

# **ANNUAL REPORT**

## **2019-20**



**VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLADIST.**  
**SAMBALPUR – 768 018, ODISHA**  
**[www.vssut.ac.in](http://www.vssut.ac.in)**

## VICE CHANCELLOR'S MESSAGE

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***Prof. Atal Chaudhuri*** (*Vice Chancellor*)

Vice Chancellor, VSSUT

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For last 64 years, VSSUT has been the leading center of excellence for Technical Education. The present report has been put together to highlight the salient features of University's progress during 2019 -20.

While we do face formidable challenges in meeting our commitment of providing high quality facilities to the teachers and students, we shall not leave any stone unturned to improve our thinking and action on year to year basis. Over the last few years TEQIP has been the major supporting scheme for all-round development of this legendary institute. Hope, in future, it will strengthen our hands to attain great academic height that we are aiming to.

# **1. INSTITUTE'S BASIC INFORMATION**

Veer Surendra Sai University of Technology (VSSUT), Odisha was formed by Odisha Act 9 of 2009 by converting University College of Engineering (UCE), Burla to a non-affiliating Unitary University and came into force by issue of notification by Government of Odisha from 1<sup>st</sup> day of July 2009 (vide Industries Deptt. Memo No. IV-TTI-33/2009-8553 and 8564 dtd 10.6.2009). This State Government University is recognized by University Grants Commission (UGC), New Delhi under Section 2(f) & 12(B) of UGC Act.

Situated at the foothill of world famous Hirakud dam, the early history of the University is a fascinating chapter in the growth of technical education in Odisha. Established on 12<sup>th</sup> August 1956 at Burla in the name of University College of Engineering (UCE), the first engineering college of the state was functioned as a constituent college of Utkal University, Bhubaneswar. The primary objective of establishing the Engineering University is to produce engineers who can manage Hirakud Dam.

The University occupies nearly 300 acres of prime land in Burla. Indeed the contribution from the Irrigation Department of Odisha was the decisive element in determining the location of this University. With a glorious history and strong academics staff, VSSUT is strongly identified with engineering education in India. Since its inception and foundation, VSSUT has constantly led the way in reform movements, taking pivotal roles in reconstruction, modernization and administration of the society. The University has a strong alumni base and most of them occupying coveted positions in many educational, industrial and research organization all over the world. The efforts and expertise of VSSUT graduates have been the major contribution in planning and construction of Odisha infrastructure.

VSSUT provides its students with modern educational facilities while retaining traditional values as well as using its strong industrial contents to mold young, talented individuals who can compete in the arena. The aim of VSSUT is to rank among leading University globally. Consequently, mission is to be competitive not only in India, but all over the world. The University has adopted a dynamic, global, creative and communicative approach in education as well as research and development. Keeping abreast with modern developments, VSSUT is constantly restructuring itself and renovating its physical infrastructure as well as its research and development facilities in various department and central facilities such as computer centre, library, internet centre, central research facility and workshop. Government of Odisha has recently funded to establish an Innovation-cum-Incubation Centre at VSSUT campus. Separate halls of residence are available for the students in the campus. Semester pattern system is being followed for both Undergraduate and Post Graduate Programmes and the medium of instruction is English. The syllabi are updated at regular intervals keeping in pace with the advancement in technology and need of the industries so as to maintain the level of technical education at par with other institutes of international repute. The University has infrastructures for all the indoor and outdoor games.

### **The following academic programmes are available at VSSUT**

- ☐ Bachelor of Technology (B.Tech )
- ☐ Bachelor of Achitecture (B.Arch.)
- ☐ Master of Technology (M.Tech )
- ☐ Dual Degree Programme (B.Tech.& M.Tech.)
- ☐ Master of Science (M.Sc.)
- ☐ Integrated M.Sc.
- ☐ Master in Computer Application (MCA)
- ☐ Master in Philosophy (M.Phil)
- ☐ Doctor of Philosophy (Ph.D.)

Seven UG programmes and Eight PG programmes of the University have got NBA Accreditation. The University has also got NAAC Accreditation during 2016-17. Admissions to various Masters programmes are conducted by the University. Admission into B.Tech. programme is made based on the all India rank secured in JEE (Main) through OJEE. However, admission to B.Tech.(LE) as well as MCA programmes are based on OJEE rank through Odisha Joint Entrance Examination(OJEE). All the programmes are approved by AICTE. Admission to 5 yrs. Integrated M.Sc. Programmes are done through an entrance examination conducted by VSSUT. The University has a QIP centre for Ph.D. Programme in engineering disciplines. It is also a National Doctoral Fellowship centre.

The Training and Placement section of the University plays a very important role in counseling and guiding the students for their successful career placement. More than 50 reputed National and Multinational companies visit VSSUT for campus recruitment annually. 100% of the eligible students secure job offers before they complete their programme of studies and leave the University. The placement section ensures and takes care to provide the best arrangements and hospitality for the visiting company officials. Further, the students of this University are doing extremely well in national level examinations like GATE, CAT, MAT, XAT, GRE, TOEFEL, IES and other competitive examinations. The students have taken up challenges in innovations for betterment of the society

## 2. VISION & MISSION

### **Vision**

To emerge as an internationally acclaimed Technical University to impart futuristic technical education and creation of vibrant research enterprises that produces quality engineers and researchers, truly world class leader and unleashes technological innovations to serve the global society with an aim to improve the quality of life.

### **Mission**

Veer Surendra Sai University of Technology, Odisha, Burla strives to create values and ethics in its products by inculcating depth and intensity in its educational standards and need based research through.

- Participative learning in a cross-cultural environment that promotes the learning beyond the class room. Collaborative partnership with industries and academic within and outside the country in learning and research.
- Encouraging innovative research and consultancy through the active participation and involvement of all faculty members.
- Facilitating technology transfer, innovation and economic development to flow as natural results of research wherever appropriate.
- Expanding curricula as appropriate to include broader perspectives and
- Creation of service opportunity for the upliftment of society at large.

### **3. INFORMATION REGARDING AFFILIATING UNIVERSITY**

The Veer Surendra Sai University of Technology, Burla is a non-affiliating unitary university established under the Act 9 of 2009 passed in the Odisha State Legislative Assembly.

### **4. INFORMATION REGARDING ACADEMIC AUTONOMY**

The University enjoys both academic and administrative autonomy being an unitary one.

### **5. GOVERNANCE STRUCTURE**

#### **University Administration**

Chancellor : His Excellency Prof. Ganeshi Lal, Governor of Odisha

Vice Chancellor : Prof. Atal Chaudhuri

Registrar : Smt. Upama Kalo, OAS (S)

Comptroller of Finance : Shri. Nilam Prakash Kujur, OFS

Controller of Examinations : Dr. Pradip Kumar Sahu

#### **Members of Board of Management**

1. Prof. Atal Chaudhuri, Vice Chancellor, VSSUT, Burla (Ex-officio)
2. Sri Sanjay Kumar Singh, IAS, Commissioner cum Secretary, SD & TE Dept., Govt. of Odisha, Bhubaneswar (Ex-officio)
3. Principal Secretary to Government, Finance Department, Government of Odisha. (Ex-officio)
4. Director of Technical Education & Training, Odisha (Ex-officio)
5. Hon'ble Vice-Chancellor, Biju Pattnaik University of Technology, Odisha, Rourkela
6. Prof. Kusum Sudhakar Reddy, Professor, Civil Engineering, IIT, Kharagpur.
7. Prof. H.C.S. Rathore, Vice-Chancellor, Central University of South Bihar, Patna, Bihar, UGC Nominee
8. Er. Bimal Krushna Mishra, Ex-CEO, RSB Metal Tech.(P) Ltd., N2/40, IRC Village, Bhubaneswar (Alumni)
9. Er. Sashi Sekhar Mohanty, CMD, Neelachal Ispat Nigam, Jajpur, Odisha. (Alumni)
10. Prof. Rutuparna Panda, Professor in Electronics & Telecommunication Engineering, VSSUT, Burla
11. Prof. Amar Nath Nayak, Professor in Civil Engineering VSSUT, Burla
12. Prof. Rakesh Mohanty, Associate Professor, VSS University of Technology
13. Shri Kishore Kumar Mohanty, M.L.A., Jharsuguda
14. Shri Debesh Acharya, M.L.A., Bargarh
15. Registrar, VSSUT, Burla, Convener-cum-Secretary

## DEANS

Faculty & Planning	:	Prof. Bibhuti Bhusan Pati
Students' Welfare	:	Prof. Sudhanshu Sekhar Das
Academic Affairs	:	Prof. Sarat Kumar Swain
CDCE	:	Prof. Uma Ranjan Jena
SRIC	:	Prof. Pawan Kumar Modi
PGS & R	:	Prof. Prakash Chandra Swain

## HODs

Architecture	:	Dr. Bharati Mohapatra
Chemical Engineering	:	Dr. Achyut Kumar Panda
Chemistry	:	Prof. Sukalyan Dash
Civil Engineering :	:	Dr. Ajaya Kumar Nayak
Coordinator, Computer Application	:	Dr. (Mrs.)Sucheta Panda
Computer Science & Engg.	:	Dr. Manas Ranjan Kabat
Electrical Engineering	:	Dr. (Mrs) Banaja Mohanty
Electrical & Electronics Engg.	:	Dr. Gyanaranjan Biswal
Electronics & TC Engineering	:	Dr. Kabiraj Sethi
Humanities	:	Dr. Jayprakash Paramguru
Information Technology	:	Dr. Manas Ranjan Senapati
Mathematics	:	Dr. Sushanta Kumar Paikray
Mechanical Engineering	:	Prof. Jyoti Ranjan Mohanty
Metallurgy & Materials Engineering	:	Dr. Bibhuti Bhusan Pani
Physics	:	Prof. Umaranjan Jena
Production Engineering	:	Dr. Kamal Pal

## PICs

Central Library	:	Dr. Harish Kumar Sahoo
Central Internet	:	Dr. Manas Ranjan Kabat
Central Computer	:	Dr. Suvasini Panigrahi
Central Workshop	:	Dr. Rabindra Behera
Guest House	:	Dr. Sushanta Kumar Paikray
Central Transport	:	Dr. Rabindra Behera
Central Store & Purchase	:	Dr. Sanjay Agrawal
Civil Works	:	Prof. Sanjay Kumar Patro
Electrical Maintenance	:	Dr. Gyan Ranjan Biswal
Examination	:	Dr. Ganeswar Nath
Training & Placement	:	Prof. Prasanta Nanda
Telephone	:	Dr. Harish Kumar Sahoo
Alumni Relations	:	Dr. Sanjay Agrawal
University Seminar	:	Prof. Jyoti Ranjan Mohanty
Time Table	:	Mrs. Sudhira Rath
Horticulture	:	Prof. Jaydev Rana
University Canteen	:	Dr. Himansu Sekhar Behera

## **OTHER OFFICIALS**

Director, IQAC	:	Prof. Bibhuti Bhusan Pati
Co-ordinator, TEQIP-III	:	Prof. Amar Nath Nayak
First Appellate Authority, RTI	:	Prof. Rutuparna Panda
Public Information Officer	:	Dr. Manas Ranjan Kabat
Maintenance Engineer (I/c)	:	Er. Akash Kumar Naik
E-Abhiyoga	:	Dr. Satyabrata Das
NCC	:	Lt. Er. Birendra Kumar Barik
NSS	:	Dr. Anil Kumar Kar
Internal Complain Cell	:	Dr. Punyapriya Mishra
Co-ordinator, Faculty & Planning	:	Dr. D. Chandrasekhar Rao



Co-ordinator, Students' Welfare	:	Dr. Smurti Ranjan Mohapatra
Co-ordinator, SRIC	:	Dr. Mihir Kumar Sutar
Co-ordinator, PGS & R	:	Dr. Mohapatra Prakash K. Sahoo
Nodal Officer, Finance, TEQIP-III	:	Dr. Priyaranjan Mohapatra
Nodal Officer, Procurement, TEQIP-III	:	Dr. Purnapriya Mishra
Nodal Officer, Academics, TEQIP-III	:	Prof. Prakash Kumar Hota
Nodal Officer, MIS, TEQIP-III	:	Dr. D. Chandrasekhar Rao
Librarian	:	Dr. Archita Nanda
Office Superintendent	:	Sri Balistha Sohela
PA to Vice-Chancellor(I/C)	:	Sri Jagabandhu Sathi

### **Section Officers**

Accounts – I	:	Sri Himadri Sekhar Panda
Accounts – II (S.O. I/c)	:	Sri Gouranga Ch. Sahu
Examination	:	Sri Lajrus Kujur
Establishment	:	Sri Jagabandhu Sathi

## **HALL OF RESIDENCE ADMINISTRATION**

### **Dean, Students Welfare**

**Prof. Sudhanshu Sekhar Das**

#### **Marichi Hall of Residence**

Warden	Dr. Bidyadhar Rout
Asst. Warden	Dr. Deepak Kumar Lal

#### **Atri Hall of Residence**

Warden	Dr. Prakash Chandra Mishra
Asst. Warden	Dr. Mohapatra Prakash K. Sahoo

#### **Kratu Hall of Residence**

Warden	Dr. Sushanta Kumar Badjena
Asst. Warden	Er. Suresh Kumar Srichandan

#### **Arundhati Hall of Residence**

Warden	Dr. Soumya Saswati Sarangi
Asst. Warden	Er. Ananda Kumar Behera

**Anuradha Hall of Residence**

Warden	Dr. Renu Prava Dalai
Asst. Warden	Dr. Jatin Kumar Pradhan

**Vasistha Hall of Residence**

Warden	Dr. Arunanshu Mohapatra
Asst. Warden	Dr. Kiran Kumar Ekka

**Visakha Hall of Residence**

Warden	Dr. Raseswari Pradhan
Asst. Warden	Er. Amit Kumar Behera

**Vasundhra Hall of Residence**

Warden	Dr. Sasmita Behera
Asst. Warden	Dr. Ashok Kumar Sahoo

**Pulastya Hall of Residence**

Warden	Dr. Debabrata Giri
Asst. Warden	Er. Pratap Kumar Pradhan

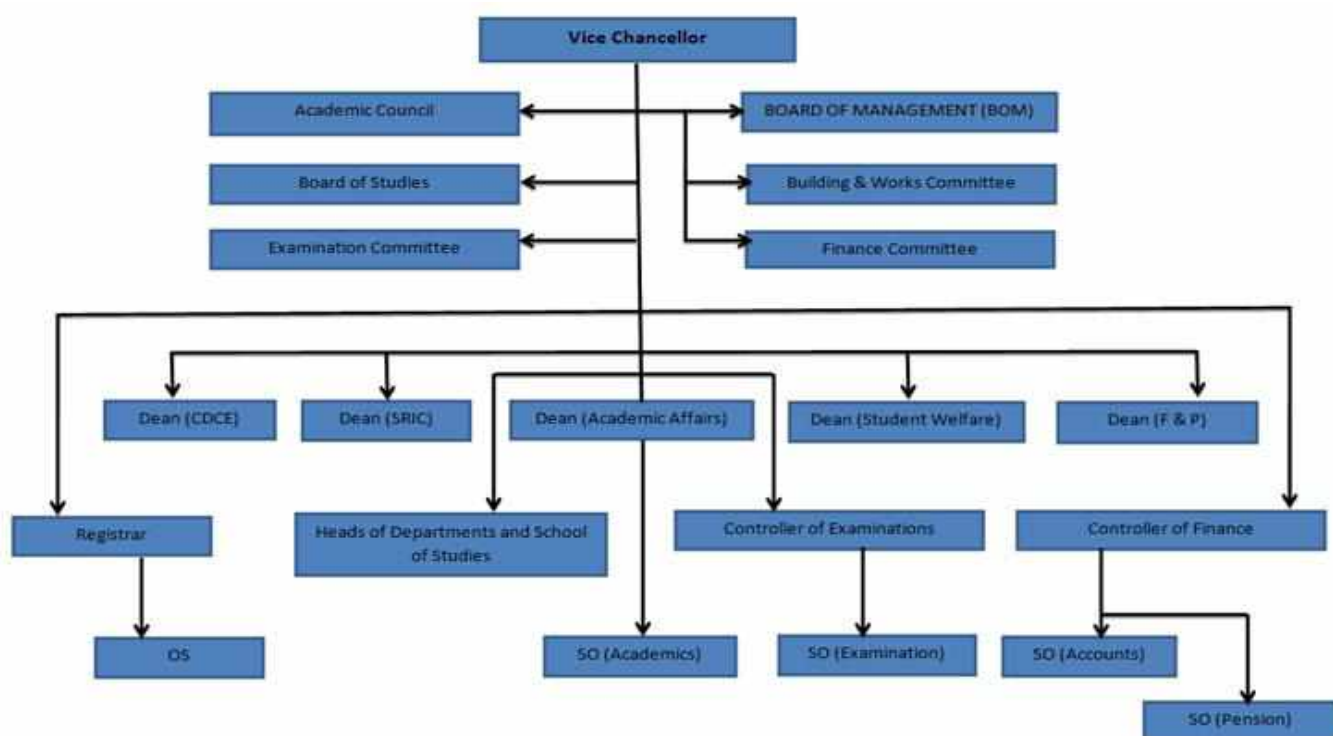
**Rohini Hall of Residence**

Warden	Dr. Nibedita Patel
Asst. Warden	Er. Amit Mallick

**Pulaha Hall of Residence**

Warden	Dr. Anil Kumar Kar
Asst. Warden	Er. Santosh Kumar Sahu
Asst. Warden	Dr. Bigyan Ranjan Jali
Asst. Warden	Er. Susant Kumar Sial
Asst. Warden	Ar. Amit Chatterjee

## 6. ORGANISATION STRUCTURE



## 7. ACADEMIC CALENDAR

### VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA ACADEMIC & ACTIVITY CALENDAR OF ODD SEMESTER OF July' 2019 to Dec'-2019

#### PART - A

Sl. No.	Details of Academic Events	1 <sup>st</sup> Semester B.Tech / B.Arch. / B.Tech. & M.Tech. Dual Degree/ M.Tech./ MCA/M.Phil/ M.Sc./Ph.D./Integrated M.Sc. (Tentative, Subjected to admission of student)	3 <sup>rd</sup> , 5 <sup>th</sup> & 7 <sup>th</sup> Sem. B.Tech/ 3 <sup>rd</sup> , 5 <sup>th</sup> , 7 <sup>th</sup> & 9 <sup>th</sup> B.Arch. / 3 <sup>rd</sup> , 5 <sup>th</sup> , 7 <sup>th</sup> & 9 <sup>th</sup> B.Tech. & M.Tech. Dual Degree/ 3 <sup>rd</sup> & 5 <sup>th</sup> Sem. MCA/ Ph.D/ 3 <sup>rd</sup> M.Tech. & M.Sc. and 3 <sup>rd</sup> , 5 <sup>th</sup> , 7 <sup>th</sup> & 9 <sup>th</sup> Integ. M.Sc. & 6 <sup>th</sup> Sem. Executive B.Tech. Programme
1	(A) Registration of Regular students (without fine) to Odd Semesters. Registration of students shall be done in respective department. (B) Re-admission of eligible backlog students to Odd Semester (without fine). Re-admission of students shall be done in Academic Section.		11/07/2019 & 12/07/2019
2	Commencement of Odd Semester classes	After Admission	11/07/2019
3	(A) Registration of Regular students (with fine) to Odd Semesters. Registration of students shall be done in respective department. (B) Re-admission of eligible backlog students to Odd Semester (with fine). Re-admission of students shall be done in Academic Section.		29/07/2019 & 30/07/2019
4	Last date of the review meeting before Mid-semester Examination in the respective Departments and notification about attendance of the student by the concerned HOD( a copy of Departmental proceedings and notification to be sent to office of Dean, Academic Affairs.)		01/10/2019
5	Mid-Semester Examination		27/09/2019 to 04/10/2019
6	Repeat Mid Semester Examinations		21/10/2019 to 25/10/2019
7	Athletic Meet		02.11.2019 & 03.11.2019
8	Last date of showing evaluated Mid semester/Repeat Mid Semester answer scripts to the students by the concerned subject teacher		06/11/2019
9	Last date of completion of sessional/Lab/Project & Viva Examination and theory classes	29/11/2019	23/11/2019
10	Last date of submission of consolidated attendance shortage report to the office Dean, Academic Affairs by HODs in proper format.	30/11/2019	25/11/2019
11	Last date of Report to COE by HODs after Departmental meeting on Lab/Sessional/Viva/Seminar/Project etc. failure cases.	03/12/2019	27/11/2019
12	Date of Notification of debarring students from appearing End Semester Examination for Attendance Shortage by the office of Dean, Academic Affairs	04/12/2019	30/11/2019
13	End Semester Examination (Theory Papers)	06/12/2019 to 18/12/2019	05/12/2019 to 17/12/2019
14	Last Date of evaluation of End Semester Answer Book		31/12/2019
15	Last Date of showing evaluated End Semester Answer Book to students		03/01/2020
16	Last date of Submission of Answer Book (Mid-Semester & End Semester) in the office of COE and on line submission of marks.(Submission of COs)		06/01/2020
17	Last date of Publication of Odd Semester results		30/01/2020

#### PART - B

Sl. No.	Details of Academic Events	All Even Semesters of B.Tech/B.Arch./ B.Tech. & M.Tech. Dual Degree/ MCA/M.Sc/M.Tech/ M.Phil/ Integrated M.Sc. & Ph.D (Tentative), 7 <sup>th</sup> Sem. Executive B.Tech. Programme
1	Date of Subject Registration for Even Semesters 2020	02/01/2020 & 03/01/2020
2	Date of commencement of Even Semesters classes 2020	02/01/2020

Memo No.VSSUT/ACD/ 642 /2019

Copy to: University Notice Board /Notice Board of all Halls of Residences /All Deans/ All HODs / All PICs /Director, IQAC/ Registrar/ COE/COF /Wardens of All Halls of Residence/ Prof. I.e, Examination/Chairman, Time Table/ Collection Asst./P.A. to V.C./Dean, F&P with a request to facilitate in displaying this notice in the University website.

Dean, Academic Affairs  
Dated: 12/06/2019

Dean, Academic Affairs  
12/6/2019

**VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, ODISHA**  
**ACADEMIC & ACTIVITY CALENDAR OF EVEN SEMESTER OF Jan'2020 to June'2020**

No.VSSUT/ACD/ 1220/2019

Dated: 12/12/2019

**PART - A**

Sl. No.	Details of Academic & Activity Events	Even Semester for all UG and PG Programme and 7 <sup>th</sup> Semester Executive B.Tech
1	Registration of Regular students and Re-admission of eligible backlog students to Even Semester without fine. (Registration of students shall be done in respective department. But Re-admission of students shall be done in Academic Section).	02.01.2020 & 03.01.2020
2	Commencement of Even Semester classes	02.01.2020
3	Registration of Regular students and Re-admission of eligible backlog students to Even Semester with fines. (Registration of students shall be done in respective department. But Re-admission of students shall be done in Academic Section).	17.01.2020 & 18.01.2020
4	Last date of the review meeting before Mid-Semester Examination in the respective departments and notification about attendance of the student by the concerned HOD (a copy of Departmental proceedings and notification to be sent to office of Dean, Academic Affairs)	20.02.2020
5	Mid-Semester Examination	25.02.2020 to 29.02.2020
6	Student Function (Samavesh, IUSM, Cultural Function)	02.03.2020 to 07.03.2020
7	Repeat Mid-Semester Examinations	17.03.2020 to 21.03.2020
8	Last date of showing evaluated mid semester answer scripts to the students by the concerned subject teacher	31.03.2020
9	Registration of students for Even Semester backlog paper to appear End Semester Examination	25.03.2020 to 11.04.2020
10	Completion of sessional/Lab/Project /Seminar & Viva Examinations etc.	06.04.2020 to 20.04.2020
11	Registration of only final year students for Odd Semester backlog papers to appear Supplementary Examinations	15.04.2020 to 22.04.2020
12	Last date of theory classes	20.04.2020
13	Last date of submission of consolidated attendance shortage report of theory / Laboratory / Design / Drawing / Seminar & Project Work the office of the Dean, Academic Affairs by HODs in proper format.	21.04.2020
14	Last date of Report to COE by HODs after departmental meeting on Lab/Sessional/Viva/Seminar/Project etc. failure cases	23.04.2020
15	Date of Notification of debaring students from appearing examination for Attendance Shortage by Dean, Academic Affairs	25.04.2020
16	End Semester Examination (Theory Papers)	29.04.2020 to 22.05.2020
17	Submission of Final Thesis and completion of dissertation / thesis evaluation/ open defense of 4 <sup>th</sup> Semester M.Tech. & 2 <sup>nd</sup> Semester M.Phil.	20.05.2020 to 12.06.2020
18	Last Date of showing evaluated Answer Book to students & Submission of Answer Scripts and marks of Mid-Semester, End Semester Theory/Sessional and Practical Exam. to Controller of Examinations	30.05.2020
19	Publication of Even Semester Results	26.06.2020
20	Registration of only final year students for Even Semester backlog papers to appear Supplementary Examinations.	27.06.2020 to 03.07.2020
21	Commencement of Supplementary Examination only for final year students	10.07.2020
22	Last Date of showing evaluated Answer Book of Supp Exam to students & submission of supplementary marks	28.07.2020
23	Publication of Supplementary Results	10.08.2020

**PART - B**

Sl. No.	Details of Academic Events	Odd Semester for all UG and PG Programme and 8 <sup>th</sup> Semester Executive B.Tech
1	Date of Subject Registration for Odd Semesters 2020	27.07.2020 & 28.07.2020
2	Date of commencement of Odd Semesters classes 2020	27.07.2020
3	Date of commencement of 1 <sup>st</sup> Semester B.Tech, B.Arch, MCA & 5yrs Int. M.Sc. classes 2020	Subject to date of admission

By order of Hon'ble Vice-Chancellor

Memo No.VSSUT/ACD/1221<sup>(35)</sup>/2019

Copy to : 1. University Notice Board /All Deans/ Registrar, VSSUT, Burla/Wardens of All Halls of Residence/ All HODs/COE/COF/Prof. I/c, Examination/Chairman, Time Table/ Prof. I/c, Central Library/Accounts Section/ Collection Asst./ /Dean, F&P with a request to facilitate in displaying this notice in the University website.  
2. P.A. to V.C for kind information of Hon'ble Vice-Chancellor.

Dean, Academic Affairs  
Dated: 12/12/2019

Dean, Academic Affairs  
12/12/2019

## 8. INFRASTRUCTURE ACADEMIC, LIBRARY, COMPUTER CENTRE, RESIDENTIAL, HOSTELS ETC

### INFRASTRUCTURE

#### Land and Buildings

S.N.	Description	Details	Area/Plinth Area
1.	LAND IN USE	University	36.5 Acres
		Hall of Residences	28.0 Acres
		Staff Quarters	69.1 Acres
		Total	<b>133.6 Acres</b>
	FREE LAND AVAILABLE FOR EXTENSION		<b>266.77 Acres</b>
	GOVT LAND AVAILABLE FOR EXTENSION		<b>102.00 Acres</b>
		<b>Grand Total</b>	<b>502.37 Acres</b>
2.	UNIVERSITY BUILDING DETAILS	Main building of plinth area	1,22,715 sft
		Workshop plinth area	27858 sft
		Workshop office	3100 sft
		High voltage Laboratory	1200 sft
		Cycle shed	4600 sft
		Garage	1660 sft
		Guest House	3120 sft
		Robotic Club	2700 sft
		Auditorium	14850 sft
		N.C.C. Building	6000 sft
		Gymnasium	3300 sft
		Athletic Building	1730 sft

		Maintenance office		3200 sft
		Dispensary		2560 sft
		Computer Science & Engg. Building		19010 sft
		Workshop Extension		2610 sft
		Hydraulics Laboratory extension		1140 sft
		Cycle sheds		2120 sft
		Library Building		14050 sft
		Administrative Building		8530 sft
		Extension of Electrical & ELTCE Building		2880 sft
		Community centre		2700 sft
		<b>Total</b>		<b>251633 sft.</b>
3.	HALL OF RESIDENCE DETAILS	Atri Hall (For Boys)		47260 sft
		Kratu Hall (For Boys)		47260 sft
		Vasistha Hall (For Boys)		47260 sft
		Marichi Hall (For Boys)		47260 sft
		Pulastya Hall (For Boys)		47260 sft.
		Angira Hall (For Girls)		24160 sft.
		Arundhati Hall (For Girls)		58100 sft
		Anuradha Hall (For Girls)		35000 sft.
		Visakha Hall (For Girls)		35000 sft.
		Rohini Hall (For Girls)		35000 sft.
		<b>Total</b>		<b>423560 sft</b>
4.	STAFF QUARTERS DETAILS	A-1 Bungalow	1 No.	4725 sft



	C	4 Nos.	12352 sft
	D/TD	11 Nos.	15400 sft
	E	18 Nos	20880 sft
	F	100 Nos.	88000 sft
	G	29 Nos.	13050 sft
	RS	7 Nos.	3805 sft
	4R	5 Nos.	9750 sft
	F4R	4 Nos.	7320 sft
	M4R	4 Nos.	7200 sft
	5R	6 Nos.	11220 sft
	3R	27 Nos.	29750 sft
	F 3R	8 Nos.	8448 sft
	Modified E	4 Nos.	3280 sft
	E(New)	4 Nos.	2640 sft
	B.F	2 Nos.	1720 sft
	B.F	14 Nos.	10640 sft
	G.E	10 Nos.	4000 sft
	<b>Total</b>		<b>2,54,180 sft</b>

## 9. DEPARTMENT PROFILE WITH INFRASTRUCTURE & FACILITIES



# DEPARTMENT OF ARCHITECTURE

## 1. About the Department:

The Department of Architecture was established in the year 2013 in VSSUT, Burla. Presently, the department is offering a five-year undergraduate B. Arch course with an emphasis on professional training. Its teaching program covers the broad spectrum of understanding, designing and constructing human habitat and environment. The course opens up opportunities for advanced studies and professional career in designing, planning and managing of built environment and extends to new frontiers of allied disciplines.

The department has the unique advantage of developing within a reputed Technical University and connecting with the oldest and highly experienced multi-disciplinary faculty of Odisha. It also has the distinction of being located in the culturally and environmentally rich region of Odisha.

The department is committed to ensure that the students are nurtured in an environment where there is unhindered 'accessibility' to knowledge resources and 'sustainability' of social and cultural values. The department is keen to imbibe the spirit of innovation, environmental sensitivity and creativity among the students in its endeavor for academic and professional excellence. Within the stringent academic environment there is abundant opportunity of co-curricular and explorative activities, where team spirit, leadership qualities, management skills and tech-proficiency are developed.

There is good opportunity to get exposure of up-to-date technological advancement, and knowledge of emerging research fields through the international conferences and symposiums regularly organised by the University. The University has state-of-art facilities for students to explore allied technical fields. By harnessing the available opportunities and potentiality the Department is striving to mark its footprint by emerging as a prominent centre of Architecture education in India.

## 2. Faculty details :

	<b>Name</b>	<b>Qualification</b>	<b>Specialization</b>
1.	Dr. Debabrata Giri <b>(H.O.D)</b>	B.Tech (CET, BBSR), M.Tech (NIT, RKL), Ph.D (IIT, KGP)	Geotechnical Engineering
1.	Dr. Bharati Mohapatra	B. Arch (CET), M.Arch (Jadavpur University), Ph.D (SAP, Anna University)	Urban Design and Planning
2.	Dr. Indrani Chakraborty	B.Arch., (B.E. College) (DU), Master of City Planning, Architecture and Regional Planning, (IIT, Kharagpur), Ph.D., (IIT, Kharagpur)	Environment Design and Planning, Green Building

### **ASSISTANT PROFESSORS**

3.	Mr. Amit Chatterjee	B. Arch (University of Mysore), M. Arch (D. Y. Patil College of Engg. And Tech.)	Architecture Conservation, Sustainable Architecture, Green Building Infrastructure, and Theory of Design.
4.	Mr. Shaswat Sekhar Sarangi	B. Arch ( NIT Raipur)	History of Architecture, Vernacular Architecture, Theory of Architecture

## 3. Courses Offered:

B. Arch Degree in Architecture.

#### 4. Laboratory Details:

This department has been established recently. The following laboratories are in the process of establishment.

Sl. No	Name of the Laboratory	Equipments
1	Architectural Design Studio	<b>Drafting Tools</b> <b>Miscellaneous</b> Movable Display Panels Fixed Display Panels Overhead Projector and projector screen Laser Light pointers
2.	Model Making Studio	<b>Cutting/Model Making</b> <b>Drafting Tools</b> <b>Miscellaneous</b> Display Corner Storage and Workshop Area
3.	Seminar cum Display Room	Computer system Furnished Lab furniture Storage cabinets Overhead Projector and projector screen Laser Light pointers Movable Display Panels Fixed Display Panels
4.	CAD Lab	Adequate no. of Computers Furnished Lab furniture Overhead Projector and Projector Screen Laser Light pointers

#### 5. Other information of the Department:

Department of Architecture is a milestone in the history of this University. The Department is proud to have creative budding Architects of the future having run four years in the arena of Architectural education in the state. This department believe in creating a work culture having a continuous and never ending team spirit. The department has organized several industry interaction lectures and design workshops.

The Benchmark in quality teaching and academic discipline is the hallmark of the department. Our students have been highly acclaimed in receiving accolades from the Indian Institute of Architects, Odisha Chapter who were the organizers of the 8<sup>th</sup> Design Carnival at Bhubaneswar. Apart from these the students are also participating in various state and national level events like techfest, ZoNASA etc. The students of the Department are highly appreciated by the university authorities during the Samavesh 2015 by organising Creative Extra Vaganza. Outstanding display by the students of Architecture was also showcased through Archiz Fiesta Event and open day exhibition during Diamond Jubilee. The department has undertaken Architectural consultancy work for Government Project.

