

TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP)

PHASE-III

INSTITUTIONAL DEVELOPMENT PROPOSAL

for

Sub-component 1.1 Institutional Development for Participating Institutions

Submitted By



**INDIRA GANDHI INSTITUTE OF TECHNOLOGY, SARANG
Dist: Dhenkanal (ODISHA), PIN-759146,
Phone: 06760 – 240371, Fax: 06760- 240544**

1. INSTITUTIONAL BASIC INFORMATION

1.1 Institutional Identity

- Name of the Institution : Indira Gandhi Institute of Technology, Sarang, Dhenkanal, Orissa, 759146, India.
- Is the Institution AICTE approved? : Yes
- Furnish AICTE approval No.:F.No.Eastern/1-2811691744/2017/EOADate: 05-04-2017
- Type of Institution : Govt. funded
- Status of Institution : State Govt. Institute of Govt. of Odisha
(Autonomous)
(Affiliated to Biju Patnaik Univ. of Technology)
- Name of Head of the Institution : Prof. Bikasha Chandra Panda, Director
(Full time appointee)

1.2 Academic Information:

- **Engineering UG and PG programmes offered in Academic year 2016-17:**

S. No	Title of programmes	Level (UG, PG, PhD)	Duration (Years)	Year of starting	AICTE sanctioned annual intake	Total student strength in all years of study
1	B.TECH IN CIVIL ENGINEERING	UG	4YEARS	1982-83	60	258
2	B.TECH IN ELECTRICAL ENGINEERING	UG	4YEARS	1982-83	60	258
3	B.TECH IN MECHANICAL ENGINEERING	UG	4YEARS	1982-83	60	258
4	B.TECH IN CHEMICAL ENGINEERING	UG	4YEARS	1994-95	30	129
5	B.TECH IN METALLURGICAL AND MATERIALS ENGINEERING	UG	4YEARS	1994-95	60	258
6	BTECH IN ELECTRONICS AND	UG	4YEARS	2008-09	60	258

7	BTECH IN COMPUTER SCIENCE AND ENGINEERING	UG	4YEARS	2008-09	60	258
8	MASTERS IN COMPUTER APPLICATIONS (MCA)	PG	3YEARS	1990-91	30	96
9	M.TECH IN ENVIRONMENTAL SCIENCE AND ENGINEERING (PT)	PG	2YEARS	2008-09	18	36
10	M.TECH IN INDUSTRIAL POWER CONTROL AND DRIVES (PT)	PG	2YEARS	2008-09	18	36
11	M.TECH IN MECHANICAL SYSTEM DESIGN	PG	2YEARS	2008-09	18	36
12	M.TECH IN STRUCTURAL ENGINEERING	PG	2YEARS	2008-09	18	36
13	M.TECH IN PRODUCTION ENGINEERING	PG	2YEARS	2011-12	18	36
14	M.TECH IN POWER SYSTEMS ENGINEERING	PG	2YEARS	2013-14	18	36
15	M.TECH IN POWER ELECTRONICS AND DRIVES	PG	2YEARS	2014-15	18	36
16	M.TECH IN GEOTECHNOLOGICAL ENGINEERING	PG	2YEARS	2014-15	18	36

- **NBA Accreditation Status of UG and PG programmes as on 31st December 2016:**

Total no of programmes eligible for accreditation (at least one batch pass out):**16**

No. of programmes accredited: **05**

No. of programmes applied for accreditation: **06 (05 –Accredited, 01- Applied (Evaluation pending))**

- **Status of Faculty Associated with Teaching Engineering Students (Regular & Contract) as on 31st December 2016:**

No. of Sanctioned Regular Posts	Present Status : Number in Position by Highest Qualification												Total Number of regular faculty in Position	Total Vacancies	Total Number of contract faculty in Position
	Doctoral Degree				Masters Degree				Bachelor Degree						
	Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, Maths and English/ other languages		Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, Maths and English/ other languages		Engineering Disciplines		Supporting Disciplines (Physics, Chemistry, Maths and English/ other languages				
	R	C	R	C	R	C	R	C	R	C	R	C			
1	2	3	4	5	6	7	8	9	10	11	12	13	14= (2+4 +6+8 + 10+1 2)	15= (1-14)	16= (3+5 +7+9 + 11+1 3)
152	28	02	10	02	51	71	15	17	00	4	00	00	104	64	96

R=Regular, C=Contract

2. INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP)

(Implementation period : April 2017- March 2020)

2.1 Give the Executive Summary of the IDP (max 2 pages).

Indira Gandhi Institute of Technology, Sarang is an autonomous (Administrative) and fully residential technical institute under the Govt. of Orissa. Established in the year 1982, the Institute has made steady progress to develop into a National level Institute.

The main strengths of the Institute are its highly qualified and dedicated group of faculty members with commitment for excellence and the highly enthusiastic student body with an enviable record of academic achievements and successful industrial placements. The Institute also has fairly good infrastructure facilities in terms of land space, buildings, laboratory and library facilities etc.

While IGIT is justifiably proud of its strengths and achievements, there are many challenges it may have to face because of the rapid economic and technological developments currently occurring both at the national and international level. Having analyzed its current status, its internal strengths and weaknesses and the threats and opportunities presented to it by its environment, IGIT has decided to embark upon a vast and ambitious programme of institutional development and looks forward to receiving financial assistance under TEQIP-III for implementation of the programme to improve learning outcomes and employability of its graduates. This is proposed to be achieved by

- Improvements of teaching, training and learning facilities
- Faculty and staff development for improved competence
- Strengthening of existing PG programmes and PhD programmes
- Enhancement of interaction with industries
- Implementation of institutional reforms
- Academic support for weak students

SWOT Analysis

a) Procedure adopted

The SWOT analysis was done department-wise by conducting brainstorming sessions involving faculty, staff and students to bring out the most important strengths, weaknesses, opportunities and threats and to prioritize the action plan. The observations from all departments were discussed and compiled in another meeting of the Central TEQIP Committee under the chairmanship of the Director of the Institute to arrive at a summarized SWOT analysis.

Summary of SWOT analysis



b) Strategic Plan

The above assessment of the current strengths and weaknesses as well as the opportunities and threats in the environment leads to the identification of the following main strategic directions that the Institute has to pursue over the next five years so that it may fulfil its vision and mission and may continue to contribute towards development of technical education and overall natural growth.

o **Improvement in the Quality of Students Produced**

Creation of complete professionals of enhanced employability through systematic development of curricula, faculty quality, laboratories, classrooms, library, information processing facilities etc.

Production of post-graduates capable of taking the lead role in creation of sustainable, cost effective, innovative products and services for the industry and the society.

o **Faculty Development** through schemes for up gradation of faculty qualification, improvement of subject knowledge and research competence of faculty by interacting with peer groups in India and abroad and improvement of pedagogical skills of faculty.

o **Organisational Reforms** through achievement of full autonomy, schemes of appraisal and incentives, improvement of administrative efficiency and work culture.

