

# 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**

+91-9437572477 (0663)-2430211 [vc@vssut.ac.in](mailto:vc@vssut.ac.in)

For last 64 years, VSSUT has been the leading center of excellence for Technical Education. The present report was 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 Architecture (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 |

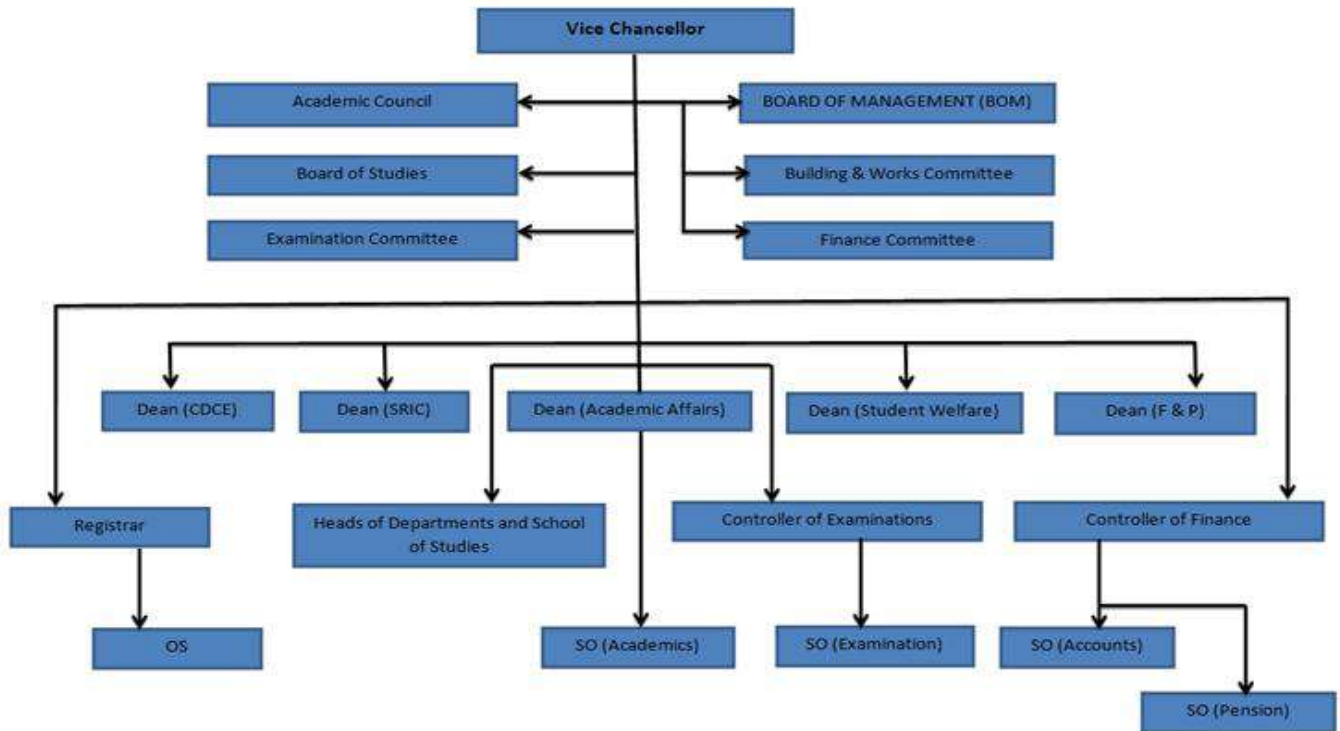
#### **Arundhati Hall of Residence**

|              |                            |
|--------------|----------------------------|
| 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  |
| <b><u>Vasistha Hall of Residence</u></b> |                          |
| 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.<br>(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.<br>(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.)           |   | 13/08/2019 & 14/08/2019  |
| 5       | Mid-Semester Examination  |   | 01/10/2019   |
| 6       | Repeat Mid Semester Examinations  |   | 27/09/2019 to 04/10/2019   |
| 7       | Athletic Meet   |   | 21/10/2019 to 25/10/2019   |
| 8       | Last date of showing evaluated Mid semester/Repeat Mid Semester answer scripts to the students by the concerned subject teacher   |   | 02.11.2019 & 03.11.2019  |
| 9       | Last date of completion of sessional/Lab/Project & Viva Examination and theory classes  | 29/11/2019  | 06/11/2019   |
| 10      | Last date of submission of consolidated attendance shortage report to the office Dean, Academic Affairs by HODs in proper format.   | 30/11/2019  | 23/11/2019   |
| 11      | Last date of Report to COE by HODs after Departmental meeting on Lab/Sessional/Viva/Seminar/Project etc. failure cases.   | 03/12/2019  | 25/11/2019   |
| 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  | 27/11/2019   |
| 13      | End Semester Examination (Theory Papers)  | 06/12/2019 to 18/12/2019  | 30/11/2019   |
| 14      | Last Date of evaluation of End Semester Answer Book   |   | 05/12/2019 to 17/12/2019   |
| 15      | Last Date of showing evaluated End Semester Answer Book to students   |   | 31/12/2019   |
| 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)   |   | 03/01/2020   |
| 17      | Last date of Publication of Odd Semester results  |   | 06/01/2020   |

#### 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/ 692 /2019

Copy to: University Notice Board /Notice Board of all Halls of Residences /All Deans/ All HODs / All PICs /Director, IQAC/ Registrar/ COE/COE/ /Wardens of All Halls of Residence/ Prof. I/c, 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 <b>without fine</b> . (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 <b>with fines</b> . (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 debarring 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

  
 Dean, Academic Affairs  
 Dated: 12/12/2019

Memo No.VSSUT/ACD/1221<sup>(55)</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  
 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                   |              |
|                         |                                   | <b>Total</b>                | <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<br><b>(H.O.D)</b> | B.Tech (CET, BBSR),<br>M.Tech (NIT, RKL),<br>Ph.D (IIT, KGP)  | Geotechnical<br>Engineering                           |
| 1. | Dr. Bharati Mohapatra                | B. Arch (CET),<br>M.Arch (Jadavpur<br>University),<br>Ph.D (SAP, Anna<br>University)  | Urban Design and<br>Planning                          |
| 2. | Dr. Indrani Chakraborty              | B.Arch., (B.E. College)<br>(DU),<br>Master of City Planning,<br>Architecture and Regional<br>Planning, (IIT, Kharagpur),<br>Ph.D., (IIT, Kharagpur) | Environment Design<br>and Planning, Green<br>Building |

### ASSISTANT PROFESSORS

- |    |                     |   |  |
|----|---------------------|---|--|
| 3. | Mr. Amit Chatterjee | B. Arch (University of Mysore),<br>M. Arch (D. Y. Patil College of Engg. And Tech.) | Architecture Conservation,<br>Sustainable Architecture, Green Building Infrastructure, and Theory of Design. |
| 4. | Mr. Shaswat Sarangi | Sekhar 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><br><b>Miscellaneous</b><br>Movable Display Panels<br>Fixed Display Panels<br>Overhead Projector and projector screen<br>Laser Light pointers |
| 2.     | Model Making Studio         | <b>Cutting/Model Making</b><br><b>Drafting Tools</b><br><b>Miscellaneous</b><br>Display Corner<br>Storage and Workshop Area  |
| 3.     | Seminar cum Display Room    | Computer system<br>Furnished Lab furniture   |

|    |         |   |
|----|---------|---|
|    |         | Storage cabinets<br>Overhead Projector and projector screen<br>Laser Light pointers<br>Movable Display Panels<br>Fixed Display Panels |
| 4. | CAD Lab | Adequate no. of Computers<br>Furnished Lab furniture<br>Overhead Projector and Projector Screen<br>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<br>(H.O.D) | M.Sc., M.Phil,<br>Ph.D (Chemical Engg,<br>NIT Rourkela) | Organic<br>Chemistry &<br>Chemical reaction<br>engg. |
| <b><u>ASSISTANT PROFESSORS</u></b>   |   |  |
| 2. Ms. Nivedita Patel                | BE (Berhampur Univ.),<br>M. Tech, (BIT, Mesra)          | Fuels and<br>Combustion,                             |

|    |                             |   |  |
|----|-----------------------------|---|--|
|    |                             |   | Thermochemical conversion of WEO to liquid fuel                                |
| 3. | Dr. Krushna Prasad Shadangi | Ph.D., (IIT, Guwahati)<br>M.Tech. (NIT Rourkela)<br>B. Tech. (BPUT) | Biofuel, catalysis, Kinetics, waste water treatment                            |
| 4. | Mr. Amit Kumar Behera       | B. Tech, (NIT Warangal),<br>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),<br>M.Tech(IIT Kharagpur)                     | Mineral Processing   |
| 7. | Dr. Lipika Parida           | M.Tech (IIT,BHU),<br>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/Flimwise 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 imidiata 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, pericyclue, 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.,<br>Ph.D. (Utkal University)<br>Post-Doc (USA) | <b>Organic Chemistry,<br/>Polymer Chemistry,<br/>Nanotechnology,<br/>Materials Science</b> |
| 2. Prof. Pravin Kumar Kar   | M.Phil<br>Ph.D (Delhi University)                             | <b>Industrial Chemistry</b>  |
| 3. Prof. Rahas Bihari Panda | M.Sc., MPhil.,<br>Ph.D (SU)                                   | <b>Environmental<br/>Chemistry/Organic<br/>Chemistry</b>                                   |