The overall growth of the department in several fronts is possible due to combined efforts of highly qualified faculty and enthusiastic students. The department is very proud and privileged to have the faculty, staff and students who aspire to fulfil the dreams of this department to become a centre of excellence in the fields of innovation and creativity.

# DEPARTMENT OF CHEMICAL ENGINEERING

## 1. About the Department:

The Department of Chemical Engineering, Veer Surendra Sai University of Technology is setting its footprint in 2014 with 4 year B.Tech. programme to inculcate students with a strong fundamental knowledge in the field of chemical Engineering and to meet the challenges of rapidly changing technological environment. The branch of Chemical Engineering deals with the chemical processes for manufacturing of different products, designing of related equipments. The Department to impart quality education for the students in all areas especially in the upcoming areas such as Nanotechnology, bio-medical engineering, bio-molecular engineering, environmental engineering, biochemical engineering, process control, pharmaceutical processing etc. The department will start M.Tech. courses in emerging areas very soon.

### Vision

To become a nationally and internationally acclaimed department of higher studies to prepare students to meet new challenges faced by chemical and related industries through green technologies.

### Mission

- I. To impart strong fundamental knowledge to the students to face the new world in a rapidly changing technological environment.
- II. To carry out interdisciplinary research so as to address the needs of chemical engineering in particular and society in general.
- III. To develop leadership qualities in the students to solve chemical engineering problems keeping in mind the safety and environmental concerns.

## 2. Faculty details :

Name	Qualification	Specialization
1. Dr. Achyut Kumar Panda (H.O.D)	M.Sc., M.Phil, Ph.D (Chemical Engg, NIT Rourkela)	Organic Chemistry & Chemical reaction engg.
<b><u>ASSISTANT PROFESSORS</u></b>		
2. Ms. Nivedita Patel	BE (Berhampur Univ.), M. Tech, (BIT, Mesra)	Fuels and Combustion, Thermochemical conversion of WEO to liquid fuel
3. Dr. Krushna Prasad Shadangi	Ph.D., (IIT, Guwahati) M.Tech. (NIT Rourkela) B. Tech. (BPUT)	Biofuel, catalysis, Kinetics, waste water treatment

4.	Mr. Amit Kumar Behera	B. Tech, (NIT Warangal), M. Tech, (IIT, Guwahati)	Waste water treatment techniques
5.	Mr. Veda Prakash	M. Tech, (IIT, Roorkee)	CAPPD
6.	Mr. Anil Kumar Murmu	B.Tech (NIT Warangal), M.Tech(IIT Kharagpur)	Mineral Processing
7.	Dr. Lipika Parida	M.Tech (IIT,BHU), Ph.D (IIT,Kharagpur)	Biomechanics of C. elegans, Rheology, Soft-Lithography Simulation of Reactions

### 3. Courses offered :

- B. Tech. in Chemical Engineering
- Ph.D. in Chemical Engineering

### 4. Laboratory details

The list of equipments for the following labs are as follows.

#### 1. Heat Transfer Lab.

- Heat Transfer Through Composite Wall
- Thermal Conductivity of Liquids
- Parallel Flow/Counter Flow Heat Exchanger(shell and Tube, Double pipe)
- Dropwise/Filmwise Condensation Unit
- Stefan Boltzmann Apparatus
- Heat Transfer from a Pinfin
- Heat Transfer through Natural Convection

#### 2. Mass Transfer Lab.

- Vapour in Air Diffusion
- Vapour Liquid Equilibrium(Computerized)
- Humidification and De-Humidification
- Simple distillation setup
- Wetted wall column
- Sieve plate Distillation Apparatus

#### 3. Chemical Engineering Thermodynamics Lab.

- Air Conditioning Test Rig
- Water to Water Heat Pump Test Rig
- Separating & throttling calorimeter

#### 4. Chemical Reaction Engineering Lab.

- Isothermal Batch Reactor
- Continuous Stirrer Tank Reactor(CSTR)
- CSTR in series Cascade CSTR
- Isothermal Plug flow Tubular reactor coiled tube type
- Straight Tube type Plug Flow Reactor
- Mass Transfer with and without chemical reaction

#### 5. Fluid Dynamics Lab.

- Discharge through venture meter and orifice meter

#### 6. Fuel and Combustion Lab.

- Conradson apparatus

- Smoke Point Apparatus
  - Pour Point Apparatus
  - Muffle furnace
  - Incubator Digital
  - Distillation Apparatus
  - Pensky Martens Apparatus
  - Engler Viscometer
  - Bomb Calorimeter (Manual)
  - Bomb Calorimeter (Automatic)
  - Hot Air Oven
7. **Material Handling Lab.**
- Standard Test sieves
  - Cyclone Separator
  - Wilfley Table
  - Jaw crusher
  - Roll crusher
  - Magnetic Separator
  - Plate and Frame Filter
  - Forth flotation cell
8. **Process Control and Instrumentation Lab.**
- Control Valve characteristics Apparatus
  - Flow Process Control Trainer System
9. **Computer Aided design Lab.**
- Chem.Cad. Design
10. **Process Technology Lab.**
- UV-Visible spectrophotometer

**5. Details of research area of faculty members:**

Sl. No.	Name of the faculty	Research area
1.	Ms. Nivedita Patel	Fuel & Combustions, thermochemical conversion of NEO to Liquid fuel techniques
2.	Mr. Amit Kumar Behera	Waste Water Treatments
3.	Mr. Veda Prakash	Process Design
4.	Dr. Krushna Prasad Shadangi	Bio-diesel, Thermo-chemical Conversion of biomass to liquid fuel, Hydro-deoxygenation of oil, Liquid-liquid extraction, Catalyst preparation and characterization, waste water treatment.
5.	Mr. Anil Kumar Murmu	Mineral Processing
6.	Dr. Lipika Parida	Biomechanics of C. elegans, Rheology, Soft-Lithography, simul at of reactors.

**6. Sponsored Research Projects (On going): Nil**

**7. Consultancy:**

The consultancy offered by the department include: (i) Testing of all the properties of solid and liquid fuel, (ii) Characterisation and treatment of waste water, (iii) Design of equipment including reactor, distillation column, absorption column etc., (iv) Modelling of chemical process, (v) Energy optimisation using pinch technology.

# DEPARTMENT OF CHEMISTRY

## 1. About the Department:

The Department of Chemistry started with the establishment of University College of Engineering (UCE) in 1956 (presently, Veer Surendra Sai University of Technology (VSSUT) (UGC Recognized Unitary Technical University Established by Government of Odisha in 2009). The department introduces the basic fundamentals of chemistry to the students at B.Tech. level. The department offers two year Master of Science (M.Sc.) in Chemistry five year Integrated M.Sc. (Int. M.Sc.) in Chemistry, Master of Philosophy (M.Phil.) in Chemistry, Doctor of Philosophy (Ph.D.) in Chemistry. These courses have been designed to generate researching for higher learning and solve the immediate problem of industries in and around Sambalpur as well as in the state and country. It includes advanced studies on Biomaterials, Nanomaterials, Nanotechnology, Surface Technology, Material Science, Organic Chemistry, Inorganic and Physical Chemistry, Organic synthesis, medicinal chemistry, pericyclic, Chemistry of Materials, Ferrous and Non-Ferrous Materials, Industrial Processes, Environmental Chemistry, Polymer Chemistry, besides the General Chemistry courses. The sessional and practical works consisting of problems related to industrial and applied chemistry are also incorporated in the syllabus for strengthening knowledge of the students. Courses have been prepared according to UGC, NET, and GATE guidelines.

## Faculty Details:

Name	Qualification	Specialization
<b><u>PROFESSORS</u></b>		
1. Prof. Sarat Kumar Swain	M.Sc., M.Phil., Ph.D. (Utkal University) Post-Doc (USA)	<b>Organic Chemistry, Polymer Chemistry, Nanotechnology, Materials Science</b>
2. Prof. Pravin Kumar Kar	M.Phil Ph.D (Delhi University)	<b>Industrial Chemistry</b>
3. Prof. Rahas Bihari Panda	M.Sc., MPhil., Ph.D (SU)	<b>Environmental Chemistry/Organic Chemistry</b>
4. Prof. Sukalyan Dash (HOD)	M.Sc., M.Phil., Ph.D. (Sambalpur University)	<b>Organic Chemistry, Surface Chemistry, Reaction Kinetics, Organized Assemblies</b>
<b><u>ASSOCIATE PROFESSORS</u></b>		
5. Dr. Priyaranjan Mohapatra	M.Sc (Ravenshaw ) M.Phil. (Ravenshaw ) Ph.D (Utkal University) Post-doc, (Chonnam National University , South Korea)	<b>Inorganic and Industrial Chemistry</b>
6. Dr. Trinath Biswal	M.Phil, Ph.D (Utkal)	<b>Organic and Industrial Chemistry</b>
7. Dr. Achyut Kumar Panda	M.Sc., M.Phil, Ph.D (NIT Rourkela)	<b>Organic Chemistry</b>
<b><u>ASSISTANT PROFESSORS</u></b>		
8. Dr. Ramakrishna D S	M.Sc (University of Hyderabad), Ph.D (Indian Institute of Chemical Technology)	<b>Organic Chemistry / Synthesis</b>
9. Dr. Monalisa Mohapatra	M.Sc. (Utkal University) Ph. D. (IIT Madras)	<b>Physical Chemistry</b>



10. Dr. Aruna Kumar Barick

M.Sc. (Utkal University)  
M.Tech. (CIPET),  
Ph.D. (IIT, Kharagpur)

**Polymer Science, Engineering  
& Technology**

11. Dr. Bigyan Ranjan Jali

M.Sc. (Utkal University)  
Ph. D. (IIT Guwahati)

**Supramolecular Chemistry  
(Inorganic Chemistry)**

### 3. Courses Offered:

Following courses are offered in the department:

Name of Programme	Year of Commencement
M.Sc. (Chemistry)	2010-11
Int.M.Sc. (Chemistry)	2013-14
M.Phil. (Chemistry)	2014-15
Ph.D. (Chemistry)	2013-14

### 4. Laboratory Facilities:

Sl. No.	Name of Laboratory	Major Equipments	Research Facilities
1.	UG/PG Laboratories	Potentiometer, Conductometer pH meter, Oil Testing Apparatus, Bomb caloneimeter	
2.	Instrumentation Lab.	Colorimeter, Refractometer, FTIR, Microwave synthesis, Electronmicroscope flarimeter, Atronic Absorh specific copy, DSC, DLS	Spectro-fluorimeter UV-Vis Spectro-photometer Electrochemical Workstation
3.	Environmental Lab.	Turbidity meter sound pressure measuring instruments, BOD incubator, COD reflexes fluorimes lonselective electrode.	



**Research Lab**

## 5. Research Activities:

The details of research area of faculty members, award received and any other distinctions as follow:

Sl. No.	Name of the Faculty	Research Area	Awards/Distinctions etc.
1.	Dr. S. K. Swain	Materials Science; Polymer Science; Nanotechnology;  Polymer composites and nanocomposites; Synthesis and Application of Nanomaterials;  Bio-composites	Samanta Chandra Sekhar Award 2015, by Odisha Bigyan Academy department of Science and Technology, Govt. of Odisha for outstanding research. INSA Research Fellowship – 2013 to do research work at IACS, Kolkata, Govt. of India DAE Young Scientist Research Award – 2008-09, Department of Atomic Energy, Board of Research in Nuclear Sciences (BRNS), Govt. of India JNCASR Visiting Fellowship – 2007-2008, Jawaharlal Nehru Centre for Advance Scientific Research (JNCASR), Bangalore, Govt. of India BOYSCAST Post-doctoral Fellowship – 2004-05, Department of Science and Technology, Govt. of India to avail post-doctoral research work at the University of Akron, Ohio, USA Prof. R. K. Nanda Memorial Award – 1994 for Best Oral Presentation at Ravenshaw College, Cuttack
2.	Dr. P. K. Kar	Supramolecular chemistry  Corrosion Science,  environmental science	
3.	Dr. R. B. Panda	Environmental Chemistry, Air,  Water and Soil Analysis,  Utilization of Fly Ash, Hazards waste management, Environmental Impact, Assessment and Environmental plan, Biomedical waste assessment and management, Industrial pollution	National Environment Award - 1994 (Subakaran Sarawagi Environment Award) for the outstanding contribution to the Nation in the conservation of environment in mining sectors.

		assessment and management	
4.	Dr. S. Dash	Physical Organic Chemistry; Bio-fuel; Adsorption study of Novel Materials	Prof. R. C. Tripathy Young Scientist Award – 2007 Prof. D. N. Pattnayak Award for Best Paper by Odisha Chemical Society- 2008
5.	Dr. T. Biswal	Polymer Composites and Nanocomposites	
6.	Dr. P. Mohapatra	Synthesis and Application of Nanomaterials (Graphene, Quantum Dots, Nanoparticles, etc.)	Brain Korea 21st Century (BK 21) Post-doctoral Fellowship, South Korea
7.	Dr. A. K. Panda	Conversion of Plastic Waste to Liquid Fuel	
8.	Dr. Ramakrishna D. S.	Organic Synthesis	
9.	Dr. M. Mohapatra	Physical Photochemistry; Biophysical Chemistry; Fluorescence Spectroscopy	Prof. R. K. Nanda Memorial Award (Best Oral Presentation) in 22nd Annual Conference of Orissa Chemical Society Best Ph.D. Thesis Award (Langmuir Award) in Physical and Theoretical Chemistry at IIT Madras Post-doctoral Research Fellowship, IIT Madras
10.	Dr. A. K. Barick	Preparation & Characterization, of Polymer Blend, Composite, and Nanocomposites;	Hanyang Brain Post-doctoral Fellowship– 2012-13, Hanyang University, South Korea
11.	Dr. B.R. Jali	Supramolecular Chemistry Inorganic Chemistry	

## 6. Consultancy:

Testing of materials like cement, oil, water, lubricants, etc. are carried out in the laboratories of the department besides, the department gives suggestions and scientific deliberations on drinking water quality and their purification methods.

## 7. Continuing Education Programme:

The department had conducted short term training programme on environmental chemistry and related areas.

## 8. Research Projects:

Following sponsored research projects are sanctioned by funding agencies in the Department:

1. Prof. P. K. Kar: Corrosion Inhibition Studies of Metal Chelates(2006-08); AICTE, Govt. of India.
2. Dr. S. Dash: Synthesis, Characterization, and Photochemical studies some Novel Polymethine Cyanine Dyes (2007-09); AICTE, Govt. of India.
3. Prof. S. K. Swain: Acoustical Investigation of Some Pharmaceutical Proteins (2014-17); Department of Biotechnology, Govt. of Odisha.
4. Prof. S. K. Swain/Dr. P. Mohapatra: Preparation and Characterization of Graphene Nanocomposites by Reinforcement of Transition Metal based Quantum Dots (2015-18); EMR-II, CSIR, Govt. of India.
5. Dr. Ramakrishna D. S.: Total Synthesis of Biologically Active Carbazole Alkaloids: Glybomines A-C and their analogues (2014-17); UGC-FRP Scheme, Govt. of India.
6. Dr. A. K. Barick: Development of Nanoparticle/Nanotube Hybrid Nanofiller based Thermoplastic Polyurethane/Polyaniline Blend Nanocomposites for Multi-functional Applications (2015-18); UGC-FRPScheme, Govt. of India.
7. Dr. M. M. Mohapatra, Fundamental Investigation of biopolymers- biosurfactats interaction towards understanding their physio clinical behavior using fluorescent drug molecules” (2016-19); DST-SERB, Govt. of India.
8. Dr. B.R. Jali, Development of Higher photoluminscent Nanosized Lantharide orsanic frame works for biological application. UGC-FRPS Scheme Govt. of India.

## 9. Publications:

Following is the categorical list of number of papers published by faculties of the department in last five years:

- Research Papers Published in Peer Reviewed International/National Journals: 310 Nos.
- Book published by Springer and Elecuvier publisher - 02
- Book Chapters Published in Peer Reviewed Edited Books:17 Nos.
- Research Papers Presented/Published in International/National Conference Proceedings: 120 Nos.
- Patent published : 01 (USA), 01 (S. Korea), 02 (Indian).

# DEPARTMENT OF CIVIL ENGINEERING

## 1. About the Department:

Civil Engineering plays a vital role in the growth and development of any nation. Infrastructures like roads, buildings, railways, airports, dams, drainage & irrigation canal system, water supply network need the knowledge and services of Civil Engineers. It comprises of many specialisations like Structural engineering, Geotechnical Engineering, Hydraulics and Water Resources Engineering, Environmental Engineering, Transportation Engineering and Geo-informatics Engineering. Recognizing the rapid, extensive and emerging development in civil engineering, the degree programme includes computer aided analysis & design and remote sensing besides an integrated and systematic foundation in physical engineering sciences like solid, fluid and soil mechanics, materials, graphics and surveying. The sequential provision of subjects develop the engineering mythology and practice as applied to planning, design and control of buildings, bridges, hydraulic structures environmental system, transportation system and others. The programme instills in the students, a professional approach through project work and practical training during vacations. Department encompasses well-trained faculties in all major specialisations like Structural engineering, Geotechnical Engineering, Hydraulics & Water Resources Engineering, Environmental Engineering and Transportation Engineering. Since 2012 regular masters and Ph.D. courses in all major specialisations and from 2015 dual degree program in Structural Engineering have been initiated.

## 2. Faculty Details :

<u>Name</u>	<u>Qualification</u>	<u>Specialization</u>
<b><u>PROFESSORS</u></b>		
1. <b>Prof. Amar Nath Nayak</b>	B. Sc. (Engg.), (Utkal Univ.), M. Tech (IIT, Kharagpur), Ph. D (IIT, Kharagpur)	<b>Structural Engineering</b>
2. <b>Prof. Prakash Chandra Swain</b>	B.Sc. (Engg.) (CET, BBSR), M.E. (UCE, BURLA), Ph. D (NIT, Warangal)	<b>Water Resources Engineering, Application of Artificial Intelligence Techniques to Water Resources Management</b>
3. <b>Prof. Pradip Kumar Pradhan</b>	B.Sc (Engg.) (SU), M.Tech(SU), PhD (IIT Kharagpur)	<b>Geotechnical engineering</b>
4. <b>Prof. Pradip Kumar Das (On Lien)</b>	B.Sc. (Engg.) (NIT, Rourkela), M.Sc. (Engg.), (UCE, Burla), MBA (HRM), P.G. Dip (Operation Management), P.G. Dip. (Human Resources Engg), Ph. D : IIT, Kanpur	<b>Hydraulics &amp; Water Resources Engg</b>
5. <b>Prof. Sudhanshu Sekhar Das</b>	B.Sc Engg., (OUAT), M.T.R.P. (Indian Institute of Engineering Science and Technology Shibpur, Ph.D (IIT Kharagpur)	<b>Transportation Engineering</b>

6.	<b>Prof. Sanjaya Kumar Patro</b>	PhD (IIT Bombay)	Structural Engineering
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#### **ASSOCIATE PROFESSORS**

7.	<b>Dr. Chitta Ranjan Mohanty (On Lien)</b>	B.Sc (Engg.) (UCE Burla), M Tech (IIT Kharagpur), Ph.D (IIT Kharagpur)	Environmental Engineering
8.	<b>Dr. Ajaya Kumar Nayak (H.O.D.)</b>	BTech (NIT,RKL), ME(IISc, Bangalore), Ph.D. (University of Southampton, UK)	Structural Engineering
9.	<b>Dr. Rakesh Roshan Dash</b>	B.E. (Utkal Univ.) M. Tech. (IIT Delhi) Ph.D. (IIT Roorkee)	Environmental Science and Engineering
10.	<b>Dr. Ramakanta Panigrahi</b>	B.Sc. (Engg.) (UCE Burla), M. Tech (IIT Delhi), PhD (IIT Delhi)	Structural Engineering
11.	<b>Dr. Debabrata Giri</b>	B.Tech (CET, BBSR), M.Tech (NIT, RKL), Ph.D (IIT, KGP)	Geotechnical Engineering
12.	<b>Dr. Saubhagya Kumar Panigrahi</b>	B. Tech. (Utkal University), M. Tech. (NIT Rourkela), Ph.D. (IIT Kharagpur )	Structural Engineering
13.	<b>Dr. Anil Kumar Kar</b>	B.Sc. (Engg) (S.U), M.Tech (IIT Roorkee), Ph.D (IIT Roorkee)	Water Resources Engineering

#### **ASSISTANT PROFESSORS**

14.	<b>Ms. Sudhira Rath</b>	B.Sc. (Engg) (N.I.T, Rourkela), M.E (S.U)	Transportation Engineering
15.	<b>Ms. Jayanti Munda</b>	B.Tech (UCE, Burla ), M.Tech (NIT Warangal)	Geotechnical Engineering
16.	<b>Ms. Leena Sinha</b>	B.Tech ( UCE Burla ), M.Tech( NIT Rourkela)	Structural Engineering
17.	<b>Dr. Parsuram Nayak</b>	B-Tech (UCE Burla), M. Tech (NIT Rourkela), PhD (II TKGP)	Structural Engineering
18.	<b>Dr. Bharadwaj Nanda</b>	B. Tech (CET Bhubaneswar), M. Tech (NIT Rourkela), Ph.D ( IIT Kharagpur)	Structural Engineering
19.	<b>Mr. Rajiv Lochan Sahu</b>	B. Tech. (VIT University,Vellore), M. Tech (NIT Rourkela)	Geotechnical Engineering
20.	<b>Dr. Janhabhi Meher</b>	B.Tech ( UCE BURLA ), M.Tech (IIT Kanpur), Ph.D (NIT Rourkela)	Water Resources Engineering
21.	<b>Ms. Laxmipriya Mohanty</b>	M.Tech	Water Resources Engineering
22.	<b>Ms. Rupashree Ragini Sahoo</b>	M. Tech.(NIT Rourkela)	Geotechnical Engineering
23.	<b>Mr. Akash Kumar Naik</b>	B.Tech (VSSUT, Burla) M. Tech (IIT, Kharagpur)	Transportation Engineering
24.	<b>Ms. Sanghamitra Jena</b>	B. Tech., M. Tech (CET, BBSR)	Structural Engineering
25.	<b>Ms. Jhunarani Ojha</b>	B. Tech.,	Transportation

		M. Tech (NIT, Rourkela)	<b>Engineering</b>
26.	<b>Dr. Ramkrishna Dandapat</b>	B.E. (Bengal Engineering and Science University, Shibpur) M. Tech. (IIT Kharagpur), Ph.D. (IIT Kharagpur)	<b>Structural Engineering</b>
27.	<b>Mr. Pratap Kumar Pradhan</b>	B.Tech (VSSUT, Burla), M.Tech (IIT Guwahati)	<b>Transportation Engineering</b>
28.	<b>Mr. Ajaya Kumar Das</b>	B.Tech (C.E.T Bhubaneswar), M.Tech(IIT Delhi)	<b>Structural Engineering</b>
29.	<b>Ms. Kajal Swain</b>	B.Tech, ITER (SOA University), Bhubaneswar, M.Tech. NIT, Rourkela	<b>Geotechnical Engineering</b>
30.	<b>Ms. Kirtisuta Bhoi</b>	B.Tech (VSSUT, Burla), M.Tech(VSSUT, Burla)	<b>Water Resources Engineering</b>
31.	<b>Mr. Sushant Kumar Sial</b>	B.Tech (VSSUT, Burla), M.Tech (IIT Kharagpur)	<b>Transportation Engineering</b>
32.	<b>Ms. Abhayaa Nayak</b>	B.Tech (IACR, Rayagada), M.Tech (V.S.S.U.T Burla)	<b>Water Resource Engineering</b>
33.	<b>Dr. Asim Kumar Mishra</b> (TEQIP Sponsored)	B.E. (UCE Burla ) M.Tech. (NIT Rourkela), Ph.D (IIT Kharagpur)	<b>Experimental modal testing, model updating, structural dynamics</b>
34.	<b>Mr. Sajal</b> (TEQIP Sponsored)	B.Tech. (NIT, Surathkal) M.Tech (IIT, Roorkee)	<b>Structural Dynamics</b>

### 3. Courses Offered :

B.Tech in Civil Engineering.

M.Tech. in Civil Engineering with specialization in

- Structural Engineering
- Transportation Engineering
- Water Resources Engineering
- Geo-Technical Engineering
- Environmental Science & Engineering

Dual Degree: B. Tech in Civil Engineering and M. Tech in Civil Engineering with specialization in Structural Engineering.

Ph.D degree in all major areas of Civil Engineering.

### 4. Laboratory Details:

Sl. No	Name of the Laboratory	Major Equipments	Research Facilities

1	Structural Engineering	Digital Universal Testing Machine(100Toncapacity),LoadingFrame for testing of structuralmembers, Equipment to measureMaxwell ReciprocalTheorem,Two hinged Arch, Three hingedArch, Redundant Truss, Optical microscope for crack measurement.	Dynamicresponseofstiffenedisotropic/compositeshells, Retrofitting ofconcrete structures with FRP compositesUtilization of SolidWaste in ConcretePreparation,Behaviour of Concrete withPartial Replacement of Wastes
2	Concrete	Compression Testing Machine (2000 kN capacity), Flexural Testing Machine, Concrete Mixer, Table Vibrator, Humidity chamber, permeability Test apparatus of concrete, Digital schmitic Rebound Hammer, Ultra sonic pulse velocity equipment muttle furnace, core cutter.	Concrete Behavioural Mechanics, Study onSelf Compacting Concrete, EarthquakeAnalysis of Dam, Optimization, ComputerApplication in Civil Engineering, RecycledAggregate Concrete, Fly-Ash Geo-Polymer Concrete
3	Geotechnical Engineering	Digital Triaxial Testing Machine, Large Size Direct Shear Test Apparatus, Swelling testingmachine, CBR Testing Machine,Consolidometer (Single Unit)Three gang consolidometer Automatic cumpactor	Geotechnicalcharacterizationof industrialwastes, Soil Stabilization using IndustrialWastes and Bio-Enzymes, Stabilization ofExpansive Soil/Soft Soil and Improvement ofSoil Bearing Capacity. Modeling foundationvibration, Dynamic characterization of soilfrom soil suction, Response of the foundationand structure under Earthquake excitation,Reinforced Soil
4	Transportation Engineering	CBR Testing Machine, Marshall Stability Equipment, Los-Angel abrasion testing Machine, Impact Tester, Centrifuge Extractors, Dynamic Cone Pavement Penetrometer Ductility testing Machine, Softening Point measurement for bitumen, Viscometer Roughometer	Design of Air Ambulance, Soil Stabilization, Transportat OnPlanning, Pavement MaterialEngineering, Traffic Safety.
5	Environmental Engineering	UV-VISSpectrophotometer, FlamePhotometer, OrionFlorde iron plus meter, BODIncubator, Conductivitymeter, Cooling incubatorm, sound level meter, laminar airflow cabinet.	Water and waste water quality analysis,Waste Utilization, Raw water treatm ent,Waste watertreatment, Solid wastemanagement,IndustrialWastemanageme nt,Environmentalimpactassessment,Riverwater quality modeling, Airqualitym odeling,Groundwater quality modeling, Noise modeling.
6	Fluid Flow Laboratory	Micro ADV, PVC pipe testingequipment, Flow tracker, Openchannelflumes (4Nos.)Pipe frictionapparatus, Reynold'sApparatus, Hydrology system, Depth Echo sounder, Automatic water level recorder, Impact of Jets Apparatus, Automatic weather station, Hydraulic Bench with accessories, pitot Tubes, Curent Meters, Rain Gauges, Differential Global positioning system, GIS master lab kit.	1-D and 2-D velocity measurement usingFlow Tracker,3-D velocitymeasurementusing Micro ADV,Velocity profile andshear stress profile study in openchannels, Hydraulic jump and spillwayprofile study, laminar, transition andturbulent flow zones study.



7	Surveying Laboratory	Electronic Total Station, Micro-optic Theodolite, AutoLevel, Venire Theodolite	Measurement of distances, horizontal and vertical angles and elevations in topographic and geodetic works, plotting of contours, assessment of area of water bodies, plots etc.
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**Structural Engg. Lab.**



**Concrete Lab.**



Sl. No.	Name of the Faculty members	Research Area	Awards/ Distinction etc
1	Dr. Amar Nath Nayak	Development of sustainable correlate with Industrial wastes. Advanced Composites/Fibre Reinforced, Polymers, Plate and Shell Structures, Retrofitting of Concrete Structures using FRP composites. Structural vibrations	K. F. Antia National Award for the best paper published in the Journal of Institution of Engineers (India) 1999-2000.  Sayed Mumtaz Ali Memorial Award during 54 <sup>th</sup> & 55 <sup>th</sup> Annual technical Session 2013 & 2014 respectively for best paper published in the Technical Annual of Institution of Engineers (India) Odisha State Centre, Bhubaneswar.

			<p>Er. PC Choudhury award for best paper published in the Technical Annual Journal 2018 of Institution of Engineers (India), Odisha State Centre, Bhubaneswar.</p> <p>Govinda Gupta memorial award for the outstanding contribution in the field of R&amp;D activity for 2018 by Institution of Engineers (India), Odisha State Centre, Bhubaneswar.</p>
2	Dr .PrakashChandra Swain	Water ResourcesManagement,Applicationof ArtificialIntelligenceTechniques toWaterResources Engg. Surface & Groundwater flow matelling	<p>Er. Banabihari Mohanty Memorial Award for outstanding research paper in the field of Irrigation Engineering by the Institution of Engineers in 1999 &amp; 2002.</p> <p>Awarded gold medal for contribution to the field of Electrical &amp; Electronics Engineering by Orissa Engineering Congress (2002).</p> <p>Damodar Sahoo Memorial Award for Best Research paper (2017) by Institution of Engineers.</p>
3	Dr. PradipKumar Pradhan	Dynamics of Soil andFoundations, MachineFoundations, GroundImprovement andReinforced soil.	
4	Dr PradipKumar Das (On Lien)	Computational Hydraulics, Multivariate Analysis of Hydrologic System, Fluvial Hydraulics, Contamination Transport modeling for Porous media flow.	<p>• Gold Medal in Annual Session of Orissa Engineering Congress held on 6th February,1993</p>
5	Dr. Sudhansu Sekhar Das	Transportation Planning,Traffic Operations andManagement,PublicTransportation SystemTravel Behavior Analysisand Demand Models	
6	Dr.SanjayaKumar Patro	<p>Energy Dissipation Systemsfor Seismic ResistingDesign;Utilisation of Industrial SolidWaste in ConcretePreparation;</p> <p>Nanotechnology Cement;Wind induced vibration control;Seismic Vulnerability Assessment</p>	<p>Awarded with Syed Mumtaz Ali Memorial Award in four years i.e. 52, 53, 55th 56th 57th Annual Technical Session of Orissa State Centre, The Institution of Engineers (India)</p> <p>Awarded with Er. Arta Bandhu Jena Award In the 54th and 58th patert on “A COMPOSITION FOR PARTIAL REPLACEMENT OF ORDINARY PORTLAND CEMENT” patert No. 303344 dt. 22.11.2018.Annual Technical Session of Orissa State Centre, The Institution of Engineers (India)</p> <p>Awarded with Civil Engg. Division first prize in 57<sup>th</sup> Annual session of Odisha Engineering congress.</p> <p>Patent on “ A composition for partial replacement of ordinary Portland command” patent No. 303344/22.11.18</p>
7	Dr. Ajaya Kumar Nayak	Structural Engineering	<p>• Doctoral Scholarship to carry out Ph.D Program at University of Southampton, UK.</p>

8	Dr. Rakesh Roshan Dash	Water Quality & Treatment, River Bank Filtration, Waste Water	• Received French government scholarship (2002) to complete M. Tech. thesis at INSA de Lyon, France
9	Dr. Debabrata Giri	Earth-quake Engineering, Soil Dynamics, Dynamic Behaviour of reinforced Slopes	
10	Dr. Ramakanta Panigrahi	Tensegrity structures geopolymer concrete	
11	Dr. Parsuram Nayak	Structural dynamics	Earth-quake analysis of structures/

## 6. Ongoing Sponsored Research Projects:

The department has received grant from the DST / Ministry of HRD / RD / AICTE for the following projects.

Sl. No.	Name of the Project	Sanctioning Authority	Amount in Lakh (Rs.)	Year of sanction
1.	Characterization of light weight concrete using Ash Cenosphere	DST	13.25	2015-16
2.	Development of a fluoride filter for community uses	DST	12.78	2014-15
3.	Modernization of Environmental laboratory	AICTE	18.04	2013-14
4.	Modernization of Hydraulics Flow Lab	AICTE	10.00	2013-14
5.	Performance study of Flexible pavements using Expert System	AICTE	10 .00	
6.	Development of Fuzzy-logic and Neural Network technology for flood mitigation	AICTE	16 .00	
7,	Flood forecasting in river Mahanadi using hydrological and mathematical modeling	AICTE	10 .00	
8.	Installation of automatic weather station	AICTE	5.00	
9.	Development of CAD laboratory	AICTE	6.00	

10	Fly Ash Generation & Utilization in CoalBased Thermal Power Stations of Odisha(2013-14)”	SPCB, Odisha		2014 -15
11 .	Study on Environmental Im pact of Fly ashfrom major Thermal Power Plants inOdisha”	SPCB, Odisha		2015 -16
12	UK-India collaborative Research Project (UKIERI-III) on FRP shear strengthening of damages concrete becomes subjected to fatigue loading.	UK	12.53	2018-20
13	MODROB for structural Engg. Lab.	AICTE	18.5	2017-19
14	MODROB for advanced concrete Lab.	AICTE	19.0	2017-19

## 7. Consultancy :

1. Non-destructive Testing of Silo foundation at Aditya Aluminium (A unit of Hindalco Industries Ltd.), Sambalpur.
2. The department is chosen as State Resource Institute for National Programme on Capacity building of engineers in earthquake risk management (NPCBEERM) by the Ministry of Home Affairs, Govt. of India to provide necessary training to the field engineering regarding earth quake resistant structure.
3. The department is the “State Technical Agency appointed by “National Rural Roads Development Agency” NRRDA, Govt. of India, New Delhi, to scrutiny the DRPs for rural roads under PMGSY.
4. The department is chosen as consultant for the redesign and checking the adequacy Building of RBI, Bhubaneswar against earthquake.
5. Checking of Structural Design and Drawing of B. R. Ambedkar Medical College & Hospital, Raipur.
6. Proof checking of structural Design & Drawing and Conducting NDT and Issue of Structural Stability Certificate of Part C Building of CIPET, Bhubaneswar.
7. Checking the Design of Elevator of Rairakhol Railway Station of Sambalpur Division of East Coast Railway.
8. Checking the Structural Drawing and Adequacy of Self Supporting Towers and Guyed Masts of Mahanadi Coalfield Limited, Burla.
9. Survey of Water Surface Area of Power Channel of Hirakud Dam, Burla.
10. Geotechnical investigation for coal washery at Talcher, BSNL office building, RBI Bhubaneswar, MCL and various private Organizations.
11. Recommendation of design mix for embankment blanketing material and stability analysis of high embankments of Sambalpur-Talcher rail link project.
12. Soil Investigation for Works department, Water Recourses Dept., Govt. of Odisha, Indian Railways, BSNL, MCL, SAIL, NTPC, etc and various private Organizations.
13. Department has designed a water supply scheme for twenty two villages of Rengali Sasan of Sambalpur district.