- **Social Responsibility** - Special attention for socially disadvantaged and academically weak groups, increased public visibility, networking and outreach of the Institute to the community.

2.2 Provide an action plan with timelines for : (not more than 1 page for each sub-activity)

(a) Improving the learning outcomes of the students

S. No	Items	Actions	Implementation Agency	Frequency	Monitoring Indicators
1	Faculty training (qualification upgradation, subject upgradation & research competence, Pedagogical training, participation in conferences, seminars/workshops etc.)	Faculties will be provided with financial and administrative support to upgrade their knowledge and research competence, Pedagogical training, participation in conferences, Seminars and workshops. (Training Needs Analysis- TNA is enclosed herewith as Appendix –I)	IGIT Sarang (Project Institute)	a) Qualification up-gradation: Once during the Project b) subject upgradation & research competence: Once in a financial Year Pedagogical training: Once during the Project Participation in conferences, Seminars and workshops: Once in a financial Year	Percent of planned training completed as reported/ aggregated 6 monthly: 40%
2.	Staff training (Technical & Administrative staff)	Staff training (Technical & Administrative staff) will be provided with financial and administrative support to upgrade their knowledge. (Training Needs Analysis-TNA is enclosed herewith as Appendix –II)	IGIT Sarang (Project Institute)	Twice during the Project	Percent of planned training completed as reported/ aggregated 6 monthly: 40%
3.	Increasing capacity of UG, PG and PhD education (Increasing enrollment and starting new UG, PG and PhD programmes)	a) Increase in number of students in PG and Doctoral programmes b) Enhancement of research activities. (Detail report is given in Appendix-III)	IGIT Sarang (Project Institute)	On Yearly basis.	As per AICTE Norms and regulations.
4.	Investing in smart classrooms, campus Wi-Fi (24×7 broadband connectivity and Wi-Fi access in all academic and administrative buildings and hostels (with a minimum of 2 MBPS speed for each connection)), e-library	a) Maintenance of cabling and other devices associated with the Wi-Fi system. b) Development of e-library facility for the students after up gradation of Institute data base and the website.	IGIT Sarang (Project Institute)	On Yearly basis.	As per the requirement
5	Improving the academic performance of SC/ST/OBC/ academically weak students through innovative methods, such as remedial and skill development classes, peer assisted learning for increasing the transition rate, non cognitive skills and pass rate	a) Arranging bridge courses, supplementary teaching classes and skill development training programmes b) Specialized training in soft components including communication- presentation skills	IGIT Sarang (Project Institute)	Semester and subject basis	As per the requirement of the students
6.	Instituting academic and non-academic reforms including	a) At present the Institute is affiliated to State Technical University “Biju	IGIT Sarang (Project Institute)	Once During the Project	As per the requirement of the students

S. No	Items	Actions	Implementation Agency	Frequency	Monitoring Indicators
		<p>University , if nominated by the University on specialisation basis.The Institute will get flexibility in the curriculum development after getting Autonomous status from UGC.</p> <p>b) The University has changed its Curriculum in 2008 and again in 2015.</p> <p>c) Institute will be upgraded to an Autonomous Institute with academic autonomy</p>			

(b) Improving employability of the students

S. No	Items	Actions	Implementation Agency	Frequency	Monitoring Indicators
1	Increasing interaction with industry (What are the industries located in the vicinity? What role of industry is perceived for the institute?)	<p>a) To conduct interactive workshops, conferences and lectures with members of industry</p> <p>b) To conduct industrial training , orientation courses, industrial visits for faculties and students</p> <p>c) To facilitate short-term appointment for professionals from industry as visiting faculties in institution and deployment of faculties to industries for gaining industrial experience and work on projects in industry</p> <p>d) To associate experts from industries in curriculum development, student assessment</p> <p>e) Providing continuing education opportunities, short term training / refresher programmes to industry personnels</p> <p>f) Inviting senior experts from industries for campus interviews</p>	IGIT Sarang (Project Institute)	On Semester/Yearly basis	The Institute is Surrounded by many PSUs and Private Industries. They will be requested to provide this facility.
2.	Student career counseling and placement	<p>a) Inviting experts from industry to prepare students for on and off- campus job interviews.</p> <p>b) To conduct interactive workshops, conferences and lectures with members of industry.</p> <p>c) To conduct industrial training, orientation courses, industrial visits for students.</p>	IGIT Sarang (Project Institute)	On Semester/Yearly basis	The Institute is Surrounded by many PSUs and Private Industries. They will be requested to provide this facility.

(c) Increasing faculty productivity and motivation

S. No	Items	Actions	Implementation Agency	Frequency	Monitoring Indicators
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S. No	Items	Actions	Implementation Agency	Frequency	Monitoring Indicators
1	sponsored research, consultancy and other revenue generating activities	<p>a) To take up sponsored research projects with funding from Central Govt. Depts. / Agencies and industries</p> <p>b) To conduct joint research work involving faculties and field professionals</p> <p>c) To conduct industrial exhibitions to highlight research facilities and expertise available with the Institution</p> <p>d) To facilitate transfer of technology</p> <p>e) To provide consultancy to nearby industries for solving their live problems</p>	IGIT Sarang (Project Institute)	On Semester/ Yearly basis	The Institute will upgrade its research and consultancy activity through the Dean FARC (Faculty Affairs, Research and Consultancy)

2.3 Provide an action plan with timelines for

S. No	Items	Actions	Implementation Agency	Frequency	Monitoring Indicators
1	Obtaining autonomous institution status from UGC	From its very inception in 1982, the Institute enjoys administrative, managerial and financial autonomy under Govt. of Orissa, but has been academically affiliated to Utkal University and then to Biju Pattnaik University of Technology. The process is now underway for obtaining academic autonomy. The Institute has already obtained No Objection Certificate from Biju Pattnaik University of Technology, Orissa and the Dept. of Industries, Govt. Of Orissa and has applied to UGC for consideration of its proposal for grant of academic autonomy.	IGIT Sarang (Project Institute)	Once During the Project	The Institute in co-ordination with the University and the state Govt will take necessary steps in this regard.
2.	Improving the NBA accreditation status	IGIT, Sarang is the first Govt. Engineering College in the state of Orissa to apply and get accreditation for B. Tech. programmes in Civil, Electrical and Mechanical Engineering in 2004. Subsequently, in 2008, the institute got accreditation for B. Tech. programmes in Civil, Electrical, Mechanical and Metallurgical Engg. and Masters Programme in Computer Application. Accreditation for the only other eligible programme, i.e, B. Tech. in Chemical Engg. will soon be sought after filling up the vacancies of faculty positions. The other UG and PG programmes have been started in 2008 and hence are not eligible for accreditation. The Institute	IGIT Sarang (Project Institute)	Once During the Project	The Institute in co-ordination with the University and the state Govt will take necessary steps in this regard.