4. Prof. Sukalyan Dash (HOD) M.Sc., M.Phil., Ph.D. (Sambalpur University) **Organic Chemistry, Surface Chemistry, Reaction Kinetics, Organized Assemblies**

**ASSOCIATE PROFESSORS**

5. Dr. Priyaranjan Mohapatra M.Sc (Ravenshaw ) M.Phil. (Ravenshaw ) Ph.D (Utkal University) Post-doc, (Chonnam National University , South Korea) **Inorganic and Industrial Chemistry**
6. Dr. Trinath Biswal M.Phil, Ph.D (Utkal) **Organic and Industrial Chemistry**
7. Dr. Achyut Kumar Panda M.Sc., M.Phil, Ph.D (NIT Rourkela) **Organic Chemistry**

**ASSISTANT PROFESSORS**

8. Dr. Ramakrishna D S M.Sc (University of Hyderabad), Ph.D (Indian Institute of Chemical Technology) **Organic Chemistry / Synthesis**
9. Dr. Monalisa Mohapatra M.Sc. (Utkal University) Ph. D. (IIT Madras) **Physical Chemistry**
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<br>pH meter, Oil Testing Apparatus, Bomb calorimeter   |  |
| 2.      | Instrumentation Lab. | Colorimeter, Refractometer, FTIR, Microwave synthesis, Electron microscope, Atomic Absorption spectrophotometer, DSC, DLS | Spectro-fluorimeter<br>UV-Vis Spectrophotometer<br>Electrochemical Workstation |
| 3.      | Environmental Lab.   | Turbidity meter, sound pressure measuring instruments, BOD incubator, COD reflexes fluorimeter, Ion selective 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;<br>Polymer Science; Nanotechnology;<br>Polymer composites and nanocomposites; Synthesis and Application of Nanomaterials; | Samanta Chandra Sekhar Award 2015, by Odisha Bigyan Academy department of Science and Technology, Govt. of Odisha for outstanding research.<br>INSA Research Fellowship – 2013 |

|    |                  |  |  |
|----|------------------|--|--|
|    |                  | Bio-composites   | to do research work at IACS, Kolkata, Govt. of India<br>DAE Young Scientist Research Award – 2008-09, Department of Atomic Energy, Board of Research in Nuclear Sciences (BRNS), Govt. of India<br>JNCASR Visiting Fellowship – 2007- 2008, Jawaharlal Nehru Centre for Advance Scientific Research (JNCASR), Bangalore, Govt. of India<br>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<br>Prof. R. K. Nanda Memorial Award – 1994 for Best Oral Presentation at Ravenshaw College, Cuttack |
| 2. | Dr. P. K. Kar    | Supramolecular chemistry<br>Corrosion Science,<br>environmental science  |  |
| 3. | Dr. R. B. Panda  | Environmental Chemistry, Air,<br>Water and Soil Analysis,<br>Utilization of Fly Ash, Hazards waste management,<br>Environmental Impact, Assessment and Environmental plan, Biomedical waste assessment and management,<br>Industrial pollution assessment and management | National Environment Award - 1994 (Subakaran Sarawagi Environment Award) for the outstanding contribution to the Nation in the conservation of environment in mining sectors.  |
| 4. | Dr. S. Dash      | Physical Organic Chemistry; Bio-fuel; Adsorption study of Novel Materials  | Prof. R. C. Tripathy Young Scientist Award – 2007<br>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;<br>Biophysical Chemistry;<br>Fluorescence Spectroscopy  | Prof. R. K. Nanda Memorial Award (Best Oral Presentation) in 22nd Annual Conference of Orissa Chemical Society<br>Best Ph.D. Thesis Award (Langmuir Award) in Physical and Theoretical Chemistry at IIT Madras<br>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<br>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. Prof. Amar Nath Nayak            | B. Sc. (Engg.), (Utkal Univ.),<br>M. Tech (IIT, Kharagpur),<br>Ph. D (IIT, Kharagpur)  | <b>Structural Engineering</b>   |
| 2. Prof. Prakash Chandra Swain      | B.Sc. (Engg.) (CET, BBSR),<br>M.E. (UCE, BURLA),<br>Ph. D (NIT, Warangal)  | <b>Water Resources Engineering, Application of Artificial Intelligence Techniques to Water Resources Management</b> |
| 3. Prof. Pradip Kumar Pradhan       | B.Sc (Engg.) (SU),<br>M.Tech(SU), PhD (IIT Kharagpur)  | <b>Geotechnical engineering</b>   |
| 4. Prof. Pradip Kumar Das (On Lien) | B.Sc. (Engg.) (NIT, Rourkela), M.Sc. (Engg.), (UCE, Burla),<br>MBA (HRM), P.G. Dip (Operation Management),<br>P.G. Dip. (Human | <b>Hydraulics &amp; Water Resources Engg</b>  |

Resources Engg), Ph. D :  
IIT, Kanpur

- |    |                                   |  |                                       |
|----|-----------------------------------|--|---------------------------------------|
| 5. | <b>Prof. Sudhanshu Sekhar Das</b> | B.Sc Engg., (OUAT),<br>M.T.R.P. (Indian Institute<br>of Engineering Science and<br>Technology Shibpur, Ph.D<br>(IIT Kharagpur) | <b>Transportation<br/>Engineering</b> |
| 6. | <b>Prof. Sanjaya Kumar Patro</b>  | PhD (IIT Bombay)   | <b>Structural<br/>Engineering</b>     |

**ASSOCIATE PROFESSORS**

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

**ASSISTANT PROFESSORS**

- |     |                            |   |                                       |
|-----|----------------------------|---|---------------------------------------|
| 14. | <b>Ms. Sudhira Rath</b>    | B.Sc. (Engg) (N.I.T,<br>Rourkela), M.E (S.U)                    | <b>Transportation<br/>Engineering</b> |
| 15. | <b>Ms. Jayanti Munda</b>   | B.Tech (UCE, Burla ),<br>M.Tech (NIT Warangal)                  | <b>Geotechnical<br/>Engineering</b>   |
| 16. | <b>Ms. Leena Sinha</b>     | B.Tech ( UCE Burla ),<br>M.Tech( NIT Rourkela)                  | <b>Structural<br/>Engineering</b>     |
| 17. | <b>Dr. Parsuram Nayak</b>  | B-Tech (UCE Burla),<br>M. Tech (NIT Rourkela),<br>PhD (II TKGP) | <b>Structural<br/>Engineering</b>     |
| 18. | <b>Dr. Bharadwaj Nanda</b> | B. Tech (CET<br>Bhubaneswar),<br>M. Tech (NIT Rourkela),        | <b>Structural<br/>Engineering</b>     |

|  |   |  |
|--|---|--|
|  | Ph.D ( IIT Kharagpur)   |  |
| 19. Mr. Rajiv Lochan Sahu                      | B. Tech. (VIT University,Vellore),<br>M. Tech (NIT Rourkela)  | <b>Geotechnical Engineering</b>  |
| 20. Dr. Janhabi Meher                          | B.Tech ( UCE BURLA ),<br>M.Tech (IIT Kanpur),<br>Ph.D (NIT Rourkela)  | <b>Water Resources Engineering</b>                                     |
| 21. Ms. Laxmipriya Mohanty                     | M.Tech  | <b>Water Resources Engineering</b>                                     |
| 22. Ms. Rupashree Ragini Sahoo                 | M. Tech.(NIT Rourkela)  | <b>Geotechnical Engineering</b>  |
| 23. Mr. Akash Kumar Naik                       | B.Tech (VSSUT, Burla)<br>M. Tech (IIT, Kharagpur)   | <b>Transportation Engineering</b>                                      |
| 24. Ms. Sanghamitra Jena                       | B. Tech.,<br>M. Tech (CET, BBSR)  | <b>Structural Engineering</b>  |
| 25. Ms. Jhunarani Ojha                         | B. Tech.,<br>M. Tech (NIT, Rourkela)  | <b>Transportation Engineering</b>                                      |
| 26. Dr. Ramkrishna Dandapat                    | B.E. (Bengal Engineering and Science University, Shibpur)<br>M. Tech. (IIT Kharagpur),<br>Ph.D. (IIT Kharagpur) | <b>Structural Engineering</b>  |
| 27. Mr. Pratap Kumar Pradhan                   | B.Tech (VSSUT, Burla),<br>M.Tech (IIT Guwahati)   | <b>Transportation Engineering</b>                                      |
| 28. Mr. Ajaya Kumar Das                        | B.Tech (C.E.T Bhubaneswar),<br>M.Tech(IIT Delhi)  | <b>Structural Engineering</b>  |
| 29. Ms. Kajal Swain                            | B.Tech, ITER (SOA University), Bhubaneswar,<br>M.Tech. NIT, Rourkela  | <b>Geotechnical Engineering</b>  |
| 30. Ms. Kirtisuta Bhoi                         | B.Tech (VSSUT, Burla),<br>M.Tech(VSSUT, Burla)  | <b>Water Resources Engineering</b>                                     |
| 31. Mr. Sushant Kumar Sial                     | B.Tech (VSSUT, Burla),<br>M.Tech (IIT Kharagpur)  | <b>Transportation Engineering</b>                                      |
| 32. Ms. Abhayaa Nayak                          | B.Tech (IACR, Rayagada),<br>M.Tech (V.S.S.U.T Burla)  | <b>Water Resource Engineering</b>                                      |
| 33. Dr. Asim Kumar Mishra<br>(TEQIP Sponsored) | B.E. (UCE Burla )<br>M.Tech. (NIT Rourkela),<br>Ph.D (IIT Kharagpur)  | <b>Experimental modal testing, model updating, structural dynamics</b> |
| 34. Mr. Sajal<br>(TEQIP Sponsored)             | B.Tech. (NIT, Surathkal)<br>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),Loading Frame for testing of structuralmembers, Equipment to measure Maxwell Reciprocal Theorem, Two hinged Arch, Three hinged Arch, Redundant Truss, Optical microscope for crack measurement.                       | Dynamic response of stiffened isotropic/composites shells, Retrofitting of concrete structures with FRP composites Utilization of Solid Waste in Concrete Preparation, Behaviour of Concrete with Partial 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 muffle furnace, core cutter. | Concrete Behavioural Mechanics, Study on Self Compacting Concrete, Earthquake Analysis of Dam, Optimization, Computer Application in Civil Engineering, Recycled Aggregate Concrete, Fly-Ash Geo-Polymer Concrete  |
| 3      | Geotechnical Engineering   | Digital Triaxial Testing Machine, Large Size Direct Shear Test Apparatus, Swelling testing machine, CBR Testing Machine, Consolidometer (Single Unit) Three gang consolidometer Automatic compactor   | Geotechnical characterization of industrial wastes, Soil Stabilization using Industrial Wastes and Bio-Enzymes, Stabilization of Expansive Soil/Soft Soil and Improvement of Soil Bearing Capacity. Modeling foundation vibration, Dynamic characterization of soil from soil suction, Response of the foundation and 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 On Planning, Pavement Material Engineering, Traffic Safety.   |
| 5      | Environmental              | UV-VIS Spectrophotometer, Flame Photometer, Orion Florida iron  | Water and waste water quality analysis, Waste Utilization, Raw water   |