14. The department has completed a project on fly-ash generation and utilization in the state of Odisha for the Year 2014-15.
15. The department is engaged to assess the impact of fly-ash ponds of major thermal power plants in the state of Odisha.
16. Proof checking and quality control of buildings for Central Government Employees Welfare and Housing Organisation
17. Proof checking of Water tanks, RWSS Division, Bhubaneswar
18. Performance study of Pavements under PMGSY
19. Proof checking of building, NAC, Boudha
20. Hydrological Survey for Ash Pond and Redmud Pond of NALCO, M&R Complex, Damanjodi
21. Contour Plotting and Soil Investigation for Proposed Coal Washeries at various project sites of MCL Coal Mines, Odisha
22. Project Report (DPR) on "Water Supply to uncovered area of Sambalpur Town" and "Improvement of Sanitation System of Sambalpur Town" under Urban Infrastructure Development Scheme for small and Medium Towns (UIDSSMT) for Sambalpur Municipal Council
23. Safety and Stability Analysis of Starter Dykes and Design of Raising of Dykes for Ash Pond, Vedanta Aluminium Limited, Jharsuguraha
24. Checking of design and drawing of Town Hall-cum- Auditorium, Binka N.A.C.
25. Vetting of design & structural drawing of AGE E&M & AGE B&R, subdivision office & accommodation for security control systems at DMRL
26. Vetting of Hydraulic design, structural design and estimates of overhead tanks, and water treatment plant for integrated rural piped water supply schemes of Sambalpur division
27. Third party quality assurance check for Hindustan Steel Works Construction Limited
28. Assessment of water spread area of power channel of Hirakud system.
29. Study of safety and stability of Dyke of Ash Pond, CPP, NALCO, Angul.
30. Proof checking of structural drawing and design of OSHB buildings at Bhubaneswar & Angul.

#### **8. Other Information of the Department:**

Department generates highest revenue for the institute through various major consultancy projects from Government, Public Sector Undertakings and Private Industries along with normal testing of civil engineering materials. The alumnae of this department presently hold various important positions in the industry, state and central governments, national and international academic and research institutions. Our students have been highly acclaimed by the selection committee of prestigious Companies.

# DEPARTMENT OF COMPUTER APPLICATION

## 1. About the Department:

The Master of Computer Applications (MCA) program was started in 1993 with an intake of 30 and one of the oldest Department of VSSUT, Burla. It is committed to impart quality education in the sub-fields of IT, a field growing in leaps and bounds. The curriculum is so made that the course provides a good theoretical foundation through high-quality teaching complemented by extensive practical training. It is dedicated to the mission of inculcating value-based, socially committed professionalism to the cause of overall development of students and society. This department comprises of six faculty members (out of them Four Faculties with doctorate degrees) and is actively involved in research and in carrying out projects besides teaching. The persistence of the dedicated faculty in maintaining the standards is manifest in the successful placement and in the production of Ph.Ds. To keep in touch with the ever growing technology, the faculty members participate regularly in refresher courses and symposia conducted by various universities and research institutions. The students are provided with ample opportunities to improve their organisational skills and group dynamics. They are motivated to handle seminars and to participate in group discussions. Apart from emphasizing on consistent and good academic performance, the department encourages participation in the co-curricular and extra-curricular activities to bring out the latent talents in its students. To impart the knowledge of reasoning, analytical ability for various competitive examinations the course includes subject as Mathematical Foundation of Computer Science, Discrete Mathematics, Cloud Computing etc. For overall development of student subjects such as Professional Communication in English, Oral and Written Communication and Practical's and Training of Personality Development, Interview Preparation, Group Discussion etc. are also included in curriculum. This overall combination of subjects gives them sound and excellent background for any competitive environment. This also provides them with increase opportunity in Institute Campus Placement. The students are now highly placed in many reputed companies of India as well as abroad. The students are placed in many top level Companies like TCS, Infosys, Accenture, Capgemini etc.

## Vision

To create Intellectual capital in the area of Computer Science and Applications through providing quality education to meet ever changing skill requirement of the industry and academia. To establish specialized facilities for development and absorption of Emerging & Time Relevant Technologies to enrich the student's skill set.

### **Mission**

To produce Qualified Post-Graduates who are competent in the areas of Computer Science and Applications and able to meet the challenges of ever changing industry requirements at global and national level. To develop strong theoretical concepts complemented with practical trainings. To inculcate innovative skills, research aptitude, teamwork, ethical practices in students so as to meet expectations of the industry as well as society.

### **Faculty Details :**

<b>Name</b>	<b>Qualification</b>	<b>Specialization</b>
<b><u>ASSOCIATE PROFESSORS</u></b>		
1. Dr.(Mrs.) Sasmita Kumari Padhy	M.C.A (BPUT), M.Tech(BU), Ph.D (UTKAL)	<b>Soft Computing, Multiprocessor Scheduling</b>
2. Dr. (Mrs.) Sucheta Panda (H.O.D)	M.C.A (NIT,Rourkela), M.Tech(NIT,Rourkela) Ph.D (NIT,Rourkela)	<b>Image Processing (Color Image Segmentation using Markov Random Field Models)</b>
<b><u>ASSISTANT PROFESSORS</u></b>		
3. Mr. Sanjib Kumar Nayak	BE (UTKAL), PGDIT(IITKgp ) M.Tech (Tezpur)	<b>Parallel &amp; Distributed systems</b>
4. Dr. Sasmita Acharya	B.Tech (Utkal University), M.Tech (BPUT) Ph.D. (VSSUT, Burla)	<b>Wireless Sensor Networks</b>
5. Mrs. Etuari Oram	M.Tech (CSE) (NIT,Rourkela)	<b>Wireless Sensor networks, software Engineering, Data Mining</b>
6. Dr. Bighnaraj Naik	Ph.D. (VSSUT), M.Tech. (SOAU), B.E. (BPUT)	<b>Machine Learning, Soft Computing, Data Mining</b>

### **3. Courses offered :**

Master in Computer Application (MCA)

Ph. D. In Computer Application

#### 4. Laboratory Details :

Sl.No.	Name of the Laboratory	Major Equipments	Research Facilities
1	Windows Laboratory	30 DELL Optiplex Dual Core Computer Systems, HP Laser Jet M1005 Printer, 10 KVA Online Console UPS, Wi-Fi Router for Wireless internet activity, 1 GBPS leased line internet facility	Data Mining, Soft Computing, Wireless Networks, Pattern Recognition, Information Retrieval, Network Security, Mobile Communication etc.
2.	LINUX LAB	Intel® Core(TM) i7-4790 CPU @ 3.60GHz RAM: 4 GB 64-bit OS, Windows 8.1 Pro	DBMS PROGRAMMING JAVA PROGRAMMING ENTERPRISE WEB-BASED COMPUTING WITH JAVA SEMINAR



Windows Lab, MCA



Linux Lab, MCA

#### 5. Details of research area of faculty members :

#### 6. Details of research area of faculty members :

Sl.No.	Name of the Faculty members	Research Area
1.	Dr.(Mrs.) Sasmita Kumari Padhy	Soft Computing, Multiprocessor Scheduling
2.	Dr.(Mrs.) Sucheta Panda	Image Processing, Computer Vision, Soft Computing



3.	Dr. Bighnaraj Naik	Soft Computing, Data Mining
4.	Mr Sanjib Ku. Nayak	Wireless Sensor Networks
5.	Dr. Sasmita Acharya	Parallel & Distributed Systems, Cloud Computing
6.	Mrs Etuari Oram	Computer Networks

#### **6. Other information of the Department :**

Well equipped Computer Laboratory with facilities for Database, Programming lab, Project lab, Networking lab, Computer Graphics & Multimedia and Linux lab. In Windows laboratory, each student can have hands-on experience in practical applications that enhances the knowledge imparted in the theory classes. The course content has been well mapped with future career prospects of the MCA students.

Department has more than 50 text books for immediate reference by the students and faculty members. Ph.D in Computer Application has started from the year 2016.

The Department has a student's society in which students and faculties are the members. The society is mainly meant to build up a good academic atmosphere by organizing lectures/ seminars/workshops by outside speakers and also by the members of the society.

From 2013, a Departmental Annual Technical Symposium 'ADHRIT', of the MCA Student Society has been started, where the students have proved their talent in different technical, cultural, social events. Alumni's have also extended their helping hand to make the event successful since its inception.

## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



### 1. About the Department :

The Department of Computer Science and Engineering was established in 1994. It has produced high quality technocrats for the last few decades to cater to the needs of hardware and software industry, R&D organizations, and academic Institutions. The syllabi of the Department are updated with many advanced courses to enable students to keep themselves at par with the cutting edge-technology. The teaching in the department emphasizes on fundamental principles, development of creative thinking and the analytical ability to solve real life problems. The Department also encourages its students to engage in extra-curricular and co-curricular activities, personality development, developing team spirit, and organizational skills.

The department has a library with good number of books, journals and magazines to help the students to upgrade their outlook in various areas of Computer Science. The department organizes National Technical Seminars, Exhibitions and Industry-Institute Interaction Programme every year. B. Tech CSE, and M. Tech CSE programme are accredited by “NBA”.

### Mission

To produce best quality computer science professionals and researchers by providing state-of-the art training, hands on experience and healthy research environment.

To collaborate with industry and academia around the globe for achieving quality technical education and excellence in research through active participation of all the stakeholders.

To promote academic growth by establishing Centers of Excellence and offering inter disciplinary postgraduate and doctoral programs.

To establish and maintain an effective operational environment and deliver quality, prompt, cost effective and reliable technological services to the society aswell as compliment the local and global economic goals.

## Vision

To be a recognized leader by imparting quality technical education and thereby facilitating the extensive research environment, equipping students with latest skills in the field of technology supplemented with practical orientation to face challenges in the fast morphing modern computing industry and academia for the betterment of the society

### Faculty Details :

2.

	<b>Name</b>	<b>Qualification</b>	<b>Specialization</b>
	<b><u>PROFESSORS</u></b>		
1.	Dr. Chita RanjanTripathy (On Lien)	B.Sc. Engg.(UCE), M.Tech, Ph.D(IIT, Kharagpur)	Parallel Processing
2.	Dr. Amiya Kumar Rath (On Lien)	B.E, (Marathwada Univ.), M.Tech (Utkal), Ph. D. (Utkal) MBA, (Systems Mgmt)	Computer Architecture, Embedded system, Data Structure
	<b><u>ASSOCIATE PROFESSORS</u></b>		
3.	Dr. Rakesh Mohanty	B.E. (UCE Burla), M.Tech. (JNU, Newdelhi), Ph.D (IIT Madras)	Online Algorithms, Self Organizing Data Structures
4.	Dr. Manas Ranjan Kabat (H.O.D)	B.E. (Utkal University), M.E. (BEC, Calcutta), Ph.D (Sambalpur Univ.)	Internet and Quality of Service, Computer algorithms, Real-Time Systems Artificial Intelligence, Wireless Sensor Network
5.	Dr. Suvasini Panigrahi	B.Tech. (Utkal Univ.), M. Tech. (Utkal Univ.) Ph.D., (IIT Kharagpur)	Database and Information Security
	<b><u>ASSISTANT PROFESSORS</u></b>		
6.	Mr. Satya Prakash Sahoo	M. Tech (CSE)	Computer Networks, Data Structure, Soft Computing, Database Engineering
7.	Dr. Sumitra Kisan	B.Tech (UCE,Burla), M. Tech (ISM,Dhanbad), PhD. (Utkal Univ.)	Cryptography & Network security, Image Processing &Fractal study
8.	Dr. Santosh Kumar Majhi	B.Tech, (VSSUT, Burla) M.E, (Utkal Univ.) Ph.D (SSU, Cuttack)	Decision Science, Information Systems, Cloud Computing, Network & Internet Security, Database

9.	Ms. Alina Mishra	MBA (Operation Mgmt) B. Tech. (BPUT), M.Tech (NIT Rourkela)	<b>Applications</b> <b>Software Engineering,</b> <b>Program Slicing, Soft</b> <b>computing</b>
10.	Mrs. Santi Behera	B. Tech. (CSE, BPUT), M. Tech. (NIT Rourkela)	<b>Wireless sensor Network,</b> <b>Multimedia System, Mobile</b> <b>Computing</b>
11.	Ms. Alina Dash	B. Tech (VSSUT,Burla), M. Tech(NUO, Baripada)	<b>Computer Networking</b>

### 3. Courses Offered :

(a) B.Tech.in Computer Science & Engineering

(b) M.Tech. in specialization Computer Science & Engg.

(c) Ph.D. in major areas of Computer Science & Engg..

### 4. Laboratory Details :

Sl. No.	Name of the Lab	Major Equipment	Research Facilities
1.	System Programming Laboratory	38 Nos. HP Intel Core <a href="#">i7-6700@3.4</a> GHz, Intel Q150, Ubuntu HP Intel Core i3 4130, Intel H8 Chipset, Preloaded Linux S/W GCC Lex, Yacc, Java, ScilLab, Octave	Data Structure, Design and Analysis of Algorithms, Operativ Systems, Adv. Comp., Java
2.	Computing Lab 1	40 Nos. HP Intel Core i7 @ 4.2 GHz, Ubuntu HP Intel Core i7-6700 @ 3.4 GHz, Ubuntu HP Intel Core i7 @ 3.4 GHz, Windows 8.0 Professional preloaded <b>S/W</b> -QualNet -Aneka Cloud -TurboC -Dev C++	Complier Design, Database Systems, IWP Software Engineering, Cloud Computing, Computer Networks
3.	Computer Organization Laboratory	18 No. DELL Intel Core i7-4790 @ 3.6 GHz, Windows 8.1 Preloaded RAM Trainer Kit (15 Nos.) ALU Trainer Kit (15 Nos.) Computer and SMPS Trainer Kit (02 Nos.) Hard Disk Controler Kit (15 Nos.)	Computer Organization Microprocessor, Ditigal Electronics

		Printer and Scanner Kit (02 Nos.) RTC and Temp. Measuring Trainer Kit (15 Nos.) 8085 Microprocessor Trainer Kit (15 Nos.) S/W -Protious -8085 Simulator	
4.	Research Laboratory	14 No. DELL Intel Core i7-3770, 3.4 GHz, Linux preloaded 01 No. HP Server Model ML-350 (01 no.) Dual Intel Xeon Processor <a href="#">E5-2609@1.9GHz</a> , 6 Core15MB/85W Processor	Dedicated Lab for Research Scholars



**Computer Hardware Lab.**



**Networking Lab.**

**5. Details of Research area of faculty member and awards /distinctions**

Sl. No.	Name of the Faculty Members	Research Area	Awards/Distinctions etc.
1.	Dr. Chita Ranjan Tripathy (On Lien)	Parallel Processing	Sir Thomas Ward Memorial Gold Medal from Institute of Engineers, Nagpur in 1998. Certificate of merit for Best research paper award-2003 & 2004 from Institute of Engineers, Kolkata. Best paper award in Inter. Conf. Adv. Computing & Communication-2006 from NIT, Surathkal
2.	Dr. Amiya Kumar Rath (on Lien)	Sensor Networks, Adhoc Networks, Embedded System	
3.	Dr. Rakesh Mohanty	Data Structure and Algorithm, OS-Scheduling, Graph Theory-Coloring, Computational Thinking, Rectangle Packing	Best Research Paper Award- ICRAET, 2012 from Hyderabad
4.	Dr. Manas Ranjan Kabat	WSN (MAC Protocols)	Best paper award in Inter. Conf. Adv. Computing & Communication 2006, from NIT, Surathkal.
5.	Dr. Suvasini Panigrahi	Database Intrusion Detection, Fraud Detection, Wireless Multimedia Sensor Networks	
6.	Mr. Satya Prakash Sahoo	Computer Network	
7.	Ms. Sumitra Kisan	Image Processing, Cryptography and Network Security, OS	
8.	Dr. Santosh Kumar Majhi	Decision Science, Information Systems, Cloud Computing, Network & Internet Security, Database Applications.	
9.	Ms. Alina Mishra	Software Engineering, Program Slicing, Soft Computer Network	

10.	Mrs. Santi Behera	Wireless sensor Networks	
11	Ms. Alina Dash	Computer Networking	

## DEPARTMENT OF ELECTRICAL ENGINEERING

### 1. About the Department:

The Department of Electrical Engineering of the erstwhile University College of Engineering, Burla is one among the first branches to be instituted in 1956. The department has grown in consonance with the changing needs of the society and pushed new frontiers of the discipline without shedding its strength in core areas of electrical engineering. The department has integrated modern pedagogical methods incorporating the focus to instill 21<sup>st</sup> century skills in the students. The contribution of the department to nation building is highlighted by the prominent positions the alumni occupies across the world. The industry institute interaction has been significantly improved over the years resulting in capacity building. The graduates of the department continue to be in great demand by the industry which is attested by the fact that about thirty industries recruit from the discipline every year through campus placement. The department has a mini library with more than five hundred books and periodicals. The department has a society named “Electrical Engineering Society” in which all students and faculty members are members. The significance of the department can be judged by the fact that the Government of Odisha has approved to open a Center of Excellence in Electrical Engineering with an approximate investment of Rs 10 crores. The department currently offers B.Tech. in Electrical Engineering, M.Tech. in Electrical Engineering with three specializations, that is, Power System Engineering, Power Electronics Control of Drives and Control and Instrumentation. The UG and PG programs of the department has been approved by AICTE and accredited by National Board of Accreditation.

### Mission

To produce Electrical Engineers with dynamic well rounded personalities adaptable to ever increasing demands of emerging technologies involving analytical and practical skills.

### Vision

- To develop the department as a renowned academic centre of learning in the discipline of Electrical Engineering.
  - To establish research and development centre of repute so as to encourage active participation with industry by staff and students to take on practical problems of industry and to provide feasible solutions.
  - To establish tie-ups with institutions of national and international repute and to foster building up of a wide knowledge base to keep in tune with ever increasing demands of technologies.
- Developing simple, appropriate technologies, which will be instrumental in the up-liftment of rural society.

### 2. Faculty Details:

**Name**

**Qualification**

**Specialization**

## **PROFESSORS**

1.	Dr. Bibhuti Bhusan Pati	B.Sc. Engg.(UCE Burla), M.Tech ( IISc. Bangalore), Ph.D (Utkal University)	Control System Engineering
2.	Dr. Prakash Kumar Hota	B.E (REC) Tiruchirapalli, M.Sc (Engg) (Sambalpur Univ.), Ph.D (Engg) (Jadavpur University)	Industrial Power Control & Electric Drives, Power System Engineering
3.	Dr. Pawan Kumar Modi	B.Sc.(Engg.) (REC, Rourkela), M.E. (UCE, Burla), Ph.D. (IIT Roorkee)	Power System Engineering, Power System Planning and Reliability, Distribution System Engineering
4.	Dr. Sidhartha Panda	B.E.(Bangalore University), M.E.(UCE, Burla/ SU), Ph.D. (IIT, Roorkee)	Power System Engineering.

## **ASSOCIATE PROFESSORS**

5.	Dr. Manish Tripathy	B.E. (NIT, Rourkela), M.E. (S.U.), Ph.D.(IIT Delhi)	Power System Engineering
6.	Dr. (Ms.) Banaja Mohanty (HOD)	B.Tech.(C.E.T, BBSR), M.Tech.(U.C.E, Burla), Ph.D(VSSUT, Burla)	Power System
7.	Dr. Siba Prasada Panigrahi	B. Tech (CET, Bhubaneswar), M.E. (NIT, Rourkela), Ph. D (Berhampur University)	Energy Management, Signal Processing
8.	Dr. Papia Ray	B. Tech. (Govt. Engg college, Bihar), M. Tech. (NIT Jamshedpur), Ph.D (I.I.T Delhi),	Power Systems

## **ASSISTANT PROFESSORS**

9.	Mr. Basanta Kumar Rana	ME (Integrated ) (Indian Institute of Science)	Real Time Hardware and Software
10.	Dr. Bidyadhar Rout	B.E. (IGIT, U.U.), M.E. (BESU, Howrah) Ph.D (VSSUT, Burla)	Control System Engineering
11.	Ms. Mamun Mishra	B. Tech. (BPUT), M. Tech. (VSSUT, Burla)	Power System Engineering
12.	Dr. Deepak Kumar Lal	B. Tech. (BPUT, Rourkela), M. Tech. (NIT Jamshedpur), Ph.D (VSSUT, Burla)	Power System
13.	Dr. Ramesh Ch. Prusty	B.Tech, M.Tech, Ph.D (VSSUT, Burla)	Power System Engineering
14.	Dr. Raseswari Pradhan	B. Tech. (IGIT Sarang) M. E. (Jadavpur University) Ph.D. (NIT, Rourkela)	Control System
15.	Dr. Rajat Kanti Samal	B.E (UCE Burla), M.Tech. (IIT, Roorkee), Ph.D (VSSUT, Burla)	Hydroelectric Systems
16.	Ms. Debidasi Mohanty	B. Tech. (VSSUT Burla), M. Tech. (NIT Trichy)	Power System
17.	Ms. Nutan Saha	B. Tech. (IGIT, Sarang) M. Tech. (IEST, Shibpur, Kolkata)	Power Electronics and Drives
18.	Dr. Rosy Pradhan	B. Tech. (CET, BPUT),	Control and Automation



		M. Tech. (NIT Rourkela) Ph.D (VSSUT, Burla)	
19.	Ms. Bineeta Soreng	B. Tech (CET, Bhubaneswar), M. Tech (NIT Rourkela)	VLSI Design and Embedded System
20.	Ms. Prangya Mohanty	B.Tech (B.P.U.T. Odisha) , M.Tech(N.I.T. Rourkela)	Power Electronics And Drives
21.	Mr. Amit Mallick	B.Tech (B.P.U.T), M.Tech (VSSUT)	Power System Engineering
22.	Mr. Pratyusha Pratik	B.Tech. (VSSUT, BURLA), M.Tech (IIT ROORKEE)	System and Control
23.	Ms. Sagarika Rout	B.Tech (B.P.U.T) M.Tech (VSSUT)	Power System Engineering
24.	Dr. Jatin Kumar Pradhan	B.Tech (VSSUT, Burla), M.Tech (NIT Rourkela)	Control System (Linear Control, Robust Control)
25.	Mr. K Sujita Kumar Achary	B.E. (VSSUT Burla), M.Tech. (NIT Tiruchirappalli)	Power System
26.	Ms. Bisaya Bhoi	B.Tech (IGIT Sarang) M.Tech. (VSSUT, Burla)	Power System Engineering
27.	Mr.Reddi Ganesh	B.Tech( MVGR Vizianagaram) M.Tech( NIT Durgapur) PhD continue( NIT Durgapur)	

### 3. Technical Staff details

Sl. No.	Name	Designation	e-mail address
1	Sri S.P.Tripathy	Comp.Prog.	sp_tripathy@rediffmail.com
2	Sri Deepak K.Biswal	Sr Instructor	deepak_uceelect@rediffmail.com
3	Sri.Akadesia Meher	Mech. Gr.I	
4	Sri.Surendra Swain	Mech. Gr.II	
5	Sri Manash Ranjan Nayak	Sr. Assistant	mrnayak_vssut@yahoo.com
6	Sri Sagar Ranjan Samal	Lab. Attendant	sagar.ranjan14@gmail.com
7	Sri Sanjib Ku. Jena	Jr. Instructor	jena.sanjib656@gmail.com
8	Sri Sameer Ku. Behera	Jr. Instructor	sameerb876@gmail.com
9	Sri Amit Ku.Sahoo	Jr. Instructor	amitsahoo78@gmail.com
10	Sri Mrutyunjay Das	Mech. Gr-III	mrutyunjaydas@gmail.com

### 4. Support staffs:

Sl.	Name	Designation
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**No.**

1	Sri.A.K.Rao	Head Peon
2	Sri. Parsu Haripal	Peon
3	Sri Upendra Padhan	Peon
4	Sri Sukanta Prusty	Watchman

**5. Courses offered:**

The Department of Electrical Engineering offers

Sl. No.	Program	course	Year of completion
1.	B.Tech	Electrical Engineering	Four
2.	Integrated Dual Degree	B.Tech. in Electrical Engineering (EE) and M.Tech. in Power System Engineering (PSE).	Five
3.	Executive B.Tech	Electrical Engineering with specialization in Power Engineering.	Four
4.	M.Tech	Electrical Engineering with specialization in a) Power System Engineering (NBA Accredited) b) Power Electronics Control & Drives c) Control & Instrumentation	Two
5.	Ph.D.	Doctor of Philosophy in all major fields of Electrical Engineering	

**6. Laboratory Details:**

The Department is constantly updating the various laboratories and the following laboratories are available to support students and faculty in research for various areas related to electrical engineering.

Sl.No.	Name of the Lab.	Major Equipment's
1	Electrical Machines Laboratory	DC shunt motor, DC compound motor, Slip-Ring Induction Motor, DC shunt motor and Alternator Set, DC Shunt Motor and Generator Set, DC Series Motor and Generator Set, DC Shunt Motor and Compound Generator Set, Single phase induction motor, Reluctance Motor, Three Phase Transformers, Single Phase Transformer, 1-Phase Variac's ,3-Phase Variac's Standard Volt meter, Ammeter, Wattmeter etc

2	Power Electronics and Drives Laboratory	IGBT,MOSFET,SCR & TRIAC Static characteristics study module SCR , MOSFET, IGBT Dynamic Characteristics Module R,RC, UJT triggering, Forced Commutation, Step Down Chopper, Boost Chopper, Series inverter, Three phase IGBT PWM Inverter, Three phase IGBT Four quadrant, DC chopper Single & Three phase SCR based half & fully controlled converter for DC motor drive, Cyclo-converter, Scientific color 100MHz 250MS/s, Real time (50GS/s equivalent time Digital storage C.R.O,L&T make 20MHz.Digital storage, Smart Grid and power system set up, integrated with PV panel, wind turbine and grid
3	Microprocessor & Microcontroller Laboratory	8086 microprocessor kits (LCD version), 8051 micro controller (LCD version),LCD interfacing with 8051, DAC, ADC interfacing with 8051, 8085 Microprocessor based relay testing kit, Stepper motor controller interface.
4	Network Devices Laboratory	choke coils, Single Phase Energy Meter, CRO's, Rheostats, Wattmeter's, Function Generators Spectral analyser of a non-sinusoidal wave form
5	Instrumentation and Control Laboratory	Kelvin's double bridge, Potential Transformers, Thermo Couple, Current transformers AC/DC modular servo system, P.I.D. Unit, Digital servo system, Traducer & instrumentation kit, Linear system simulator, Relay control system, Compensation design, P.I.D.controller, Digital Control, Programmable Logic Control (PLC) Trainer
6	High Voltage Laboratory.	100 kV AC testing transformer, 140 kV DC, 280 kV DC 2-stage 0.49KJ,140 kV Impulse Generator test set with all accessories,100mA, 100MHz 500Ms/s Digital storage Oscilloscope for impulse Voltage Measurement, Dielectric dissipation factor (Tan delta) & Specific resistance of Solid and liquid materials, BDV test transformer oil, Transformer turns ratio meter.
7	Power System Laboratory	Artificial transmission line,Cable fault locator,12bit 100KHz. FFT analyzer SM-2701, AC Network Analyser ,DC Network Analyser, Supervisory Control and Data Acquisition System (SCADA) trainer with Analog and Digital Modules, OPALRT, MATLAB, PSCAD, PSIM, DlgSILENT software
8	Computation Laboratory	Details of Computers and Softwares:  SystemConfiguration: 28Nos  Processor: Icore 5  RAM:2GB  HardDisk:40GB  Operating System: Microsoft Windows 8  Software's: MATLAB and Its Tool Boxes

		EMTDC/PSCAD ETAP, EMTP TC/VC++/VB++
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**Electrical Machines Lab.**



**Power Electronics Lab.**

#### 7. Details of Research Area of Faculty Members:

Sl. No	Name Faculty Members	Research Area	Award/Distinctions
1.	Dr. Bibhuti Bhusan Pati	Control System, Power System control, AUV Control	-
2.	Dr. Prakash Kumar Hota	Power System Operation and control, deregulation and Hybrid Generation Systems	State Gold Medal-1998, (1st prize in Electrical, Electronics & Computer Engineering Division) conferred by Orissa Engineering Congress for a research paper in 1998. Rajalaxmi Memorial Best Engineering College Teacher Award for Orissa State - 2002, given by The Indian Society for technical Education, New Delhi.
3.	Dr. Pawan Kumar Modi	Power System Planning and Reliability, Distribution System, Power System Optimization, Soft Computing Application	-

4.	Dr. Sidhartha Panda	Application of Soft Computing Techniques to Power System Operation and Control	-
5..	Dr. Manish Tripathy	Power Systems Dynamics, PSS, FACTs, Application Intelligent Techniques in Power System optimization and Control, Wind Power	-
6.	Dr.(Mrs.) Banaja Mohanty (HOD)	Power Systems	Best Paper award for 2019 International journal of modelling and simulation
7.	Dr. Siba Prasada Panigrahi	Energy Management, Signal Processing	
8.	Dr. Papia Ray	Power Systems & Power System Protection	
9.	Mr. Basanta Kumar Rana	Industrial Automation , Drives	
10	Dr. Bidyadhar Rout	Design and application of nonlinear controller in Power system stability	
11.	Ms. Mamun Mishra	Power Distribution System Planning & Control	
12.	Dr.Deepak Kumar Lal	Distribution System Planning & Operation Automatic Generation Control Economic Load Dispatch Renewable Energy Integration Power Quality	
13.	Dr.Ramesh Ch. Prusty	Power Systems	
14.	Dr.Raseswari Pradhan	Control Systems Engg.	
15.	Dr. Rajat Kanti Samal	Wind Power; Power Systems; Sustainable Energy	Certificate of Reviewing (Electric Power Systems Research) by Elsevier Reviewer Recognition, September 2019
16.	Mr. Debidasi Mohanty	Power Systems	
17.	Mrs. Nutan Saha	Power Electronics	
18.	Dr. Rosy Pradhan	Control & Automation	
19.	Ms. Bineeta Soreng	VLSI Design & Embedded Systems	

<b>20.</b>	Mrs. Prangya Mohanty	Power Control and Drives	
<b>21.</b>	Mr. Amit Mallick	Power System Engineering	
<b>22.</b>	Mr. Pratyusha Pratik	System and Control	
<b>23.</b>	Ms. Sagarika Rout	Power System Engineering	
<b>24.</b>	Dr. Jatin Kumar Pradhan	Control System (Linear Control, Robust Control)	
<b>25.</b>	Mr. K Sujita Kumar Achary	Power System	
<b>26.</b>	Ms. Bisaya Bhoi	Power System Engineering	
<b>27</b>	Mr.Reddi Ganesh		

## 8. Publication

		<b>Till 2018</b>	<b>2019</b>
<b>Conferences</b>	<b>International</b>	126	15
	<b>National</b>	7	3
<b>Journal</b>	<b>International</b>	173	32
	<b>National</b>	15	

## 9. Sponsored Research Projects (Ongoing):

<b>S.N.</b>	<b>Project Title</b>	<b>Principal Investigator</b>	<b>Project Duration</b>	<b>Amount (Rs. In Lakhs)</b>	<b>Funding Agency</b>
<b>1</b>	Assessment of wide-area measurement signal by computational intelligence techniques	Dr. Papia Ray	02 Years	15.46	DST
<b>2</b>	Modernization of electrical power system laboratory	Dr. A.K. Barisal	02 years	18.00	AICTE MODROB

## 10. Consultancy:

List of testing and R&D facilities available in the Deptt. of Electrical Engg.

- Measurement of dielectric loss factor ( $\tan\delta$ ), capacitance and permittivity of solid dielectric (up to 10 KV) using shearing bridge.

- Breakdown strength tests on solid, liquid and gaseous dielectrics using AC (100KV), DC (280 KV) and impulse (140 KV, 0.49 KJ, L.I.).
- Testing of dielectric strength of the insulating oil (transformer oil etc.) as per relevant I.S.S.
- Calibration and testing of energy meters as per relevant standards.
- AC Power measurement.
- Testing of dielectric strength of insulators:
  1. Dry / Wet flashover test.
  2. Dry / Wet flashover test with one minute withstand test as per relevant I.S.S.
- Testing of circuit breakers. (specification :230V / 400V, 0-100 A)
  1. Measurement of low resistance by Kelvin's double bridge(0-0.001 $\Omega$ )
  2. Measurement of insulation resistance of any equipment/ dielectric samples.
  3. Measurement of earth resistance.
  4. LCR Q-measurement.
  5. Wave form Analysis.

