solutions and appropriate results.



- Finance and Accounts:** The ERP system of the institute has a module that covers various aspects relating to financial aspects with employee concerns. It has two sub-sections as advanced management system and the personal advance system. The advanced management system provides advances to the faculties for attending

various conferences, FDP, and workshops. The employees who avail advance for attending various conferences, FDP, and workshops need to go for a presentation after coming to the institute which provides a scope for others to have a knowledge-sharing session. The personal advance management system provides loans to employees on various grounds like higher education, purchase of vehicles, and personal loans. It is done through proper verification by the approval authority.

The screenshot displays the NIST Information System interface. The top section is the 'Notice Board' with several announcements. Below it is the 'Advance Details' section, which includes a table of employee advances.

SID	Category	Short Description	Apply Date	Applied Amount(₹)	Status
1	Personal	personal reason	20/02/2018	20000	Settled
2	Higher Study	for paying PhD semester fees	19/02/2016	10000	Settled
3	Higher Study	for paying semester fees	16/07/2015	10000	Settled
4	Higher Study	For PhD Semester fees	20/07/2014	10000	Settled
5	Personal	for personal use	20/06/2014	20000	Settled
6	Higher Study	phd Registration	22/08/2013	20000	Settled
7	Personal	personal use	14/06/2013	10000	Settled

- Student Admission and Support:** The Institute proactively uses the NIS for various purposes relating to student admission and support such as entering newly enrolled student data, maintaining information on a candidate's background, details with registration of the student, and fees payment. It acts as a comprehensive platform for dealing with various data for students enrolling in a program and also verifying certificates (such as 10th, and 12th examinations) of the enrolled students for smooth functioning of further processes.



- Examination :** The institute effectively utilizes the National Institute science and Technology (NIST) information system for a multitude of examination-related endeavors. These endeavors include, but are not limited to, the extraction of diverse reports pertaining to the attendance of students, the uploading of question papers by faculty members, the uploading of marks, as well as the extraction of reports for both internal and external result publication. By harnessing the power of the NIST information system, the examination department is able to streamline and enhance the examination processes, ensuring efficient and accurate record-keeping and reporting.





Sl. No.	Roll Number	Name	Subject	Grade	Marks
1	20112010	JAYDEVI KUMAR PRASAD	PHYSICS	B	70
2	20112011	ABHIRAM KUMAR SAHOO	PHYSICS	B	70
3	20112012	SAHINI KUMAR	PHYSICS	B	70
4	20112013	DEBENDRA KUMAR	PHYSICS	B	70

6.3 Faculty Empowerment Strategies

6.3.1 Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year.

Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year.				
Year	Name of teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2021-22	Dr. Sandipan Mallik	-	Indian Energy Congress	2000
2021-22	Prof. Nilesh Dalai		Indian Energy Congress	2000
2021-22	Prof. Manoj Sahoo		Indian Energy Congress	2000
2021-22	Prof. Bibhuti Bhusan Mishra		Indian Energy Congress	2000
2021-22	Dr. M. Suresh		Indian Energy Congress	2000
2021-22	Dr. Murthy Cherukuri		Indian Energy Congress	2000
2021-22	Dr. Aswini Kumar Nayak		Indian Energy Congress	2000
2021-22	Dr. Pradyumna Kumar Patra		Indian Energy Congress	2000
2021-22	Dr. Sushanta Kumar Sahu		Indian Energy Congress	2000
2021-22	Dr. Souren Mishra		Indian Energy Congress	2000
2021-22	Dr. Barada P Sethy		Indian Energy Congress	2000
2021-22	Dr. B Sambu Reddy		Indian Energy Congress	2000
2021-22	Prof. Aswini Kumar Khuntia		Indian Energy Congress	2000

2021-22	Dr. Sachidananda Prasad		Indian Energy Congress	2000
2021-22	Dr. Souren Misra	OASME Workshop		1315
2021-22	Nilesh Dalai	Make in Odisha Expo		6488

6.3.2 Number of professional development / administrative training programmes organized by the Colleges for teaching and non-teaching staff during the year

Number of professional development / administrative training programmes organized by the Colleges for teaching and non teaching staff during the year					
Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	Dates (from-to)	No. of participants (Teaching staff)	No. of participants (non-teaching staff)
2021-2022	Hands on Labview	Hands on Labview	20/12/2021 to 28/12/2021	8	5
2021-2022	Cyber Security & Block Chain	C programming	20/12/2021 to 30/12/2021	22	7
2021-2022	ANSYS	ANSYS	16/06/2021 to 30/06/2021	5	2

6.3.3 No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year		
Title of the professional development programme	Number of teachers who attended	Date and Duration (from – to)
-	-	-

6.3.4 Faculty and Staff recruitment (no. for permanent recruitment):

Faculty and Staff recruitment (no. for permanent recruitment):			
Teaching		Non-teaching	
Permanent	Fulltime	Permanent	Fulltime
17	17	3	3

6.3.5 Welfare schemes

Welfare scheme	
Teaching	ESI, provident fund
Non-teaching	ESI, Provident fund
Students	Student Insurance

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

The institute has established an internal and external audit committee. The internal audit committee is composed of four individuals: the principal, who also serves as the chairman of the finance committee, a representative chosen by the governing body, the finance officer of BPUT, and the ex-office member. On the other hand, the external audit is carried out by a chartered accounting firm known as MDC & associate.