|   |                       |  |   |
|---|-----------------------|--|---|
| 1 | Engineering           | plus meter, BOD incubator, Conductivity meter, Cooling incubator, sound level meter, laminar airflow cabinet.  | treatment, Waste water treatment, Solid waste management, Industrial Waste management, Environmental impact assessment, River water quality modeling, Air quality modeling, Groundwater quality modeling, Noise modeling.                                       |
| 6 | Fluid Flow Laboratory | Micro ADV, PVC pipe testing equipment, Flow tracker, Open channel flumes (4 Nos.) Pipe friction apparatus, Reynold's Apparatus, Hydrology system, Depth Echo sounder, Automatic water level recorder, Impact of Jets Apparatus, Automatic weather station, Hydraulic Bench with accessories, pitot Tubes, Current Meters, Rain Gauges, Differential Global positioning system, GIS master lab kit. | 1-D and 2-D velocity measurement using Flow Tracker, 3-D velocity measurement using Micro ADV, Velocity profile and shear stress profile study in open channels, Hydraulic jump and spillway profile study, laminar, transition and turbulent flow zones study. |
| 7 | Surveying Laboratory  | Electronic Total Station, Micro-optic Theodolite, Auto Level, Venier 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.   |



**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.<br><br>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.<br><br>Er. PC Choudhury award for best paper published in the Technical Annual Journal 2018 of Institution of Engineers (India), Odisha State Centre, Bhubaneswar.<br><br>Govinda Gupta memorial award for the outstanding contribution in the field of R&D activity for 2018 by Institution of Engineers (India), Odisha State Centre, Bhubaneswar. |
| 2       | Dr. Prakash Chandra Swain   | Water Resources Management, Application of Artificial Intelligence Techniques to Water Resources Engg. Surface & Groundwater flow modelling  | Er. Banabihari Mohanty Memorial Award for outstanding research paper in the field of Irrigation Engineering by the Institution of Engineers in 1999 & 2002.<br><br>Awarded gold medal for contribution to the field of Electrical & Electronics Engineering by Orissa Engineering Congress (2002).<br><br>Damodar Sahoo Memorial Award for Best Research paper (2017) by Institution of Engineers.  |
| 3       | Dr. Pradip Kumar Pradhan    | Dynamics of Soil and Foundations, Machine Foundations, Ground Improvement  |   |

|   |                                  |   |  |
|---|----------------------------------|---|--|
|   |                                  | and Reinforced soil.  |  |
| 4 | Dr Pradip Kumar Das<br>(On Lien) | Computational Hydraulics, Multivariate Analysis of Hydrologic System, Fluvial Hydraulics, Contamination Transport modeling for Porous media flow.   | ☐ ☐ Gold Medal in Annual Session of Orissa Engineering Congress held on 6th February, 1993   |
| 5 | Dr. Sudhansu Sekhar Das          | Transportation Planning, Traffic Operations and Management, Public Transportation System Travel Behavior Analysis and Demand Models   |  |
| 6 | Dr. Sanjaya Kumar Patro          | Energy Dissipation Systems for Seismic Resisting Design; Utilization of Industrial Solid Waste in Concrete Preparation; Nanotechnology – Cement; Wind induced vibration control; Seismic Vulnerability Assessment | 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)<br>Awarded with Er. Arta Bandhu Jena Award In the 54th and 58th patent on “A COMPOSITION FOR PARTIAL REPLACEMENT OF ORDINARY PORTLAND CEMENT” patent No. 303344 dt. 22.11.2018. Annual Technical Session of Orissa State Centre, The Institution of Engineers (India)<br>Awarded with Civil Engg. Division first prize in 57 <sup>th</sup> Annual session of Odisha Engineering congress.<br>Patent on “ A composition for partial replacement of ordinary Portland cement” patent No. 303344/22.11.18 |
| 7 | Dr. Ajaya Kumar Nayak            | Structural Engineering  | ☐ ☐ ☐ Doctoral Scholarship to carry out Ph.D Program at University of Southampton, UK.   |
| 8 | Dr. Rakesh Roshan Dash           | Water Quality & Treatment, River Bank Filtration,   | ☐ ☐ Received French government scholarship (2002) to complete M. Tech. thesis at INSA de Lyon, France  |

|    |                            |   |                                     |
|----|----------------------------|---|-------------------------------------|
|    |                            | Waste Water   |                                     |
| 9  | Dr. Debabrata<br>Giri      | Earth-quakeEngineering,<br>Soil Dynamics, Dynamic<br>Behaviour of<br>reinforcedSlopes |                                     |
| 10 | Dr. Ramakanta<br>Panigrahi | Tensegrity structures<br>geopolymar concreate   |                                     |
| 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 concreteusing Ash<br>Cenosphere                | DST                   | 13.25                | 2015-16          |
| 2.      | Development of a fluoride filter forcommunity<br>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 pavementsusing<br>Expert System                   | AICTE                 | 10 .00               |                  |
| 6.      | Development of Fuzzy-logic and NeuralNetwork<br>technology for flood mitigation | AICTE                 | 16 .00               |                  |
| 7,      | Flood forecasting in river Mahanadi   | AICTE                 | 10 .00               |                  |

|      |   |                 |       |          |
|------|---|-----------------|-------|----------|
|      | using hydrological and mathematical modeling  |                 |       |          |
| 8.   | Installation of automatic weather station   | AICTE           | 5.00  |          |
| 9.   | Development of CAD laboratory   | AICTE           | 6.00  |          |
| 10   | Fly Ash Generation & Utilization in Coal Based Thermal Power Stations of Odisha(2013-14)”   | SPCB,<br>Odisha |       | 2014 -15 |
| 11 . | Study on Environmental Impact of Fly ash from major Thermal Power Plants in Odisha”   | SPCB,<br>Odisha |       | 2015 -16 |
| 12   | UK-India collaborative Research Project (UKIERI-III) on FRP shear strengthening of damaged 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, team-work, ethical practices in students so as to meet expectations of the industry as well as society.

## Faculty Details :

| Name                                   | Qualification  | Specialization  |
|--|--|---|
| <b><u>ASSOCIATE PROFESSORS</u></b>     |  |   |
| 1. Dr.(Mrs.) Sasmita Kumari Padhy      | M.C.A (BPUT),<br>M.Tech(BU),<br>Ph.D (UTKAL)                           | <b>Soft Computing,<br/>Multiprocessor<br/>Scheduling</b>  |
| 2. Dr. (Mrs.) Sucheta Panda<br>(H.O.D) | M.C.A (NIT,Rourkela),<br>M.Tech(NIT,Rourkela)<br>Ph.D (NIT,Rourkela)   | <b>Image Processing<br/>(Color Image<br/>Segmentation using<br/>Markov Random<br/>Field Models)</b> |
| <b><u>ASSISTANT PROFESSORS</u></b>     |  |   |
| 3. Mr. Sanjib Kumar Nayak              | BE (UTKAL),<br>PGDIT(IITKgp )<br>M.Tech (Tezpur)                       | <b>Parallel &amp;<br/>Distributed systems</b>   |
| 4. Dr. Sasmita Acharya                 | B.Tech (Utkal<br>University),<br>M.Tech (BPUT)<br>Ph.D. (VSSUT, Bural) | <b>Wireless Sensor<br/>Networks</b>   |
| 5. Mrs. Etuari Oram                    | M.Tech (CSE)<br>(NIT,Rourkela)   | <b>Wireless Sensor<br/>networks, software<br/>Engineering, Data<br/>Mining</b>                      |
| 6. Dr. Bighnaraj Naik                  | Ph.D. (VSSUT),<br>M.Tech. (SOAU), B.E.<br>(BPUT)                       | <b>Machine Learning,<br/>Soft Computing,<br/>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<br>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<br>RAM: 4 GB<br>64-bit OS, Windows 8.1 Pro   | DBMS PROGRAMMING<br>JAVA PROGRAMMING<br>ENTERPRISE WEB-BASED COMPUTING WITH JAVA SEMINAR  |