1. Is any enhanced assistance / mentoring that the institution is looking forward from its ATU?
 - A) Assistance for creating Research facilities.
 - B) Smoothing of the administrative issues of the students from UG level to PhD level.
 - C) Training of institution officials and senior faculties obtaining academic autonomy
 - D) Setting up curriculum development cell, industry- institute interaction cells etc.
 - E) Sharing of best academic, administrative and governance practices
 - F) Establishment of corpus fund, faculty development fund, equipment replacement fund and maintenance fund
 - G) Filling up faculty and staff vacancies
 - H) Increasing internal revenue generation through sponsored and consultancy projects
 - I) Student performance evaluation
 - J) Faculty incentive for continuing education, consultancy and R & D activities
2. Does your BoG need strengthening, if yes, then how? **YES**
 - A) Orientation of BOG members
 - B) Frequency of BOG meetings should be increased
3. Is there an ERP/MIS system existing, if yes, then any improvement, modification suggested.
ERP/MIS system is not available.
4. Is there any mechanism i.e. special classes being conducted in the institution for improving the GATE score? **NO**

2.5 Provide a Twinning Plan with a high performing institute with the objective of capacity building knowledge transfer and developing long term strategic partnerships. (Twinning plan will be formalized into Twinning agreement after finalizing the twinning partner).

Twinning arrangements with IIT, Bhubaneswar to build

- capacity and improved performance
- Preparation of massive open online courses (also referred to as MOOCs), facilitating access of institutions to MOOCs
- Filling up of faculty vacancies
- Developing credit-based systems such that students in institutions could use select e-learning courses as part of their degree programs
- Greater access to digital resources
- Integration with Swayam platform etc.
- Improving institutional governance
- Improve student learning
- Student employability
- Centralized Research hubs opened to all faculty and Research scholars at PG and PhD level.
- Procurement of Goods (equipment, furniture, books LRs, software and minor items) and Minor civil works

- **Increasing faculty productivity and motivation**
- **Establishing a twinning system**
- **Twinning arrangements with institutions under Sub-component 1.1 to build capacity and improved performance**
- **Individual Institutional mentors**
- **(Consultant services if required, can also be procured for the above said activities.)**

2.6 Is there any difficulty in Recruitment and selection of high-quality faculty? If yes, what are the reason & action plan to solve the issue? **YES**

Inadequate number of skilled and Qualified Faculty member at higher positions such as Associate Professor and Professor level.

2.7 Give an action plan for ensuring that the project activities would be sustained after the end of the Project.

IGIT Sarang will put aside specific funds for the ongoing maintenance and development of the Institute once the project period ended; this will continue in TEQIP III.

- **IGIT will deposit at least 8% of their revenue every year into a Sustainability Fund.**
- **The proposed twinning arrangement with IIT Bhubaneswar will help in providing its Infrastructure for different academic and research issues.**
- **The Faculty Recruitment envisaged for each focus state will build a system for recruiting and retaining adequate numbers of high-quality faculty. This Plan will be expected to provide a long-term solution to the problem of faculty recruitment and retention (not just during the project period).**
- **The governance-related reforms under the Project, such as UGC autonomy, high-quality BoG and accreditation are expected to put colleges on a long-term path of excellence, which will include innovations in areas relating to internal revenue generation**

2.8 Describe briefly the participation of departments/faculty/students in the IDP preparation.

A complete strategic planning exercise was carried out in the institute involving faculty, staff and students to arrive at the SWOT analysis and the strategic plan. A committee will be formed consisting of faculty members from various departments under the institutional TEQIP unit to draft institutional development proposal taking into account the above findings and the guidelines of TEQIP. The project was later discussed and approved in the meeting of the central TEQIP committee under the chairmanship of the Director of the Institute.

APPENDIX - I

Training Needs Analysis (TNA) - Faculty Development Plan

DEPARTMENT OF CIVIL ENGINEERING				
Name of the Faculty	Designation	Area of training/ development	Duration (Days)	Tentative date of training/ development programme
BIKASHA CHANDRA PANDA	PROFESSOR	Sustainable Infrastructure Development, Structural Modeling, Structural integrity, Desalination	1 Month	During July 2017- January 2018
PRATAP KUMAR PANI	PROFESSOR	Fluid-Structure Interaction	1 Month	During July 2017- January 2018
MAHESWAR MAHARANA	PROFESSOR	Geomechanics	1 Month	During February 2018- September 2018
SUDEEP KUMAR CHAND	PROFESSOR	Environmental Geotechnology	1 Month	During July 2017- January 2018
MANOJ KUMAR DASH	PROFESSOR	Structural Engineering	1 Month	During February 2018- September 2018
TUSAR KANT NATH	PROFESSOR	Hydraulic & Water Resources Engg.	1 Month	During February 2018- September 2018
CHITTARANJAN SAHOO	ASSOCIATE PROFESSOR	Environmental Engineering	1 Month	During February 2018- September 2018
RABINDRA KUMAR KAR	ASSOCIATE PROFESSOR	Geotechnical Engineering	1 Month	During February 2018- September 2018
GOUTAM KUMAR POTHAL	ASSOCIATE PROFESSOR	Geotechnical Engineering, Geosynthetics, Site investigation and Ground Improvement.	1 Month	During February 2018- September 2018
PRIYADARSHINI DAS	ASSISTANT PROFESSOR	Structural Engineering	1 Month	During February 2018
SURAJ KUMAR SAHU	ASSISTANT PROFESSOR	Structural Engineering	1 Month	During February 2018
SUJIT KUMAR PRADHAN	ASSISTANT PROFESSOR	Highway & Traffic Engg.	1 Month	During February 2018
BHAGIRATI TRIPATHY	ASSISTANT PROFESSOR	Construction Tech. & Management	1 Month	During February 2018
DEPARTMENT OF ELECTRICAL ENGINEERING				
Name of the Faculty	Designation	Area of training/ development	Duration (Days)	Tentative date of training/ development programme
BIBHU PRASAD PANIGRAHI	PROFESSOR	Electrical Machines, Machine Drives, Power Electronics, Power Systems	1 Month	During February 2018- September 2018
PRANATI DAS	ASSOCIATE PROFESSOR	Communication Engineering, Digital Signal Processing, Image	1 Month	During July 2017- January 2018