## 11. Other Information of the department

The faculty members have large numbers of research publications in international journals and have received international recognition. The Department has organized continuing education programs in the following areas for the benefit of the field engineers and the faculties of various institutions inside as well as outside the state.

- a) Power System Operation & Control
- b) Intelligent Systems and their Applications to Modern Power Networks
- c) Power Quality Issues
- d) Information Technology
- e) Power system Optimization
- f) Power Electronics and Drives
- g) MATLAB / SIMULINK
- h) Microprocessor, Digital Electronics, DSP, VLSL, Soft Computing,
- i) Control System Design and Analysis
- j) Power electronics control
- k) Renewable energy sources
- l) Micro-grid

# DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

## 1. About the Department:

The department of EEE is made functional with an aim to produce qualified engineers with sound knowledge in electrical engineering and a strong background in electronics. At present, it offers one undergraduate degree, B.Tech. in EEE. Initially, the department was established in year 2010, combined with existing Electrical Engineering department. It becomes operational as an independent department in year 2020. The department is offering an excellent academia environment to pursue B.Tech. in EEE, M.Tech. in control and instrumentation (C&I) engineering, and Ph.D. in experts available with department in specialized domain of research. This department also aims to establish itself as a forefront in R&Ds in the areas of Smart Grid, Power System Optimization, Power System Instrumentation, Industrial Automation, Smart Sensors, Robust Control, Image Processing, Digital Signal Processing, Industrial Communication, Biomedical Instrumentation, Internet of Things (IoT) & Cyber Physical System. The department have five ongoing research projects of worth more than ₹ 50 lakhs in its credit, funded by CPRI, Bangalore, Ministry of Power (MoP), Govt. of India and NPIU-MHRD, New Delhi.

Presently, the department has well-equipped state-of-the-art facility to test and calibrate the gas density sensor for SF6-GIS environment, funded by the Central Power Research Institute (CPRI), Bangalore, Govt. of India. The department also has some other sponsored project funded by NPIU-MHRD under TEQIP-III grant in the areas of IoT and Cyber Physical System, Image Processing, and Communication System engineering. In this way, the department has shown its deep involvement in industry-academia tie-up to solve some of real life for our society related to specialized domain of EEE in India. We are also aiming to establish different laboratories to augment the course works and enhance the experimental tests, validation, and research potentials such as Instrumentation & Sensors Lab (Masters), Control Lab (Masters), CAD Electrical, Signals & Systems Lab, Network Lab and Measurements and Instruments Lab.

Our more than 80% final year students have already been successfully offered for job by various companies, viz., L&T, Bhusan, Adani, Jindal, TCS, Infosys, Tech Mahindra etc. EEE students put their footprint at national and international level competitions from IITs, ISRO, BARC, HAL and Russian Federation. This glorious journey is kept on continuing by the students to achieve new heights. Further, Two of our faculties have been awarded Fellow position by the Institution of Engineers (India), Life Member by ISTE, India, and Senior Member by IEEE, USA. The department holds one Patent in its credit; adapted one international edition book for Indian subcontinent, published one more book, and also have credit of publishing numerous high standard journal papers by different publishing houses of national and international repute. Our faculties are actively involved in different working groups of international committees for the implementation of Standards and Protocols.

## VISION AND MISSION:



**Mission:** The graduates in Electrical & Electronics Engineering program of VSSUT Burla strives to create world class Electrical & Electronics Engineers by

- Imparting quality education to its students and enhancing their skills
- Encouraging innovative research and consultancy by establishing the state of the art research facilities through which the faculty members and engineers from the nearby industries can actively utilize the established the research laboratories
- Expanding curricula as appropriate to include broader prospective
- Establishing linkages with world class R&D organizations and leading educational institutions in Indian and abroad for excelling in teaching, research and consultancy
- Developing simple and appropriate technologies for rural areas and eventually contributing to sustainable development of the society

**Vision:** The graduates in Electrical & Electronics Engineering program of VSSUT Burla strives to be recognized globally for imparting outstanding technical education and research leading to well qualified truly world class leaders and to unleash technological innovations to serve the global society with an ultimate aim to improve the quality of life.

## 2. Faculty Details:

Name	Qualification	Specialization
<b><u>PROFESSORS</u></b>		
1. Dr. Rabindra Kumar Sahu	M.E., (S.U.), Ph.D (IIT Madras) FIE, LMISTE	Power System Engineering
<b><u>ASSOCIATE PROFESSORS</u></b>		
2. Dr. Gyan Ranjan Biswal, HOD	B.E., (Pt. RSU Raipur), M.Tech. (Honours), (CSV TU Bhilai) Ph.D., (IIT Roorkee) FIE, LMISTE, SMIEEE	Power System Automation; C&I Engineering
3. Dr. Santi Behera	B.Tech, (C.E.T, Bhubaneswar), M.E (Sambalpur University), Ph.D. (NIT, Rourkela)	Power system stability, Optimization techniques.
<b><u>ASSISTANT PROFESSORS</u></b>		
4. Ms. Sarmila Garnaik	B. Tech. (Utkal University), M. Tech. (UCE, Burla)	Communication System Engineering
5. Dr. Lingraj Dora	B. E., UCE, Burla), M. Tech., (VSSUT, Burla)	Communication System Engineering
6. Dr. Sasmita Behera	B.E. (UCE, Burla, SU), M. E (BPUT), Ph. D (VSSUT)	Power Systems
7. Mr. Bibhuti Prasad Sahoo	B. Tech (NIT, Rourkela), M.Tech (IIT Roorkee )	Measurement & Instrumentation

8.	Mr. Prasanta Kumar Parida	B. Tech. (UCE, BURLA), M. Tech. (VSSUT, BURLA)	Communication System Engineering
9.	Mr. Hemant Modi (TEQIP)	B.Tech. (NIT Meghalaya); M.Tech. (MNIT Jaipur)	Power Electronics and Drives
10.	Mr. Pothuraju Prabhu Kumar (TEQIP)	B.Tech. (KL University); M.Tech. (IIT Roorkee)	Power Systems

### 3. Courses Offered:

The Department of Electrical Engineering and EEE offers

- B.Tech. degree in Electrical and Electronics Engineering (EEE).
- M.Tech. degree in Electrical Engineering with specialization in Control & Instrumentation.
- Doctor of Philosophy (Ph.D.) in specialized research areas of EEE.

### 4. Laboratory Details:

The Department is in process of establishing following labs to provide hands-on experience to students, and also to support faculties in their research areas, related to EEE.

S. No.	Name of the Lab. (UG, BTech and PG, MTech)	Major Equipment
1	Network Theory Laboratory	Choke coils, Single Phase Energy Meter, CRO's, Rheostats, Wattmeter's, Function Generators Spectral analyser of a non-sinusoidal wave form.
2	Measurement and Instrumentation	Kelvin's double bridge, Potential Transformers, Thermo Couples, Current Transformers, Traducer & instrumentation kit: force, displacement, moisture, velocity measurement; Linear system simulator.
3	Analog and Digital Electronics	BJT basing kit; Power amplifiers kit; FET characteristics kit; Oscilloscope, Function generator, Transistor power supply; Digital IC trainer kit, FPGA kit, Xilinx kit.
4	Microprocessor & Microcontroller	8085 and 8086 microprocessors kits (LCD version), 8051 microcontroller (LCD version), LCD interfacing with 8051, DAC, ADC interfacing with 8051, 8085 Microprocessor based relay testing kit, Stepper motor controller interface.
5	CAD Electrical Apparatus	MATLAB & Simulink platform; OPEL-RT, hardware to be procured.
5	Signal & Systems I-and-II *	Performed using MATLAB & Simulink platform; hardware to be procured.
6	Communication System *	Performed using MATLAB & Simulink platform; hardware to be procured.

7	Control Systems (M.Tech.)	Digital Control, Programmable Logic Control (PLC) Trainer; PAC module, NI-cRIO, ELVIS-III, Inverted Pendulum
8	Instrumentation and Sensors (M.Tech.) **	Smart Sensors Testing and Calibration facility, Data Acquisition module, NI-cRIO, ELVIS-III, LabVIEW.

**NOTE:** All the labs are under procurement process of new equipment, both in terms of hardware and software after independently functioning as separate department from Jan. 2020.

\*\* The lab is sponsored in part under Research Scheme on Power (RSoP) by central power research institute (CPRI), Bangalore, Ministry of Power (MoP), Govt. of India, and also supported in part under

\* The lab is supported in part by NPIU-MHRD, TEQIP-III under Collaborative Research and Innovation (CRI) Scheme.

#### 5. Details of Research Area of Faculty Members:

S. No	Name Faculty Members	Research Area	Award/Distinctions
1.	Prof. Rabindra Kumar Sahu	Modeling, Simulation and Analysis of Power System Operation, and Control Automatic Generation, FACTS Devices Deregulation; Restructured Power Systems, and Application of Soft Computing in Electrical Engineering	Fellow of the Institution of Engineers (India), 2015 Received best paper award in IEEE International Conference on Circuit, Power and Computing Technologies (2013). MHRD, Govt. of India fellowship in 2000 and 2004.
2.	Dr. Gyan Ranjan Biswal, HOD	Power System Automation: Power Generations and Sub-station Automation (IEC 61850) Sustainable Sources of Energy (HFCs and Solar PV / Hybrid Energy Systems) Smart Monitoring: Smart Sensors, Intelligent Control and Internet of Things (IoT) and Cyber Physical System (CPS) in Micro-grid	<ul style="list-style-type: none"> <li>• Fellow of IE (India) in year 2019; Senior Member- IEEE, USA in year 2017, and Life Member of ISTE, India in year 2004.</li> <li>• Holds one Indian Patent; filed one more.</li> <li>• Adapted one international edition book, Digital Fundamentals, Pearson India.</li> <li>• Recipient of MHRD Fellowship, and Centre for International Cooperation in Science (CICS) jointly awarded by INSA-CSIR-DAE/BRNS-CICS.</li> <li>• Recognized as Outstanding Contributions in Reviewing by ISA Transactions and Int. J. Hydrogen Energy, Elsevier for the year 2017.</li> </ul>
3.	Dr. Santi Behera	Voltage stability using	State award: Institution

		intelligent techniques	prize 2019: Power quality analysis of the hybrid SPV-wind integrated system with the use of FC and STATCOM
4.	Ms. Sarmila Garnaik	VLSI Signal Processing (speech recognition)	
5.	Dr. Lingraj Dora	Medical Image Processing, Pattern Recognition, and Communication System Engineering	AI Techniques for Biomedical Engg. Appln., Lap LAMBERT Academic Publishing, Germany.
6.	Dr. Sasmita Behera	Power Systems	
7.	Mr. Bibhuti Prasad Sahoo	Power System Optimization, Measurement & Instrumentation	Awarded MHRD Fellowship, 2009-11
8.	Mr. Prasanta Kumar Parida	Image Processing and Computer Vision, Signal Processing	
9.	Mr. Hemant Modi	Power Electronics and Drives	Awarded MHRD Fellowship
10.	Mr. Pothuraju Prabhu Kumar	Power Systems	Awarded MHRD Fellowship

#### 6. Publications of the Department:

		Till 2018	2019
Conferences	International	65	16
	National	15	02
Journal	International	48	09
	National	16	
Book Chapters	International	17	05
	National		

#### 7. Sponsored Research Projects (Ongoing):

S. No.	Project Title	Principal Investigator	Project Duration	Amount (₹ In Lakhs)	Funding Agency
1	IEC 61850 complaint SFC monitoring system GW insulated switch gear Project code: RSOP/2017/TR/2/1962017	Dr. G.R. Biswal	02 Years	48.00	CPRI, Bangalore, MoP

2	Internet of things Driven Speed Control of Electrical Equipment(s) Vide. No. VSSUT/TEQIP/37/2020, dt. 16/01/2020	Dr. G.R. Biswal	01 Year	0.50	NPIU-MHRD, TEQIP-III
3	Medical Image Analysis using Deep Learning	Dr. L. Dora	01 Year	0.50	NPIU-MHRD, TEQIP-III
4	Image Classification using AI Techniques	Dr. L. Dora	01 Year	0.70	Seed Grant, TEQIP-II
5	Energy Management by improvement of PV generation dispatchability in isolated system and DC microgrid Sanction Letter No. VSSUT/TEQIP/35/2020 Dt. 16.01.2020	Dr. S. Behera	01 Year	0.45	NPIU-MHRD, TEQIP-III
6	Deep Learning for Medical Image Analysis	Mr. P. Parida	01 Year	0.50	NPIU-MHRD, TEQIP-III

## 8. Consultancy:

List of testing and R&D facilities available in the Deptt. of Electrical & Electronics Engineering (EEE)

- A sophisticated facility to test and calibrate the gas density leakage sensor to be withstand in 50-MV AC / 70-MV DC environment; specially designed for SF6-Gas Insulated Switchgear (GIS)/ Circuit Breaker environment.
- Necessary infrastructure to design and develop Smart plugs for rotating electrical devices.

## 9. Other Information of the department

- The Department has also organized different types of continuing education programmes, namely, STTP/STC/FDP etc. for the benefit of the field engineers and the faculties of various institutions inside as well as outside the state. Some of the lists of programs are as follows:
  - AICTE QIP Sponsored Short Term Course on “Intelligent Control and Sensing of Smart Grid and Smart Cities”, Duration: One Week (30.04.2018 to 05.05.2018). [Coordinator: Dr. Gyan Ranjan Biswal].
  - TEQIP-III Sponsored STC on “Modeling and Simulation of Electrical Systems using MATLAB/Simulink”, Duration: One Week (28.10.2019 to 02.11.2019). [Coordinator: Dr. Sasmita Behera]
  - AICTE Sponsored STTP on “Applications of Soft Computing in Power System”, Duration: One Week (02.12.2019 to 07.12.2019). [Coordinator: Dr. Sasmita Behera]
- Course Restructuration: New course curricular development; with effect from AY 2019-20
  - Dr. Sasmita Behera for B.Tech. – EEE and

- Dr. Gyan Ranjan Biswal for M.Tech. – C&I

# DEPARTMENT OF ELECTRONICS AND TELE-COMMUNICATION ENGINEERING

## 1. About the Department:

Electronics, particularly computer usage coupled with recent explorations has already crept into every sphere of human activities. Every industry, institution & organization feels the need of an Electronics Engineer. Advanced countries in the world have gone to such depths of electronics today that an Electronics Engineer is indispensable in every front. Opportunity in this highly sophisticated and advanced branch of engineering is immense. Keeping in view the need of the subject, the Electronics and Telecommunication Engineering Department of VSSUT, Burla offers quite an attractive up-to-date 4 year B.Tech Degree course, 2 year M.Tech Degree courses and Ph.D. programme. The students graduated from this department are now well-placed in important National and International organizations. The department organizes National conference, Symposia, Seminars, Exhibitions & Short term courses on advanced topics. The students of this department have own distinctions in All India Technical Students Meet for their technical paper presentation.

## 2. Faculty details :

Name	Qualification	Specialization
<b><u>PROFESSORS</u></b>		
1. Dr. Rutuparna Panda	B.Sc. (Engg.), M.Sc. (Engg), UCE Burla, Ph.D. (Engineering) (IIT, Kharagpur)	Communication, Signal Processing, Image processing
2. Dr. Umaranjan Jena	B.Sc. (Engg.) (UCE, Burla), M.Tech (III, KGP), Ph.D (Jadavpur University)	Computer Vision & Image Processing
<b><u>ASSOCIATE PROFESSORS</u></b>		
3. Dr. Nrusingha Prasad Rath	B.E., Ph.D (Jadavpur University)	Computer Vision & Recognition of Digital Images
4. Dr. Debasis Mishra	BE (University of Mysore), M.Tech (BHU), Ph.D (Engg.) (Jadavpur Univ.)	Microwave Engineering
5. Dr. Manoranjan Pradhan	B.E., M.E. (UCE, Burla), Ph.D (Sambalpur University)	Microprocessor, Digital VLSI Design, FPGA based design
6. Dr. Kabiraj Sethi (HOD)	B.Sc (Engg), (UCE, Burla), M.Tech (BPUT), Ph.D (Sambalpur University)	Communication System Engineering/VLSI Design
7. Dr. Sanjay Agrawal	B.E., M.E , (UCE, Burla), Ph.D (Sambalpur University)	Communication System Engineering / image processing
8. Dr. Harish Kumar Sahoo	B.E. (Utkal University), M.Tech. (N.I.T. Rourkela), Ph.D. (Sambalpur University)	Electronic Systems & Communication (MIMO OFDM Wireless Systems Adaptive Estimation)
9. Dr. Arunanshu Mahapatro	Diploma, BE, M. Tech, Ph.D (NIT Rourkela)	Wireless communication, Senior networks cognitive radio

10. Dr. Nilamani Bhoi	B.E. (UCE, Burla), M.E.(Jadavpur University), Ph.D (NIT, Rourkela)	Image Processing
11. Dr. Biswa Binayak Mangaraj	B.E. (UCE, Burla), M.E. & Ph.D (Jadavpur Univ.)	Antenna Analysis and design
<b><u>ASSISTANT PROFESSORS</u></b>		
12. Mr. Hrudananda Pradhan	BE (UCE, Burla), M Tech (NIT, Rourkela)	(Optimal antenna design) Antenna Engineering
13. Ms. Diptimayee Konhar	B.Tech, (UCE, Burla) M.Tech. (VSSUT)	Communication System Engineering
14. Dr. Bikramaditya Das	B.Tech, (BPUT, Rourkela), M.Tech (NIT, Rourkela), Ph.D (VSSUT)	Wireless Communication, Adaptive Control, Control of Underwater Vehicles, ROBOTICS
15. Mr. Bandan Kumar Bhoi	B.Tech (BPUT Odisha), M.Tech (IIIT Hyderabad)	Digital VLSI Design, Embedded system design, Quantum computing
16. Mr. Suvendu Narayan Mishra	B.E., (Utkal) M.Tech, (VSSUT)	Communication Systems Engineering
17. Mr. Aditya Kumar Hota	B.E.( S.U.), M.Tech.( VSSUT)	Communication System Engg., VLSI Design
18. Ms. Madhusmita Panda	B.Tech (JITM) M. Tech (BPUT), M.B.A (H.R)	Computer Science Engg.
19. Ms. Rasmita Sahu	B.E (S.M.I.T(BPUT), M.Tech (VSSUT)	Communication system Engineering
20. Ms. Lopamudra Ghadai	M.Tech. (VSSUT, Burla)	Digital signal processing
21. Ms. Sakambhari Mahapatra	B.Tech.(BPUT) M.Tech.(VSSUT)	Communication System Engineering
22. Mr. Manasa Ranjan Jena	B.Tech., M.Tech.( IIT Kharagpur)	Microelectronics and VLSI Design
23. Mr. Dharamvir Kumar	BE (IETE, New Delhi), M.Tech (ISM, Dhanbad)	VLSI
24. Mr. Ananda Kumar Behera	B.Tech. (BPUT), M.Tech (NIT Durgapur)	Tele Communication Engineering
25. Dr. Sheeja K. L.	B.E., M.Tech., (NIT Rourkela), Ph.D. (NIT, Rourkela)	Antenna Engineering
26. Ms. Sangeeta Sa	B.Tech (UCE Burla), M.E.(IISc Bangalore)	Telecommunication Engineering
27. Mr. Bijay Kumar Sa	B.Tech. (BPUT) M.Tech. (NIT Rourkela)	Communication & Signal Processing
28. Dr. Ashish Kumar Sharma	M.Tech (UTU Belgium), PhD (BITS Pilani, Rajasthan)	Communication System Engg., Microwave Devices
29. Ms. Tunirani Nayak	B.Tech (UCE Burla), M.Tech (ITER, SOA University)	Communication, Image Processing
30. Mr. Subrat Kumar Sethi	B.E., M.Tech.(IIT, Kharagpur)	Communication Engineering
31. Mr. Radhashyam Patra	B. Tech (VSSUT ) M.Tech (IIT-BHU Varanasi),	Signal Processing, Digital Techniques, Wireless communications

### 3. Courses offered :



(a) B.Tech : Electronics and Telecommunication Engineering

(b) M.Tech : (i) Communication Systems Engineering

(ii) VLSI Signal Processing

(iii) RF and Microwave Engineering

(c) Ph.D. : Doctor of Philosophy

**(d) Laboratory Details :**

Sl. No.	Name of the Lab	Major Equipments	Research Facilities
1.	Basic Electronics Laboratory	Analog/Digital storage CRO, 20/30 MHz CRO, 2MHz function/pulse generator, Analog & Digital multimeters, Multioutput power supply, PSPICE, TrainingKits	Equipment are used for UG & PGStudents
2.	Microprocessor Laboratory	Microprocessor trainer kits (8085,8086), Microcontroller trainer kits (8051), Interfacing cards	Hardware and Softwareare used for UG & PGStudents
3.	Analog & Digital Electronics circuits Laboratory	Analog/Digital storage CRO, 20/30 MHzCRO, 5MHz function/pulse generator, Analog & Digital multimeters, Multioutput power supply, Bread boards withfunction generator	Hardware are used for UG & PGStudents
4.	Communication Laboratory	Analog/Digital storage CRO, Signal Analyzer, Satellite communication kit, Radar trainer kit, Kits for Analog and Digital Communication, PCs with LABVIEW software	Hardware and Softwareare used for UG & PGStudents
5.	Microwave Laboratory	Microwave Test Benches, Microstrip Antenna trainer, PCs withHFSS (CAD tool) RF signal generator, spectrum Analyser	Hardwares and Softwaresare used for UG, PG, Ph.DStudents
6.	EDA Lab.	PCs with software like Cadence, Visual TCAD, Symica	Softwareare used for PG, Ph. DStudents

7.	VLSI Lab.	PCs with software like Vivado , PSpice, Microwind, FPGA trainer kits	Hardware and Software are used for UG & PG Students
8.	TSE Lab.	PCs with MATLAB, Online Image Software	Software are used for PG, Ph. D Students

## 5. Details of research area of Faculty members

Sl. No.	Name of the Faculty member	Research Area
1	Dr. Rutuparna Panda	Communication, Signal Processing, Image processing
2	Dr. Uma Ranjan Jena	Computer Vision & Image Processing
3	Dr. Nrusingha Prasad Rath	Computer Vision & Recognition of Digital Images
4	Dr. Debasis Mishra	Microwave Engineering, Microstrip Antennas, Metamaterials
5	Dr. Manoranjan Pradhan	Microprocessor, VLSI design
6	Dr. Kabiraj Sethi	Communication System Engineering, VLSI Design
7	Dr. Sanjay Agrawal	Communication System , Image processing
8	Dr. B. B. Mangaraj	Antenna Analysis & Design
9	Dr. Nilamani Bhoi	Image Processing
10	Mr. Hrudananda Pradhan	Optimal Antenna Design
11	Ms. Diptimayee Konhar	Microwave and Antenna Engineering
12	Dr. Bikramaditya Das	Wireless Communication, Adaptive Control, Control of underwater Vehicles, ROBOTICS
13	Mr. Suvendu Narayan Mishra	RF Devices, Antennas, Computational EM
14	Mr. Bandan Kumar Bhoi	Digital VLSI Design, Embedded system design, FPGA based design
15	Mr. Aditya Kumar Hota	VLSI Design and embedded systems
16	Ms. Madhusmita Panda	Wireless Communication, Adaptive Control
17	Ms. Rasmita Sahu	Microwave and Antenna Engineering
18	Ms. Lopamudra Ghadai	Digital signal processing
19	Ms. Sakambhari Mahapatra	Signal Processing, Image processing
20	Mr. Manasa Ranjan Jena	Microelectronics and VLSI Design
21	Mr. Dharamvir Kumar	Digital VLSI Design

22	Mr. Ananda Kumar Behera	Array antenna, Microstrip antennas, Computational EM
23	Dr. Sheeja K. L.	Antenna Engg., Metamaterials Antennas, Fitternas
24	Ms. Sangeeta Sa	Telecommunication
25	Mr. Bijay Kumar Sa	Communication & Signal Processing
26	Dr. Ashish Kumar Sharma	RF & Microwave Communication
27	Ms. Tunirani Nayak	Communication & Signal Processing
28	Dr. Arunanshu Mahapatro	Wireless Sensor Networks
29	Dr. Harish Kumar sahu	Channel estimation and equalization in MIMO Wireless system, Adaptive System Identification, Neural Networks
30	Mr. Subrat Kumar Sethi	<b>Wireless Communication</b> , Wireless Sensor Networks
31	Mr. Radhashyam Patra	Signal Processing, Digital Techniques

#### 6. Other information of the Department:

Apart from the regular faculty members, following two faculty members are engaged in the department under TEQIP-III program.

1. Mr. Amaresh Kumar Sahoo
2. Mr. Imtiyaz Khan

There are four numbers of permanent technical staffs and three numbers of non-teaching employees are working and are listed in the following table:

S/L NO.	Name	Designation
1	Mr. Tapas Ranjan Mohanty	Senior Instructor
2	Mr. Suraj Kumar Mishra	Junior Instructor
3	Mr. Ramji Dehury	Junior Instructor
4	Mr. Surya Kanta Sahoo	Mechanic
5	Mr. Narendra Kumar Parida	Laboratory Attendant
6	Mr. Rama Chandra Sahoo	Treasury Sarkar
7	Mr. Pramod Kumar Swain	Peon

The department offers facilities for advanced research and has already awarded Ph. D degree to twelve no. of scholars. The faculty members are also pursuing research work regularly leading to publications in national and international journals to their credit. The department has a library of its own with a good number of books along with IEEE magazines & journals to help the students. The department has a society named "Electronics & Telecommunication Engineering Society" for the students. The department conducts annual national level student seminar "Techtronix" in addition to regular training programs in electronics related subjects in collaboration with institute of national importance & industries.

# DEPARTMENT OF HUMANITIES

## 1. About the Department:

The Department of Humanities was founded in 1956. It is a multi-disciplinary department having three disciplines: Economics, English and Organizational Behaviour. The Department of Humanities plays a unique and distinctive role in an institute where the ethos of science and technology prevails. It is believed that engineering and science are, by their very nature, humanistic and socially derived enterprises. Hence a complete science and technology education must include liberal arts, economics, social and behavioural sciences where the students unite application of scientific principles along with human, moral and social understanding.

The undergraduate courses taught by the department aim at making the science and technology students aware of the various issues concerning man and society. They are meant to sensitize students to the broader social, cultural, economic, ethical and human issues involved in social changes. The vision of the department is to be the centre of excellence in the field of education with creative learning.

## 2. Faculty details :

Name	Qualification	Specialization
<b><u>ASSOCIATE PROFESSOR</u></b>		
1. Dr. Jayaprakash Paramaguru	M.A., Ph.D (English)	Linguistics & Translation
<b><u>ASSISTANT PROFESSORS</u></b>		
2. Mrs. Ashapura Dash	M.A., M.Phil. (English), MBA (HR & BIM)	Linguistics
3. Mr. Prasant Barla	MBA	HR & Marketing
4. Dr. Prasanta Kumar Padhi	MA (BU), MPhil (BU), Ph.D (UU), PGDTE(CIEFL, Hyd)	Black American Women Writing, Business Communication, Cross Cultural Communication
5. Mr. Chandramani	MA (B.U.), M.Phil (B.U.) Ph.D (B.U.)	Indian and Canadian Literature, Feminism
6. Mr. Auro Kumar Sahoo	M.A (U.U.), M. Phil (Pondicherry Central University), Ph.D (IIT, Bhubaneswar)	Productivity and Efficiency, Applied Econometrics, Micro Economics

## 3. Course offered :

- i) For B.Tech. :

ii) Ph.D in English

**Laboratory details :**

SI No.	Name of the Lab	Major Equipments
1	Language Laboratory	Skill Junction, Head phones, USER SETS, Camera, Projector

**5. Details of research area of faculty members :**

SI No.	Name of the faculty	Research Area
1	Dr. Jayaprakash Paramaguru	Translation, British Literature, Linguistics
2	Mrs. Ashapurna Dash	Indian writings, Women writing, Linguistics
3	Mr. Prasanta Barla	HR & Marketing
4	Dr. Prasanta Ku. Padhi	Black American writing, Women writing

## DEPARTMENT OF INFORMATION TECHNOLOGY



### 2. About the Department:

In recent years, the challenges before the educational institutes are manifold. It will have to cope with fast changes in technology simultaneously, training more students with adequate information with less availability of financial support for expansion and excellence.

To meet these challenges, the University introduced a new 4 year B.Tech. Course in Information Technology which is the latest emerging area in the present generation. The course was duly approved by AICTE and offered by the University from the academic session 2003-2004 on self financing basis. Presently, the department offers the following courses.

- B.Tech. degree in Information Technology (IT)
- M.Tech. degree in Information & Communication Technology (ICT)
- M.Tech. degree in Computer & Information Technology (CIT)
- Ph.D. (Engg.) Programme in Information Technology

### MISSION

1. To provide quality education to the students to have a clear, concise conceptual understanding of the basic theories and principles of the subjects.
2. To provide best in class learning ambience to enhance the logical & analytical skills, and to prepare the students for higher studies, research and continuous contribution to technical field.
3. To provide exposure of latest tools and technologies in the area of engineering and technology to provide sustainable and cost effective solutions.
4. To allow students to work in team to explore their leadership Quality, Interrelationship skills and interest to their full intellectual potential and ability.
5. To create socially responsible citizens having ethical students.

### VISION

The Department of Information Technology aspires to emerge as a center of scholastic excellence in the field of academic and research as in to meet the global requirements through imparting quality technical

education, research expertise and ethical values in a direction that would inspire and encourage students to generate value based output to the society government, industry and academia in terms of technical and professional expertise, skill sets, creativity with a blend of leadership and entrepreneurial expertise.

#### **Faculty Details :**

<b>Name</b>	<b>Qualification</b>	<b>Specialization</b>
<b><u>ASSOCIATE PROFESSORS</u></b>		
1. Dr. Himanshu Sekhar Behera	M.E., (N.I.T, Rourkela) Ph.D. (B.P.U.T, RKL)	Data Mining, Computational Intelligence, Soft Computing & Evolutionary Computation, Pattern Recognition, Distributed System
2. Dr. Manas Ranjan Senapati (H.O.D)	Ph.D (BPUT)	Data Mining, Big data Analysis, Pattern Analysis, Clustering, Classification.
3. Dr. Pradip Kumar Sahu	B. E. ( VSSUT, Burla), M. E. (Jadavpur University), Ph. D (IIT Kharagpur)	Embedded Systems, VLSI, NoC, SoC, Computer Architecture, Microprocessor
4. Dr. Satyabrata Das	B.E, M.Tech., Ph.D, MBA (Systems)	Information & Communication Technology
<b><u>ASSISTANT PROFESSORS</u></b>		
5. Dr. D. Chandrasekhar Rao	B. Tech. (BPUT, Rourkela), M.Tech.(BPUT, Rourkela) Ph. D. (VSSUT, Burla)	Peer to Peer Network, Theory of Computation, Compiler Construction, Computer Network, Cryptography, Soft Computing, Robotics
6. Mr. Kishore Kumar Sahu	B.Tech, (BPUT), M.Tech. (BPUT)	Machine Learning, Data Mining, Computational Intelligence, Formal Languages, NLP, Cloud Computing
7. Ms. Sasmita Behera	B.Tech (U.C.E, Burla), M. Tech (NIT Rourkela)	Computer Organization and Architecture, Computer networking
8. Mr. Sujaya Kumar Sathua	B. Tech. (VSSUT Burla), M. Tech. (NIT Rourkela)	NLP, Text mining and image processing
9. Mr. Gyanaranjan Shial	B. Tech (VSSUT, Burla), M. Tech. ( IIT Bombay)	Data Mining, Soft Computing, Information Retrieval, Pattern Recognition
10. Dr. Pradipta Kumar Das	B.Tech., (North Odisha Univ.), M.Tech (Jadavpur University) Ph.D. (VSSUT, Burla)	Machine Intelligent and Computer Vision, Emotional Intelligent, Robotics, Video processing
11. Ms. Gargi Bhattacharjee	B.Tech (BPUT), M.E (BIT Mesra)	Software Engineering, Computer Graphics and Cryptography

- |     |                             |   |                          |
|-----|-----------------------------|---|--------------------------|
| 12. | Mr. Atul Vikas Lakra        | B. Tech. (UCE Burla),<br>M. Tech. ( MNIT Allhabad)                      | <b>Cloud Computing</b>   |
| 13. | Mr. Suresh Kumar Srichandan | B.Tech (UCE, Burla),<br>M.Tech (VSSUT)                                  | <b>Computer Networks</b> |
| 14. | Dr. Kshiramani Naik         | B. E. (UCE, Burla),<br>M. Tech. (NIT Rourkela),<br>Ph. D. (IIT Dhanbad) | <b>Image Processing</b>  |

**5. Technical Staff Details:**

Name	Designation	Qualification
Mr. Devi Prasanna Kanungo	Junior Instructor	B. Tech. (BPUT), M. Tech. (VSSUT Burla)
Mr. Sujit Mohapatra	Junior Instructor	MCA (Utkal University) (UGC-NET Qualified)

**6. Support Staff:**

Name	Designation
Mr. Pravat Kumar Swain	Office Assistant
Mr. Dolamani Swain	Office Attendant
Mr. Ratha Sendria	Sweeper

**7. Courses Offered:**

- (a) B.Tech. in Information Technology
- (b) M.Tech. Spec : Information & Communciation Technology (ICT)
- (c) M.Tech. Spec : Comp. & Information Technology (CIT)
- (d) Ph.D. (Engg.)