**5. 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.

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

|            |                         |   |   |
|------------|-------------------------|---|---|
|            |                         | PhD. (Utkal Univ.)  | <b>Image Processing &amp; Fractal study</b>   |
| <b>8.</b>  | Dr. Santosh Kumar Majhi | B.Tech, (VSSUT, Burla)<br>M.E, (Utkal Univ.)<br>Ph.D (SSU, Cuttack)<br>MBA (Operation Mgmt) | <b>Decision Science, Information Systems, Cloud Computing, Network &amp; Internet Security, Database Applications</b> |
| <b>9.</b>  | Ms. Alina Mishra        | B. Tech. (BPUT),<br>M.Tech (NIT Rourkela)   | <b>Software Engineering, Program Slicing, Soft computing</b>  |
| <b>10.</b> | Mrs. Santi Behera       | B. Tech. (CSE, BPUT),<br>M. Tech. (NIT Rourkela)  | <b>Wireless sensor Network, Multimedia System, Mobile Computing</b>   |
| <b>11.</b> | Ms. Alina Dash          | B. Tech (VSSUT, Burla),<br>M. Tech (NOU, 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.<br>HP Intel Core <u>i7-6700@3.4 GHz</u> ,<br>Intel Q150,<br>Ubuntu<br>HP Intel Core i3 4130, Intel H8<br>Chipset, Preloaded Linux<br>S/W<br>GCC Lex, Yacc, Java, ScilLab,<br>Octave   | Data Structure,<br>Design and Analysis<br>of Algorithms,<br>Operativn Systems,<br>Adv. Comp., Java             |
| 2. | Computing Lab 1                  | 40 Nos.<br>HP Intel Core i7 @ 4.2 GHz,<br>Ubuntu<br>HP Intel Core i7-6700 @ 3.4<br>GHz, Ubuntu<br>HP Intel Core i7 @ 3.4 GHz,<br>Windows 8.0 Professional<br>preloaded<br>S/W<br>-QualNet<br>-Aneka Cloud<br>-TurboC<br>-Dev C++  | Complier Design,<br>Database Systems,<br>IWP Software<br>Engineering, Cloud<br>Computing, Computer<br>Networks |
| 3. | Computer Organization Laboratory | 18 No.<br>DELL Intel Core i7-4790 @ 3.6<br>GHz, Windows 8.1 Preloaded<br>RAM Trainer Kit (15 Nos.)<br>ALU Trainer Kit (15 Nos.)<br>Computer and SMPS Trainer Kit<br>(02 Nos.)<br>Hard Disk Controler Kit (15<br>Nos.)<br>Printer and Scanner Kit (02 Nos.)<br>RTC and Temp. Measuring<br>Trainer Kit (15 Nos.)<br>8085 Microprocessor Trainer Kit<br>(15 Nos.)<br>S/W<br>-Protious<br>-8085 Simulator | Computer<br>Organization<br>Microprocessor,<br>Ditigal Electronics   |
| 4. | Research Laboratory              | 14 No.<br>DELL Intel Core i7-3770, 3.4<br>GHz, Linux preloaded 01 No.<br>HP Server Model ML-350 (01<br>no.)<br>Dual Intel Xeon Processor <u>E5-<br/>2609@1.9GHz</u> , 6<br>Core15MB/85W Processor   | Dedicated Lab for<br>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<br>(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<br>(on Lien)      | Sensor Networks, Adhoc Networks, Embedded System                    |   |
| 3.      | Dr. Rakesh Mohanty                     | Data Structure and Graph Algorithm, OS-Scheduling, Theory-Coloring, | Best Research Paper Award- ICRAET, 2012 from  |

|     |                         |   |  |
|-----|-------------------------|---|--|
|     |                         | Computational Thinking, Rectangle Packing   | 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 Multi media 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:**

|                          | <b>Name</b>             | <b>Qualification</b>   | <b>Specialization</b>   |
|--------------------------|-------------------------|--|---|
| <b><u>PROFESSORS</u></b> |                         |  |   |
| 1.                       | Dr. Bibhuti Bhusan Pati | B.Sc. Engg.(UCE Burla),<br>M.Tech ( IISc. Bangalore),<br>Ph.D (Utkal University)                 | <b>Control System Engineering</b>   |
| 2.                       | Dr. Prakash Kumar Hota  | B.E (REC) Tiruchirapalii,<br>M.Sc (Engg) (Sambalpur Univ.),<br>Ph.D (Engg) (Jadavpur University) | <b>Industrial Power Control &amp; Electric Drives, Power System Engineering</b> |
| 3.                       | Dr. Pawan Kumar Modi    | B.Sc.(Engg.) (REC, Rourkela),<br>M.E. (UCE, Burla),  | <b>Power System Engineering, Power System Planning</b>                          |

|    |                     |  |   |
|----|---------------------|--|---|
|    |                     | Ph.D. (IIT Roorkee)  | <b>and Reliability,<br/>Distribution System<br/>Engineering</b> |
| 4. | Dr. Sidhartha Panda | B.E.(Bangalore University),<br>M.E.(UCE, Burla/ SU),<br>Ph.D. (IIT, Roorkee) | <b>Power System<br/>Engineering.</b>                            |

#### **ASSOCIATE PROFESSORS**

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

#### **ASSISTANT PROFESSORS**

|     |                        |   |  |
|-----|------------------------|---|--|
| 9.  | Mr. Basanta Kumar Rana | ME (Integrated )<br>(Indian Institute of Science)                               | <b>Real Time<br/>Hardware and<br/>Software</b> |
| 10. | Dr. Bidyadhar Rout     | B.E. (IGIT, U.U.),<br>M.E. (BESU, Howrah)<br>Ph.D (VSSUT, Burla)                | <b>Control System<br/>Engineering</b>          |
| 11. | Ms. Mamun Mishra       | B. Tech. (BPUT),<br>M. Tech. (VSSUT, Burla)                                     | <b>Power System<br/>Engineering</b>            |
| 12. | Dr. Deepak Kumar Lal   | B. Tech. (BPUT, Rourkela),<br>M. Tech. (NIT Jamshedpur),<br>Ph.D (VSSUT, Burla) | <b>Power System</b>                            |
| 13. | Dr. Ramesh Ch. Prusty  | B.Tech,<br>M.Tech,<br>Ph.D (VSSUT, Burla)                                       | <b>Power System<br/>Engineering</b>            |
| 14. | Dr. Raseswari Pradhan  | B. Tech. (IGIT Sarang)<br>M. E. (Jadavpur University)<br>Ph.D. (NIT, Rourkela)  | <b>Control System</b>                          |
| 15. | Dr. Rajat Kanti Samal  | B.E (UCE Burla),  | <b>Hydroelectric</b>                           |

|     |                              |  |  |
|-----|------------------------------|--|--|
|     |                              | M.Tech. (IIT, Roorkee),<br>Ph.D (VSSUT, Burla)   | <b>Systems</b>   |
| 16. | Ms. Debidasi Mohanty         | B. Tech. (VSSUT Burla),<br>M. Tech. (NIT Trichy)   | <b>Power System</b>  |
| 17. | Ms. Nutan Saha               | B. Tech. (IGIT, Sarang)<br>M. Tech. (IEST, Shibpur,<br>Kolkata)                          | <b>Power Electronics<br/>and Drives</b>                        |
| 18. | Dr. Rosy Pradhan             | B. Tech. (CET, BPUT),<br>M. Tech. (NIT Rourkela)<br>Ph.D (VSSUT, Burla)                  | <b>Control and<br/>Automation</b>                              |
| 19. | Ms. Bineeta Soreng           | B. Tech (CET,<br>Bhubaneswar),<br>M. Tech (NIT Rourkela)                                 | <b>VLSI Design and<br/>Embedded System</b>                     |
| 20. | Ms. Prangya Mohanty          | B.Tech (B.P.U.T. Odisha) ,<br>M.Tech(N.I.T. Rourkela)                                    | <b>Power Electronics<br/>And Drives</b>                        |
| 21. | Mr. Amit Mallick             | B.Tech (B.P.U.T),<br>M.Tech (VSSUT)  | <b>Power System<br/>Engineering</b>                            |
| 22. | Mr. Pratyusha Pratik         | B.Tech. (VSSUT, BURLA),<br>M.Tech (IIT ROORKEE)  | <b>System and Control</b>                                      |
| 23. | Ms. Sagarika Rout            | B.Tech (B.P.U.T)<br>M.Tech (VSSUT)   | <b>Power System<br/>Engineering</b>                            |
| 24. | Dr. Jatin Kumar Pradhan      | B.Tech (VSSUT, Burla),<br>M.Tech (NIT Rourkela)  | <b>Control System<br/>(Linear Control,<br/>Robust Control)</b> |
| 25. | Mr. K Sujita Kumar<br>Achary | B.E. (VSSUT Burla),<br>M.Tech. (NIT<br>Tiruchirappalli)                                  | <b>Power System</b>  |
| 26. | Ms. Bisaya Bhoi              | B.Tech (IGIT Sarang)<br>M.Tech. (VSSUT, Burla)   | <b>Power System<br/>Engineering</b>                            |
| 27. | Mr.Reddi Ganesh              | B.Tech( MVGR<br>Vizianagaram)<br>M.Tech( NIT Durgapur)<br>PhD continue( NIT<br>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.Surendra Swain      | Mech. Gr.II    |                                |
| 4       | Sri Manash Ranjan Nayak | Sr. Assistant  | mrnayak_vssut@yahoo.com        |
| 5       | Sri Sagar Ranjan Samal  | Lab. Attendant | sagar.ranjan14@gmail.com       |
| 6       | Sri Sanjib Ku. Jena     | Jr. Instructor | jena.sanjib656@gmail.com       |
| 7       | Sri Sameer Ku. Behera   | Jr. Instructor | sameerb876@gmail.com           |
| 8       | Sri Amit Ku.Sahoo       | Jr. Instructor | amitsahoo78@gmail.com          |
| 9       | Sri Mrutyunjay Das      | Mech. Gr-III   | mrutyunjaydas@gmail.com        |