6.4.2 Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year (not covered in Criterion III)

Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year (not covered in Criterion III)		
Name of the non-government funding agencies/ individuals	Funds/ Grants received in Rs.	Purpose

6.5 Internal Quality Assurance System

6.5.1 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
-				
Academic	Yes	NIRF, BPUT	Yes	IQAC team
Administrative	-	-	-	-

6.5.2 Activities and support from the Parent – Teacher Association (at least three)

- Foundation day Program
- Orientation program for students
- Sankalp (Inter College Tech fest)

6.5.3 Development programs for support staff (at least three)

- Faculty orientation Program
- Staff Orientation Program
- Thursday seminar
- All hand meeting

6.5.4 Post Accreditation initiative(s) (mention at least three):

1. The institute has signed MoUs with these following industries for collaborative research projects and student internships.
 - Parkland Solar (Mar 2021)
 - Maven Silicon Softech Pvt. Ltd. (Aug 2021)
 - Pipli Technologies Pvt. Ltd. (Dec 2021)
 - IG Drones (Apr 2022)
 - Protionix Tech. Pvt. Ltd (Apr 2022)

2. New specializations were added to the UG courses keeping in mind the employment scenario.
 - B.Tech (Computer Science and Technology) was introduced in the year 2022.
 - B.Tech (Electronics and Computer Engineering) was introduced in the year 2022.
3. Awards and prizes instituted: In order to recognize the individual achievements of students and alumni, several awards and prizes were instituted as listed below.
 - Institute gold medals for each degree programme separately. (B.Tech-Branch wise, MBA, MCA, M.Tech)
 - Distinguished Alumnus award for alumni exhibiting outstanding achievements in extraordinary fields.
4. NCC Naval wing was introduced with cadet strength of 100 and with CTO and an NCC PI. It operates under the Berhampur Group Command HQ.
5. A technology business incubator was setup to nurture startup ideas and inculcate entrepreneurial mindset among the students.
6. A fab lab was set up with 3D printing and PCB prototyping setup (including automatic component placement) for the students to try out their ideas in electronic system design and manufacturing.

6.5.5 Other accreditation agency

- | | | |
|--|-------------|-----|
| a. Submission of Data for AISHE portal | : (Yes /No) | Yes |
| b. Participation in NIRF | : (Yes /No) | Yes |
| c. ISO Certification | : (Yes /No) | Yes |
| d. NBA or any other quality audit | : (Yes /No) | Yes |

6.5.6 Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting activity	Duration 2021-2022	Number of participants
2022	Internal quality team visit (Experts panel recommended by BPUT)	24.09.2022	24.09.2022	3
2022	Departmental academic audit visit	12.07.2022	12.07.2022	5

CRITERIA – VII

CRITERION VII–INSTITUTIONAL VALUES AND BEST PRACTICES (2021-22)

7.1–Institutional Values and Social Responsibilities

7.1.1 Gender Equity (Number of gender equity promotion programs organized by the institution during the year July 2021 to June 2022)

Title of the program	Period 2021-2022	Participants	
		Female	Male
International Women's Day Program	8 th March 2022	160	30
-	-	-	-

7.1.2 Environmental Consciousness and Sustainability/Alternate Energy initiatives such as the percentage of the power requirement of the College met by the renewable energy sources:

1. The renewable energy club, NIST organized an awareness program on the eve of National Energy Conservation Day at the NIST campus on 6th Jan 2022.
2. NIST Art & Drama Club (ADC) performed nukkad natak on Women empowerment at KIIT Bhubaneswar on 22nd April 2022
3. Online Seminar organised by School of Electrical Science, NIST "Recent Advancement in harvesting Solar Energy 25th July 2021
4. NIST consumes an average of 54,468 KWh from the grid per month & 11501 KWh is collected from renewable resources (Solar, Wind, Biogas etc). Hence the total 17.43 % of power requirement was met by renewable resources.