**8. Laboratory Details :**

Sl.No.	Name of the Lab	Major Equipment	Research Facilities
1.	Computing Lab - II	28 Nos. of HP Intel Core i7 @3.4 GHz, 4 GB DDR3 RAM, 500 GB 7200rpm HDD, Windows 8 Professional OS (406 G1) desktops  Server: 01 Number  Software:  IBM Rational Rose  Matlab-2019a	Computational Laboratory, Data Structure, etc
2.	Simulation Laboratory	0 Nos. of Intel Core i7 processor under Windows 8 Platform  Server: 01 Number	Microprocessor& Microcontroller, Modeling and  Simulation& Database



3.	M.Tech. & Research Laboratory	20 Nos. of HP ALL in one system	Research and M.Tech. dissertation
4.	Advanced Computing Laboratory (New Laboratory)	30 Nos. of HP Desktop 406-MT-i7 processor 4 GM RAM, 500 GB HDD  15 Nos. of IoT kits	IoT, APLAB, etc



**Computing Laboratory – II**



**Simulation Laboratory**

#### **9. Details of Research area of faculty member and awards /distinctions**

SL. NO.	NAME OF FACULTY	DESIG-NATION	SPECIALIZATION	AWARDS/DISTINCTION
1	Dr.H.S.Behera	Associate Professor	Data Mining Computational Intelligence Soft Computing & Evolutionary Computation Pattern Recognition Distributed System	<b>Distinguished Scientist Award</b> (Nomination code - RA16ENNC829 and the Award Code - EN/DSA/Data Mining/AAP - III.) Vide F. No VIF/INV/ARM/2016 (AAP-II) Nov 11, 2016at Annual Research Meet-ARM 2016 (for development and innovation in the areas of Research and Development) by Venus International Foundation, (Estt. u/s Indian Trusts Act 1882 /ISO 9001:2008 Certified), Chennai, Tamil Nadu- 600088.

				Listed in 32nd Edition (2015 32nd Edition). of <b>Who's Who in the World</b> 32nd Edition, " <b>Marquis Who's Who</b> " USA. VIP Number: 36823026
2	Dr.ManasRanjanSenapati	Associate Professor	Data Mining Big data Analysis Pattern Analysis Clustering Classification.	Fellow of the Institution of Engineers India, 2015
3	Dr.Pradip Kumar Sahu	Associate Professor	Embedded Systems VLSI NoC SoC Computer Architecture Microprocessor	
4	Dr.Satyabrata Das	Associate Professor	Distributed System Mobile Computing & Networks Real Time Systems Fault Tolerant Computing	<b>Best Teacher Award by ISTE-2014 (Odisha, BBSR Chapter)</b> <b>SandeepMohapatra Memorial Award- 2016. The Institution of Engineers(India), Odisha State Centre, Bhubaneswar</b>
5	Dr. D. Chandrasekhar Rao	Assistant Professor	Peer to Peer Network Computer Network Soft Computing Robotics	Awarded by Wipro Technologies "In pursuit of Excellence in Engineering Education through Innovation" in 2011.
6	Mr. Kishore Kumar Sahu	Assistant Professor	Data Mining Computational Intelligence Formal Languages NLP Cloud Computing	
7	Ms.SasmitaBehera	Assistant Professor	Computer Organization and Architecture Computer networking	
8	Mr.Sujaya Kumar Sathua	Assistant Professor	NLP, Text mining and image processing	IEEE brand ambassador 2018
10	Mr.GyanaranjanShial	Assistant Professor	Data Mining, Soft Computing, Information Retrieval, Pattern Recognition	

10	Dr.Pradipta Kumar Das	Assistant Professor	Machine Intelligent and Computer Vision Emotional Intelligent Robotics Video processing	
11	Ms.GargiBhattacharjee	Assistant Professor	Software Engineering Computer Graphics and Cryptography	
12	Mr.AtulVikasLakra	Assistant Professor	Cloud Computing	
13	Mr. Suresh Kumar Srichandan	Assistant Professor	Computer Networks	
14	Dr.KshiramaniNaik	Assistant Professor	Image Processing	

#### 10. Publications

		Till 2018	2019
<b>Conferences</b>	<b>International</b>	16	04
	<b>National</b>		
<b>Journal</b>	<b>International</b>	35	14
	<b>National</b>	02	
<b>Book</b>	<b>International</b>		02
	<b>National</b>		

# DEPARTMENT OF MATHEMATICS

## 1. About the department :

The department was established in 1956. Since then it has always shared the vision of the University in striving for excellence in research and teaching activities and has succeeded in this endeavour to a large extent. Over the years, the department has evolved as one of the premier departments in the Odisha State providing excellent teaching and research in Mathematics.

The department offers M.Sc., M.Phil, Ph.D. programmes besides its basic responsibility of offering Mathematics course to B.Tech. and M.Tech. students.

The vibrant academic environment is nurtured by strongly motivated well qualified faculties and provides an opportunity to pursue research in front line areas of basic sciences as well as in interdisciplinary areas of science and technology. In the coming decade, apart from the existing areas, the department intends to develop areas related to mathematical aspects of computing science in all its manifestations.

Our vision is to foster in mathematical education and research, technical excellence, well poised between abstraction and application.

## 2. Faculty Details :

Name	Qualification	Specialization
<b><u>PROFESSOR</u></b>		
1. Dr. Jayaprakash Panda	M.Sc., Ph.D. (Utkal)	Fluid Dynamics, Numerical Analysis
<b><u>ASSOCIATE PROFESSORS</u></b>		
2. Dr. Mahendra Kumar Jena	M.Sc.(Sambalpur Univ.), Ph.D (IIT Kanpur), PDF(IIT Bombay) IHPC Singapore	Spline Analysis, Wavelet Analysis, Computer Aided Geometric Design
3. Dr. Susanta Kumar Paikray (H.O.D)	M. Sc. & M. Phil. (Ravenshaw Univ.); Ph. D (Berhampur Univ.)	Summability Theory, Fourier Series, Operations Research, Graph Theory.
<b><u>ASSISTANT PROFESSORS</u></b>		
4. Dr. Saroj Kumar Padhan	M.A. (Sambalpur Univ.), M.Phil(Sambalpur Univ.), Ph.D (IIT Kharagpur)	Optimization, Functional Analysis, Fractional Calculus
5. Dr. Itishree Nayak	P.G.(Utkal Univ.), M.Phil (Utkal Univ.) Ph.D (Utkal Univ.)	Numerical analysis,numerical solution of partial differential equation
6. Dr. Ashok Kumar Sahoo	M.Sc.(Maths), M.Phil(Maths), M.Tech., Ph.D (Utkal Univ.)	Complex Analysis
7. Dr. Smrutiranjana Mohapatra	M.Sc. (S.U.) Ph.D (IIT Guwahati), PDF (IISc. Bangalore)	Interaction of waves with submerged structure(s), Water wave problems with floating elastic plate(s), Flows in porous media
8. Mr. Niran Meher	M.Sc. (IIT Bombay)	Functional Analysis, Numerical Analysis
9. Dr. Amit Ku. Sharma (TEQIP Sponsored)	M.Sc. (Utkal University) Ph.D. (IIT Delhi)	Algebraic coding Theory
10. Dr. Dillip Kumar (TEQIP Sponsored)	M.Sc. Ph.D (BHU)	Fluid Dynamics

### 3. Courses Offered :

- (a) **B.Tech.** : Mathematics I, Mathematics II, Mathematics III, Mathematics IV (Common to all Branches)
- (b) **MCA** : Discrete Mathematics (1<sup>st</sup> semester), Quantitative Techniques (2<sup>nd</sup> Semester)
- (c) **M.Sc.** : 2 year M.Sc. in Applied Mathematics, 5 Year Integrated M.Sc. in Mathematics
- (d) **M.Phil** : 1 year M.Phil in Mathematics
- (e) **Ph.D.** : Ph.D in all areas of Mathematics

Research Methodology, a compulsory subject for Ph.D. Course work for the research scholars of all branches of science and engineering is being offered by Mathematics department.

### 4. Details of research areas of faculty members :

Sl.No	Name of the Faculty member	Research Area
1	Prof. J. Panda	Fluid Dynamics, Numerical Analysis
2	Dr. M.K. Jena	Spline Analysis, Wavelet Analysis, Computer Aided Geometric Design
3	Dr. S.K. Paikray	Fourier Series, Graph Theory, Optimization
4	Dr. S.K. Padhan	Functional Analysis, Optimization, Fractional Calculus
5	Dr.(Mrs.) I. Nayak	Computational Fluid Dynamics
6	Dr. A.K. Sahoo	Complex Analysis
7	Dr. S.R. Mohapatra	Integral Equation, Special Function

### 5. Sponsored Research Projects (Ongoing) :

Use of Integral equation on Problems of Scattering of Waves in a two dimensional Fluid Principal investigator –  
**Dr. S.R. Mohapatra**

Sponsoring Agency – **DST SERB**

# DEPARTMENT OF MECHANICAL ENGINEERING

## 1. About the Department:

Department of Mechanical Engineering came into existence in 1956 as one among three engineering branches of University College of Engineering Burla. Since its inception, the department has constantly focused in developing the academic excellence of the students in Mechanical Engineering and also in various research activities. Over the years, this department has produced eminent technocrats who are engaged in important positions all over the globe. Producing best graduates who proved themselves worthy to society, is one of the major strengths of the department. Students of this department are performing very well in competitive examinations such as GATE, GRE, CAT, UPSC etc. Students are placed in a number of responsible positions and many of them are pursuing their higher studies in prestigious institutes of the country like IISc Bangalore, IITs, NITs, IIITs, IIMs and abroad. Moreover, the Department has a rich pool of faculties with expertise in their respective areas who are engaged in large number of sponsored R & D projects and consultancy works. The curriculum of this branch is designed in such a manner that it covers the most recent trends in technology to keep pace with the international standards. This department has produced highly motivated professionals (around 4000) to serve the humanity both nationally and internationally, with excellence. So far, this branch has produced over 450nos. of M. Tech and 24 nos. of Ph.D. students. Currently two of the Master's degree specializations i.e., Machine Design & Analysis and Production Engineering, are NBA accredited by AICTE upto 2021.

### **Mission:**

Mechanical Engineering Department of VSSUT Burla strives to impart quality education to the students with enhancement of their skills to make them globally competitive through:

- Maintaining state of the art research facilities to provide conducive environment to create, analyze, apply and disseminate knowledge.
- Fortifying collaboration with world class R&D organizations, educational institutions, industry and alumni for excellence in teaching, research and consultancy practices to fulfil 'Make In India' policy of the Government.
- Providing the students with academic environment of excellence, leadership, ethical guidelines and lifelong learning needed for a long productive career.

### **Vision:**

To be recognized as a center of excellence in education and research in the field of mechanical engineering by producing innovative, creative and ethical mechanical engineering professionals for socio-economic upliftment of society in order to meet the global challenges.

## 2. Faculty Details:

<b>Name</b>	<b>Qualification</b>	<b>Specialization</b>
<b><u>PROFESSORS</u></b>		
1. Prof. Jaydev Rana	BE (HONS) (UCE BURLA), ME (HONS) (UCE BURLA) Ph.D(IIT Kharagpur)	Production Engg.
2. Dr. Pusparaj Dash	B.Sc. (Engg.) (UCE Burla), M.Sc. (Engg.)( REC Rourkela) Ph.D (IIT Kharagpur)	Machine Design and Vibration
3. Dr. Jyoti Ranjan Mohanty (HOD)	BE (IGIT, Sarang), ME (REC Rourkela), Ph.D (NIT Rourkela)	Machine Design; Fatigue & Fracture; Composite Material
<b><u>ASSOCIATE PROFESSORS</u></b>		
4. Dr. Bibhuti Bhusan Pani	B.S. and M. S. (St. Petersburg State Polytechnical University, Russia), Ph.D (Engg.), IIT Kharagpur	Metal Forming, Powder Metallurgy
5. Dr. Saroj Kumar Sarangi	B. E. (UCE Burla), M.Tech. (NIFFT Ranchi) , Ph.D (IIT Kharagpur) Post Doc. Research (NCKU Taiwan)	CVD Diamond Coating, High Speed Machining, Joining metal-Ceramics
6. Dr. Sumanta Panda	B.Tech (UCE Burla), M.Tech (IIT Delhi), Ph.D- Sambalpur University	Robot Mechanism, Condition Monitoring, Bearing Dynamics
7. Dr. Prasanta Kumar Pradhan	BTech (UCE Burla), MTech (IIT Guwhati), Ph.D (IIT Kharagpur)	Machine Design
8. Dr. Chitta Ranjan Deo	B.E.: (OEC Bhubaneswar), ME (REC Rourkela), Ph. D (NIT Rourkela)	Composite Material
9. Dr. Punyapriya Mishra	B.Tech (UCE, Burla), M.Tech (NIT Rourkela), Ph.D - NIT Rourkela	Production Engg.
10. Dr. Padmanav Dash	BE (JIET Cuttack), ME (IEST, Shibpur), Ph.D (IIT Kharagpur)	Solid Mechanics
11. Dr. Sarojrani Pattnaik	B.Tech ( KIIT University), M.Tech (CET Bhubaneswar, Ph.D.(IIT Roorkee)	Production Engineering
12. Dr. Prakash Chandra Mishra	BE (IGIT Sarang), M.Tech (IIT Delhi), Ph.D (Loughborough University), Post Doc.I; Loughborough University	Engine Tribology; Emission; Friction Modeling
13. Dr. Aurovinda Mohanty	B.E. (IGIT Sarang), ME (IIT Kanpur), Ph.D. (IIT, Khargpur)	Fluid & Thermal Science
<b><u>ASSISTANT PROFESSORS</u></b>		
14. Dr. Pandaba Patro Reader	B.E.(Berhampur University), M.Tech (IIT Guwahati), Ph.D ( IIT Kharagpur)	Thermal (Heat Power)
15. Dr. Hrushikesh Barik Reader	B.Tech (UCE Burla), M.Tech (UCE Burla), Ph.D (IIT Bombay)	Thermal Engineering (Gas dynamics, Computational Fluid Dynamics)
16. Mr. Debasish Tripathy	BE, (OEC,Bhubaneswar), M.Tech. (IIT (BHU)	Machine Design
17. Mrs. Sunita Singh Naik	B. Tech.(UCE, Burla), M.Tech. (VSSUT, Burla),	Production Engg.
18. Dr. Swagatika Mishra	B.Tech. (BPUT, Rourkela), M.Tech (BPUT, Rourkela), Ph.D (NIT Rourkela)	Industrial and Production Engg.
19. Dr. Prabir Kumar Jena	B. Tech (OEC, Bhubaneswar), M.Tech (N.I.T Rourkela), Ph.D. (NIT, Rourkela)	Thermal Engineering

20.	Mrs. Janaki Dehury	B. Tech (VSSUT, Burla), M.Tech (NIT, Rourkela)	Production Engineering
21.	Dr. Pragyan Paramita Mohanty	B.Tech (OSME, Keonjhar), M. Tech. (JNTU, Hyderabad, Ph.D (NIT Rourkela)	Manufacturing Science
22.	Dr. Debasmita Mishra	B.Tech (JITM, Parlakhemundi), M.Tech (UCE Burla), Ph.D (NIT,Rourkela)	Thermal Engineering
23.	Mr. Johnson B Lakra	B.Tech (VSSUT Burla), M. Tech (IIT Madras)	Mechanical Design
24.	Dr. Mihir Kumar Sutar	B.Tech (IGIT Sarang), M.Tech (NIT Rourkela), Ph.D (IIT Roorkee)	Machine Design, Robotics
25.	Dr. Madhusmita Pradhan	B.Tech (OSME, Keonjhar), M.Tech. (VSSUT, Burla), Ph.D. (VSSUT, Burla)	Machine Design and Analysis
26.	Mr. Layatitdev Das	B.Tech (CET, Bhubaneswar), M.Tech (NIT Rourkela)	Machine Design and Analysis
27.	Mr. Shasanka Sekhar Dalai	B.Tech (IGIT, Sarang), M.Tech (IIT Madras)	Applied Mechanics
28.	Dr. Priyadarshi Tapas Ranjan Swain	Ph.D. (NIT, Rourkela)	Thermal Engineering
29.	Mr. Santosh Kumar Sahu	B.Tech (BPUT), M.Tech (NIT Rourkela),	Production Engineering
30.	Dr. Kiran Kumar Ekka	B.Tech (UCE, Burla) M.Tech (NIT, Hamirpur) Ph.D (NIT, Hamirpur)	CAD CAM
31.	Dr. Abhilash Purohit	B.Tech. (PKAC Bargarh) M.Tech. (NIT Rourkela) Ph.D (NIT Rourkela)	Production Engineering
32.	Mr. Swgat Dwivedi	B.Tech. (VSSUT Burla) M.Tech. (IIT Guwahati)	Production Engineering

### 3. Technical Staff Details:

Sl No	Name	Qualification	Specialization
1.	Mr. Bijaya Kumar Bhoi	Diploma	Machine Design/Production Engg.
2.	Mr. Ashok Samal	Diploma	Machine Design
3.	Mr. Sushant Kumar Acharya	Diploma	Thermal Engineering
4.	Mr. Guptanchal Rath	M.Tech.	Thermal Engineering
5.	Mr. Akshaya Kumar Meher	ITI	Senior Steno
6.	Mr. Jashi Bhushan Pradhan	Diploma	Thermal Engineering
7.	Mr. Sanjay Jagat	ITI	Mechanical Engineering

### 4. Support Staff Details

Sl No	Name	Qualification
1.	Mr. Brundaban Rath	Senior Steno
2.	Mr. Pramod Kumar Bhoi	Printer
3.	Mr. Jhatu Sahu	Peon
4.	Mr. Suresh Chandra Nayak	
5.	Mr. Bhabani Shankar Barik	Peon
6.	Mr. Maheswar Haripal	Peon



## 5. Courses offered:

SL. No.	Program	Degree/Specialization	Intake	Year of Establishment
1	B.Tech	Mechanical Engg.	120	1956
2	M.Tech.	Machine Design & Analysis	18	1972
3		Production Engineering	18	
4		Heat Power Engg.	18	
5	Ph.D.	Mechanical Engineering	-	2010

## 6. Laboratory Details :

Sl. No.	Name of the Laboratory	Major Equipment
1	Dynamics and Vibration Lab	Vibration Monitoring Equipment
2	Material Testing Lab	Universal Testing Machine- Instron, Piezo Electric Force Dynamometer CVD Diamond Coating Set-up Wear and Friction Monitor
3	Production Engineering Lab	Optical Inverted Metallurgical Microscope- Microprocessor Based Temperature Controlled Sintering Furnace Tallysurf
4	CAD/CAM Lab	MSC Nastran Patran
5	Heat Transfer Lab	Emissivity Measuring equipment
6	Thermal Engineering Lab	Cochran Boiler

7	Hydraulics and Fluid Machinery Lab	Pelton Wheel, Francis Turbine, Kaplan Turbine, Centrifugal pump, Resiprocating pump
8	Heat Power Lab	Rusten Diesel Engine
9	Refrigeration and Air conditioning lab	RAC tutor
10	Metrology Lab	Profile projector Autocollimator, Angle Decker Optical Flat



**Materials Testing Lab.**



**Production Engg. Lab.**

#### **7. Details of the Research Area of Faculty Members :**

<b>Sl. No</b>	<b>Name of the Faculty</b>	<b>Research Area</b>
1	Prof. Jaydev Rana	Production Engg.
2	Prof. P.R. Dash	Mechanical Vibration & condition monitoring
3	Dr. J. R. Mohanty	Machine Design
4	Dr. B. B. Pani	Production Engg.
5	Dr. S. K. Sarangi	Production Engg.
6	Dr. S. Panda	Robotics
7	Dr. P. K. Pradhan	Machine Design
8	Dr. C. R. Deo	Machine Design
9	Dr. P. Mishra	Production Engg.

10	Dr. P. Dash	Machine Design
11	Dr. S.R. Pattnaik	Production Engg.
12	Dr. P.C. Mishra	Engine Tribology; Emission; Friction Modeling
13	Dr. A. Mohanty	Thermal Engg.
14	Dr. P. Patro	Thermal Engg.
15	Dr. H. K. Barik	Thermal Engg.
16	Mr. D. Tripathy	Machine Design
17	Mrs. S. S. Naik	Production Engg.
18	Dr. P. K. Jena	Thermal Engg.
19	Dr. S. Mishra	Production Engg.
20	Miss J. Dehury	Production Engg.
21	Dr. D. Mishra	Thermal Engg.
22	Mrs. P. P. Mohanty	Production Engg.
23	Mr. J. B. Lakra	Machine Design
24	Mr. M. K. Sutar	Robotics & Machine Design
25	Ms. M. Pradhan	Machine Design
26	Mr. L. D. Das	Machine Design
27	Mr. S. S. Dalai	Applied Mechanics
28	Dr. Priyadarshi Tapas Ranjan Swain	Thermal Engg.
29	Dr. Santosh Kumar Sahu	Production Engg.
30	Dr. Kiran Kumar Ekka	CAD/CAM
31	Dr. Abhilash Purohit	Production Engg.
32	Mr. Swgat Dwivedi	Production Engg.

**8. Publication of the Department: In National / International Conferences, Journals, Books, Book Chapters etc.**

Year	No. of Publications
2016	22
2017	45
2018	62
2019	27 (till date)

**9. Sponsored Research Projects:**

Sl. No.	File No.	Name of the Funding Agency & Scheme	Title	PI/Co-PI	Duration (years)	Amount Sanctioned

						(In Lakhs)
1.	SR/FST/ETI-208/2007, dated 31 <sup>st</sup> December 2008	DST (FIST)-2008	Development of Mechanical Engineering Laboratory	HOD	5.0	67.57
2.	8023/BOR/RID /RPS-142/2008-09, dated 12 <sup>th</sup> March 2009	AICTE (RPS)-2009	Biasing and Nucleation Study by addition of metal Powders on growth of diamond by Hot Filament Chemical Vapor Deposition (HFCVD) method on cemented carbide inserts	Dr. S. K. Sarangi	3.0	6.49
3.	8023/RID/RPS -18(POLICY-IV)(GOVT)/2011-12, dated 20 <sup>th</sup> April 2012	AICTE (RPS)-2012	Development of nano/ultranano diamond Coating on cemented carbide inserts by Hot Filament Chemical Vapor Deposition (HFCVD) method	Dr. S. K. Sarangi	2.0	14.10
4.	22(0628)/13/E MR-II, dated 26 <sup>th</sup> February 2013	CSIR-2013	Development of NCD and UNCD diamond coatings and their characterization on cemented carbide inserts	Dr. S. K. Sarangi	3.0	21.92
5.	ERIP/ER/1203 119/M/01/1529	DRDO-2014	Development of ultrasonic absorbent composite material using date palm leaf fiber	Dr. J. R. Mohanty	3.0	7.385
6.	MRP-MAJOR-MECH-2013-7846	UGC-MRP-2013	Development of a high vacuum brazing furnace for joining metals to ceramics	Dr. S. K. Sarangi	3.0	14.97
7.	AICTE, TEQIP-III CRS Scheme, Govt. of India	AICTE-CRS (2019)	Composites for Heat Shielding Components in Air craft	Dr. A. Purohit, Dr. D. Mishra	3.0	19.48

#### 10. Achievements of the Department:

Since its inception the Department itself has proven its sky-rising worthiness by producing Engineers in a large number for the service to the society, who have proven their credibility in different fields. A brief achievement of both the faculties and students of the Department, in different scenario is being represented herewith;

- **Faculty Achievements:**

Currently the department has total 30 number of highly qualified faculties from prestigious Institutes of the Country (03 Professors, 09 Associate Professors and 18 Assistant professors). Their achievements are enlisted herewith in the form of their enormous publication number, and awards/honors being received by them.

- **Student Achievement:**

Though there are many achievements by the students, a few are enlisted below:

- a. Er. Manas Bhadra (B. Tech. 2009) is actively associated with Mars Mission of ISRO
- b. Mr. Sarthak Samal (B. Tech. 2015) has been selected as Port Engineer in Ukraine Anglo Eastern Company with salary of Rs. 21.00 lakhs per annum.
- c. T. Tejaswini (Robotics Club): AIR-1 IN National student's space Challenge-2018 at IIT, Kharagpur
- d. Mrs. Smaranika Nayak awarded M. Tech Gold medal in 2012
- e. Miss. Rasmita Parida awarded M. Tech Gold medal in 2013
- f. Miss Silva Acharya awarded best graduate in 2012
- g. Miss Subhasmita Nayak awarded best graduate in 2015
- h. Miss Ananya Satpathy awarded best all rounder in 2015
- i. Miss Saswati Chand has been selected for MS programme (2016) in Industrial Engg., North Carolina State University, USA

- **SAE Club (Mechanical Engineering) Achievements:**

The SAE Club was established in the year 2011 and since then has never looked back. Few of its achievements are as follows:

- AIR 3 in Design Event in Supra 2018
- AIR 4 in Cost Event in Supra 2018
- AIR 9 in overall Supra 2018
- AIR 15 in Design Event in Formula Bharat 2018
- AIR 14 in Quiz Event in Formula Bharat 2018
- AIR 36 in overall in Formula Bharat 2018
- AIR 4 in Design Event in FFS 2019
- AIR 3 in Cost Event in FFS 2019
- AIR 7 in overall in FFS 2019

# DEPARTMENT OF METALLURGY &

## MATERIALS ENGINEERING

### 1. About the Department :

The Department of Metallurgical & Materials Engineering (MME) was established in 2013. This department is devoted to the designing, creation and fundamental understanding of materials that are capable of enhancing the human experience.

At present, the Department offers a 4 - year B. Tech. programme, M.Tech. in “Industrial Metallurgy”, PhD in “Metallurgical & Materials Engineering” and a 4 - year B. Tech Executive programme for industrials employees in collaboration with Department of Production Engineering as a course name “Manufacturing and Process Engineering”. On completion of this courses the student gains skill to get into a rewarding career in industries, academic, government and private sectors like SAIL, VIZAG Steel, Hindalco, Balco, Vedanta, Tata Steel, TRL, Bhushan, Accenture, TCS, Wipro, Infosys, Cognizant and various CSIR laboratories such as IMMT (BBSR), NML (Jamshedpur) etc. The main focuses of the department activities are multi-directional with an emphasis on both teaching and research. Currently, the department is setting up various laboratories involved in undergraduate courses. The faculties of this department have completed their M. Tech and PhD degrees from various IITs, NITs and foreign universities. Since establishment of department, it has 8 laboratories with good number of equipment. The current approach of our department is to develop each and every laboratory with multifunctional objectives. Presently, aiming to improve and share the knowledge of the different course with the better understanding and at the same time to integrate the research facility with consultancy. Department is also engaged in solving real industrial problem of Aditya Aluminium. The department is developing liaison with research labs; mandating industry partners and extending entrepreneurship challenges and initiating the interdisciplinary research. The department has introduced e-learning courses / lecture notes for students, to understand the subject in depth. The department has an idea to create internship programs for students of other university / college by developing the various laboratories. The motivation of our department is to improve knowledge by interacting and pursuing research students with mutual exchanging ideals. The department aims in becoming a globally prominent department in the field metallurgy & materials engineering, and a Centre of excellence. Mission of the department is to promote student achievement and preparation for global competitiveness by fostering Educational excellence in the field of materials and process and to carry out quality research of national and global relevance.

### 2. Faculty Details:

	<b>Name</b>	<b>Qualification</b>	<b>Specialization</b>
1.	Dr. B. B Pani (H.O.D)	B.S. and M.S. (Russia), Ph.D (IIT Kharagpur)	<b>Mechanical Engineering</b>

## **ASSOCIATE PROFESSOR**

- |                              |  |   |
|------------------------------|--|---|
| 2. Dr. Sushant Kumar Badjena | B.E. (I.G.I.T Sarang),<br>M. Tech. (IIT Kanpur),<br>Ph.D. – KAIST, South Korea | <b>Mechanical &amp; Physical Metallurgy, Metal Forming, Severe Plastic Deformation (SPD), Finite Element Method (FEM)</b> |
|------------------------------|--|---|

## **ASSISTANT PROFESSORS**

- |   |   |  |
|---|---|--|
| 3. Mr. Avala Lava Kumar   | B.E. (MGIT, Hyderabad),<br>M.Tech. (NIT, Durgapur)                          | <b>Physical Metallurgy &amp; Mechanical Metallurgy</b>                 |
| 4. Ms. Suneeti Purohit<br>(On leave for Ph.D. at Swinburne University of Technology, Australia) | B.Tech (IGIT, Sarang),<br>M.Tech (IIT, Kharagpur & KIT, Karlsruhe)          | <b>Metallurgical and Materials Engineering</b>                         |
| 5. Mr. Dinesh Kumar Mishra  | B.Tech (IGIT, Sarang),<br>M.Tech (IIT, Kharagpur),                          | <b>Metallurgical and Materials Engineering</b>                         |
| 6. Mr. Gautam Behera  | B.Tech. (IGIT, Sarang)<br>M.Tech (IIT, Kharagpur)                           | <b>Metallurgical &amp; Materials Engineering</b>                       |
| 7. Mr. Nilakantha Sahu  | B.Tech (VSSUT),<br>M.Tech (IIT, Roorkee),                                   | <b>Metallurgical and Materials Engineering (Corrosion Engineering)</b> |
| 8. Ms. Subhadra Sahoo   | B.Tech (IGIT, Sarang),<br>M. Tech (Jadavpur University),                    | <b>Metallurgical and Materials Engineering</b>                         |
| 9. Dr. Renu Prava Dalai   | B.Tech (IGIT, Sarang),<br>M.Tech (NIT, Rourkela),<br>Ph.D. (IIT, Kharagpur) | <b>Metallurgical and Materials Engineering</b>                         |
| 10. Dr. Manila Mallik   | B. Tech (IGIT, Sarang),<br>M. Tech (NIT, Rourkela),<br>PhD (IIT, Kharagpur) | <b>Metallurgical and Materials Engineering</b>                         |
| 11. Mr. Gourahari Behera  | B. Tech (NIT, Rourkela),<br>M. Tech (IIT, Kanpur)                           | <b>Materials Science &amp; Engineering</b>                             |

### **3. Courses offered :**

B.Tech. in Metallurgy & Materials Engineering



## Physical Metallurgy Lab.

### 4. Details of research area of faculty members & Awards / Distinction :

S.No	Name of the faculty	Research area	Awards/Distinctions
1	Dr. S.K. Badjena	Severe plastic deformation, Metalforming, Finite Element Method, Dynamic Recrystallization, Shape memory alloys, Bio materials, Mechano-chemical Activation	Nijhawan Award for Best Technical Paper, 2006, NML, CSIR, India Tamotia Award for Best Published paper on Environmental issues related to Mineral processing IIME, 2007, India
2	Mr. A.Lava kumar	Superalloys, Aluminum alloys, Steels, Archeometallurgy, Nano materials	1 <sup>st</sup> Prize in metallurgaphy contest in NCPCM 2015 at NIT, Rourkela. Visiting research fellow at IIT, Kanpur (2015). Best oral presentation in NMD ATM, 2015 2 <sup>nd</sup> Prize in poster presentation in CSIR-NML Jamshedpur, 2015
3	Ms. Suneeti Purohit	Nanoscience & Nanotechnology, Electronic materials, Physical metallurgy	
4	Mr. Dinesh Kumar Mishra	High entropy alloy, Simulation and modeling, Mechanical alloying, NMC, Powder metallurgy, process metallurgy, Iron & Steel- heat treatment and characterization	Best poster presentation in MRS-2017 at VSSUT, Burla
5	Mr. Gautam Behera	Power plant alloys, Rail steels, Extractive metallurgy, physical metallurgy	Second prize in poster presentation in (NCPCM-2015) at NIT, Rourkela
6.	Mr. Nilakantha Sahu	Welding metallurgy, Friction stir welding, High temp. oxidation and corrosion	
7.	Ms. Subhadra Sahoo	Corrosion Engg (Steel), Heat treatment in EN31 Steel, Mechanical Metallurgy	First prize in paper presentation in symposium commission in RCC structure in Mumbai. Best poster presentation in (INCAL-2019 at BBSR
8.	Dr. Renu Prava Dalai	Steel matrix composite materials, TMP of high Mn steel, Tribology and corrosion study of steel and composite, synthesis	Institute silver medal in M.Tech at NIT, RKL.



		of MMC by powder metallurgy	First Prize in oral presentation in composite 2010, IIT, Kharagpur.  1 <sup>st</sup> Prize in metallography composite 2010, IIT, Kharagpur
9.	Dr. Manila Mallik	Lead-free solder, Nonindentation creep of lead free solder, synthesis of nano powder, commission and tribology composited materials.	Institute silver medal in M.Tech at NIT, Rourkela
10.	Mr. Gourahari Behera	Solid state welding Nano alloy synthesis and characterization, solidification process	

# DEPARTMENT OF PHYSICS

## 1. About the department:

The Department of Physics was established in 1956. Since the inception of the University, the department is contributing to the academic and administrative development of this institute. The department offers Master Degree Programme in Applied Physics since 2010, Integrated M.Sc., and M.Phil. programmes since 2014. Research in the department ranges across the mostchallenging problems in theoretical and experimental condensed Matter Physics, (Multiferroics, Functional materials, glass ceramics) Liquid Crystals, Nuclear and particle physics, Computational Physics of Complex Systems, Ultrasonics, and Plasma Physics etc. So far seven persons have completed their Ph. D work. Thedepartment plans to offer various elective courses for both PG and UG programmes in specific topics on emerging, and multidisciplinary areas in future.