### 4. Support staffs:

| Sl. No. | Name               | Designation |
|---------|--------------------|-------------|
| 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. | Program | course | Year of completion |
|-----|---------|--------|--------------------|
|-----|---------|--------|--------------------|

|            |                        |  |      |
|------------|------------------------|--|------|
| <b>No.</b> |                        |  |      |
| <b>1.</b>  | B.Tech                 | Electrical Engineering   | Four |
| <b>2.</b>  | Integrated Dual Degree | B.Tech. in Electrical Engineering (EE) and M.Tech. in Power System Engineering (PSE).  | Five |
| <b>3.</b>  | Executive B.Tech       | Electrical Engineering with specialization in Power Engineering.   | Four |
| <b>4.</b>  | M.Tech                 | Electrical Engineering with specialization in<br>a) Power System Engineering (NBA Accredited)<br>b) Power Electronics Control & Drives<br>c) Control & Instrumentation | Two  |
| <b>5.</b>  | 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   |
|----------|---|---|
| <b>1</b> | 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   |
| <b>2</b> | 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 microcontroller (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, DIGSILENT software   |
| 8 | Computation Laboratory                      | Details of Computers and Softwares:<br>System Configuration: 28Nos<br>Processor: Icore 5<br>RAM:2GB<br>HardDisk:40GB  |

|  |  |
|--|--|
|  | <p>Operating System: Microsoft Windows 8</p> <p>Software's: MATLAB and Its Tool Boxes</p> <p>EMTDC/PSCAD</p> <p>ETAP, EMTP</p> <p>TC/VC++/VB++</p> |
|--|--|



**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.<br>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<br>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<br>Planning & Control  |  |
| 12. | Dr.Deepak Kumar Lal            | Distribution System Planning & Operation<br>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                  |   |
| 20. | Mrs. Prangya Mohanty      | Power Control and Drives                        |   |
| 21. | Mr. Amit Mallick          | Power System Engineering                        |   |
| 22. | Mr. Pratyusha Pratik      | System and Control                              |   |
| 23. | Ms. Sagarika Rout         | Power System Engineering                        |   |
| 24. | Dr. Jatin Kumar Pradhan   | Control System (Linear Control, Robust Control) |   |
| 25. | Mr. K Sujita Kumar Achary | Power System                                    |   |
| 26. | Ms. Bisaya Bhoi           | Power System Engineering                        |   |
| 27  | Mr.Reddi Ganesh           |   |   |

## 8. Publication

|             |               | Till 2018 | 2019 |
|-------------|---------------|-----------|------|
| Conferences | International | 126       | 15   |
|             | National      | 7         | 3    |
| Journal     | International | 173       | 32   |

|  |                 |    |  |
|--|-----------------|----|--|
|  | <b>National</b> | 15 |  |
|--|-----------------|----|--|

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

| S.N. | Project Title   | Principal Investigator | Project Duration | Amount (Rs. In Lakhs) | Funding Agency |
|------|---|------------------------|------------------|-----------------------|----------------|
| 1    | Assessment of wide-area measurement signal by computational intelligence techniques | Dr. Papia Ray          | 02 Years         | 15.46                 | DST            |
| 2    | 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 SF<sub>6</sub>-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:

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

|     |                                       |   |                                     |
|-----|---------------------------------------|---|-------------------------------------|
|     |                                       | M. E (BPUT), Ph. D<br>(VSSUT)                     |                                     |
| 7.  | Mr. Bibhuti Prasad Sahoo              | B. Tech (NIT, Rourkela),<br>M.Tech (IIT Roorkee ) | Measurement &<br>Instrumentation    |
| 8.  | Mr. Prasanta Kumar Parida             | B. Tech. (UCE, BURLA),<br>M. Tech. (VSSUT, BURLA) | Communication<br>System Engineering |
| 9.  | Mr. Hemant Modi<br>(TEQIP)            | B.Tech. (NIT Meghalaya);<br>M.Tech. (MNIT Jaipur) | Power Electronics and<br>Drives     |
| 10. | Mr. Pothuraju Prabhu<br>Kumar (TEQIP) | B.Tech. (KL University);<br>M.Tech. (IIT Roorkee) | Power Systems                       |

### 3. Courses Offered:

The Department of Electrical Engineering and EEE offers

- i. B.Tech. degree in Electrical and Electronics Engineering (EEE).
- ii. M.Tech. degree in Electrical Engineering with specialization in Control & Instrumentation.
- iii. 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.<br>(UG, BTech and PG,<br>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.        |
| <p><b>NOTE:</b> 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.</p> <p>** 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</p> <p>* The lab is supported in part by NPIU-MHRD, TEQIP-III under Collaborative Research and Innovation (CRI) Scheme.</p> |  |  |

##### 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<br>Received best paper award in IEEE International Conference on Circuit, Power and Computing Technologies (2013).<br>MHRD, Govt. of India fellowship in 2000 and 2004. |

|    |                             |  |   |
|----|-----------------------------|--|---|
| 2. | Dr. Gyan Ranjan Biswal, HOD | Power System Automation: Power Generations and Substation Automation (IEC 61850)<br>Sustainable Sources of Energy (HFCs and Solar PV / Hybrid Energy Systems)<br>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 intelligent techniques   | State award: Institution 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 Fellowship MHRD |

**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<br>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

a) 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]

(b) 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 :**

| <b>Name</b>                        | <b>Qualification</b>  | <b>Specialization</b>   |
|------------------------------------|---|---|
| <b><u>PROFESSORS</u></b>           |   |   |
| 1. Dr. Rutuparna Panda             | B.Sc. (Engg.),<br>M.Sc. (Engg), UCE Burla,<br>Ph.D. (Engineering) (IIT,<br>Kharagpur) | <b>Communication,<br/>Signal Processing,<br/>Image processing</b>         |
| 2. Dr. Umaranjan Jena              | B.Sc. (Engg.) (UCE,<br>Burla),<br>M.Tech (III, KGP),<br>Ph.D (Jadavpur University)    | <b>Computer Vision &amp;<br/>Image Processing</b>                         |
| <b><u>ASSOCIATE PROFESSORS</u></b> |   |   |
| 3. Dr. Nrusingha Prasad Rath       | B.E.,<br>Ph.D (Jadavpur University)   | <b>Computer Vision &amp;<br/>Recognition of<br/>Digital Images</b>        |
| 4. Dr. Debasis Mishra              | BE (University of Mysore),<br>M.Tech (BHU),<br>Ph.D (Engg.) (Jadavpur<br>Univ.)       | <b>Microwave<br/>Engineering</b>  |
| 5. Dr. Manoranjan Pradhan          | B.E., M.E. (UCE, Burla),<br>Ph.D (Sambalpur<br>University)                            | <b>Microprocessor,<br/>Digital VLSI<br/>Design, FPGA<br/>based design</b> |
| 6. Dr. Kabiraj Sethi<br>(HOD)      | B.Sc (Engg), (UCE,<br>Burla),<br>M.Tech (BPUT),                                       | <b>Communication<br/>System<br/>Engineering/VLSI</b>                      |



|                                |  |  |
|--------------------------------|--|--|
|                                | Ph.D (Sambalpur University)  | <b>Design</b>  |
| 7. Dr. Sanjay Agrawal          | B.E.,<br>M.E. (UCE, Burla),<br>Ph.D (Sambalpur University)                             | <b>Communication System Engineering / image processing</b>                                     |
| 8. Dr. Harish Kumar Sahoo      | B.E. (Utkal University),<br>M.Tech. (N.I.T. Rourkela),<br>Ph.D. (Sambalpur University) | <b>Electronic Systems &amp; Communication (MIMO OFDM Nireless Systems Adaptive Estimation)</b> |
| 9. Dr. Arunanshu Mahapatro     | Diploma, BE,<br>M. Tech,<br>Ph.D (NIT Rourkela)  | <b>Wireless communication, Senior networks cognitive radio</b>                                 |
| 10. Dr. Nilamani Bhoi          | B.E. (UCE, Burla),<br>M.E.(Jadavpur University),<br>Ph.D (NIT, Rourkela)               | <b>Image Processing</b>  |
| 11. Dr. Biswa Binayak Mangaraj | B.E. (UCE, Burla),<br>M.E. & Ph.D (Jadavpur Univ.)                                     | <b>Antenna Analysis and design</b>   |