		Processing		
LOKANTH TRIPATHY	ASSOCIATE PROFESSOR	Power System Engineering, Modern Protection, HVDC, FACTs, Renewable Energy, Smart Grid	1 Month	During July 2017- January 2018
RABINDRA BEHERA	ASSISTANT PROFESSOR	Power Systems Planning, Control and Management	1 Month	During February 2018- September 2018
MAHESWAR PRASAD BEHERA	ASSISTANT PROFESSOR	Power Systems Engineering	1 Month	During February 2018- September 2018
BIDYADHAR BISWAL	ASSISTANT PROFESSOR	Power Systems Engineering	1 Month	During February 2018- September 2018
BRIJESH KUMAR	ASSISTANT PROFESSOR	Power Electronics and Drives	1 Month	During February 2018
UMAKANTA MOHANTA	ASSISTANT PROFESSOR	High Voltage Engineering, Electrical Drives	1 Month	During February 2018
MANOJ KUMAR CHAUDHURY	ASSISTANT PROFESSOR	Machine Drives	1 Month	During February 2018
KALI CHARAN PRADHAN	ASSISTANT PROFESSOR	Power System Engineering	1 Month	During February 2018
BINAY KUMAR NAYAK	ASSISTANT PROFESSOR	Industrial Power and Automation	1 Month	During February 2018
MECHANICAL & PRODUCTION ENGINEERING				
Name of the Faculty	Designation	Area of training/ development	Duration (Days)	Tentative date of training/ development programme
A. Mishra	PROFESSOR	Mechanical Engineering	1 Month	During July 2017- January 2018
B.D. SAHOO	PROFESSOR	Mechanical Engineering	1 Month	During July 2017- January 2018
SUKANTA KUMAR SENAPATI	PROFESSOR	Applied Mechanics & Bio-Medical Engineering	1 Month	During July 2017- January 2018
BIBHUTI BHUSAN CHOUDHURY	ASSOCIATE PROFESSOR	Prod.Engg., CAD/CAM, Robotics	1 Month	During February 2018- September 2018
NARAYAN CHANDRA NAYAK	ASSISTANT PROFESSOR	Manufacturing Science & Engg, Industrial Management	1 Month	During February 2018- September 2018
DHIREN KUMAR BEHERA	ASSISTANT PROFESSOR	Industrial Engineering & Management, Production Engineering, Scheduling, Powder Metallurgy, Soft Computing	1 Month	During February 2018- September 2018
PRASANTA KUMAR DHAL	ASSISTANT PROFESSOR	Production Engineering, Optimization Engineering, Flexible Manufacturing Systems	1 Month	During February 2018- September 2018

JAYASHREE NAYAK	ASSISTANT PROFESSOR	Thermal Engineering	1 Month	During February 2018
SUPRIYA SAHU	ASSISTANT PROFESSOR	Production Engineering	1 Month	During February 2018
MANOJ MUNI	ASSISTANT PROFESSOR	Mechanical Engineering	1 Month	During February 2018
JULY RANDHARI	ASSISTANT PROFESSOR	Mechanical Engineering	1 Month	During February 2018
RABINARAYAN SETHI	ASSISTANT PROFESSOR	Engg. Mechanics, M/c Dynamics, Strength of Materials, Machine Design, Fluid Mechanics \$ Hydraulic Machine, Mechanical Vibration	1 Month	During February 2018
SUDHAKAR MAJHI	ASSISTANT PROFESSOR	Mechanical Engineering	1 Month	During February 2018
BABITA SINGH	ASSISTANT PROFESSOR	Mechanical Engineering	1 Month	During February 2018

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

Name of the Faculty	Designation	Area of training/development	Duration (Days)	Tentative date of training/ development programme
SURESH CHANDRA PATNAIK	PROFESSOR	Physical Metallurgy, Powder Metallurgy	1 Month	During July 2017- January 2018
BIDYAPATI SARANGI	PROFESSOR	Extractive Mett.	1 Month	During July 2017- January 2018
PRAFULLA KUMAR MALLIK	ASSISTANT PROFESSOR	Advanced Ceramic Materials, Bio-Materials, Tribology of Material	1 Month	During February 2018- September 2018
SANDEEP KUMAR SAHOO	ASSISTANT PROFESSOR	Ferrous Extractive Metallurgy	1 Month	During February 2018- September 2018
JOGENDRA MAJHI	ASSISTANT PROFESSOR	Physical Metallurgy, Mechanical Metallurgy	1 Month	During February 2018
AMULYA BIHARI PATTNAIK	ASSISTANT PROFESSOR	Mechanical Behaviour of Materials, Advance Materials	1 Month	During February 2018

DEPARTMENT OF CHEMICAL ENGINEERING

Name of the Faculty	Designation	Area of training/development	Duration (Days)	Tentative date of training/ development programme
SATYABRATA MOHANTA	PROFESSOR	Mineral Processing, Plant Optimization	1 Month	During July 2017- January 2018
KASHINATH BARIK	ASSISTANT PROFESSOR	Fluid Mechanics, Applied Mathematics	1 Month	During February 2018- September 2018
DIPA DAS	ASSISTANT PROFESSOR	Coal Chemicals and Fertilizer	1 Month	During July 2017- January 2018
HAREKRUSHNA	ASSISTANT	Chemical Engineering	1 Month	

SUTAR	PROFESSOR			
BRAHMOTRI SAHOO	ASSISTANT PROFESSOR	Heat Transfer, Chemical Reaction Engineering, Chemical Process Calculation, Chemical Process Dynamics and Control	1 Month	During February 2018- September 2018
IPSITA DIPAMITRA BEHERA	ASSISTANT PROFESSOR	Biotechnology	1 Month	During February 2018- September 2018
ANUP KUMAR BAIRAGI	ASSISTANT PROFESSOR	Industrial Pollution Abatement	1 Month	During February 2018
RABIRANJAN MURMU	ASSISTANT PROFESSOR	Fuel Cell, Polymer Technology	1 Month	During February 2018
DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING				
Name of the Faculty	Designation	Area of training/ development	Duration (Days)	Tentative date of training/ development programme
URMILA BHANJA	ASSOCIATE PROFESSOR	Optical Network, Optimization Technique, Soft Computing & Wireless Network	1 Month	During July 2017- January 2018
ASHIMA ROUT	ASSISTANT PROFESSOR	Communication Engineering; Cognitive Radio Ad Hoc Network	1 Month	During July 2017- January 2018
DEBAJYOTI MISHRA	ASSISTANT PROFESSOR	Electronics & Telecommunication Engineering	1 Month	During February 2018- September 2018
JANMAJAY ROUT	ASSISTANT PROFESSOR	Signal Processing	1 Month	During February 2018- September 2018
KODANDA DHAR SA	ASSISTANT PROFESSOR	Instrumentation and Electronics	1 Month	During February 2018- September 2018
PARESH KUMAR PASAYAT	ASSISTANT PROFESSOR	Communication System Engg.	1 Month	
DEPARTMENT OF COMPUTER SCIENCE ENGINEERING & APPLICATIONS				
Name of the Faculty	Designation	Area of training/ development	Duration (Days)	Tentative date of training/ development programme
SAROJ ANANDA MISHRA	PROFESSOR & HEAD	Fractals and Graphics, System Dynamics, MIS, Operation Research, Networking, Computer Programming	1 Month	During July 2017- January 2018
SASMITA MISHRA	ASSOCIATE PROFESSOR	Data Structure, Programming, Language, RDBMS, Operating Systemas, Graphics	1 Month	During July 2017- January 2018