## 2. Faculty details :

Name	Qualification	Specialization
Dr. Umaranjan Jena (H.O.D)	B.Sc. (Engg.) (UCE, Burla), M.Tech (III, KGP), Ph.D (Jadavpur University)	Computer Vision & Image Processing
<b><u>PROFESSORS</u></b>		
1. Prof. Piyush Ranjan Das	M.Sc. (Revenshaw), Ph.D. (IIT Kharagpur)	Condensed Matter Physics
2. Prof. Manas Ranjan Panigrahi	Ph.D (NIT, Rourkela)	Experimental Condensed Matter Physics
<b><u>ASSOCIATE PROFESSORS</u></b>		
3. Dr. Akhyaya Kumar Pattanaik	M.Sc. (B.U.), Ph.D. (IIT, Guwahati)	Solid State Physics (Experimental)
4. Dr. Ganeswar Nath	M.Sc., M.Phil., Ph.D. (Ultrasonics) (Ravenshaw)	Ultrasonic (Experimental), Plasma Physics(Theoretical)
5. Dr. Santanu Sengupta	M.Sc., Ph.D. (IIT Kharagpur)	Computational Physics
6. Dr. Sunanda Kumari Patri	M.Sc. (B.U.), M.Phil. (B.U.), Ph.D. (IIT Kharagpur)	Condensed Matter Physics

## **ASSISTANT PROFESSORS**

7. Mr. Sidheswar Behera	M.Sc. (B.U.)	Materials Science
8. Dr. P. Lakshmi Praveen	M.Sc., M.Phil., Ph.D.	Condensed Matter Physics
9. Dr. Soumya Saswati Sarangi	M.Sc , Ph. D (JNCASR, Bangalore), Post-doc (IISc., IOP)	Computational Condensed Matter Physics

10.	Dr. Jasvinder Pal Singh Virdi	Ph.D (Panjab Univ, Chandigarh)	<b>Nonlinear Dynamics</b>
11.	Dr. Parbati Naik	M.Sc (Utkal), M.Phil (Utkal)	<b>Condensed matter Physics</b>
12.	Dr. Jhasaketan Bhoi	M.Sc., M.Phil., Ph.D.	<b>Nuclear Physics</b>
13.	Dr. Mohapatra Prakash K. Sahoo	M.Sc , PhD (IIT Kharagpur), Post-doc (Zhejiang University)	<b>Condensed Mater Physics (Experimental)</b>

### 3. Courses offered :

- **UG:** B.Tech.
- **PG:** M.Sc. (Applied Physics), Integrated M.Sc.
- **M.Phil.** (Physics)
- **Ph.D.** (Physics)

### 4. Laboratory details :

S. No.	Name of the Lab	Major Equipments	
1.	<b>M. Sc. &amp; Integrated M. Sc. Labs</b>	1.	Lattice Dynamics Kit
		2.	Fourier Analysis Kit
		3.	Hall Effect Set Up
		4.	Planck's Constant Kit
		5.	Energy Band Gap Setup
		6.	Photodiode Characteristics Kit
		7.	Optical Fiber Kit: Estimation of Numerical Aperture
		8.	Calculation of e/m by Thompson's Method
		9.	Michelson's Interferometer
		10.	B-H Curve Kit
		11.	LED & Laser Diode Characteristics
		12.	GM Counter
		13.	Curie Temperature Setup
		14.	Four Probe Method
		15.	Fermi Energy Kit
		16.	Stefan's Constant Kit
		17.	Solar Cell Apparatus
		18.	ESR Spectrometer
		19.	Young's Modulus by Searle's Method

2.	<b>B.Tech. Lab</b>	20. Millikan's oil drop Experimental set up 1. Determination of acceleration due to gravity 2. Barton's Apparatus 3. Determination of Thermal Conductivity with Lee's Apparatus 4. Capillary Rise Method 5. Newton's Rings Apparatus 6. Determination of Grating Element 7. Sonometer 8. Characteristics of BJT
3.	<b>Research Labs</b>	<p><b><u>Advanced Materials Laboratory</u></b></p> 1. Muffle Furnace ( up to 1700 <sup>0</sup> C) 2. Tubular Furnace 3. Planetary Ball Milling Machine 4. Hydraulic Pressure 5. Oven 6. Vibrating Ball Milling Machine 7. Sonicator 8. Density Measurment Kit <p><b><u>Ultrasonics &amp; Acoustics Laboratory</u></b></p> 1. Multi Frequency Ultrasonic Interferometer 2. Water Circulating Bath 3. Digital Weighing Balance

**5. Details of research area of faculty member, awards / distinction received:**

S. No.	Name	Research Area	Awards/ Distinctions
1.	Dr. P. R. Das	Condensed Matter Physics, Materials Science	
2.	Prof. M. R. Panigrahi	Experimental Condensed Matter Physics, Thin Film	Nominated for world's who's who in 2012, 2015 Nominated for Top 100 scientist by CBS, England
3.	Dr.A. K. Pattanaik	Condensed Matter Physics, Materials Science	

4.	Dr. G. Nath	Ultrasonics, Plasma Physics	Dr.M.Pancholy Award-2013, Dr. Parthasarathi Award-2016 by Ultrasonic Society of India.
5.	Dr. S. Sengupta	Computational Quantum Mechanics	
6.	Dr. S. K. Patri	Condensed Matter Physics	
7.	Mr. S. Behera	Materials Science	
8.	Dr. P. L. Praveen	Soft Condensed Matter Physics, Liquid Crystals	Young Scientist Award-2012 by Dr.K.V.Rao Scientific Society, Hyderabad.
9.	Dr. S. S. Sarangi	Computational Condensed Matter Physics	
10.	Dr. J. P. S. Viridi	Nonlinear Dynamics	
11.	Dr. J. Bhoi	Nuclear Physics Theory	
12.	Ms. Parbati Naik	Condensed Matter Physics	
13	Dr. M. P. K. Sahoo	Experimental Condensed Matter Physics	

#### 6. Sponsored Research Projects (Ongoing):

S. No.	Title of the Project	Faculty Name	Funding Agency	Amount In Lakhs
1	Development of high temperature piezoelectric ceramics based on (1-x) Bi (Me', Me'')O <sub>3</sub> -x PbTiO <sub>3</sub> Systems Project No.: SR/FTP/PS-63/2008	Dr A. K. Pattanaik	DST, New Delhi	20.28
2	Ultrasonic Characterisation of nanofluids for various concentration at different temperatures ProjectNo.F.20-1(28)/2012(BSR)	Dr. G. Nath	UGC, New Delhi	6.00
3	Development of ultrasonic absorbant composite material using date palm leaf fiber	Dr. G. Nath (Co-PI)	DRDO, New Delhi	7.38

	Project No.ERIP/ER/1203119/M/01/1529			
4	Study of propagation of ultrasonic waves in solvent mixture used in preperation of natural fiber from agricultural wastes  Project No. ERIP/ER/1203150/M/01/1559	Dr. G. Nath	DRDO, New Delhi	8.62

#### **7. Other information of the Department: 19 Ph.D. Scholars**

1. Ms. P. L. Deepti has been awarded TEQUIP- II fellowship for pursuing her Ph.D.
2. Ms. G. Biswal has been awarded Biju Pattnaik Research Fellowship for parscing.

# DEPARTMENT OF PRODUCTION ENGINEERING



## 1. About the Department :

Manufacturing or Production, in its broadest sense, is the process of converting raw materials into useful products. It encompasses the design and manufacturing of goods using various production methods and techniques. Manufacturing is the backbone of any industrialized nation and its level of manufacturing activity is directly related to the economic health. Advanced Production Technology with computer controlled processes is the present day need of the manufacturing industries.

Production Engineering has emerged as an independent discipline catering to the global need. Thus, the department was started in the year 1996 with an annual intake of 30 with the following objectives and core values.

- To promote academic excellence.
- To raise the level of knowledge, competence and skills in the area of manufacturing engineering.
- Implementation of new curriculum and innovative instructional methods, such as self-paced learning, problem-solving projects, training in industry.
- To establish and expand research capabilities for students and faculty.
- Consulting projects that will serve industry and the community.
- Exposure and experience with advanced manufacturing technologies such as Robotics, FMS, CIM, Non-conventional machining etc.

Core production engineering subjects, topics on advanced production technologies, IT related subjects and topics on managerial skills are carefully designed and put in the course structure to produce industry ready professionals. The job opportunities lie both in core manufacturing sectors and IT sectors. Due to high rate of globalization and industrialization, the scope of employment for manufacturing professionals is vast and is ever increasing.

## 2. Faculty Details:

Name	Qualification	Specialization
<b><u>PROFESSORS</u></b>		
1. Dr. Debadutta Mishra	B.Sc. (Engg.) (CET), M.Sc. (Engg.) (NIT, Rourkela) Ph.D (S.U.)	Production Engg.
2. Dr. Debabrata Dhupal	B.E.( Utkal University), M.E (Jadavpur University) Ph.D(Engg), Jadavpur University DIBM (IGNOU)	Micromachining, Advance Manufacturing Process, RP & Non-traditional machining, Metal Cutting.
<b><u>ASSOCIATE PROFESSORS</u></b>		
3. Dr. Kamal Pal (H.O.D)	B.E (Jadavpur University), M.E (BEC, Kolkata), Ph.D (IIT Kharagpur)	Production Engineering
4. Dr. Arun Kumar Rout	B.E, M.Tech, Ph.D.,	Mechanical Systems Design
5. Dr. Nirmal Kumar Kund	B.Tech (IGIT, Sarang), M.Tech (IISc, Bangalore), Ph. D- (IISc, Bangalore)	Mechanical Sciences
6. Dr. Pankaj Charan Jena	B.E, M.Tech, (BPUT, Odisha) Ph.D ( Jadavpur University).	Mechanical System Design.
7. Dr. Sudhansu Ranjan Das	B.E. (BPUT, Odisha), M.Tech. (KIIT University), Ph.D (NIT, Jamshedpur)	Manufacturing Engineering
8. Dr. Trupti Ranjan Mahapatra	B.E, M.Tech (UCE, Burla), Ph.D.	Design and Manufacturing
<b><u>ASSISTANT PROFESSORS</u></b>		
9. Ms. Anisha Ekka	B.Tech (CET, Bhubneswar), M.Tech (IIT Guwahati)	Fluid and Thermal
10. Mr. Birendra Kumar Barik	B.Tech. (VSSUT Burla), M.Tech. (NIT Trichy),	Manufacturing Technology
11. Ms. Lipsamayee Mishra	B.Tech. (BPUT), M.Tech. (VSSUT Burla)	Manufacturing System Engineering
12. Mr. Premananda Ekka	B.Tech ( VSSUT, Burla), M.Tech (IIT, Guwahati)	Computer Assisted Manufacturing
13. Mr. Sambeet Kumar Sahu	B.Tech. (BPUT, Burla), M.Tech (VSSUT, Burla)	Production Engineering
14. Ms. Smita Padhan	B.Tech. (VSSUT, Burla), M.Tech.(NIT,Warangal)	Manufacturing Engineering
15. Ms. Sunita Sethy	B.Tech ( BPUT), M.Tech. (VSSUT Burla)	Production Engineering

### 3. Courses offered:

The Department presently offers the following courses:

- B.Tech. in Production Engineering (NBA Accredited)
- M.Tech. in Manufacturing Systems Engineering
- M.Tech in Robotics & CAD-CAM



d) Ph.D. Programme in major areas of Production Engineering

#### 4. Laboratory Details:

Sl. No.	Name of the Lab.	Major Equipments	Research Facilities
1.	Metal Cutting Lab.	1. Engine Lathe 2. Polishing Machine 3. Tool Grinder 4. Acoustic analyzer 5. Tool Maker's Microscope	1. Vibration analysis of cutting tool. 2. Noise analysis of cutting tool 3. Polishing of specimen
2	Metal Forming Lab.	1. Shearing Machine 2. Hydraulic Bulging machine 3. Hydraulic press 4. Universal testing machine	1. Forward & Backward Extrusion 2. Hydraulic bulging & Deep draining 3. Tensile, compression & Bending Test.
3.	CAD Lab.	1. CATIA, ANSYS, Solidhllar VS	1. Modelling & Simulation
4.	Virtual Mfg. Lab.	1. Open CIM 2. I-GRIP 3. QUEST 4. SIMUL@ 5. Workspace 5 6. 3D Printer 7. 3D Scanner	1. CIM Model simulation 2. Robot Workspacesimulation
5.	Robotics & FMS Lab.	1. CNC Lathe, 2.CNC Milling, 3.ASRS 4.Linear shuttle conveyor 5.Pallet conveyor 6.Loading unloading arm 7. Aristo robot 8. Scara robot	FMS model simulation
6.	Metrology Lab.	1.Profile Projector 2.PortableSurface roughnesstesting, 3.Micro hardness testing 4.CMM	
7	Non Traditional	1. Laser beam machining	Micromachining of metals andceramics

	Machining Lab.	2. USM Set up 3. EDM set up 4. AJM set up	
8	Advance Manufacturing Lab.	1. CNC EDM 2. Pin on disc friction wear Test RIG	
9	Metal Cutting Lab.	Tool Maker's Microscope	



**Non-Conventional Machining Lab.**



**Robotics & FMS Lab.**

**5. Details of research area of faculty members :**

Sl. No.	Name of the faculty member	Research Area
1	Dr. Debadutta Mishra	Production Engineering, Robotics & FMS
2	Dr. Debabrata Dhupal	Micromachining, Advance Manufacturing Process, RP & Non-traditional machining, Metal Cutting.
3	Dr. Kamal Pal	Production Engineering, Welding & Soft computing techniques
4	Dr. Arun Kumar Rout	Tribo-mechanical study of natural fiber reinforced polymer/metal matrix composites, characterization of nanocomposites.
5	Dr. Nirmal Kumar Kund	<ul style="list-style-type: none"> <li>Semi-solid processing of light weight materials.</li> <li>Thermal processing of liquid metals.</li> <li>Solidification, macrosegregation and characterization of materials.</li> </ul>

6	Dr. Pankaj Charan Jena	Design, Modeling, Fabrication and Mechanical Characterization of Fibre (Glass/Carbon/Agriculture-waste) Reinforced/ Particulate Polymer Composite Structure Functional Graded/Smart Materials Structure Metal matrix composite structure Vibration analysis of Mechanical Structure, Fault Diagnosis Techniques, Fuzzy Logic.
7	Dr. Sudhansu Ranjan Das	Machining & machinability study, Hard turning, Modelling & optimization, minimum quantity lubrication, Laser micro- machining, Material characterization, machining of MMC.
8	Dr. Trupti Ranjan Mahapatra	Laminated composite structures/ Curved structures Numerical/Experimental nonlinear mechanical responses Nonlinear FEM Smart (SMA, PZT and Magnetostrictive material) Composite Structures Vibro-acoustic Analysis of Laminated/ Smart Structures Functionally Graded Material (FGM), FG-CNT

**6. Consultancy :** - Examination of failure of the welded joint

- Mechanical characterization of materials
- Tribological characterization of materials.

**7. Other information of the department**

The current research works that are being carried out in the department are:

- Thermal analysis, tool erosion, crack initiation and propagation in EDM surfaces
- Study of Surface roughness
- Analysis of eroded crater formed under growing plasma channel in EDM
- Thermal analysis and study of hole contour, surface damage (HAZ) in Nd-YAG laser drilling.
- Analysis of MRR, surface roughness, tool wear in USM
- Analysis of MRR through mathematical and statistical modeling in AJM
- Application of soft computing techniques in FMS scheduling
- Application of TOC in product mix problems
- Simulation and modeling using Robotics and Factory Floor software tools

**10. INFORMATION REGARDING NBA ACCREDITATION : ACCREDITED & APPLIED FOR**

**UG PROGRAMMES**

Sl.No	Name of the branch	Year of Starting	Accreditation status	Validity upto	Remarks
1.	Civil Engineering	1956	Accredited	30/06/2021	
2.	Chemical Engineering	2014	Not Accredited		Not eligible (no professor)
3.	Computer Science & Engineering	1994	Accredited	30/06/2022	
4.	Electrical Engineering	1956	Accredited	30/06/2022	
5.	Electrical & Electronics Engineering	2010	Applied		Filling e-SAR (last date: 30/06/2020)
6.	Electronics & Telecomm. Engg.	1972	Accredited	30/06/2022	
7.	Information Technology	2003	Accredited	30/06/2021	Compliance report submitted
8.	Mechanical Engineering	1956	Accredited	30/06/2022	
9.	Metallurgy & Materials Engineering	2013	Not Accredited		To be applied
10.	Production Engineering	1996	Accredited	30/06/2021	Compliance report submitted

**PG PROGRAMMES**

Sl.No	Department	Name of the Specialization	Year of Starting	Accreditation status	Validity	Remarks
1.	Civil Engineering	Water Resources Engg	1969	Accredited	30/06/2020	
		Structural Engineering	1969	Accredited	30/06/2020	
		Transportation Engineering	1975	Not Accredited		Applied
		Geo-technical Engineering	2012	Not Accredited		Not applied (no admission in 2018)
		Environmental Science & Engineering	2012	Not Accredited		Not applied (no admission in 2019)
2.	Electrical Engg.	Power System Engineering	1969	Accredited	30/06/2019	Not Applied
		Power Electronics Control & Drives	2011	Not Accredited		Not applied
		Control & Instrumentation	2015	Not Accredited		Not applied
3.	Mechanical Engg.	Machine Design & Analysis	1972	Accredited	30/06/2020	
		Heat Power Engg.	1972	Not Accredited		Applied

		Production Engineering	1972	Not Accredited		Applied
4.	Electronics & Telecomm. Engg.	Communication Systems	1995	Accredited	30/06/2020	
		VLSI Signal Processing	2012	Not Accredited		Applied
		Microwave Engineering	2015	Not Accredited		Not Applied
5.	Computer Science & Engg.	Computer Science & Engineering	2008	Accredited	30/06/2019	Not Applied
6.	Production Engg.	Manufacturing Systems	2008	Not Accredited		Applied
		Industrial & Production Engg	2012	Not Accredited		Not applied
		Robotics & CAD-CAM	2015	Not Accredited		Not applied
7.	Information Technology	Information & Communication Technology	2013	Not Accredited		Not applied (No admission in 2018, 2019)
		Computer and Information Technology	2017	Not Accredited		Not applied (New course)
8.	Computer Application	MCA	1993	Accredited	30/06/2019	Not applied

## 11.PROGRAMMES OFFERED (UG, PG, PHD)

### i) 4 YEARS B.TECH. PROGRAMME (FULL TIME) (ALL AICTE APPROVED)

Sl.No	Name of the branch	Year of Starting	Sanctioned Intake				
			Intake	GIN**	TFW	LE***	Total
1.	Civil Engineering <sup>#</sup>	1956	90+30*	02	06	9+3*	140
2.	Chemical Engineering	2014	60	-	03	6	69
3.	Computer Science & Engineering <sup>#</sup>	1994	30+30*	01	03	3+3*	70
4.	Electrical Engineering <sup>#</sup>	1956	120	02	06	12	140
5.	Electrical & Electronics Engineering	2010	30+30*	-	03	3+3*	69
6.	Electronics & Telecomm. Engg. <sup>#</sup>	1972	120	02	06	12	140
7.	Information Technology <sup>#</sup>	2003	60*	-	03	6*	69
8.	Mechanical Engineering <sup>#</sup>	1956	120	03	06	12	141
9.	Metallurgy & Materials Engineering	2013	60	-	03	6	69
10.	Production Engineering <sup>#</sup>	1996	30+30*	-	03	3+3*	69
TOTAL			840	10	42	84	976

\* Self-sustaining programme

**\*\*GIN – Govt. of India Nominee**

**\*\*\* LE – Lateral Entry of Diploma holders in 2nd year.**

**# Course accredited by National Board of Accreditation (NBA)**

**TFW – Tuition Fee Waiver**

## **ii) 5 YEARS B.ARCH. PROGRAMME (FULL TIME)**

Sl.No	Name of the branch	Year of Starting	Sanctioned Intake	
			Intake	Total
1.	Architecture	2013	20	20

## **iii) 5 YEARS INTEGRATED UG & PG DUAL DEGREE PROGRAMME (FULL TIME)**

Sl.No	Department	Name of the Specialisation	Year of Starting	Sanctioned Intake
1.	Civil Engineering	B.Tech. in Civil Engg & M.Tech. in Structural Engg.	2015	18
2.	Electrical Engg.	B.Tech. in Electrical Engg. & M.Tech. in Power System Engg.	2015	18
TOTAL				36

## **iv) 2 YEARS M.TECH. PROGRAMMEs (FULL TIME)**

Sl.No	Department	Name of the Specialisation	Year of Starting	Sanctioned Intake
1.	Civil Engineering	#Water Resources Engg*	1969	18
		#Structural Engineering*	1969	18
		Transportation Engineering*	1975	18
		Geo-technical Engineering*	2012	18
		Environmental Science & Engineering*	2012	18
2.	Electrical Engg.	#Power System Engineering*	1969	18
		Power Electronics Control & Drives*	2011	18
		Control& Instrumentation*	2015	18
3.	Mechanical Engg.	#Machine Design & Analysis*	1972	18
		Heat Power Engg. *	1972	18
		#Production Engineering*	1972	18
4.	Electronics & Telecomm. Engg.	#Communication Systems*	1995	18
		VLSI Signal Processing*	2012	18
		Microwave Engineering*	2015	18
5.	Computer Science & Engg.	#Computer Science & Engineering *	2008	18
6.	Production Engg.	Manufacturing Systems*	2008	18
		Industrial & Production Engg	2012	18
		Robotics & CAD-CAM*	2015	18
7	Information Technology	Information & Communication Technology *	2013	18
		Computer and Information Technology	2017	18
8	Mathematics	Computational Mathematics & Data Processing	2010	18
# – NBA Accredited * AICTE approvedTOTAL				360

**v) 2 YEARS M.Sc. PROGRAMME (FULL TIME)**

Sl.No	Name of the Course	Specialisation	Year of Starting	Sanctioned Intake
1.	M.Sc. (Physics)	Applied Physics	2010	18
2.	M.Sc. (Chemistry)	Industrial Chemistry/ Organic Chemistry	2010	36
3.	M.Sc. (Mathematics)	Applied Mathematics	2011	18
TOTAL				72

**vi) 5 YEARS INTEGRATED M.Sc. PROGRAMME (FULL TIME)**

Sl.No	Name of the Specialisation	Year of Starting	Sanctioned Intake
1.	Chemistry	2013	18
2.	Physics	2014	18
3.	Mathematics	2015	18
TOTAL			54

**vii) One year M.Phil. PROGRAMME (FULL TIME)**

Sl.No	Name of the Specialisation	Year of Starting	Sanctioned Intake
1.	Physics	2014	10
2.	Chemistry	2014	10
3.	Mathematics	2014	10
TOTAL			30

**viii) 3 YEARS MCA PROGRAMME (FULL TIME)**

Sl.No	Name of the Specialisation	Year of Starting	Sanctioned Intake
1.	#Master in Computer Applications*	1993	30

# – NBA Accredited \* AICTE approved

**ix) Ph. D. PROGRAMME**

Sl.No.	Branch	Year of Starting
1.	Civil Engineering	2010
2.	Chemistry	2010
3.	Computer Science & Engineering	2010
4.	Electrical Engineering / EEE	2010
5.	Electronics & Telecomm. Engineering	2010
6.	English	2015
7.	Information Technology	2015
8.	Mathematics	2010
9.	Metallurgy & Materials Engineering	2015
10.	Mechanical Engineering	2010

11	Production Engineering	2010
12	Physics	2010

- Further, VSSUT has been selected as nodal centre of AICTE Quality Improvement programme for pursuing Ph.D. 10 Nos. (2 each in Civil, Electrical, Mechanical, Electronics and Production Engg.) of research scholars in engineering discipline has been sponsored through. National QIP coordination Committee (NQCC)
- University has been selected as centre for National Doctoral Fellowship Scheme and has started Ph.D admission in 2018-19

## 12. STUDENTS STRENGTH (UG, PG, PHD : SANCTIONED INTAKE & ACTUAL INTAKE

Sl.No	Name of the branch	Year of Starting	Sanctioned Intake					Actual Intake
			Intake	GIN**	TFW	LE***	Total	
1.	Civil Engineering <sup>#</sup>	1956	90+30*	02	06	9+3*	140	135
2.	Chemical Engineering	2014	60	-	03	6	69	60
3.	Computer Science & Engineering <sup>#</sup>	1994	30+30*	01	03	3+3*	70	69
4.	Electrical Engineering <sup>#</sup>	1956	120	02	06	12	140	139
5.	Electrical & Electronics Engineering	2010	30+30*	-	03	3+3*	69	67
6.	Electronics & Telecomm. Engg. <sup>#</sup>	1972	120	02	06	12	140	139
7.	Information Technology <sup>#</sup>	2003	60*	-	03	6*	69	69
8.	Mechanical Engineering <sup>#</sup>	1956	120	03	06	12	141	139
9.	Metallurgy & Materials Engineering	2013	60	-	03	6	69	63
10.	Production Engineering <sup>#</sup>	1996	30+30*	-	03	3+3*	69	49
TOTAL			840	10	42	84	976	929

Sl.No	Name of the branch	Year of Starting	Sanctioned Intake		Actual Intake
			Intake	Total	
1.	Architecture	2013	20	20	19

## 5years Integrated UG & PG Dual Degree Programme ( Full Time)

Sl.No	Department	Name of the Specialisation	Year of Starting	Sanctioned Intake	Actual Intake
1.	Civil Engineering	B.Tech. in Civil Engg & M.Tech. in Structural Engg.	2015	18	17
2.	Electrical Engg.	B.Tech. in Electrical Engg. & M.Tech. in Power System Engg.	2015	18	18



	TOTAL	36	35
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### 3 YEARS MCA PROGRAMME (FULL TIME)

Sl.No	Name of the Specialisation	Year of Starting	Sanctioned Intake	Actual Intake
1.	#Master in Computer Applications*	1993	30	29

Sl.No	Department	Name of the Specialisation	Year of Starting	Sanctioned Intake	Actual Intake
1.	Civil Engineering	#Water Resources Engg*	1969	18	NA
		#Structural Engineering*	1969	18	16
		Transportation Engineering*	1975	18	18
		Geo-technical Engineering*	2012	18	16
		Environmental Science & Engineering*	2012	18	NA
2.	Electrical Engg.	#Power System Engineering*	1969	18	16
		Power Electronics Control & Drives*	2011	18	12
		Control& Instrumentation*	2015	18	NA
3.	Mechanical Engg.	#Machine Design & Analysis*	1972	18	09
		Heat Power Engg. *	1972	18	10
		#Production Engineering*	1972	18	10

4.	Electronics & Telecomm. Engg.	#Communication Systems*	1995	18	NA
		VLSI Signal Processing*	2012	18	10
		Microwave Engineering*	2015	18	NA
5.	Computer Science & Engg.	#Computer Science & Engineering *	2008	18	NA
6.	Production Engg.	Manufacturing Systems*	2008	18	NA
		Industrial & Production Engg	2012	18	NA
		Robotics & CAD-CAM*	2015	18	NA
7	Information Technology	Information & Communication Technology *	2013	18	NA
		Computer and Information Technology	2017	18	NA
8	Mathematics	Computational Mathematics & Data Processing	2010	18	NA
# – NBA Accredited * AICTE approved TOTAL				360	117

13. FACULTY POSITIONS : SANCTIONED POSITIONS & FILLED IN POSITIONS

**PROFESSOR**

Name of Dept.	Sanctioned Strength	Existing	No. of vacancy
CIVIL ENGINEERING	06	06	00
MECHANICAL ENGINEERING	06	2	4
ELECTRICAL ENGINEERING	04	04	00
ELECTRONICS & TC ENGINEERING	04	02	02
COMPUTER SCIENCE & ENGINEERING	03	02	01
PRODUCTION ENGINEERING	03	02	01
ELECTRICAL & ELECTRONICS ENGINEERING (EEE)	01	01	00
INFORMATION TECHNOLOGY	02	00	02
METALLURGY & MATERIAL ENGINEERING	01	00	01
CHEMICAL ENGINEERING	01	00	01
COMPUTER APPLICATION (MCA)	01	00	01
ARCHITECTURE	01	00	01
PHYSICS	04	02	02
CHEMISTRY	04	04	00
MATHEMATICS	04	01	03
HUMANITIES	-	-	-
<b>TOTAL</b>	<b>45</b>	<b>26</b>	<b>19</b>

**(ASSOCIATE PROFESSOR)**

Name of Dept.	Sanctioned Strength	Existing	No. of vacancy
CIVIL ENGINEERING	13	06	<b>07</b>
MECHANICAL ENGINEERING	13	12	<b>01</b>
ELECTRICAL ENGINEERING	09	04	<b>05</b>
ELECTRONICS & TC ENGINEERING	11	09	<b>02</b>
COMPUTER SCIENCE & ENGINEERING	06	03	<b>03</b> <b>(01 Subjudice)</b>
PRODUCTION	06	06	<b>00</b>

<b>ENGINEERING</b>			
<b>ELECTRICAL &amp; ELECTRONICS ENGG</b>	03	02	<b>01</b>
<b>INFORMATION TECHNOLOGY</b>	05	04	<b>01</b> <b>(01 Subjudice)</b>
<b>METALLURGY &amp; MATERIAL ENGINEERING</b>	04	01	<b>03</b>
<b>CHEMICAL ENGINEERING</b>	02	00	<b>02</b>
<b>COMPUTER APPLICATION (MCA)</b>	02	02	<b>00</b>
<b>ARCHITECTURE</b>	02	02	<b>00</b>
<b>PHYSICS</b>	06	04	<b>02</b> <b>(01 Subjudice)</b>
<b>CHEMISTRY</b>	06	03	<b>03</b>
<b>MATHEMATICS</b>	06	02	<b>04</b>
<b>HUMANITIES</b>	01	01	<b>00</b>
<b>TOTAL</b>	<b>95</b>	<b>61</b>	<b>34</b>

**(ASSISTANT PROFESSOR)**

<b>Name of Dept.</b>	<b>Sanctioned Strength</b>	<b>Existing</b>	<b>No. of vacancy</b>
<b>CIVIL ENGINEERING</b>	21	19	<b>02</b>
<b>MECHANICAL ENGINEERING</b>	21	16	<b>05</b> <b>(01 Subjudice)</b>
<b>ELECTRICAL ENGINEERING</b>	21	18	<b>03</b>
<b>ELECTRONICS &amp; TC ENGINEERING</b>	21	21	<b>00</b>
<b>COMPUTER SCIENCE &amp; ENGINEERING</b>	06	06	<b>00</b>
<b>PRODUCTION ENGINEERING</b>	08	07	<b>01</b> <b>(01 Subjudice)</b>
<b>ELECTRICAL &amp; ELECTRONICS ENGINEERING (EEE)</b>	05	05	<b>00</b>
<b>INFORMATION TECHNOLOGY</b>	11	11	<b>00</b>
<b>METALLURGY &amp; MATERIAL ENGINEERING</b>	11	09	<b>02</b>
<b>CHEMICAL ENGINEERING</b>	06	06	<b>00</b>
<b>COMPUTER</b>	04	04	<b>00</b>

APPLICATION (MCA)			
ARCHITECTURE	03	02	01
PHYSICS	08	07	01
CHEMISTRY	06	04	02
MATHEMATICS	07	05	02
HUMANITIES	05	05	00
<b>TOTAL</b>	<b>164</b>	<b>145</b>	<b>19</b>

<b>Vice-Chancellor</b>	-	<b>01</b>	-	<b>Filled</b>
<b>Professor, T &amp; P</b>	-	<b>01</b>	-	<b>Filled</b>
<b>Dean, Students' Welfare</b>	-	<b>01</b>	-	<b>Vacant</b>
<b>Workshop Superintendent</b>	-	<b>01</b>	-	<b>Filled</b>
<b>Controller of Examination</b>	-	<b>01</b>	-	<b>Vacant (Subjudice)</b>

#### 14. STAFF POSITIONS : SANCTIONED POSITIONS & FILLED IN POSITIONS

SI No.	Name of Posts	Total No. of Sanctioned post	Total No. of Employees working against Sanctioned post	Total vacancy of Employees
1	Assistant Registrar	2	-	2
2	Senior Instructor	8	8	-
3	Senior Librarian	1	-	1
4	Technical Assistant	1	1	-
5	Maintenance Engineer	1	-	1
6	Physical Training Instructor	1	-	1
7	Office Superintendent	1	1	-
8	Section Officer	4	3	1
9	P.A. to V.C.	1	0	1
10	Librarian	1	1	-
11	Demonstrator	3	1	2

12	Junior Instructor	6	4	2
13	Computer Programmer	1	1	-
14	Campus Supervisor	1	1	-
15	Mechanic Grade-I	4	4	-
16	System Operator	1	-	1
17	Senior Assistant	18	12	6
18	Senior Stenographer	3	3	-
19	Store Keeper	1	-	1
20	Mechanic Grade-II	10	8	2
21	Pharmacist	1	1	-
22	Mechanic Grade-III	4	4	-
23	Mason	1	1	-
24	Telephone Operator	3	3	-
25	Tracer	1	1	-
26	Driver (Heavy Vehicle)	1	1	-
27	Care-Taker	2	2	-
28	Ferro Printer	1	1	-
29	Junior Assistant	11	11	-
30	Assistant Hostel Matron	1	1	-
31	Book Binder	1	1	-
32	Head Mali	1	0	1
33	Laboratory attendant	26	21	5
34	Treasury Sarkar	1	-	1
35	Work Sarkar	1	1	-
	<b>TOTAL</b>	<b>125</b>	<b>97</b>	<b>28</b>
Sl No.	Name of Posts	Total No. of Sanctioned post	Total No. of Employees working against Sanctioned post	Total vacancy of Employees
1	Mali	3	3	-
2	Zamadar	1	-	1
3	Daftary	1	1	-
4	Head Peon	1	1	-
5	Library Attendant	4	3	1
6	Peon	18	18	-
7	Sweeper	6	6	-
8	Computer Attendant	1	1	-
9	Library Gate Keeper	2	2	-
10	Watchman	13	13	-
11	Cook-Cum-Attendant	1	1	-
	<b>TOTAL</b>	<b>51</b>	<b>49</b>	<b>2</b>

Sl No.	Name of Posts	Total No. of Sanctioned post with approval of the State Govt.	Total No. of Employees working against Sanctioned post	Total vacancy of Employees	Fund received from state govt.
1	Junior Instructor	23	19	4	YES
2	Junior Stenographer	2	-	2	
3	Mechanic Grade-III	8	4	4	YES
4	Carpenter	1	-	1	
5	Driver ( Light Vehicle )	1	1	-	YES
6	Typist	1	-	1	
7	Care-taker	1	1	-	YES
8	Laboratory attendant	1	-	1	
9	<b>Attendant (Class-IV)</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>YES</b>
	<b>TOTAL</b>	<b>40</b>	<b>27</b>	<b>13</b>	