### **ASSISTANT PROFESSORS**

|                                |  |   |
|--------------------------------|--|---|
| 12. Mr. Hrudananda Pradhan     | BE (UCE, Burla),<br>M Tech (NIT, Rourkela)                           | <b>(Optimal antenna design) Antanna Engineering</b>                                       |
| 13. Ms. Diptimayee Konhar      | B.Tech, (UCE, Burla)<br>M.Tech. (VSSUT)                              | <b>Communication System Engineering</b>   |
| 14. Dr. Bikramaditya Das       | B.Tech, (BPUT, Rourkela),<br>M.Tech (NIT, Rourkela),<br>Ph.D (VSSUT) | <b>Wireless Communication, Adaptive Control, Control of Underwater Vehicles, ROBOTICS</b> |
| 15. Mr. Bandan Kumar Bhoi      | B.Tech (BPUT Odisha),<br>M.Tech (IIIT Hyderabad)                     | <b>Digital VLSI Design, Embedded system design, Quantum computing</b>                     |
| 16. Mr. Suvendu Narayan Mishra | B.E., (Utkal)<br>M.Tech, (VSSUT)                                     | <b>Communication Systems Engineering</b>  |
| 17. Mr. Aditya Kumar Hota      | B.E.( S.U.),<br>M.Tech.( VSSUT)                                      | <b>Communication System Engg., VLSI Design</b>  |

|     |                          |  |   |
|-----|--------------------------|--|---|
| 18. | Ms. Madhusmita Panda     | B.Tech (JITM)<br>M. Tech (BPUT),<br>M.B.A (H.R)            | <b>Computer Science<br/>Engg.</b>   |
| 19. | Ms. Rasmita Sahu         | B.E (S.M.I.T(BPUT),<br>M.Tech (VSSUT)                      | <b>Communication<br/>system Engineering</b>                                       |
| 20. | Ms. Lopamudra Ghadai     | M.Tech.<br>(VSSUT, Burla)                                  | <b>Digital signal<br/>processing</b>  |
| 21. | Ms. Sakambhari Mahapatra | B.Tech.(BPUT)<br>M.Tech.(VSSUT)                            | <b>Communication<br/>System<br/>Engineering</b>                                   |
| 22. | Mr. Manasa Ranjan Jena   | B.Tech.,<br>M.Tech.( IIT Kharagpur)                        | <b>Microelectronics<br/>and VLSI Design</b>                                       |
| 23. | Mr. Dharamvir Kumar      | BE (IETE, New Delhi),<br>M.Tech (ISM, Dhanbad)             | <b>VLSI</b>   |
| 24. | Mr. Ananda Kumar Behera  | B.Tech. (BPUT),<br>M.Tech (NIT Durgapur)                   | <b>Tele<br/>Communication<br/>Engineering</b>                                     |
| 25. | Dr. Sheeja K. L.         | B.E., M.Tech., (NIT<br>Rourkela), Ph.D. (NIT,<br>Rourkela) | <b>Antenna<br/>Engineering</b>  |
| 26. | Ms. Sangeeta Sa          | B.Tech (UCE Burla),<br>M.E.(IISc Bangalore)                | <b>Telecommunication<br/>Engineering</b>  |
| 27. | Mr. Bijay Kumar Sa       | B.Tech. (BPUT)<br>M.Tech. (NIT Rourkela)                   | <b>Communication &amp;<br/>Signal Processing</b>                                  |
| 28. | Dr. Ashish Kumar Sharma  | M.Tech (UTU Belgium),<br>PhD (BITS Pilani,<br>Rajasthan)   | <b>Communication<br/>System Engg.,<br/>Microwave Devices</b>                      |
| 29. | Ms. Tunirani Nayak       | B.Tech (UCE Burla),<br>M.Tech (ITER, SOA<br>University)    | <b>Communication,<br/>Image Processing</b>  |
| 30. | Mr. Subrat Kumar Sethi   | B.E.,<br>M.Tech.(IIT, Kharagpur)                           | <b>Communication<br/>Engineering</b>  |
| 31. | Mr. Radhashyam Patra     | B. Tech (VSSUT )<br>M.Tech (IIT-BHU<br>Varanasi),          | <b>Signal Processing,<br/>Digital Techniques,<br/>Wireless<br/>communications</b> |

### 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<br>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 ,  | Hardware and Softwareare used                            |

|    |          |  |                                      |
|----|----------|--|--------------------------------------|
|    |          | PSPice, Microwind, FPGA trainer kits   | for UG & PG Students                 |
| 8. | TSE Lab. | PCs with MATLAB, Online Image Software | Software 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. Suwendu 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 sahuo  | 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 :**

| <b>Name</b>                          | <b>Qualification</b>                              | <b>Specialization</b>                  |
|--------------------------------------|---|--|
| <b><u>ASSOCIATE PROFESSOR</u></b>    |   |  |
| <b>1. Dr. Jayaprakash Paramaguru</b> | M.A., Ph.D (English)                              | Linguistics & Translation              |
| <b><u>ASSISTANT PROFESSORS</u></b>   |   |  |
| <b>2. Mrs. Ashapura Dash</b>         | M.A., M.Phil. (English),<br>MBA (HR & BIM)        | Linguistics                            |
| <b>3. Mr. Prasant Barla</b>          | MBA   | HR & Marketing                         |
| <b>4. Dr. Prasanta Kumar Padhi</b>   | MA (BU), MPhil (BU), Ph.D (UU), PGDTE(CIEFL, Hyd) | Black American Women Writing, Business |

|    |                      |  |
|----|----------------------|--|
|    |                      | Communication,<br>Cross Cultural<br>Communication                                      |
| 5. | Mr. Chandramani      | MA (B.U.), M.Phil (B.U.)<br>Ph.D (B.U.)  |
|    |                      | Indian and<br>Canadian<br>Literature,<br>Feminism                                      |
| 6. | Mr. Auro Kumar Sahoo | M.A (U.U.), M. Phil<br>(Pondicherry Central<br>University),<br>Ph.D (IIT, Bhubaneswar) |
|    |                      | Productivity and<br>Efficiency,<br>Applied<br>Econometrics,<br>Micro<br>Economics      |

### 3. Course offered :

i) For B.Tech. :

English for communication, Engineering Economics Organisational Behaviour

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,<br>Linguistics |
| 2      | Mrs. Ashapura Dash         | Indian writings, Women writing,<br>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)<br>Ph.D. (B.P.U.T, RKL)                                 | <b>Data Mining, Computational Intelligence, Soft Computing &amp; Evolutionary Computation, Pattern Recognition, Distributed System</b> |
| 2. Dr. Manas Ranjan Senapati<br>(H.O.D) | Ph.D (BPUT)   | <b>Data Mining, Big data Analysis, Pattern Analysis, Clustering, Classification.</b>   |
| 3. Dr. Pradip Kumar Sahu                | B. E. ( VSSUT, Burla),<br>M. E. (Jadavpur University),<br>Ph. D (IIT Kharagpur) | <b>Embedded Systems, VLSI, NoC, SoC, Computer Architecture, Microprocessor</b>   |
| 4. Dr. Satyabrata Das                   | B.E, M.Tech.,<br>Ph.D, MBA (Systems)  | <b>Information &amp; Communication Technology</b>  |
| <b><u>ASSISTANT PROFESSORS</u></b>      |   |  |
| 5. Dr. D. Chandrasekhar Rao             | B. Tech. (BPUT, Rourkela),<br>M.Tech.(BPUT, Rourkela)<br>Ph. D. (VSSUT, Burla)  | <b>Peer to Peer Network, Theory of Computation, Compiler Construction, Computer Network, Cryptography, Soft Computing, Robotics</b>    |

|     |                             |   |  |
|-----|-----------------------------|---|--|
| 6.  | Mr. Kishore Kumar Sahu      | B.Tech, (BPUT),<br>M.Tech. (BPUT)   | <b>Machine Learning,<br/>Data Mining,<br/>Computational<br/>Intelligence, Formal<br/>Languages, NLP,<br/>Cloud Computing</b> |
| 7.  | Ms. Sasmita Behera          | B.Tech (U.C.E, Burla),<br>M. Tech (NIT Rourkela)  | <b>Computer<br/>Organization and<br/>Architecture,<br/>Computer<br/>networking</b>   |
| 8.  | Mr. Sujaya Kumar Sathua     | B. Tech. (VSSUT Burla),<br>M. Tech. (NIT Rourkela)  | <b>NLP, Text mining<br/>and image<br/>processing</b>   |
| 9.  | Mr. Gyanaranjan Shial       | B. Tech (VSSUT, Burla),<br>M. Tech. ( IIT Bombay)   | <b>Data Mining, Soft<br/>Computing,<br/>Information<br/>Retrieval, Pattern<br/>Recognition</b>                               |
| 10. | Dr. Pradipta Kumar Das      | B.Tech., (North Odisha<br>Univ.), M.Tech (Jadavpur<br>University)<br>Ph.D. (VSSUT, Burla) | <b>Machine Intelligent<br/>and Computer<br/>Vision, Emotional<br/>Intelligent,<br/>Robotics, Video<br/>processing</b>        |
| 11. | Ms. Gargi Bhattacharjee     | B.Tech (BPUT),<br>M.E (BIT Mesra)   | <b>Software<br/>Engineering,<br/>Computer Graphics<br/>and Cryptography</b>  |
| 12. | Mr. Atul Vikas Lakra        | B. Tech. (UCE Burla),<br>M. Tech. ( MNIT<br>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:**

| <b>Name</b>               | <b>Designation</b> | <b>Qualification</b>                          |
|---------------------------|--------------------|---|
| Mr. Devi Prasanna Kanungo | Junior Instructor  | B. Tech. (BPUT), M.<br>Tech. (VSSUT<br>Burla) |

**6. Support Staff:**

| <b>Name</b>            | <b>Designation</b> |
|------------------------|--------------------|
| 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 & Communication Technology (ICT)
- (c) M.Tech. Spec : Comp. & Information Technology (CIT)
- (d) Ph.D. (Engg.)