7.1.3 Differently-abled (Divyangjan) friendliness

Items Facilities	Yes / No	No of Beneficiaries
Physical facilities	Yes	-
Provision for lift	Yes	-
Ramp/Rails	Yes	-
Braille Software/facilities	No	-
Rest Rooms	Yes	-
Scribes for examination	Yes	-
Special skill development for differently bled students	No	-
Any other similar facility (Wheel Chair facilities are available)	Yes	-

7.1.4 Inclusion and Situatedness

Enlist the most important initiatives taken to address locational advantages and disadvantages during the year

Year	Number of initiatives to address location advantages and disadvantages					
2021-22	2	2	Date and duration of the initiative	Name of the initiative	Issues addressed	Number of participating students and staff
-	-	Disadvantage: Institute is situated 180 km away from the airport, hence it was difficult to bring the subject expert and other dignitaries to the institute	15 April 2022	Guest house was taken on rent near airport and a separate dedicated vehicle is fixed to get rid of this problem	Logistics	2000 (Approx.)
-	-	Disadvantage: Due to Covid outbreak, other state students could not return back to their home	18 th May 2021	Institute provided single room with all amenities & supplied food to their room	Covid Outbreak	100 (Approx.)

7.1.5 Human Values and Professional Ethics

Code of conduct (handbooks) for various stakeholders

Title	Date of Publication	Follow-up (Maximum 100 words)
EMPLOYEE HANDBOOK (Rules and Regulations Version 2.0)	July, 2019	The effective implementation and adherence to the "Employee Handbook" at NIST entail collaboration among diverse stakeholders, with responsibilities distributed across various roles. Designated individuals and groups are tasked with ensuring the proper execution. The principal holds overall responsibility for institute affairs, overseeing day-to-day management. Furthermore, the HR Department, the Staff Welfare Committee, the Performance Evaluation and Appraisal Committee, and the Ethics Committee actively contribute to the successful implementation of the Employee Handbook. This collective effort fosters a comprehensive approach to employee guidelines and welfare within the organization.
STUDENT HANDBOOK Rules and Regulations B.Tech M.Tech MBA MCA PhD	April 2022	NIST maintains a Disciplinary Committee (DC) led by a chairperson appointed by the Institute, comprising faculty members. This committee addresses complaints, scrutinizes evidence, and proposes appropriate sanctions. Recommendations, including suggested punishments for proven guilt, are submitted to the principal for

Version 2.0 rev 1.3		implementation. Unlike a court of law, the standard of proof may vary. Additionally, the institute establishes various committees/cells, such as the Women Grievance Cell, Anti-ragging Cell, and NIST Counselling Service etc. to uphold human values and professional ethics. These entities collectively contribute to fostering a secure and ethical environment within the institution and proper implementation of the policies mentioned in the handbook
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7.1.6 Activities conducted for the promotion of universal Values and Ethics

Activity	Duration 2021-22	
Universal Human Values course has been imparted	-	-

7.1.7 Initiatives taken by the institution to make the campus eco-friendly (at least five)

1. Monthly Cleaning by NSS students
2. Awareness campaign for Clean & Green Campus
3. Cleaning the pond
4. Massive plantation (Vanmohostav)
5. Recycling the wastewater for plantation
6. Making a decomposition pit for converting organic waste to manure
7. Segregation of waste for proper disposal

7.2 Best Practices

Describe at least two institutional best practices. Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link.

Best Practice-1: Offering Summer Courses for Internal and External Candidates

Link: <https://nist.edu/IQAC/best-practices.html#2021-22>

Skill certifications help students in getting better impression during campus placement. NIST has proficient trainers and master trainers to offer skill courses in VLSI, Embedded Systems, Computer programming, Computer aided manufacturing, Renewable energy, Building Management System etc. Such skill courses are also available in nearby cities such as Visakhapatnam and Bhubaneswar. Such skill centers run multiple batches per day and the access duration to their lab resources is restrictive. It was necessary to provide intensive training and hands-on to the students on tools of their choice.

The institute had floated 36 courses and saw enrolment in 21 courses. Students from inside the institute enrolled along with bulk registration from other institutes across the state. The external participants were accommodated in the hostel free of cost. The participants have successfully secured employment opportunities after passing out.

Best Practice-2: Commissioning of Fab Lab as a Central Facility

Link: <https://nist.edu/IQAC/best-practices.html#2021-22>

NIST has been pioneering development of electronic devices and systems through student projects, faculty projects

etc. Several student groups guided by NIST faculty members have received prizes in hackathons, innovation fests etc. In order to augment the effort and to make the proposed designs reality, a fabrication laboratory was required. Further, NIST being one of the nodal center for ESDM related startups, having a fabrication center will be a boon. An ESDM fabrication lab was setup to provide services for electronic system design, PCB manufacturing, testing and packaging. Equipment for etching, component placement, testing, enclosure making, 3D printing have been procured and installed at TIFAC 203. The lab has delivered several products and services to internal students and external participants. A list is given below.

- a. Delivered a few electronic products such as a general-purpose programming board, a flight controller board, optical proximity sensor PCB and ultrasonic and light intensity sensors etc.
- b. 110 students from outside the institute have been trained on rapid prototyping and PCB making for the last two sessions.
- c. 3D CAD models have been prepared and printed for a few clients on request basis.

7.3 Institutional Distinctiveness

Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust. Provide the web link of the institution in not more than 500 words

<https://nist.edu/IQAC/distinctiveness.html@2021-22>