MEDIMI SRINIVAS	ASSISTANT PROFESSOR	Artificial Intelligence, NLP, OOPS, Software Engineering	1 Month	During February 2018- September 2018
SRINIVAS SETHI	ASSISTANT PROFESSOR	Mobile Ad hoc Network, Sensor Network, Cognitive radio network, Cloud Computing, RDBMS, Software Engineering	1 Month	During February 2018- September 2018
PRIYABRATA SAHU	ASSISTANT PROFESSOR	RDBMS, Operating system, Graphics, Networking, Computer Architecture	1 Month	During February 2018- September 2018
DILLIP KUMAR SWAIN	ASSISTANT PROFESSOR	Computational theory, AI, Networking	1 Month	During February 2018
NIROJ KUMAR PANI	ASSISTANT PROFESSOR	Information Security	1 Month	During February 2018
SANJAY KUMAR PATRA	ASSISTANT PROFESSOR	Data Structure, Programming, Language, RDBMS	1 Month	During February 2018
MR. BISWANATH SETHI	ASSISTANT PROFESSOR	Cellular Automata, Pattern Classification	1 Month	During February 2018

PHYSICS

Name of the Faculty	Designation	Area of training/development	Duration (Days)	Tentative date of training/ development programme
MAHAMAD NAZoor KHAN	ASSOCIATE PROFESSOR	Small angle X-Ray scattering	1 Month	During July 2017- January 2018
CHANDRA SEKHAR MOHAPATRA	ASSISTANT PROFESSOR	Solid state Physics, Aerosol Physics Small angle X-Ray scattering	1 Month	During February 2018- September 2018
SUNIL KUMAR TRIPATHY	ASSISTANT PROFESSOR	Nuclear Physics, Cosmology	1 Month	During February 2018- September 2018

Name of the Faculty	Designation	Qualification	Area of training/development	
SUBHRA KESHARI BISWAL	PROFESSOR	Organic Synthetics, Environmental Science	1 Month	During July 2017- January 2018
BINOD BIHARI PANDA	ASSISTANT PROFESSOR	Chemistry	1 Month	During February 2018- September 2018

DEPARTMENT OF MATHEMATICS

Name of the Faculty	Designation	Qualification	Area of training/development	Type of Upgradation
PITAMBAR DAS	ASSOCIATE PROFESSOR	Differential Equation	1 Month	During July 2017- January 2018
NAMITA MISHRA	ASSISTANT PROFESSOR	Fluid Mechanics	1 Month	During July 2017- January 2018

APPENDIX - II

Supporting Technical and Non-Technical Staff Training Proposal

1.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1	Mr G.C.Das	Advance learning in instrument handling of different laboratories	7	Summer/ Winter 2017	---
2	Mr R.K.Khuntia				
3	Mr B.K.Sahoo				
4	Mr B.N.Sahoo				

2.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations	
1	Mr M.K.Sahoo	Upgradation in subject knowledge/computer training	30	Summer/ Winter 2017	TTTR,Kolkata/Chandigarh, OCAC,BBSR	
2	Mr M.D.Behera	Operation & maintenance of modern laboratory & advance equipment	7		Summer/ Winter 2017	BOSE,Cuttack/ NIT,RKL
3	Mr M.K. Burma					

3.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1	Mr M.K.Pattnaik	Finance/Secretarial practice	7	Summer/ Winter 2017	Madhusudan training institute, Govt. of Orissa/ Govt polytechnic, BBSR

4.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1	J. Ganthia	Maint. Of Lab.	30 days	Winter2019	TTTI
2	D.B. Pradhan	Maint. Of Lab.	30 days	Winter2018	TTTI
3	Bati Naik	Electrician & wiring	30 days	Summer2017	BOSE, Cuttack

4	A.K Jena	Electrician	30 days	Summer2018	IGIT Sarang
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5.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative)	Trainer Organizations
1	D.N Mallick	Electronics & software	30 days	Summer2019	IIT Kharagpur
2	A.K Maharana	Electrical Machine Drives, measuring instruments	30 days	Summer2017	TTTI
3	B.B Nayak	Electronics & software	30 days	Winter2018	IIT Kharagpur
4	G.D Verma	Electronics & software	30 days	Summer2017	IIT Kharagpur
5	D. Tripathy	Electronics & software	30 days ³²	Summer2018	IIT Kharagpur
5	S.K. Mansingh	Software,Hardware	30Days	Summer2019	

6.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative)	Trainer Organizations
1	Mr R.K. Mohanty	Office Management	30 Days	Winter2012	TTTI Kolkata

7.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative)	Trainer Organizations
1	Mr. B C Sahoo	Automotive	60	May-June	-
2	Mr. R N Mishra	Lab Works	60	May-June	-
3	Mr. A Behera	Lab Works	60	May-June	-
4	Mr. G Sahoo				-
5	Mr. P. C Sahoo	Workshop/Lab	60	May-June	-
6	Mr. S S Biswal	Workshop/Lab	60	May-June	-
7	Mr. Niranjana Jena	Workshop/Lab	60	May-June	-
8	Mr. P K Mansing	Workshop/Lab ³⁶	60	May-June	-

8.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative)	Trainer Organizations
1	Mr. B Lenka	Machining	90	May-June,	ITI
2	Mr. K C Pradhan	Welding	90	May-June, Dec	ITI,

9.

	Names of staff members	Areas of training/development	Duration (Day)	Convenient (tentative)	Trainer Organizations
1	Mr. D N Satapathy	Automation, Pneumatics, Hydraulics	60	May-June	Pune,India
2	Mr. P Behera	CNC/Moulding	60	May-June	India
4	Mr. D N Das	Automobile	60	May-June	India
5	Mr. P Mishra	RAC/HT	60	May-June	India
6	Mr. S Pradhan	Auto CAD	60	May-June	India
7	Mr. S. K Sahoo	Automotive	60	May-June	India
8	Mr. S. D Bhuyan	Material Testing	60	May-June	NABL,India
9	Mr. P.C Rout	Manufacturing	60	May-June	India
10	Mr. S D Sahoo	CNC Machining	60	May-June	CTTC,India
11	Mr. K C Pattnaik	CNC Lathe	60	May-June	India
12	Mr. R N Samant Singhar	CNC Machining	60	May-June	India
13	Mr. P K Sutar	Pattern Making	60	May-June	NIFFT,India
14	Mr. R K Dash	Foundry	60	May-June	NIFFT,India
15	Mr. N K Moharana	Forging	60	May-June	NIFFT,India
16	Mr. Palau Sahu	Welding	60	May-June	CIPET,India
17	Mr. D D Samal	Pastic Design	60	May-June	CIPET,India

10.