**8. Laboratory Details :**

| <b>Sl.No.</b> | <b>Name of the Lab</b>        | <b>Major Equipment</b>  | <b>Research Facilities</b>   |
|---------------|-------------------------------|---|--|
| 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<br>Server: 01 Number<br>Software:<br>IBM Rational Rose<br>Matlab-2019a | Computational Laboratory, Data Structure, etc                        |
| 2.            | Simulation Laboratory         | 10 Nos. of Intel Core i7 processor under Windows 8 Platform<br>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<br>(New Laboratory) | 30 Nos. of HP Desktop 406-MT-i7 processor 4 GM RAM, 500 GB HDD<br>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 | DESIGNATION         | SPECIALIZATION   | AWARDS/DISTINCTION   |
|---------|-----------------|---------------------|--|--|
| 1       | Dr.H.S.Behera   | Associate Professor | Data Mining<br>Computational Intelligence<br>Soft Computing &<br>Evolutionary Computation<br>Pattern Recognition<br>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. <b>VIP Number: 36823026</b> |
| 2 | Dr.ManasRanjanSenapati   | Associate Professor | Data Mining<br>Big data Analysis<br>Pattern Analysis<br>Clustering<br>Classification.              | Fellow of the Institution of Engineers India, 2015   |
| 3 | Dr.Pradip Kumar Sahu     | Associate Professor | Embedded Systems<br>VLSI<br>NoC<br>SoC<br>Computer Architecture<br>Microprocessor                  |  |
| 4 | Dr.Satyabrata Das        | Associate Professor | Distributed System<br>Mobile Computing & Networks<br>Real Time Systems<br>Fault Tolerant Computing | <b>Best Teacher Award by ISTE-2014 (Odisha, BBSR Chapter) 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<br>Computer Network<br>Soft Computing<br>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<br>Computational Intelligence<br>Formal Languages<br>NLP<br>Cloud Computing            |  |
| 7 | Ms.SasmitaBehera         | Assistant Professor | Computer Organization and Architecture<br>Computer networking                                      |  |
| 8 | Mr.Sujaya Kumar Sathua   | Assistant Professor | NLP, Text mining and image processing  | IEEE brand ambassador 2018   |

|    |                                |                        |   |  |
|----|--------------------------------|------------------------|---|--|
| 10 | Mr.GyanaranjanShi<br>al        | Assistant<br>Professor | Data Mining,<br>Soft Computing,<br>Information Retrieval,<br>Pattern Recognition                    |  |
| 10 | Dr.Pradipta Kumar<br>Das       | Assistant<br>Professor | Machine Intelligent and<br>Computer Vision<br>Emotional Intelligent<br>Robotics<br>Video processing |  |
| 11 | Ms.GargiBhattachar<br>jee      | Assistant<br>Professor | Software Engineering<br>Computer Graphics and<br>Cryptography                                       |  |
| 12 | Mr.AtulVikasLakra              | Assistant<br>Professor | Cloud Computing   |  |
| 13 | Mr. Suresh Kumar<br>Srichandan | Assistant<br>Professor | Computer Networks   |  |
| 14 | Dr.KshiramaniNaik              | Assistant<br>Professor | Image Processing  |  |

## 10. Publications

|                    |                      | <b>Till 2018</b> | <b>2019</b> |
|--------------------|----------------------|------------------|-------------|
| <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.,<br>Ph.D. (Utkal)   | <b>Fluid Dynamics,<br/>Numerical Analysis</b>   |
| <b><u>ASSOCIATE PROFESSORS</u></b>      |   |   |
| 2. Dr. Mahendra Kumar Jena              | M.Sc.(Sambalpur Univ.),<br>Ph.D (IIT Kanpur),<br>PDF(IIT Bombay)<br>IHPC Singapore) | <b>Spline Analysis,<br/>Wavelet Analysis,<br/>Computer Aided<br/>Geometric Design</b>     |
| 3. Dr. Susanta Kumar Paikray<br>(H.O.D) | M. Sc. & M. Phil.<br>(Ravenshaw Univ.);<br>Ph. D (Berhampur Univ.)                  | <b>Summability Theory,<br/>Fourier Series,<br/>Operations Research,<br/>Graph Theory.</b> |
| <b><u>ASSISTANT PROFESSORS</u></b>      |   |   |
| 4. Dr. Saroj Kumar Padhan               | M.A. (Sambalpur Univ.),<br>M.Phil(Sambalpur<br>Univ.),<br>Ph.D (IIT Kharagpur)      | <b>Optimization,<br/>Functional Analysis,<br/>Fractional Calculus</b>                     |
| 5. Dr. Itishree Nayak                   | P.G.(Utkal Univ.),<br>M.Phil (Utkal Univ.)<br>Ph.D (Utkal Univ.)                    | <b>Numerical<br/>analysis,numerical<br/>solution of partial<br/>differential equation</b> |
| 6. Dr. Ashok Kumar Sahoo                | M.Sc.(Maths),<br>M.Phil(Maths),<br>M.Tech., Ph.D (Utkal<br>Univ.)                   | <b>Complex Analysis</b>   |



|     |  |   |  |
|-----|--|---|--|
| 7.  | Dr. Smrutirajan Mohapatra                | M.Sc. (S.U.)<br>Ph.D (IIT Guwahati),<br>PDF (IISc. Bangalore) | <b>Interaction of waves with submerged structure(s), Water wave problems with floating elastic plate(s), Flows in porous media</b> |
| 8.  | Mr. Niran Meher                          | M.Sc. (IIT Bombay)  | <b>Functional Analysis, Numerical Analysis</b>   |
| 9.  | Dr. Amit Ku. Sharma<br>(TEQIP Sponsored) | M.Sc. (Utkal University)<br>Ph.D. (IIT Delhi)                 | <b>Algebraic coding Theory</b>   |
| 10. | Dr. Dillip Kumar<br>(TEQIP Sponsored)    | M.Sc.<br>Ph.D (BHU)   | <b>Fluid Dynamics</b>  |

### 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),<br>ME (HONS) (UCE BURLA)<br>Ph.D(IIT Kharagpur)                                     | <b>Production Engg.</b>  |
| 2. Dr. Pusparaj Dash               | B.Sc. (Engg.) (UCE Burla),<br>M.Sc. (Engg.)( REC Rourkela)<br>Ph.D (IIT Kharagpur)                         | <b>Machine Design and Vibration</b>                                      |
| 3. Dr. Jyoti Ranjan Mohanty (HOD)  | BE (IGIT, Sarang),<br>ME (REC Rourkela),<br>Ph.D (NIT Rourkela)  | <b>Machine Design; Fatigue &amp; Fracture; Composite Material</b>        |
| <b><u>ASSOCIATE PROFESSORS</u></b> |  |  |
| 4. Dr. Bibhuti Bhusan Pani         | B.S. and M. S. (St. Petersburg State Polytechnical University, Russia),<br>Ph.D (Engg.), IIT Kharagpur     | <b>Metal Forming, Powder Metallurgy</b>                                  |
| 5. Dr. Saroj Kumar Sarangi         | B. E. (UCE Burla),<br>M.Tech. (NIFFT Ranchi) ,<br>Ph.D (IIT Kharagpur)<br>Post Doc. Research (NCKU Taiwan) | <b>CVD Diamond Coating, High Speed Machining, Joining metal-Ceramics</b> |
| 6. Dr. Sumanta Panda               | B.Tech (UCE Burla),<br>M.Tech (IIT Delhi),<br>Ph.D- Sambalpur University                                   | <b>Robot Mechanism, Condition Monitoring, Bearing Dynamics</b>           |
| 7. Dr. Prasanta Kumar Pradhan      | BTech (UCE Burla),<br>MTech (IIT Guwhati),<br>Ph.D (IIT Kharagpur)   | <b>Machine Design</b>  |
| 8. Dr. Chitta Ranjan Deo           | B.E.: (OEC Bhubaneswar),<br>ME (REC Rourkela),<br>Ph. D (NIT Rourkela)                                     | <b>Composite Material</b>  |
| 9. Dr. Punyapriya Mishra           | B.Tech (UCE, Burla),<br>M.Tech (NIT Rourkela),<br>Ph.D - NIT Rourkela                                      | <b>Production Engg.</b>  |
| 10. Dr. Padmanav Dash              | BE (JIET Cuttack),<br>ME (IEST, Shibpur),<br>Ph.D (IIT Kharagpur)  | <b>Solid Mechanics</b>   |
| 11. Dr. Sarojrani Pattnaik         | B.Tech ( KIIT University),   | <b>Production</b>  |