#### 15. EXAM RESULTS ANALYSIS

PROGRAMME	BRANCH	NO. OF STUDENTS PASSED	TOTAL
<b>Ph.D</b>	COMPUTER SCIENCE & ENGINEERING	06	26
	ELECTRICAL ENGINEERING	05	
	ELECTRONICS & TELECOMMUNICATION ENGINEERING	05	
	MECHANICAL ENGINEERING	02	
	PRODUCTION ENGINEERING	01	
	CHEMISTRY	03	
	MATHEMATICS	03	
	PHYSICS	01	
<b>M.PHIL</b>	CHEMISTRY	08	16
	MATHEMATICS	08	
<b>M.TECH</b>	<b>CIVIL ENGINEERING</b>		213
	ENVIRONMENTAL SCIENCE & ENGINEERING	16	
	GEOTECHNICAL ENGINEERING	13	
	STRUCTURAL ENGINEERING	12	

	TRANSPORTATION ENGINEERING	15	
	WATER RESOURCES ENGINEERING	15	
	<b>COMPUTER SCIENCE &amp; ENGINEERING</b>		
	COMPUTER SCIENCE & ENGINEERING	16	
	<b>ELECTRICAL ENGINEERING</b>		
	CONTROL & INSTRUMENTATION ENGINEERING	16	
	POWER ELECTRONICS CONTROL & DRIVES	14	
	POWER SYSTEM ENGINEERING	14	
	<b>ELECTRONICS &amp; TELECOMMUNICATION ENGINEERING</b>		
	COMMUNICATION SYSTEM ENGINEERING	12	
	VLSI SIGNAL PROCESSING	14	
	<b>MECHANICAL ENGINEERING</b>		
	HEAT POWER ENGINEERING	14	
	MACHINE DESIGN & ANALYSIS	14	
	PRODUCTION ENGINEERING	12	
	<b>PRODUCTION ENGINEERING</b>		
	MANUFACTURING SYSTEM ENGINEERING	16	
<b>MCA</b>	MASTER IN COMPUTER APPLICATION	33	33
<b>M.SC</b>	CHEMISTRY (INDUSTRIAL CHEMISTRY)	15	46
	MATHEMATICS ( APPLIED MATHEMATICS)	16	
	PHYSICS (APPLIED PHYSICS)	15	
<b>INT.M.SC.</b>	CHEMISTRY	08	16
	PHYSICS	08	
<b>B.TECH</b>	CHEMICAL ENGINEERING	63	908
	CIVIL ENGINEERING	118	
	COMPUTER SCIENCE & ENGINEERING	72	
	ELECTRICAL ENGINEERING	151	
	ELECTRICAL & ELECTRONICS ENGINEERING	60	
	ELECTRONICS & TELECOMMUNICATION ENGINEERING	129	
	INFORMATION TECHNOLOGY	48	
	MECHANICAL ENGINEERING	144	
	METALLURGICAL & MATERIALS ENGINEERING	66	

	PRODUCTION ENGINEERING	57	
<b>B.ARCH</b>	ARCHITECTURE	38	<b>38</b>
<b>TOTAL NOS. OF DEGREE CERTIFICATES</b>			<b>1295</b>

## 16. TRANSITION RATE OF UG STUDENTS

## 17. GATE QUALIFIED STUDENTS DATA

Name of Final Year Student	Branch	GATE Registration Number (Printed in GATE Admit Card)	Qualified GATE	GATE Score
Santanu Kumar Pal	Metallurgy And Materials Engineering	MT20S16041149	Yes	460
Sourav Agrawal	Mechanical Engineering	ME20S16041132	Yes	672
ANKITA DASH	Mechanical Engineering	ME20S26041011	Yes	39.14
Sanjay Kumar Dash	Mechanical engineering	ME20S26041073	Yes	594
Bikash Vagaban Das	Electrical engineering	EE20S56041205	Yes	264
Santanu Kumar Pal	Metallurgy And Materials Engineering	MT20S16041149	Yes	460
SHREETAM SHANKAR MAHAPATRA	ELECTRICAL ENGINEERING	EE20S56041124	Yes	460
Satyajit Swain	Electrical Engineering	EE20S56042204	Yes	643
Tejesw ar Patro	EE	EE20S56041148	Yes	490
RIA DAS	Electronics and telecommunication	EC20S46041093	Yes	381
Suvam Parija	Electrical Engineering	EE20S56042081	Yes	362
Sambit Panda	Electrical Engineering	EE20S56041112	Yes	613
Sambit Panda	Electrical Engineering	EE20S56041112	Yes	613
SOURAV PATEL	Electronics and telecommunication	EC20S46042063	Yes	718
Nishtha Dalei	ETC	EC20S46030549	Yes	442
Abinash puhan	Electronics and telecommunications	EC20S46042066	Yes	369
Kedarnath Sahu	Electronics and Telecommunication Engineering	EC20S46041012	Yes	365
Gedala Sai Praveen	Electronics and Telecommunication	EC20S46041026	Yes	397
SOURAV CHAND	ELECTRICAL ENGINEERING	EE20S56035203	Yes	366
Mahavisek Patra	EE	EE20S56041208	Yes	498
PRITISH KUMAR SAHU	ELECTRICAL ENGINEERING	EE20S56032195	Yes	481
Soumya samit samal	civil engineering	CE20S76042039	Yes	38.64
Pratyush Masanta	Mechanical Engineering	ME20S26041123	Yes	44.4
MAHABIR ASISH MOHANTY	ELECTRICAL ENGINEERING	EE20S56041103	Yes	370
Shibananda Sahoo	Electrical engineering	EE20S56042082	Yes	507
Rohit Kumar Tekriwal	ETC	EC20S46030542	Yes	446
Abhijit Rath	Electronics and Telecommunication	EC20S46031053	Yes	33.67
Soumyajit Dash	Electrical Engineering	EE20S56042079	Yes	370
Pradeep Kumar Behera	Electronics & Tele Communication	EC20S46042026	Yes	247
Anwesha Mishra	Electrical	EE20S56042176	Yes	451
SATYABRATA SAHU	ECE	EC20S46041057	Yes	377



JAYADEV TRIPATHY	EE	EE20S56041147	Yes	532
Naresh Rana	Electrical engineering	EE20S56042183	Yes	430
Soumyaranjan Behera	EE	EE20S56041075	Yes	264
Gurprit Singh	Electrical engineering	EE20S56042021	Yes	460
Arati Barwa	Electrical Engineering	EE20S56042181	Yes	25.67
Swayamprabha Gouda	Mechanical engineering	ME20S16042010	Yes	373
Anwasha Mishra	Electrical	EE20S56042176	Yes	451
SHASHWAT PANDA	CIVIL ENGINEERING	CE20S76042069	Yes	402
Manas Ranjan Biswal	Electrical Engineering	EE20S56042208	Yes	36
PRITISH KUMAR SAHU	ELECTRICAL ENGINEERING	EE20S56032195	Yes	481
PRATYUSH KUMAR DORA	CIVIL ENGINEERING	CE20S86042045	Yes	36.33
Soyongsidhha Dey	Civil Engineering	D243U77	Yes	384
Susanta Behera	Electrical Engineering	EE20S56042039	Yes	213
Satyanarjan Sahoo	Civil Engineering	CE20S86042014	Yes	36.33
Gagan Bihari Mangaraj	civil engineering	CE20S76042067	Yes	24.95
Bhomiya Kalo	Civil Engineering	CE20S76042078	Yes	260
B.Kailash Rao	Civil Engineering	CE20S76042021	Yes	42.55
Dolamani Barpanda	Civil Engineering	CE20S76041003	Yes	501
B.Kailash Rao	Civil Engineering	CE20S76042021	Yes	455
Bishal Naik	Civil Engineering	CE20S76041035	Yes	625
Subham Sekhar Sarangi	EEE	EE20S56042153	Yes	41.67
SANDEEP SAMANTARAY	ELECTRICAL ENGINEERING	EE20S56038189	Yes	38.67
Gouranga Behera	MME	MT20S16039364	Yes	430
Somanath Gochhayat	MME	MT20S16038178	Yes	51.67
K Snehashis subudhi	Civil engineering	CE20S76042004	Yes	608
PRATYUSH KUMAR TRIPATHY	CIVIL ENGINEERING	CE20S76035436	Yes	487
Smruti ranjan rout	civil engineering	CE20S86041028	Yes	425
Srikant Mohanty	ETC	EC20S46042110	Yes	393
ARATI PRADHAN	CIVIL	D356D26	Yes	34.07

#### 18. TRAINING PROGRAMMES HELD FOR STUDENTS

Sl NO.	Name of the Programme	Date
01	Media Summit	
02	Hackathon ( Health Care, Disaser Management and environment, Automation and next gen, Miscellaneous)	15-16 Feb 2020
03	Matrudiwas	20 <sup>th</sup> Feb 2020
04	Boot Camp	17- 18 Feb 2020

#### 19. TRAINING PROGRAMMES HELD FOR TEACHERS

TEQIP CUNDUCTED TRAINING PROGRAMME
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Sl No.	Dept	Training mode	Title of training	From	To
1	CSE	Workshop	Professional Skill	26-11-2017	26-11-2017
2	EE	Workshop	MATLAB and SIMULINK	13-11-2017	17-11-2017
3	CSE	Workshop	Professional Skill - Career guidance in IT industry and IBM	14-01-2018	14-01-2018
4	EE	STC	Soft Computing Techniques for Engineering Problems	03-01-2018	08-01-2018
5	IT	Workshop	Cloud Computing	08-01-2018	20-01-2018
6	Civil	Workshop	Urban Infrastructure Planning and Design	22-02-2018	24-02-2018
7	MME	Workshop	Experiments in Non Destructive Testing	17-02-2018	18-02-2018
8	MME	Workshop	NTPMMPMC-2018	19-03-2018	23-03-2018
9	CSE	Conf.	National Students Computing Conference	21-04-2018	22-04-2018
10	Chemical	Workshop	NTREES-2018	23-07-2018	27-07-2018
11	ETC	Seminar	World Telecommunication	17-05-2018	17-05-2018
12	IT & CA	Conf.	ICCIDM - 2018	15-12-2018	16-12-2018
13	IT	Workshop	Cloud Computing	08-01-2018	20-01-2018
14	Production	Workshop	OTAM	15-01-2019	19-01-2019
15	Chemical	Workshop	MSDAER-2019	28-01-2019	01-02-2019
16	Civil	Workshop	Life Skill Management	07-02-2019	12-02-2019
17	Civil	Workshop	Water Urbanism	12-03-2019	16-03-2019
18	Mechanical	Workshop	AOTAMP-2019	25-03-2019	30-03-2019
19	Physics	Conf.	NCFAM-2019	27-07-2019	28-07-2019

20	EE	Conf.	NCGTR	19-10-2019	20-10-2019
21	Physics	FDP/Workshop	Design and Development of Materials for technological Applications	21-10-2019	26-10-2019
22	EE	STC	Modeling & Simulation Electrical System using Matlab Simulation	28-10-2019	02-11-2019
23	EE	Workshop	MEPSN	05-08-2019	10-08-2019
24	Chemistry	National Conf.	RAIMS - 2019	24-12-2019	25-12-2019
25	Mathematics	Int. Conf.	ICAMC - 2020	07-02-2020	08-02-2020
27	VSSUT	VSSCON-2020	VSSCON - 2020	27-03-2020	29-03-2020

20. Student Data Internship.

Sl.No.	Name of the student	Regd. No.	Branch	Summer Internship/ Industrial Training/Seminar /Conference	Duration	Place
1	Siddhant Mohanty	1702100049	MME	Seminar	04.09.2019 to 07.09.2019	CSIR-NML,Tata Steel Jamshedpur
2	Aiswarya Kumar Sahoo	1702100003	MME	Seminar	04.09.2019 to 07.09.2019	CSIR-NML,Tata Steel Jamshedpur
3	Atulya Sahoo	1602100015	MME	Training Programme	20.11.2019 to 24.11.2019	Hotel May Fair Lagoon, Bhubaneswar Organizer-JNARDDC, Nagpur
4	Swagat Suman Naik	1602100054	MME	Training Programme	20.11.2019 to 24.11.2019	Hotel May Fair Lagoon, Bhubaneswar Organizer-JNARDDC, Nagpur
5	Dayasagar Majhi	13010657	MME	Conference	20.11.2019 to 23.11.2019	OPJU, Raigarh, Chhatisgarh
6	Suchismita Nath	1703100022	MME	Conference	20.11.2019 to 23.11.2019	OPJU, Raigarh, Chhatisgarh
7	Suprava Patel	1602100052	MME	Training Programme	11.11.2019 to 20.11.2019	IIM, Hotel Uday Samudra,Thiruvananthapuram, Kerala
8	Yashraj Panda	1702110030	PE	Training Programme	09.11.2019 to 12.11.2019	Maker Faire, Hyderabad
9	Soumya Kanta Panda	1802100061	MME	Conference	20.11.2019 to 23.11.2019	OP Jindal University, Raigarh
10	Debi Prasad Patra	1802100016	MME	Conference	20.11.2019 to 23.11.2019	OP Jindal University, Raigarh
11	Biswajit Beuria	1702070035	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
12	Ajit Mohanty	1702070012	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
13	Tanweer Alam Raza	1602100058	MME	Summer Internship	20.05.2019 to 08.07.2019	NIT, Rourkela
14	Atulya Sahoo	1602100015	MME	Summer Internship	20.05.2019 to 19.07.2019	NIT, Rourkela
15	Bismaya Sahoo	1602100020	MME	Summer Internship	20.05.2019 To 19.07.2019	NIT, Rourkela
16	Shweta Bose	1702110024	PE	Industrial Training	04.06.2019 to 16.07.2019	Tata Steel Jamshedpur
17	Ankita Meher	1702110003	PE	Industrial Training	24.06.2019 to 23.07.2019	Nalco, Nalconagar, Angul
18	K. R. Satyajit	15011308	EEE	Industrial Training	16.05.2019 to 28.06.2019	DRDO, Gas Turbine Research Establishment, Bengaluru
19	Shakti Prasad Mohanty	1702111053	PE	Summer Internship	16.05.2019 to 21.06.2019	DRDO,DRDL, Kanchanbagh, Hyderabad
20	Suprava Patel	1602100052	MME	NMD ATM	11.11.2019	IIM, Kerala

					To 20.11.2019	
21	Ajit Mohanty	1702070012	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
22	Tanweer Alam Raza	1602100058	MME	Summer Internship	20.05.2019 to 10.07.2019	NIT, Rourkela
23	Abhinav Kumar Padhan	1602030002	CE	Summer Internship	17.05.2019 to 22.06.2019	Civil Engg. Dept. IIT, Bombay
24	Atulya Sahoo	1602100015	MME	Summer Internship	19.05.2019 to 10.07.2019	NIT, Rourkela
25	Bibhudatta Nanda	1602100019	MME	Industrial Training	15.05.2019 to 17.06.2019	Tata Steel Jamshedpur
20	Biswajit Beuria	1702070035	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
26	Bismaya Sahoo	1602100020	MME	Summer Internship	19.05.2019 to 10.07.2019	NIT, Rourkela
27	Rutumber Nath	1702050068	EE	Summer Internship	18.05.2019 to 17.06.2019	ITR, Chandipur, Bilasore
28	K. R. Satyajit	15011308	EEE	Industrial Training	16.05.2019 to 28.06.2019	DRDO, Gas Turbine Research Establishment, Bengaluru
29	Shakti Prasad Mohanty	1702111053	PE	Summer Internship	16.05.2019 to 21.06.2019	DRDO, DRDL, Kanchanbagh, Hyderabad
30	Biswajit Beuria	1702070035	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
31	Ajit Mohanty	1702070012	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
32	Tanweer Alam Raza	1602100058	MME	Summer Internship	20.05.2019 to 10.07.2019	NIT, Rourkela
33	Abhinav Kumar Padhan	1602030002	CE	Summer Internship	17.05.2019 to 22.06.2019	Civil Engg. Dept. IIT, Bombay
34	Atulya Sahoo	1602100015	MME	Summer Internship	19.05.2019 to 10.07.2019	NIT, Rourkela
35	Bibhudatta Nanda	1602100019	MME	Industrial Training	15.05.2019 to 17.06.2019	Tata Steel Jamshedpur
36	Bismaya Sahoo	1602100020	MME	Summer Internship	19.05.2019 to 10.07.2019	NIT, Rourkela
37	Rutumber Nath	1702050068	EE	Summer Internship	18.05.2019 to 17.06.2019	ITR, Chandipur, Bilasore
38	Shakti Prasad Mohanty	1702111053	PE	Summer Internship	16.05.2019 to 21.06.2019	DRDO, DRDL, Kanchanbagh, Hyderabad
39	Biswajit Beuria	1702070035	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
40	Ajit Mohanty	1702070012	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
41	Tanweer Alam Raza	1602100058	MME	Summer Internship	20.05.2019 to 10.07.2019	NIT, Rourkela
42	Abhinav Kumar Padhan	1602030002	CE	Summer Internship	17.05.2019 to 22.06.2019	Civil Engg. Dept. IIT, Bombay
43	Atulya Sahoo	1602100015	MME	Summer Internship	19.05.2019 to	NIT, Rourkela

					10.07.2019	
44	Bismaya Sahoo	1602100020	MME	Summer Internship	19.05.2019 to 10.07.2019	NIT, Rourkela
45	Rutumber Nath	1702050068	EE	Summer Internship	18.05.2019 to 17.06.2019	ITR, Chandipur, Bilasore
46	Shakti Prasad Mohanty	1702111053	PE	Summer Internship	16.05.2019 to 21.06.2019	DRDO, DRDL, Kanchanbagh, Hyderabad
47	Biswajit Beuria	1702070035	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
48	Ajit Mohanty	1702070012	ETC	Summer Internship	16.05.2019 to 17.06.2019	Integrated Test Range, Chandipur, Balasore
49	Shakti Prasad Mohanty	1702111053	PE	Summer Internship	16.05.2019 to 21.06.2019	DRDO, DRDL, Kanchanbagh, Hyderabad
50	Shakti Prasad Mohanty	1702111053	PE	Summer Internship	16.05.2019 to 21.06.2019	DRDO, DRDL, Kanchanbagh, Hyderabad
51	Tanweer Alam Raza	1602100058	MME	Summer Internship	20.05.2019 to 10.07.2019	NIT, Rourkela
52	Abhinav Kumar Padhan	1602030002	CE	Summer Internship	17.05.2019 to 22.06.2019	Civil Engg. Dept. IIT, Bombay
53	Atulya Sahoo	1602100015	MME	Summer Internship	19.05.2019 to 10.07.2019	NIT, Rourkela
54	Bibhudatta Nanda	1602100019	MME	Industrial Training	15.05.2019 to 17.06.2019	Tata Steel Jamshedpur
55	Bismaya Sahoo	1602100020	MME	Summer Internship	19.05.2019 to 10.07.2019	NIT, Rourkela
56	Rutumber Nath	1702050068	EE	Summer Internship	18.05.2019 to 17.06.2019	ITR, Chandipur, Bilasore

21. **CAMPUS PLACEMENT DATA:** 31 Nos. of companies have visited the University for Campus Recruitment this year. The Training & Placement Cell offered jobs to 669 nos. of students through campus recruitment programme during 2019-20. The details of placement are given below.

<b>PLACEMENT STATISTICS 2019-20</b>
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Sl. No	Name of the recruiting Companies	CTC (LPA)	MME	EE Engg.	EEE Engg	Mech Engg.	Civil Engg.	Comp.Sc. Engg.	IT Engg.	ETC Engg.	PE	Che	MCA	M.Tech/Mtech (DD) /MSc (DD)	Total
1	Nineleaps	4.5						2		2					4
2	Gyansys	4.5		3				2	1	1					7
3	TATA STEEL (PPO)	10.11				1									1
4	DELOITTE	7.6		2	3			9	1						15
5	KREETI TECHNOLOGIES	6						3	1	2					6
6	INFOSYS (HACKWITHINFY)	5						3	2	1					6
7	TATA STEEL BSL	4.8	1	2		2									5
8	JARO EDUCATION	5.16										2			2
9	INFOSYS	3.6	6	26	12	12	11	11	9	29	4	7	3	10	140
10	COGNIZANT	4.56	8	18	18	17	6	13	11	17	6	9		6	129
11	ACCENTURE	4.5	3	24	13	10	9	15	13	24	12	5	3		131
12	TCS	3.36	2	21	8	10	7	16	11	24	8	2	4	7	120
13	L&T ECC	6.27		4			9								13
14	IBM	4.5							1	1					2
15	COGNIZANT (CYBERSECURITY)	5.4						4	2						6
16	MACLEODS											5			5
17	Aditya Birla Group	6.6	6	6		12			1			7			32
18	WIPRO	3.5							1						1
19	PRADAN	7.2	2			2				2	2				8
20	HCL	3.5			1										1
21	JK PAPER	4.5										3			3
22	MARUTI SUZUKI	10.1		3		4									7
23	L&T Techgium	4		3	1	4				2					10
24	Credit Suisse	10.81						2	1						3
25	TRL	4.65				1									1
26	WINDMOLLER			1											1
27	Kodnest								1	1					2
28	Cognizant Infrastructure services	4.1		1		1					1				3
29	SG Analytics	7.25						1							1
30	Amazon	15						1							1
31	BYJUS	10.1					2					1			3
	TOTAL OFFERS		28	114	56	76	44	82	56	106	33	41	10	23	669

## 22. SPONSORED R&D PROJECT IN HAND

<b>N o.</b>	<b>Year</b>	<b>Fundi ng Agency</b>	<b>Sche me</b>	<b>Project Name</b>	<b>Principal Investigator</b>	<b>Departmen t</b>	<b>Amo unt (Lak hs)</b>
1	2016-17	AICTE	MOD ROB	Data mining Laboratory	Manas Ranjan Senapati	Information Technology	₹ 10.65
2	2016-17	AICTE	MOD ROB	MODROBS of Microwave Laboratory	Debasis Mishra	Electronics & Tele-Communication Engineering	₹ 6.03
3	2017-18	AICTE	MOD ROB	Modernization of Electrical power System Laboratory	Ajit Barisal	Electrical Engineering	₹ 18.00
4	2017-18	AICTE	MOD ROB	Modernization Structural Engineering laboratory	Sanjaya Patro	Civil Engineering	₹ 18.50
5	2017-18	AICTE	MOD ROB	Modernization of Microcontroller and Embedded System Laboratory	Manoranjan Pradhan	Electronics & Tele-Communication Engineering	₹ 8.50
6	2015-16	DST	SERB	Assessment of Wide-Area measurement Signal by Computational intelligence Techniques	Papia Ray	Electrical Engineering	₹ 15.46
7	2016-17	DST	SERB	Fundamental investigation of biopolymers-bio surfactants interaction towards understanding tdeir	Monalisha Mohapatra	Chemistry	₹ 37.62



				physicochemical behaviour using fluorescent drug molecules			
8	2017-18	CPRI		IEC 61850 Compliant SF6 Monitoring System for Gas Insulated SwiTele-Communicationh gear	GyanRanjan Biswal	Electrical & Electronics Engineering	₹ 33.64
9	2017-18	DST	SERB	Mining Socio-economic Factors Affecting Agricultural Productivity in Sambalpur District, Odisha State: Soft Computing based Machine Learning Approaches	Bighnaraj Naik	Computer Application	₹ 19.06
10	2017-18	UGC	UKIE RI-III	FRP shear strengtdening of damaged concrete beams subjected to fatigue loading	Amar Natd Nayak	Civil Engineering	₹ 12.19
11	2016-17	AICTE	MODR OB	Development of Advanced Concrete laboratory for Development of Sustainable Concrete incorporating Recycled Coarse Aggregators Ground Granulated Blast furnace Slag	Amar Natd Nayak	Civil Engineering	₹ 19.00

12	2017-18	AICTE	MODR OB	Modernization of Communication Laboratory	Bikramaditya Das	Electronics & Tele- Communicati on Engineering	₹ 7.97
13	2018-19	AICTE	RPS- NDF	Development of Fluidized Bed- Hot Abrasive Jet Machining (FB- HAJM) for Micro Machining.	Debbbrata Dhupal	Production Engineering	₹ 24.80
14	2018-19	AICTE	RPS- NDF	Assessment of tde Potential for River Bank Filtration in tde State of Odisha	Rakesh Roshan Dash	Civil Engineering	₹ 10.00

### 23. CANDIDATES COMPLETED / DOING PHD

Sl. No.	Department	No. Of Student Enrolled
01	Architecture	02
02	Chemical Engineering	01
03	Chemistry	01
04	Civil Engineering	06
05	Computer Application	01
06	Computer Science & Engineering	00
07	Electrical Engineering	02
08	Electrical & Electronics Engineering	00
09	Humanities	02
10	Information Technology	02
11	Mathematics	01
12	Mechanical Engineering	06
13	Metallurgical & Materials Engineering	01
14	Physics	01
15	Production Engineering	04
16	Electronics and Telecommunication	03
<b>TOTAL</b>		<b>33</b>

Sl. No.	Department	No. Of Student Enrolled
01	Architecture	00
02	Chemical Engineering	00
03	Chemistry	04
04	Civil Engineering	00
05	Computer Application	00
06	Computer Science & Engineering	03
07	Electrical Engineering	03
08	Electrical & Electronics Engineering	01
09	Humanities	01
10	Information Technology	00
11	Mathematics	01
12	Mechanical Engineering	01
13	Metallurgical & Materials Engineering	02
14	Physics	01
15	Production Engineering	00
16	Electronics and Telecommunication	01
<b>TOTAL</b>		<b>18</b>

## 24. R&D ACHIEVEMENTS

The faculty members of the university are engaged in good quality research and are supervising M.Tech., M.Phil. and Ph.D. Scholars. The faculty members have published a number of research papers in peer reviewed research journals. They have also published Books and Chapters for Books. Further, the departments have organized number of conferences and Seminars. 384 Nos. Ph.D. Scholar are currently pursuing their research work in the University.

### AICTE National Doctoral Fellowship (NDF)

The following candidates taken admission into full time Ph. D. programme under AICTE-National Doctoral Fellowship (NDF-2019).

Sl.No.	Name of the student	Department
1	Anamika Bandopadyay	Civil Engg.
2	Hemanta Ku. Behera	
3	Swarnima Subhadarsini	
4	Rahul Ray	Mechanical Engg.
5	Deepak Kumar Mohapatra	
6	Susanta Behera	

7.	Valipilli Somesh	Production Engg.
8.	Nisith Kumar Goswami	

### Books Published / Edited

1. *Bionanocomposites for packaging applications*, Editors: Dr. Mohammad Jawaaid and **Prof. Sarat Kumar Swain**, Hardcover ISBN 978-3-319-67318-9, eBook ISBN 978-3-319-67319-6, Publisher: Springer International Publishing, 1<sup>st</sup> Ed. (2018) DOI: 10.1007/978-3-319-67319-6. Link: <http://www.springer.com/in/book/9783319673189>.
2. *Nanostructured Polymeric composites for biomedical applications*, Editors: **Prof. Sarat Kumar Swain and** Dr. Mohammad Jawaaid, Hardcover **Paperback ISBN: 9780128167717**, Publisher: **Elsevier**, 1<sup>st</sup> Ed. (2019) (In Press) E-ISBN 978-0-12-816771-7. <https://www.elsevier.com/books/nanostructured-polymer-composites-for-biomedical-applications/swain/978-0-12-816771-7>
3. Basanta Kumar Nanda, Ankan Mishra, SudhansuRanjan Das, D. Dhupal (2019) Fluidized Bed Hot Abrasive Jet Machining (FB-HAJM) of K-60 Alumina Ceramic. In: Shunmugam M.S., Kanthababu M. (eds) *Advances in Interdisciplinary Engineering. Lecture Notes on Multidisciplinary Industrial Engineering*. Springer, Singapore, Chapter 53, ISBN: 978-981-329-470-7 **Scopus**
4. SudhansuRanjan Das, “Machinability of Different Hardened Steels With Coated Ceramic Tool”, Scholars’ Press, ISBN: 978-613-8-91626-0,(2019).
5. Dhupal D., Dixit S.R., Pattanayak S., Routray R.R., Behura A.K., Das S.R. (2019) Assessment, Modeling, and Optimization During Nd:YAG Laser Microgrooving of Titanium Alloy. In: Kumar M., Pandey R., Kumar V. (eds) *Advances in Interdisciplinary Engineering. Lecture Notes in Mechanical Engineering*. Springer, Singapore, Chapter 5, ISBN:978-981-13-6576-8 **Scopus**
6. Panda A., Das S.R., Dhupal D. (2019) Statistical Analysis of Surface Roughness Using RSM in Hard Turning of AISI 4340 Steel with Ceramic Tool. In: Shanker K., Shankar R., Sindhwani R. (eds) *Advances in Industrial and Production Engineering. Lecture Notes in Mechanical Engineering*. Springer, Singapore, Chapter 3, ISBN:978-981-13-6411-2 **Scopus**
7. PankajCharan Jena, BarsaraniPradhan, SudhansuRanjan Das, and D. Dhupal, (2019) Experimental Investigation on ECMM With Nimonic75 Alloy for ProstheticComponent.In: Kaushik Kumar, J. Paulo Davim (eds.) *Design, Development, and Optimization of Bio-Mechatronic Engineering Products*. IGI Global, Chapter 6, ISBN: 9781522582359 **Scopus**
8. SudhansuRanjan Das, Asutosh Panda, “Engineering Mechanics”, Airwalk Publications, ISBN: 978-9388084321,(2019).
9. SudhansuRanjan Das, “Fluidized bed-hot abrasive jet machining (FB-HAJM) of alumina ceramic”, Lambert Academic Publishing, ISBN: 978-3-659-79164-2,(2018).
10. Sahu S.K., NaikS., Das S.R., Dhupal D. (2019) Parametric Optimization of Surface Roughness and Overcut in Electric Discharge Machining of Al-SiC Using Copper Electrode. In: Chattopadhyay J., Singh R., Prakash O. (eds) *Renewable Energy and its Innovative Technologies*. Springer, Singapore,

Chapter 9, ISBN: 978-981-13-2116-0. **Scopus**.

11. Jena J., Panda A., Behera A.K., Jena P.C., Das S.R., Dhupal D. (2019) Modeling and Optimization of Surface Roughness in Hard Turning of AISI 4340 Steel with Coated Ceramic Tool. In: Chattopadhyay J., Singh R., Prakash O. (eds) Innovation in Materials Science and Engineering. Springer, Singapore, Chapter 15, ISBN: 978-981-13-2116-0 **Scopus**

## Paper Published

The faculty members of the University have published 405 research papers in reputed journals and conferences during 2019-20.

### TITLE

#### MVO optimized hybrid FOPID-LQG controller for load frequency control of an AC micro-grid system

S Mishra, S Patel, RC Prusty, S Panda

World Journal of Engineering

#### A modified moth flame optimisation technique tuned adaptive fuzzy logic PID controller for frequency regulation of an ac power system

D Mohanty, S Panda

International Journal of Sustainable Energy, 1-28

#### Frequency regulation of an electric vehicle-operated micro-grid under WOA-tuned fuzzy cascade controller

PC Sahu, RC Prusty, S Panda

International Journal of Ambient Energy, 1-12

#### Adaptive differential evolution based PDF plus (1+ PI) controller for frequency regulation of the distributed power generation with electric vehicle

D Khamari, RK Sahu, S Panda

International Journal of Ambient Energy, 1-15

#### Improved-GWO designed FO based type-II fuzzy controller for frequency awareness of an AC microgrid under plug in electric vehicle

PC Sahu, RC Prusty, S Panda

Journal of Ambient Intelligence and Humanized Computing, 1-18

#### Chaotic multi verse optimizer based fuzzy logic controller for frequency control of microgrids

BP Sahoo, S Panda

Evolutionary Intelligence

#### Optimal design of a robust FO-Multistage controller for the frequency awareness of an islanded AC microgrid under $i$ -S

## TITLE

PC Sahu, RC Prusty, S Panda

International Journal of Ambient Energy, 1-13

### Cosine adapted modified whale optimization algorithm for control of switched reluctance motor

N Saha, S Panda

Computational Intelligence

### Approaching hybridized GWO-SCA based type-II fuzzy controller in AGC of diverse energy source multi area power system

PC Sahu, RC Prusty, S Panda

Journal of King Saud University-Engineering Sciences 32 (3), 186-197

### A Modified Moth Swarm Algorithm-Based Hybrid Fuzzy PD–PI Controller for Frequency Regulation of Distributed Power System with Electric Vehicle

D Khamari, RK Sahu, S Panda

Journal of Control, Automation and Electrical Systems, 1-18

### Design and Analysis of 2dof-PID Controller for Frequency Regulation of Multi-Microgrid Using Hybrid Dragonfly and Particle Swarm Optimization Algorithm

S Mishra, RC Prusty, S Panda

Journal of Control, Automation and Electrical Systems, 1-15

### Grasshopper optimisation algorithm of multistage $PD_F + (1 + PI)$ controller for AGC with GDB and GRC nonlinearity of distributed power system

PC Nayak, RC Prusty, S Panda

International Journal of Ambient Energy, 1-13

### Moth Swarm Algorithm based cascade PI-PD controller for frequency regulation of distributed power generation system with electric vehicle

D Khamari, RK Sahu, S Panda

2020 First International Conference on Power, Control and Computing ...

### Load Frequency Control of Solar Photovoltaic/Wind/Biogas/Biodiesel Generator Based Isolated Microgrid Using Harris Hawks Optimization

BP Sahoo, S Panda

2020 First International Conference on Power, Control and Computing ...

### A novel hybrid many optimizing liaisons gravitational search algorithm approach for AGC of power systems

## TITLE

P Mohanty, RK Sahu, S Panda

Automatika 61 (1), 158-178

### A hybrid shuffled frog-leaping and pattern search algorithm for load frequency controller design of a two-area system connected to a power grid and thermal generator

RK Khadanga, A Kumar, S Panda

International Journal of Numerical Modelling: Electronic Networks, Devices ...