	Names of staff members	Areas of training/development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1	Mr. N K Aich	Accounting, Office Managt.	60	May-June	Bhubaneswar,India
2	Mr. D P Das	Stores Accounting, Tally, Database	60	May-June	Bhubaneswar,India
3	Mr. Nanda Rani Dash	Comp. Office Magt., Accounts	60	May-June	Bhubaneswar,India

11

Sl.No	Name of faculty	Area of training/development	Duration (Days)	Convenient(tentative) dates	Trainer organization
1	Mr.Asutosh Rath	Mass Transfer and Fuel Testing	30 days		Institute of Mineral and Materials Technology, Bhubaneswar/NIT, Rourkela

12.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1	Mr.Nityananda Nayak	Equipment handling related to Metllurgical Engineering	15 15	Summer 2011 Summer 2018	NIT, Rourkela NIT, Rourkela

13.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1	Mr.Dillip Kumar Sahoo	--	15 15	Summer 2011 Summer 2018	NIT, Rourkela NIT, Rourkela

14.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1	Mr. Saroj Kumar Nayak	Financial Accounting	30 days	In the month of May	Inside India

15.

	Names of staff members	Areas of training/ development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1	Mr. P. K. Panda	Web Design, Windows 7	30 days	In the month of October	Inside India
2	Mr. Debraj behera	Java, UNIX, Web Design, Microprocessor	30 days	In the month of May	Inside India
3	Mr. Jagdish Sahu	Hardware Maintenance & Networking, Database packages	30 days	In the month of May	Inside India

* Other Staff may also avail training in different relevant fields .

APPENDIX – IV
LIST OF EQUIPMENTS

Modernization of Existing Laboratories (Civil Engg.)

Sl. no.	Name of the Laboratory	Name of the Equipment with brief Specifications	Unit Price(Rs.)	Quantity Required	Total Cost (Rupees)
1	Survey Lab.	Total Station Instrument	4,00,000	1	4,00,000
2	Environmental Lab.	Analytical Spectro Photometer	1,00,000	1	1,00,000
3	Geotechnical Lab.	Triaxial Compression Testing Machine	4,00,000	1	4,00,000
4	Hydraulic Lab.	Hydraulic Bench	6,50,000	1	6,50,000
5	Transportation Lab.	Field CBR Testing Equipment	2,00,000	1	2,00,000
6	Structural Lab.	Deflecto meter, Extensometer, Tensile Strength tester	1,50,000	1	1,50,000
Up gradation/Renovation of Existing Equipment 1,00,000					
Total 20,00,000					

New Laboratory (Civil Engg.)

Sl. no.	Name of the Laboratory	Name of the Equipment with brief Specifications	Unit Price(Rs.)	Quantity Required	Total Cost (Rupees)
1	Dynamics Lab.	Multi Channel Data Logger, LVDT, Load cell, Concrete Test hammer, Seismic Accelerometer	4,00,000	1	4,00,000
2		Vibration Shaker/Exciter with Power Amplifier and Modal Analysis Software	6,00,000	1	6,00,000
3		Laser Doppler Vibrometer	4,00,000	1	4,00,000
4		Fatigue Testing Machine	1,00,000	1	1,00,000
5		Cyclic Triaxial Compression Testing Machine	9,00,000	1	9,00,000
6		Benkelman-Beam Apparatus	1,00,000	1	1,00,000
	Total				25,00,000

Modernization of Existing Laboratories (Electrical Engg.)

Sl. no.	Name of the Laboratory	Name of the Equipment with brief Specifications	Unit Price(Rs.)	Quantity Required	Total Cost (Rupees)
1	Control & Instrumentation Lab.	Speed Control of DC motor using closed loop feedback system	50,000	2	1,00,000
2		Speed Control of AC motor using closed loop feedback system	50,000	2	1,00,000
3		Synchro Transmitter/Receiver Unit	50,000	1	50,000
4		Digital Storage Oscilloscope	1,00,000	1	1,00,000
5		Programmable Logic Trainer i. e. Liquid Level Control Demonstrator ii. Flexible manufacturing	50,000	1	50,000
1	Machine Drives and Power Electronics	BLDC Drives (PMSM)	75,000	1	75,000
2		PC based Induction Motor Drives including Data Acquisition System	1,50,000	1	1,50,000
3		DSP based Drives	1,00,000	1	1,00,000
		PSIM	1,00,000	1	1,00,000
		SRM drive	75,000	1	75,000
1	Power System Laboratories	Over Current & Earth fault Relay[IDMT-CDG] with panel mounting including contactors ,annunciation , Indicator accessories	100,000	1	1,00,000
2		Over Voltage & Under voltage Relay with panel mounting including contactors , annunciation , Indicator & accessories	75,000	1	75,000
3		Directional Over Current Relay trainer mounted on panel with	75,000	1	75,000

		auxiliary equipments			
4		Merz Price Protection Scheme for three phase Transformer/differential relay	100,000	1	1,00,000
5		Over frequency & under frequency Relay trainer	50,000	1	1,00,000
6		AC Transmission line Analyzer	100,000	1	1,00,000
7		Pentium (Core 2 DUO) with UPS	35,000	10	3,50,000
8		Relay Testing Kit	2,00,000	1	2,00,000
	Total				20,00,000

New Laboratory (Electrical Engg.)

Sl. no.	Name of the Laboratory	Name of the Equipment with brief Specifications	Unit Price(Rs.)	Quantity Required	Total Cost (Rupees)
1	Modeling and Simulation Lab.	MATLAB , Simulink	5,00,000	1	5,00,000
2		EMTP Software	2,00,000	1	2,00,000
3		ETAP Software	3,00,000	1	3,00,000
4		PSCAD Software	4,00,000	1	4,00,000
4		PC-Pentium Core-2 Duo with UPS	35,000	20	7,00,000
6		Mi Power Software	1,00,000	1	1,00,000
7		Power Directory	1,00,000	1	1,00,000
8		Furniture and other accessories	2,00,000	-	2,00,000
	Total				25,00,000

Modernization of Laboratory (Electronics and Telecommunication Engg.)

Sl. no.	Name of the Laboratory	Name of the Equipment with brief Specifications	Unit Price(Rs.)	Quantity Required	Total Cost (Rupees)
1	Microprocessor and Digital Circuit Lb.	Intel 8086 with EPROM programming facility	20,000/-	20	4,00,000
2		Stepper Motor control using Intel 8086	30,000/-	5	1,50,000
3		Intel 8085 kit	30,000/-	5	1,50,000
4		Microlab trainer kit	15,000/-	10	1,50,000

5		Digital Storage Oscilloscope	50,000	3	1,50,000
	Total				10, 00,000

New Laboratory (Electronics and Telecommunication Engg.)

Sl. no.	Name of the Laboratory	Name of the Equipment with brief Specifications	Unit Price(Rs.)	Quantity Required	Approx. Cost (Rupees)
1	Digital Signal Processing Lab.	Intel 8051(Micro Controller) boards including hardware, software and learning materials 55	24,000	10	2,40,000
2		DSP 320C6713 (both hardware and software) ADC, DAC and Daughter board software using CCSS (Code Composer Studio)	80,000	5	4,00,000
3		Application Specific kits (Stepper motor, ADC,DAC,Key PAD, RFID Modules, 7 segment display)	5,000	5 units from each=30 nos.	1,50,000
4		PC-Pentium Core-2 Duo with UPS	35,000	06	2,10,000
	Total				10, 00,000

Mechanical Engineering Department

I) Equipments for Modernization of Existing Laboratories

Sl no	Name of the Laboratory	Name of the Equipments	Approximate Cost	Quantity	Total Cost (Proposed)
1	Workshop	Vertical CNC Milling machine	10,00,000/-	1	25,00,000/-
2	Computer Graphic and simulation Laboratory (CAD Lab)	ANSYS-FLUENT Package (2 user License) ProE package (1 user License)/ CATIA/ Auto CAD/ IDEA/Master CAM 56	5,00,000/-	1 Set Each	
		Mid range server	3,00,000/-	1	
3	Metrology / Mechanical	Tally Surf	2,00,000/	1	

	Measurement Laboratory	LVDT USING CRO	1,00,000/-	1	
		Pneumatic and Hydraulic Trainer Kit	2,00,000/-	1	
		Determination of natural frequencies of un-damped as well as damped vibrating systems.	2,00,000/-	1	
4	Material Testing lab	UTM Including Data Acquisition System	8,00,000/-	1	
5	Thermal/RAC/HP laboratory	Boiler/Oil fired Power plat	10,00,000/-	1	

II) Equipments for New Laboratories

Sl No	Name of the Laboratory	Name of the Equipments	Approximate Cost	Quantity	Total Cost (Proposed)
1	Advance Manufacturing Laboratory	WEDM (Wire-EDM)	18,00,000/-	1	25,00,000/-
		Olympus optical Microscope (STM type)	4,00,000/-	1	
		Diamond cutter	50,000/-	1	
		Fiber Laser Setup	16,00,000/-	1	
2	Mechatronics Laboratory	Sensor/ Transducer Tech Package	2,00,000/-	1	
		Robotic Arm (Puma type)	5,00,000/-	1	
		Robot development kit for mechatronic controller with vision System	5,00,000/-	1	
3	Vibration Laboratory	Vibration Fundamentals Training Systems	3,00,000/-	1	

DEPARTMENT OF CHEMICAL ENGINEERING

1. MODERNIZATION AND STRENGTHENING OF EXISTING LABS

MASS TRANSFER LAB

SL NO	EQUIPMENT	COST
1	Wetted wall column	70,000/-
2	Forced draft tray dryer	1,00,000/-
3	Soxhlet's Apparatus	75,000/-
4	Rotary dryer	50,000/-
5	Diffusion coefficient apparatus	1,20,000/-
6	Light weight digital balance	60,000/-
7	Steam distillation	75,000/-

TOTAL= 5,50,000/-

HEAT TRANSFER LAB

SL NO	EQUIPMENT	COST
1	Calandria evaporator	70,000/-
2	Jacketed vessel	45,000/-
3	Apparatus for measurement of heat transfer coefficient by forced convection	45,000/-
4	Dropwise & filmwise condensation apparatus	20,000/-
5	Vertical & horizontal condenser	30,000/-
6	Pin fin tutor	50,000/-
7	Thermal conductivities of liquids	40,000/-

TOTAL=3,00,000/-

FLUID FLOW LAB

SL NO	EQUIPMENT	COST
1	Pitot tube calibration of apparatus	40,000/-
2	V-Notch	65,000/-

TOTAL=105000/-

COMPUTER LAB

SL NO	software	COST
1	origine	15,000/-
2	MAT- lab	20,000/-
3	SPSS	25,000/-
4	AUTO CAD	20,000/-

TOTAL=80,000/-

FUEL TECHNOLOGY LAB

SL NO	EQUIPMENT	COST
1	Proximate analysis & ultimate analysis of coal	50,000/-

2	Orsat's gas analysis apparatus	50,000/-
3	Tube Furnace (digital programmable upto 1200 degree C)	5,00,000/-
4	Bomb calorimeter	50,000/-
5	CHSNO Analyzer	20,00,000/-

TOTAL=26,50,000

2. ESTABLISHMENT OF NEW LABORATORY

PROCESS CONTROL LABORATORY

SL. NO	EQUIPMEMT	Cost (Rs/unit)
1	Pressure control trainer	80,000/-
2	Level control trainer	60,000/-
3	Temperature control trainer	75,000/-
4	Flow control trainer	1,20,000/-
5	Two tank interacting system	45,000/-
6	Two tank non-interacting system	45,000/-
7	Response of first order system	25,000/-
8	Response of second order system	30,000/-
9	PID Control Trainer	50,000/-
10	On/off control trainer	40,000/-
11	Control valve characteristics	30,000/-

TOTAL= 600,000/-

GRAND TOTAL= 42,85,000/-

DEPARTMENT OF METALLURGICAL & MATERIALS ENGG.

Modernization & Strengthening of Existing Laboratories

Sl.No	Name of the Laboratory	Name of Equipment	Qty	Make/Description	Cost in Rupees
1	Physical Metallurgy Lab	Image Analysis unit	1unit	Buheler / Olympus/ Leica	10 lakhs
		High Magnification Microscope -5 No.s	5 No.s	Olympus/ Leica	02 lakhs
		Electrolytic Polishing Machine	1 unit	Buheler	02lakh
2	Material Testing Lab	Pin on disc abrasion	1unit		5lakhs
		Digital Brinell cum Vickers Hardness Tester	1unit	Buehler make / Shimadzu make	02 lakhs
		Digital Impact Tester	1unit	Buehler make / Shimadzu make	02 lakhs
3	Mineral Dressing Lab	Froth Flootation Cell	1unit		01 lakh