### Sine Cosine Optimization Based Proportional Derivative-Proportional Integral Derivative Controller for Frequency Control of a Power System

TS Gorripotu, P Ramana, RK Sahu, S Panda

Computational Intelligence in Data Mining, 789-797

### Performance Analysis of PDF+ (1+ PI) Controller for Load Frequency Control of the Multi Microgrid System Using Genetic Algorithm

PC Nayak, S Bisoi, RC Prusty, S Panda

2019 International Conference on Information Technology (ICIT), 448-453

### Automatic generation control of power system in deregulated environment using hybrid TLBO and pattern search technique

D Khamari, RK Sahu, TS Gorripotu, S Panda

Ain Shams Engineering Journal

### Adaptive differential evolution tuned hybrid fuzzy PD-PI controller for automatic generation control of power systems

JMR Chintu, RK Sahu, S Panda

International Journal of Ambient Energy, 1-16

### Performance analysis of a cascade controller for conventional and deregulated power systems

BVS Acharyulu, B Mohanty, PK Hota

International Journal of Modelling and Simulation 40 (4), 260-278

### Analysis of moth flame optimization optimized cascade proportional-integral-proportional-derivative controller with filter for automatic generation control system incorporating ...

BVS Acharyulu, B Mohanty, PK Hota

Optimal Control Applications and Methods 41 (3), 866-881

### CLSA-MRPID controller for automatic generation control of a three-area hybrid system

BVS Acharyulu, PK Hota, B Mohanty

Energy Systems 11 (1), 163-194

Harmonics and Voltage Sag Compensation of a Solar PV-Based Distributed Generation Using MSRF-Based UPQC

S Samal, A Hota, PK Hota, PK Barik

Innovation in Electrical Power Engineering, Communication, and Computing ...

Multi-level Asymmetrical Inverters Using Two DC Ports with Less Number of Switches and Conversion Stages

SK Dash, PK Hota

Innovation in Electrical Power Engineering, Communication, and Computing ...

Automatic Generation Control in Deregulated Power Market Using Sunflower Optimization Algorithm

A Sahoo, PK Hota, B Mohanty

Innovation in Electrical Power Engineering, Communication, and Computing ...

Characterization of lime activated recycled aggregate concrete with high-volume ground granulated blast furnace slag

RK Majhi, AN Nayak, BB Mukharjee

Construction and Building Materials 259, 119882

Behaviour of RC Deep Beams Strengthened with Externally Bonded GFRP Fabrics: An Experimental Study

A Kumari, AN Nayak

Recent Developments in Sustainable Infrastructure, 279-289

Production of sustainable concrete utilising high-volume blast furnace slag and recycled aggregate with lime activator

RK Majhi, AN Nayak

Journal of Cleaner Production 255, 120188

Utilization of Fly Ash Cenosphere for Production of Sustainable Lightweight Concrete

SK Patel, HP Satpathy, AN Nayak, CR Mohanty

Journal of The Institution of Engineers (India): Series A 101 (1), 179-194

Free vibration characteristics of laminated composite stiffened plates: Experimental and numerical investigation

L Sinha, SS Mishra, AN Nayak, SK Sahu

Composite Structures 233, 111557

An overview of the properties of sustainable concrete using fly ash as replacement for cement



RK Majhi, AN Nayak, BB Mukharjee

International Journal of Sustainable Materials and Structural Systems 4 (1 ...

### Shear strengthening of RC beams using GFRP sheets

A Kumari, N Dalai, RB Swain, AN Nayak

International Journal of Structural Engineering 10 (2), 174-194

### Optimal fractional order PID controller design using ant lion optimizer

2

2020

R Pradhan, SK Majhi, JK Pradhan, BB Pati

Ain Shams Engineering Journal 11 (2), 281-291

### Channel Estimation Strategies for Underwater Acoustic (UWA) Communication: An Overview

2020

MR Khan, B Das, BB Pati

Journal of the Franklin Institute

### A Comprehensive review of path planning algorithms for autonomous underwater vehicles

4

2020

M Panda, B Das, B Subudhi, BB Pati

International Journal of Automation and Computing, 1-32

### Formation control of underwater vehicles using Multi Agent System

2020

B Das, B Subudhi, BB Pati

Archives of Control Sciences 30

### Global path planning for multiple AUVs using GWO

2020

M Panda, B Das, B Pati

Archives of Control Sciences 30

### A Hybrid Approach for Path Planning of Multiple AUVs

2020

M Panda, B Das, BB Pati

Innovation in Electrical Power Engineering, Communication, and Computing ...

The department-wise list of papers published is furnished below.

Name of the Department	No. of publications
Civil Engg.	17

Mechanical Engg.	60
Electrical Engg. & EEE	32
Electronics & TC	39
Computer Sc. Engg.	29
IT	19
Production Engg.	55
Chemical Engg.	09
Metallurgy & Materials Engg.	08
MCA	16
Physics	30
Chemistry	52
Mathematics	25
Humanities	14
<b>Total</b>	<b>405</b>

## 25. CONFERENCE HELD

TEQIP CUNDUCTED TRAINING PROGRAMME					
Sl No.	Dept	Training mode	Title of training	From	To
1	CSE	Workshop	Professional Skill	26-11-2017	26-11-2017
2	EE	Workshop	MATLAB and SIMULINK	13-11-2017	17-11-2017
3	CSE	Workshop	Professional Skill - Career guidance in IT industry and IBM	14-01-2018	14-01-2018
4	EE	STC	Soft Computing Techniques for Engineering Problems	03-01-2018	08-01-2018
5	IT	Workshop	Cloud Computing	08-01-2018	20-01-2018
6	Civil	Workshop	Urban Infrastructure Planning and Design	22-02-2018	24-02-2018
7	MME	Workshop	Experiments in Non Destructive Testing	17-02-2018	18-02-2018

8	MME	Workshop	NTPMMPMC-2018	19-03-2018	23-03-2018
9	CSE	Conf.	National Students Computing Conference	21-04-2018	22-04-2018
10	Chemical	Workshop	NTREES-2018	23-07-2018	27-07-2018
11	ETC	Seminar	World Telecommunication	17-05-2018	17-05-2018
12	IT & CA	Conf.	ICCIDM - 2018	15-12-2018	16-12-2018
13	IT	Workshop	Cloud Computing	08-01-2018	20-01-2018
14	Production	Workshop	OTAM	15-01-2019	19-01-2019
15	Chemical	Workshop	MSDAER-2019	28-01-2019	01-02-2019
16	Civil	Workshop	Life Skill Management	07-02-2019	12-02-2019
17	Civil	Workshop	Water Urbanism	12-03-2019	16-03-2019
18	Mechanical	Workshop	AOTAMP-2019	25-03-2019	30-03-2019
19	Physics	Conf.	NCFAM-2019	27-07-2019	28-07-2019
20	EE	Conf.	NCGTR	19-10-2019	20-10-2019
21	Physics	FDP/Workshop	Design and Development of Materials for technological Applications	21-10-2019	26-10-2019
22	EE	STC	Modeling & Simulation Electrical System using Matlab Simulation	28-10-2019	02-11-2019
23	EE	Workshop	MEPSN	05-08-2019	10-08-2019
24	Chemistry	National Conf.	RAIMS - 2019	24-12-2019	25-12-2019
25	Mathematics	Int. Conf.	ICAMC - 2020	07-02-2020	08-02-2020
27	VSSUT	VSSCON-2020	VSSCON - 2020	27-03-2020	29-03-2020

## 26. CONSULTANCY PROJECTS IN HAND

SL. No	Consultancy work	Agency	Amount (Rs)
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1	Testing of Civil Engg. Materials	....	40,00,000
2	Structural vetting prposed Kalyan Mandap Khorda Municipality	Khorda Municipality	23,600
3	Proof Checking checking maneswar platform, Bhubaneswar	Aankhe Engineers LLP	27140
4	Proof Checking checking of existing FOB	Aankhe Engineers LLP	35,400
5	Proof checking 50000 ltr capacity RCC	Purna chandra swain, Sundargarh	11,800
6	For Railway Building Vertting	Novus Arc design pvt Ltd	30,090
7	NDT Test Provision of Road under Bridge (RUB)/LHS at Titlagarh	Asst Divisional Engineer, E.Co.Rly Titlagarh	1,12,000
8	Regarding vetting of design and drawing for differenct project in Bijepur	Executive Officer Bijepur, Bargarh	94,400
9	Regarding vetting of structural design NAC Bargarh	Spire Consultant, Bhubaneswar	1,29,800
10	Proof checking of 14 nos Type-V Quarters (Gat AIIMS,bhubaneswar	Jaisai Associate, Bhubaneswar	42,646
11	Regarding vetting of design and drawing for diferent project in Bijepur	NAC, Bijepur	94,400
12	For conducting Ultrasonic Pulse Test and Test Reboubnd hammer test	Hindalco Industries Limited	3,30,400
13	Conducting Non-destrutive test to evaulate the concrete quality Chiminey at GTC	Hindalco Industries Limited	3,30,400
14	C/o Trauma center at AIIMs ,Bhubaneswar proof checking	Executive Engineer AIIMS Project Division CPWD Bhubaneswar	71,414
15	Vetting of Structural Construction of Kalyan Manda at ATTABIRA NAC	Executive officer Attabira NAC	23,600
		<b>Total Rs</b>	<b>53,57,090</b>

## 27. START-UPS AND INNOVATION

The Indian Space Research Organisation Chairman, Dr. K.Sivan has announced the establishment of Innovation-cum-Incubation Centre in VSSUT campus in January, 2019. The construction of the Centre has already been completed with the assistance from State Govt. and ISRO.

## 28. LINKAGE WITH INDUSTRY

The University has linkage with nearby industries and organizations. The dignitaries from industries have been inducted as member in various activities of the departments and University. The courses of studies have been designed according to the suggestions received from industries considering the present day of changing world. Two nos. of Executive B.Tech. programmes have been offered by the University with the assistance from HINDALCO. The University has linkage with the following industries :

- a) Mahanadi Coalfields Limited
- b) HINDALCO
- c) Aditya Alumina Ltd
- d) Bhusan Steel Limited
- e) NALCO
- f) Tata Refractories Limited
- g) IB Thermal
- h) OHPC

## 29. COLLABORATIVE ACTIVITIES

Sl No.	Title of the Project	Name of the Principal and Co - Investigation	Department
1	Synthesis and characterization of ternary multiferroic ceramic composites for memory device application	Mohapatra Prakash Kumar Sahoo	Physics
2	Synthesis and Characterization of A- site and B - site modified SrTiO <sub>3</sub> ceramics	Akhyaya Kumar Pattanaik	Physics
3	Bio - ceramic radar absorbing material for stealth applications	Ganeswar Nath	Physics
4	Design and Development of Rare earth modified Multiferroic Ceramics	Piyush Ranjan Das	Physics
5	Some Studies on Complex Hamiltonian in Two - dimension for Classical Integrable Systems	Jasvinderpal Singh Viridi	Physics

6	Recent Developments of Ferroelectric Ceramics for Device Application	Parbati Naik	Physics
7	Fabrication and Characterization of application based smart materials	Sunanda Kumari Patri	Physics
8	Socio-economic and Health Impact of Burla Canal on local Inhabitants	Auro Kumar Sahoo	Humanities
9	Automatic Time Series Forecasting using Evolutionary Neural Network	H.S. Behera	IT
10	Secure sharing of medical images using watermarking technique	Kshiramani Naik/ Alina Dash	IT
11	Visual Perception and EEG Based robot control and application using Computational Intelligence for physical challengeable person	Pradipta Kumar Das	IT
12	Similarity Analysis and Item Grouping using various Hybridized Data Mining Techniques	Gyanaranjan Shial	IT
13	Development of Novel Approach for Recognition and Grading of Fruits using Image Processing and computer Intelligence.	Mrs.Santi Kumari Behera Asst. Professor, CSE	CSE
14	Dynamic Slicing based test case prioritization for regression testing at design phase of software development	Mrs.Alina Mishra Asst. Professor, Cse	CSE
15	Degradation of industrial pollutants using dye sensitization and bio - mediated doped photo - catalysts	Amit Kumar Behera	Chemical
16	Recycling of Waste Engine Oil (WEO) by solvent extraction - adsorption method	Nivedita Patel	Chemical
17	Development of a process for the removal of Chromium (VI) from waste water using adsorption techniques	Krushna Prasad Shadangi	Chemical
18	Development and characterization of nanoemulsion for biomedical application	Veda Prakash	Chemical
19	Removal of Heavy Metals from Fly Ash	Anil Kumar Murmu	Chemical
20	Effect of particle size of Vitamin E Nano - emulsions on its antimicrobial activity	Lipika Parida	Chemical
21	High speed pulsed gas tungsten arc welding using oxide flux for automotive application	S. K. Badjena	MME
22	Improving productivity of boiler industries using activated flux gas tungsten arc welding	Nilakantha Sahu	MME
23	Fabrication and characterization of CNT and B <sub>4</sub> C reinforced Al-Cu metal matrix composites using the powder metallurgy route to study the effect of milling parameters and reinforcement composition on the microstructure and mechanical properties of composites.	Dinesh Kumar Mishra	MME

24	Electrodeposition of hybrid composite of coreshell structure and carbon nanotube on titanium substrate	Manila Mallik	MME
25	Effect of Welding parameters on microstructure, mechanical properties and electrochemical behavior of GMAW Duplex stainlesssteels	Subhadra Sahoo	MME
26	Comparative analysis of mechanical, electrical, and wear resistance properties of Cu -MWCNT composite with Cu-MWCNT-SiC /Tic/AlN hybrid composite for heat sink application prepared by powder metallurgy method	Renuprava Dalai	MME
27	Distortion Theorem on Certain Subclasses of Bazilevic Function	Ashok Kuamr Sahoo	Mathematics
28	Duality of multiobjective variational and control problems in Branch spaces	Saroj Kuamr Padhan	Mathematics
29	Design, Synthesis and Characterization of Polymer bio-composites by using natural resources.	Trinath Biswal	Chemistry
30	Synthesis and Characterization of Polyaniline/Graphene Quantum Dots Nanocomposites	Aruna Kuamr Barick	Chemistry
31	Designing of some Biodgradable Graphene Reinforced Acrylic Polymeric Nanocomposites Films for Packaging Applications	S. K. Swain	Chemistry
32	Interaction of surfactants with polymers: A fluorescence spectroscopic study	Monalisa Mohapatra	Chemistry
33	Adsorption of Dyestuffs from Organic media on unmodified and modified silica	Sukalayan Dash	Chemistry
34	Microwave assisted catalytic pyrolysis of waste plastics to fuel	Achyut Kuamr Panda	Chemistry
35	Anion sensing and hydrogelation by novel terpyridine based transition metal complexes	Pravin Kumar Kar	Chemistry
36	Design Synthesis of FRET Based Biological active Schiff base: fluorescence Chemosensor for Zinc Ion	Bigyan Ranjan Jali	Chemistry
37	Designing of Nanostructured materials for detection of heavy metal ions	Priyaranjan Mohapatra	Chemistry

38	Optimal design of ceramic and nanoparticle filled laminated composite structure using hybrid (FEM and soft computing) technique: Theoretical and experimental analysis	Trupti Ranjan Mahapatra/ Debu Mishra	PE
39	Corrosion analysis of MgCa alloy developed for orthopedic implants	Sambeet Kumar Sahu	PE
40	Design and Development on Circular Fixture for Friction Stir Welding	Premananda Ekka	PE
41	Laser Machining of CNT based composite material	Lipsamayee Mishra/ Debadutta Mishra	PE
42	Additive Manufacturing of Al Alloy using Circular and Liner Friction Stir Processing	Anisha ekka	PE
43	Sustainability assessment and comparative investigation towards machinability improvement of AISI D3 steel using new - generation ultrahard coated carbide tool under different cooling - lubrication conditions	Sudhansu Ranajn Das/ Smita Padhan	PE
44	Knowledge based Smart System for Circular Friction Stir Processing in Industry 4.0	Birendra Kumar Barik	PE
45	Development of control methods for erosion due to surface runoff and unstable catchment characteristics	Abhayaa Nayak	Civil
46	Study of Impact of Surface roughness and Pipe dimensions on Head loss	Kirtisuta Bhoi	Civil
47	Study of effect of variable channel conditions on gap between alternate depths and location of critical depth in the channel	Janhabi Meher	Civil
48	Effect of curing types on the mechanical properties of light weight concrete with steel fibres	Parsuram Nayak/ Ashim Kuamr Mishra	Civil
49	Modelling of overtaking maneuver of driver with lateral clearance	Pratap Ku. Pradhan	Civil
50	Behavior of Glass Fiber Reinforced Plastic (GFRP) strengthened Shear Deficient Reinforced Geopolymer Self- Compacting Concrete (GSCC) beam using solid waste	S. K. Panigrahi	Civil
51	Study on strength and Durability Properties of Stabilized Earth Blocks Prepared using Industrial Waste And Alkali Binder	Bharadwaj Nanda/ Bharati Mohapatra	Civil
52	Study of moisture damage effect on dense bituminous macadam utilising polypropylene fibre by marshall methods	Sudhanshu Sekhar Das	Civil



53	Experiment and analytical modeling of concrete beams/beam - columns with shape memory alloy inserts	Ajaya Kumar Nayak	Civil
54	Study on removal of organics and nutrients from wastewater using moving bed bio film reactor	R R Dash	Civil
55	Study of effect of variable channel conditions on energy dissipation through hydraulic jump	Laxmipriya Mohanty	Civil
56	Soil Stabilisation Using Bioenzyme and Micro - organism	P. K. Pradhan	Civil
57	Rain Garden - As A solution to urban drainage problem	Anil Kumar Kar	Civil
58	Characterization of Geopolymer Bricks	Ramakanta Panigrahi/ Sanghamitra Jena	Civil
59	Confinement effect on the fibre reinforced fly ash mixed concrete subjected to elevated temperature using natural and recycled coarse aggregate	Ramkrishna Dandapat	Civil
60	Effect of ternary cement with industrial solid wastes as aggregate on rebar corrosion in RCC and development of high temperature resistance concrete	Snajaya Kuamr Patro	Civil
61	Free vibration study of stiffened composite plates with and without cutouts	Leena Sinha	Civil
62	Fabrication and evaluation of Mechanical, Thermal and Tribological properties of hybrid AMMCs through powder metallurgy technique	Prabir Kumar Jena / Rabindra Behera	Mechanical / Central Workshop
63	Characterization and study of thermo-mechanical properties of randomly oriented rattan fiber reinforced polyvinyl alcohol composite	Jyoti Ranjan Mohanty/ Janaki Dehury	Mechanical
64	A Non - hydrostatic Mesoscale Model for Rising Thermal Bubble	Dr. Hrushikesh Barik	Mechanical
65	To Develop a Z - Axis Rotating Tool with Arduino Program for Electro - Chemical Discharge Machining Process	Jayadev Rana	Mechanical
66	A study on parametric appraisal of Electro - Chemical Discharge Machining (ECDM) Process: for design and construction of Power Supply Unit.	Layatitdev Das	Mechanical
67	Development of hybrid composite with palm leaf stalk-Glass fiber composites for Automotive Application	Chitta Ranjan Deo	Mechanical

68	An optimum design approach for spur gear using metacheuristics	Sumanta Panda	Mechanical
69	An Investigation on the Mechanical Properties of Laminated Composite Plate with Different Fiber Orientation.	Mihir Kumar Sutar	Mechanical
70	Development of Natural fibre reinforced polylactic acid(PLA) green composites for biomedical and packaging applications	Sarojini Pattnaik	Mechanical
71	Evaluation of Tribological properties of biofiber polymer composite for low cost Applications	Punyapriya Mishra	Mehcanical
72	Brazing of Aluminum to advanced Ceramic cutting tool inserts and its wettability characterization	Saroj Kumar Sarangi	Mechanical
73	Study and Analysis of Mechanical and metallurgical properties of friction stir welded similar and dissimilar materials	Pragyan Paramita Mohanty	Mehcanical
74	Prepartion and characterication of data palm fiber reinfored epoxy corpste	Janaki Dehury	Mechanical
75	Machinability performance of Bio Degradable Dielectric Fluids on Sustainable Electrical Discharge Machining (EDM) of Inconel Suppert Alloys.	Santosh Kuamr Sahu	Mechanical
76	Development of Efficient Hardware Architecture for Vowel like speech Detection Method.	Dr. Bikramaditya Das	ETC
77	MIMO Dielectric Resonator antennas for 5G applications	Sheeja K. L.	ETC
78	Fractal Patch Antenna Design for High Frequency Mobile Satellite Communication	Biswa Binayak Mangraj	ETC
79	Design of multiband antenna for Aircraft	Ananda Kumar Behera	ETC
80	A Novel Compact slot Antenna for C - Band Application	Diptimayee konhar	ETC
81	Experimental Verification of Different Microstrip Antennas	Debasis Mishra	ETC
82	A Novel Antenna for S- Band Application	Suvendu Narayan Mishra	ETC
83	Design and Implementation of Continues wave(CW) Doppler Radar for physiological signatres (Respiration and Heart rate) in unobtrusive health monitoring system.	Ashish Kumar Sharma	ETC
84	Generation of Real Time Heterogeneous Signal Datasets	Ms. Rasmita Sahu	ETC

85	CAD system development for breast cancer detection using convolutional neural network (CNN)	Sanjaya Agrawal	ETC
86	Exploring digital circuits designing using perpendicular nano magnetic logic architectures	Bandan Kumar Bhoi	ETC
87	Hybrid path planning for AUVs	Madhusmita Panda	ETC
88	Object detection and tracking of videos for surveillance application	Dr. Nirmalini Bhoi	ETC
89	Power Quality analysis	Santi Behera	EEE
90	Real Time Simulation of a New Fuzzy Logic Based Secondary Load Frequency Controller For Multi - Microgrid	Bibhuti Prasad Sahoo	EEE
91	Design of intelligent fractional order controller for BLDC motor	Rosy Pradhan	EE
92	Deep Learning for Medical Image Processing	Prasanta Kumar Parida	EEE
93	Energy management by improvement of PV generation dispatchability in isolated system and DC microgrid	Sasmita Behera	EEE
94	Induction motor speed control using variable frequency drive	Amit Mallick	EE
95	Design and Implementation of Solar Rickshaw	Nutan Saha	EE
96	Design of DC - DC Converter for Hybrid Energy Storage System	Jatin Kumar Pradhan / K. Sujita Kumar Achary	EE
97	Analysis of Power Quality of 3 KW Grid Connected/Standalone solar PV System	Manish Tripathy	EE
98	Speed Control of BLDC Motor using CUK converter	Banaja Mohanty	EE
99	Design and implementation of BLDC/SRM motor drive for electric vehicle	P. K. Hota	EE
100	Transient Stability Analysis of Capacitive Voltage Substation	Deepak Kumar Lal	EE
101	Image Processing Using Deep Learning	Lingraj Dora	EEE
102	IoT Based Real Time Energy Management of A Micro - Grid	Raseswari Pradhan	EE
103	Analysis of Wind Speed Time Series for Prospective Power Generation Applications in Odisha	Rajat Kanti Samal	EE
104	Internet of Things Driven Speed Control of Electric Equipment(s): A Smart Home	Gyan Ranjan Biswal	EEE

### 30. CURRICULAR ACHIEVEMENT & CO-CURRICULAR ACHIEVEMENTS

The students of VSSUT excel in all fronts including academic, cultural, extracurricular activities. The students of the university have taken up social activities towards the development of surrounding community. The university has three societies namely Technical Society, Cultural Society & Athletic Society under which a number of clubs function for all round development of the students and to give scope to exhibit their talents. Each department has professional societies in their respective fields which provide platform for the students to exhibit their academic and research talents.

The following are the achievements of students :

#### Achievement of IDEA & INNOVATION CLUB:

- 30/04/2019-31/04/2019-3 teams for reaching through the grand finale round of Hackathon on Road Safety organized by Indian road safety campaign in association with Ministry of Road Transport and Highways, Government of India, United Nations and Bosch India at IIT Guwahati.
- 25/04/2019-26/04/2019-A first of its kind 2 Day Technical Workshop on Launch Vehicle Technology was organized to impart knowledge on Ground Station & Telemetry, Guidance & Control, Materials & propulsion, Pyro & separation systems, Range safety & precautions. It hosted following 11 eminent speakers from different centers of ISRO Indian Space Research Organization
- Apurwa Masook successfully completed the Massachusetts Institute of Technology (MIT) MIT Bootcamps for Innovation and entrepreneurship at Australia.
- Our Team Completed Internship and Industrial Training at different Industries and Institutions of India. A 8 member 2<sup>nd</sup> Year student team were at Reliance Power, Nagpur with Ashesh Padhy Sir (Sr. VP & Station Director, VIPL). A 2 member team was at UNICEF SRISTI Summer School of inclusive Innovation, Ahmedabad with Prof. Anil Gupta. A Group Containing 4 members were at Nabha L & T Power, Punjab with Athar Shahab Sir (CEO, NPL (L & T)). And also other members of Team completed their training at HAL, Sunabedha, IFFCO (Paradeep).
- Our Team Spine Care won the 2<sup>nd</sup> Runnersup Prize with a Cash Prize of INR 1 Lakh at Anveshan @019 Innovation Fellowship organized by Analog Devices, Inc. Received the award from Mr. Sai Krishna Mopuri, MD – analog Devices (India).
- One of our team member, Markandeya Mohapatra completed his 2 months internship in Bhabha Atomic Research Center.

#### Achievements of Robotic Club:

- AIR- 4 among the shortlisted teams from across India, at the National Finals of the MathWorks Parrot Mini Drone Competition held at NUMA Bengaluru.
- Appreciation by Honourable Collector, Sambalpur District on our project UAV for Disaster Management.
- Finalist Smart India Hackathon-2019 software Edition.
- Shortlisted in Round-2, ABU Robocon 2019.
- 2 teams shortlisted under Top 10 in E-Yantra Robotics competition- 2018, MHRD & IIT Bombay.
- 3 Teams in National Finals at L&T Techgum -2019.
- 3 Teams from VSSUT selected finalist for Tata Crucible Hackathon 2019.

- Asia Pacific Rank 4<sup>th</sup> in E-fest Asia Pacific 2019 Under Innovation Additive 3D printing challenge.
- Asia Pacific Rank 5<sup>th</sup> in E-fest Asia Pacific 2019 Under Student Designing Competition.
- 2<sup>nd</sup> Prize at Smart Odisha Hackathon 2018.
- 2<sup>nd</sup> Runner's up at Kolkata Zonal of Techfest -2018, IIT Bombay.
- AIR-1 at National Student's Space Challenge 2018, ISRO & IIT Kharagpur.
- 1<sup>st</sup> Prize Line Follower Event, Innovision-2018 NIT Rourkela.
- 1<sup>st</sup> Prize Hover pod Event, Innovision-2018 NIT Rourkela.
- 1<sup>st</sup> Prize Balance Bot Event, Innovision-2018 NIT Rourkela.
- 1<sup>st</sup> & 2<sup>nd</sup> Prize in Maze solving & Image Processing Event, Innovision-2018 NIT Rourkela.

- **Social responsibility**

#### SANSKAR KENDRA

- The students of the university have taken up social responsibilities by providing education to school going children of nearby locality. Sanskar Kendra is a fully mechanized sovereign group of the Veer Surendra Sai University of Technology, Burla which has been working since 2004 for the enrichment of knowledge of local children. A team of 150 volunteers from our university runs the organisation along with support from alumni and teachers of our university.
- The students of the University are not only providing education to the poor and needy children but also giving them proper career guidance.
- At present around 250 students and their families are associated the Sanskar Kendra.
- Sanskar Kendra have organised health camp, cleanliness programs and awareness camps for the children of the nearby villages.
- The students studying in Sanskar Kendra are doing very well in their studies and in their career.

### 31. AWARDS / PRIZES WON BY STUDENTS, FACULTY

#### Prof. Debadutta Mishra:

“ErBrundabanSahu Memorial Award” at 60<sup>th</sup>Annual Technical Session of Odisha State Centre, The Institution of Engineers (India) on 30th March, 2019.

#### Dr. Arun Kumar Rout

Best paper award in the ICAIMRE -2019/ Erosion wear performance of palm-epoxy hybrid composite reinforced with biowaste filler.

#### Dr. PankajCharan Jena

Er. Pratap Chandra Panda award received from The Institution of Engineers (India),2019.

#### Dr. SudhansuRanjan Das

1. Er. Pratap Chandra Panda award received from The Institution of Engineers (India),2019.
2. Distinguished Researcher award received from International Institute of Organized Research (I2OR), 2019.
3. Outstanding Educator award received from Green ThinkerZ, 2019.

Dr. TruptiRanjanMahapatra:

1. “ErBrundabanSahu Memorial Award” at 60th Annual Technical Session of Odisha State Centre, The Institution of Engineers (India) on 30th March, 2019.

“Er Raj Kishore Mahapatra Award” at 59th Annual Technical Session of Odisha State Centre, The Institution of Engineers (India) on 21st January, 2018

Dr. Sanjaya Ku. Panda, Dr. Manas Ranjan Senapati, , Dr. Pradip Kumar Sahu have been awarded with Institution Award during 60<sup>th</sup> Annual Technical Session held on 30<sup>th</sup> March, 2019 for best paper in the Institution of Engineers (India), Odisha State Centre, Bhubaneswar.

Dr. Sarojrani Pattnaik, Assoc. Prof., Mechanical Engg.

	<b>Name of the Award/ Medals</b>	<b>Name of the Research work for which the Award/Medal is WON</b>	<b>Date/ Month/ Year of award</b>	<b>Name of Awarding Organization</b>
1	1 <sup>st</sup> Global Outreach Research and Education Summit and Award 2019	Young Researcher in Mechanical Engineering Award.	31.01.2019	Global Outreach Research & Education Association
2	2 <sup>nd</sup> Global Outreach Research and Education Summit and Award 2019	For excellence in “Teacher in Mechanical Engineering”.	30.04.2019	Global Outreach Research & Education Association
3	GRABS Awards 2019	Best Faculty Award	03.02.2019	GRABS Educational Charitable Trust
4	Institute of Scholars “Research Excellence Award 2019”	For the Journal publication entitled “Development in Investment Casting Process: A Review”.	2019	Institute of Scholars (InSc), unit of SDPL
5	Institute of Scholars “Best Teacher Award 2018”	In recognition of valuable contribution to the academic community and the students.	2018	Institute of Scholars (InSc), unit of SDPL

6	Outstanding Faculty in Engg.	For the contribution and achievement in the field of mechanical engg.	07.07.2018	Venus International Foundation
7	Outstanding Scientist	For the contribution and achievement in the field of mechanical engg.	11.08.2018	Venus International Foundation
8	Outstanding Woman in Engg.	For the contribution and achievement in the field of mechanical engg.	02.03.2019	Venus International Foundation

Dr. Mihir Kumar Sutar, Asst. Prof., Mechanical Engg.

1	2 <sup>nd</sup> Global Outreach Research and Education Summit and Award 2019	For excellence in “Teacher in Mechanical Engineering”	30.04.2019	Global Outreach Research & Education Association
2	GRABS Awards 2019	Best Researcher Award	03.02.2019	GRABS Educational Charitable Trust
3	1 <sup>st</sup> Global Outreach Research and Education Summit and Award 2019	Young Researcher in Mechanical Engineering Award	31.01.2019	Global Outreach Research & Education Association
4	Institute of Scholars Research Excellence Award 2018	For the Journal publication entitled “A Geometric Approach for Inverse Kinematics of a 4-link Redundant Manipulator”	2018	Institute of Scholars (InSc), unit of SDPL
5	Best Young Faculty	Best Practise in the field of education	27.05.2018	DK International Research Foundation
6	Outstanding Faculty in Engg.	Best Practise in the field of education	07.07.2018	Venus International Foundation
7	I2OR Awards 2018 for Educators	Best Practise in the field of education	17.06.2018	International Institute of Organized Research (I2OR)
8	Young Researcher in Mechanical Engineering	Global Outreach Education Award for excellence in “Research in Mechanical Engg”	25.06.2018	REDINNO Multinational Technology Company

### 32. FINANCIAL INFORMATION : FUNDS RECEIVED & SPENT

Income			
Sl. No.	Items	Amount in thousands	Amount converted in absolute Rs.
01	Grants Received from		
(i)	University Grants Commission	0	0
(ii)	Distance Education Council	0	0
(iii)	Other Central Government Departments	52,916,664	52,916,664
2	Grants Received from State Government	702,558	702,558,000
3	Grants Received from Local Bodies	0	0
4	Donations	0	0
5	Tuition Fee	76,008	76,008,000
6	Other Fees	170,850.26	170,850,260
7	Interests	15,565.736	15,565,736
8	Sale of Application Form	0	0
9	Other Income	1,287.016	1,287,016
<b>Total</b>		1,019,185.676	1,019,185,676

Expenditure			
Sl. No.	Items	Amount in thousands	Amount converted in absolute Rs.
01	Salary, Allowances & Retirement Benefits	556,779.601	556,799,601
02	Buildings (Construction & Maintenance)	82,042.048	82,042,048
03	Library & Laboratory	14,504.48	14,504,480
04	Research Activities	2,000	2,00,000
05	Scholarships	0	0
06	Grants to Colleges	0	0
07	Other Expenditures	39,086.867	39,086,867
<b>Total</b>		694,432.996	694,432,996



### 33. INTERNAL REVENUE GENERATED

Furnish figure for financial year :FY 2018-2019	
Revenue earned from	Amount (₹)
Fees ( From students)	7,14,50,000
Externally funded R & D projects	24,14,20,000
Consultancy	5,357,090
Infrastructure and Human Resources	0
Financial (Interest earned form bank accounts etc.)	1,55,74,553
TOTAL	33,38,01,643. 00