New Laboratories

Sl.No	Name of the Laboratory	Name of Equipment	Qty	Make/Description	Cost in Rupees
1	Material Processing Lab	Induction Melting F/c -	1unit	Inductotherm	17lakhs
		High Temperature Furnace	1unit		08 lakhs
		Compaction Press	1unit	Blue Star 40 ton capacity	02lakh
		Die Punch sets	2sets	For powder compaction	01 lakh
2	Material Characterization Lab	X-Ray Diffractometer	1unit	X-Ray Diffraction (XRD) X-Ray Diffraction unit with compact Kratky camera attachment, Philips make , Philips XRD system with basic components --- a PW 1830 HT generator, a PW 1050 goniometer, PW3710 control electronics, and X-Pert system software. Searchable ICCD Powder Diffraction File (1998) database and Rietveldt Refinement software	70 lakhs
		Atomic Absorption Spectroscopy	1unit		17lakhs
		Thermal Analyser	1unit		20 lakhs
		Particle Size Analyzer	1unit	Particle size analyzer. Shimadzu/ Malvern / Polytec Make , SALD ¹ -3001 Laser Diffraction Particle Size Analyzer, Measurement method: Laser diffraction and scattering, measurement range: 0.1 to 2000 mm, Computer with interface and printer. Data processing functions. Input/output and storage of data files, Tabular and graphical output of particle size distributions statistical and time series analysis	10 lakhs
3	Computer Applications in Metallurgical Engg.	P.C	10Nos		04 lakh
		Modelling & Simulation Softwares			04 lakhs

**DEPARTMENT OF COMPUTER SC. & ENGINEERING
I.G.I.T., SARANG**

Existing Laboratory

Description	Quantity	Rate	Total
1. Computer System	15 Nos.	30,000/-	4,50,000/-
2. IBM Server	01 no	2,00,000/-	2,00,000/-
3. Oracle 10g Database S/w	01 no	2,00,000/-	2,00,000/-
4. Operating System(Windows-7) (30 user license)	01 no	1,50,000/-	1,50,000/-
5. Operating System(Windows-XP)	02 no	7,500/-	15,000/-
6. Turbo C (Window-XP based)	01 no	10,000/-	10,000/-
7. Laser Jet Printer	01 no	10,000/-	10,000/-
8. Network simulation tuner kit & Software	04 no		5,50,000/-
		Total	: 15,85,000/-

New Laboratory

Description	Quantity	Rate	Total
1. Architecture tuner kit	01 No	1,50,000/-	1,50,000/-
2. New Lab. for Multimedia & Graphics			
a) Graphics Server	01 No	2,00,000/-	2,00,000/-
b) Colour Laser Jet Printer	01 No	20,000/-	20,000/-
c) LCD Projector	01 No	1,50,000/-	1,50,000/-
d) Flash Software	01	No	30,000/-
30,000/-	65		
		Total	: 5,50,000/-

APPENDIX-III

Sl. No.	UNDER GRADUATE COURSES	Year of APPROVAL By GOVT & University	Year of AICTE/COA Approval	Intake strength per year as per AICTE Approval	Increased Intake strength per year as per AICTE Approval
1	B.TECH IN CIVIL ENGINEERING	1982-83	1985	30	120
2	B.TECH IN ELECTRICAL ENGINEERING	1982-83	1985	30	120
3	B.TECH IN MECHANICAL ENGINEERING	1982-83	1985	30	120
4	B.TECH IN CHEMICAL ENGINEERING	1994-95	1994-95	30	60
5	B.TECH IN METALLURGICAL AND MATERIALS ENGINEERING	1994-95	1994-95	30	60
6	B.TECH IN COMPUTER SCIENCE AND ENGINEERING	2008-09	2008-09	60	-
7	B.TECH IN ELECTRONICS AND TELECOMMUNICATION ENGINEERING	2008-09	2008-09	60	-
8	B.TECH IN PRODUCTION ENGINEERING	2014-15	Not Available	00	60
9	BACHELOR IN ARCHITECTURE (B.ARCH.)	2014-15	2014-15	40	40
Sl. No.	POST GRADUATE COURSES	Year of Sanction		Intake strength per year	
1	MASTERS IN COMPUTER APPLICATIONS (MCA)	1990-91	1990-91	30	60
2	M.TECH IN ENVIRONMENTAL SCIENCE AND ENGINEERING (PT)	2008-09	2008-09	18	-
3	M.TECH IN INDUSTRIAL POWER CONTROL AND DRIVES (PT)	2008-09	2008-09	18	-
4	M.TECH IN MECHANICAL SYSTEM DESIGN	2008-09	2008-09	18	-
5	M.TECH IN STRUCTURAL ENGINEERING	2008-09	2008-09	18	-
6	M.TECH IN PRODUCTION ENGINEERING	2011-12	2011-12	18	-
7	M.TECH IN POWER SYSTEMS ENGINEERING	2013-14	2013-14	18	-
8	MSC IN APPLIED MATHEMATICS	2014-15	NA	18	-
9	MSC IN APPLIED PHYSICS	2014-15	NA	18	-
10	M.TECH IN COMPUTER SCIENCE AND ENGINEERING	2014-15	-	-	18
11	M.TECH IN ELECTRONICS AND TELECOMMUNICATION ENGINEERING	2014-15	-	-	18
12	M.TECH IN GEOTECHNOLOGICAL ENGINEERING	2014-15	-	-	18
13	M.TECH IN METALLURGICAL AND MATERIALS ENGINEERING	2014-15	-	-	18
14	M.TECH IN POWER ELECTRONICS AND DRIVES	2014-15	-	-	18
15	M.TECH IN TRANSPORTATION ENGINEERING	2015-16	-	-	18
16	M.TECH IN ENERGY SYSTEMS ENGINEERING	2015-16	-	-	18
17	M.TECH IN THERMAL ENGINEERING	2015-16	-	-	18
18	M.TECH IN CHEMICAL ENGINEERING	2015-16	-	-	18
19	M.TECH IN INDUSTRIAL METALLURGY	2015-16	-	-	18
20	M.TECH IN COMPUTER SCIENCE INFORMATION	2015-16	-	-	18

	SECURITY				
21	M.TECH IN WIRELESS COMMUNICATION TECHNOLOGY	2015-16	-	-	18
22	MSC IN APPLIED CHEMISTRY	2015-16	NA	18	-
23	M.TECH IN ENERGY CONSERVATION AND MANAGEMENT	2015-16	-	-	18
DOCTORATE OF PHILOSOPHY (PHD)					
	PHD IN CIVIL ENGINEERING	<p>The Institute presently conducts phd under Utakal University and BPUT Odisha</p> <p>The Institute will run the PHD programme in a better manner after getting autonomy. This project can help the Institute in this regard.</p>			
	PHD IN ELECTRICAL ENGINEERING				
	PHD IN MECHANICAL ENGINEERING				
	PHD IN CHEMICAL ENGINEERING				
	PHD IN METALLURGICAL AND MATERIALS ENGINEERING				
	PHD IN COMPUTER SCIENCE AND ENGINEERING				
	PHD IN ELECTRONICS AND TELECOMMUNICATION ENGINEERING				
	PHD IN PRODUCTION ENGINEERING				
	PHD IN PHYSICS				
	PHD IN CHEMISTRY				
	PHD IN MATHEMATICS				