- |                                |  |  |
|--------------------------------|--|--|
|                                | M.Tech (CET Bhubaneswar,<br>Ph.D.(IIT Roorkee)   | <b>Engineering</b>   |
| 12. Dr. Prakash Chandra Mishra | BE (IGIT Sarang),<br>M.Tech (IIT Delhi),<br>Ph.D (Loughborough<br>University),<br>Post Doc.1; Loughborough<br>University | <b>Engine<br/>Tribology;<br/>Emission;<br/>Friction<br/>Modeling</b> |
| 13. Dr. Aurovinda Mohanty      | B.E. (IGIT Sarang), ME (IIT<br>Kanpur), Ph.D. (IIT,<br>Khargpur)   | <b>Fluid &amp;<br/>Thermal<br/>Science</b>                           |

### **ASSISTANT PROFESSORS**

- |                                    |  |   |
|------------------------------------|--|---|
| 14. Dr. Pandaba Patro<br>Reader    | B.E.(Berhampur University),<br>M.Tech (IIT Guwahati),<br>Ph.D ( IIT Kharagpur)   | <b>Thermal (Heat<br/>Power)</b>   |
| 15. Dr. Hrushikesh Barik<br>Reader | B.Tech (UCE Burla),<br>M.Tech (UCE Burla),<br>Ph.D (IIT Bombay)                  | <b>Thermal<br/>Engineering<br/>(Gas dynamics,<br/>Computational<br/>Fluid<br/>Dynamics)</b> |
| 16. Mr. Debasish Tripathy          | BE, (OEC,Bhubaneswar),<br>M.Tech. (IIT (BHU)                                     | <b>Machine Design</b>   |
| 17. Mrs. Sunita Singh Naik         | B. Tech.(UCE, Burla),<br>M.Tech. (VSSUT, Burla),                                 | <b>Production<br/>Engg.</b>   |
| 18. Dr. Swagatika Mishra           | B.Tech. (BPUT, Rourkela),<br>M.Tech (BPUT, Rourkela),<br>Ph.D (NIT Rourkela)     | <b>Industrial and<br/>Production<br/>Engg.</b>  |
| 19. Dr. Prabir Kumar Jena          | B. Tech (OEC, Bhubaneswar),<br>M.Tech (N.I.T Rourkela),<br>Ph.D. (NIT, Rourkela) | <b>Thermal<br/>Engineering</b>  |
| 20. Mrs. Janaki Dehury             | B. Tech (VSSUT, Burla),<br>M.Tech (NIT, Rourkela)                                | <b>Production<br/>Engineering</b>   |
| 21. Dr. Pragyan Paramita Mohanty   | B.Tech (OSME, Keonjhar),<br>M. Tech. (JNTU, Hyderabad),<br>Ph.D (NIT Rourkela)   | <b>Manufacturing<br/>Science</b>  |
| 22. Dr. Debasmita Mishra           | B.Tech (JITM,<br>Parlakhemundi), M.Tech<br>(UCE Burla),<br>Ph.D (NIT,Rourkela)   | <b>Thermal<br/>Engineering</b>  |
| 23. Mr. Johnson B Lakra            | B.Tech (VSSUT Burla),<br>M. Tech (IIT Madras)                                    | <b>Mechanical<br/>Design</b>  |
| 24. Dr. Mihir Kumar Sutar          | B.Tech (IGIT Sarang),<br>M.Tech (NIT Rourkela),<br>Ph.D (IIT Roorkee)            | <b>Machine<br/>Design,<br/>Robotics</b>   |
| 25. Dr. Madhusmita Pradhan         | B.Tech (OSME, Keonjhar),<br>M.Tech. (VSSUT, Burla),<br>Ph.D. (VSSUT, Bural)      | <b>Machine Design<br/>and Analysis</b>  |

|     |                                    |   |  |
|-----|------------------------------------|---|--|
| 26. | Mr. Layatitdev Das                 | B.Tech (CET, Bhubaneswar),<br>M.Tech (NIT Rourkela)                     | <b>Machine Design<br/>and Analysis</b> |
| 27. | Mr. Shasanka Sekhar Dalai          | B.Tech (IGIT, Sarang),<br>M.Tech (IIT Madras)                           | <b>Applied<br/>Mechanics</b>           |
| 28. | Dr. Priyadarshi Tapas Ranjan Swain | Ph.D. (NIT, Rourkela)   | <b>Thermal<br/>Engineering</b>         |
| 29. | Mr. Santosh Kumar Sahu             | B.Tech (BPUT),<br>M.Tech (NIT Rourkela),                                | <b>Production<br/>Engineering</b>      |
| 30. | Dr. Kiran Kumar Ekka               | B.Tech (UCE, Burla)<br>M.Tech (NIT, Hamirpur)<br>Ph.D (NIT, Hamirpur)   | CAD CAM                                |
| 31. | Dr. Abhilash Purohit               | B.Tech. (PKAC Bargarh)<br>M.Tech. (NIT Rourkela)<br>Ph.D (NIT Rourkela) | <b>Production<br/>Engineering</b>      |
| 32. | Mr. Swgat Dwivedi                  | B.Tech. (VSSUT Burla)<br>M.Tech. (IIT Guwahati)                         | <b>Production<br/>Engineering</b>      |

### 3. Technical Staff Details:

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

### 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,<br>Piezo Electric Force Dynamometer<br>CVD Diamond Coating Set-up<br>Wear and Friction Monitor |
| 3       | Production Engineering Lab | Optical Inverted Metallurgical Microscope-<br>Microprocessor Based Temperature Controlled<br>Sintering Furnace<br>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<br>Autocollimator, Angle Decker<br>Optical Flat                   |



**Materials Testing Lab.**



**Production Engg. Lab.**

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

| Sl. No | Name of the Faculty | Research Area   |
|--------|---------------------|---|
| 1      | Prof. Jaydev Rana   | Production Engg.<br>Mechanical Vibration & condition monitoring |
| 2      | Prof. P.R. Dash     |   |
| 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<br>Study by addition of metalPowders on growth ofdiamond 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<br>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 andUNCD diamond coatings and their characterization on cemented carbide inserts   | Dr. S. K. Sarangi | 3.0              | 21.92                        |

|    |  |                         |   |                                  |     |       |
|----|--|-------------------------|---|----------------------------------|-----|-------|
| 5. | ERIP/ER/1203<br>119/M/01/1529                      | DRDO-<br>2014           | Development of ultrasonic absorbent composite material using date palm leaf fiber | Dr. J. R. Mohanty                | 3.0 | 7.385 |
| 6. | MRP-MAJOR-<br>MECH-2013-<br>7846                   | UGC-<br>MRP-<br>2013    | Development of a high vacuum brazing furnace for joining metals to ceramics       | Dr. S. K. Sarangi                | 3.0 | 14.97 |
| 7. | AICTE, TEQIP-<br>III CRS Scheme,<br>Govt. of India | AICTE-<br>CRS<br>(2019) | Composites for Heat Shielding Components in Air craft                             | Dr. A. Purohit,<br>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:

- Er. Manas Bhadra (B. Tech. 2009) is actively associated with Mars Mission of ISRO
- 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.
- T. Tejaswini (Robotics Club): AIR-1 IN National student's space Challenge-2018 at IIT, Kharagpur
- Mrs. Smaranika Nayak awarded M. Tech Gold medal in 2012
- Miss. Rasmita Parida awarded M. Tech Gold medal in 2013
- Miss Silva Acharya awarded best graduate in 2012
- Miss Subhasmita Nayak awarded best graduate in 2015
- 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 industrial 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:

| Name  | Qualification  | Specialization  |
|---|--|---|
| 1. Dr. B. B Pani<br>(H.O.D)   | B.S. and M.S. (Russia),<br>Ph.D (IIT Kharagpur)                                | <b>Mechanical<br/>Engineering</b>   |
| <b><u>ASSOCIATE PROFESSOR</u></b>   |  |   |
| 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;<br/>Physical<br/>Metallurgy,<br/>Metal Forming,<br/>Severe Plastic<br/>Deformation<br/>(SPD), Finite<br/>Element Method<br/>(FEM)</b> |
| <b><u>ASSISTANT PROFESSORS</u></b>  |  |   |
| 3. Mr. Avala Lava Kumar   | B.E. (MGIT, Hyderabad),<br>M.Tech. (NIT, Durgapur)                             | <b>Physical<br/>Metallurgy &amp;<br/>Mechanical<br/>Metallurgy</b>  |
| 4. Ms. Suneeti Purohit<br>(On leave for Ph.D. at<br>Swinburne University of<br>Technology, Australia) | B.Tech (IGIT, Sarang),<br>M.Tech (IIT, Kharagpur &<br>KIT, Karlsruhe)          | <b>Metallurgical and<br/>Materials<br/>Engineering</b>  |
| 5. Mr. Dinesh Kumar Mishra  | B.Tech (IGIT, Sarang),<br>M.Tech (IIT, Kharagpur),                             | <b>Metallurgical and<br/>Materials<br/>Engineering</b>  |
| 6. Mr. Gautam Behera  | B.Tech. (IGIT, Sarang)<br>M.Tech (IIT, Kharagpur)                              | <b>Metallurgical &amp;<br/>Materials<br/>Engineering</b>  |
| 7. Mr. Nilakantha Sahu  | B.Tech (VSSUT),<br>M.Tech (IIT, Roorkee),                                      | <b>Metallurgical and<br/>Materials<br/>Engineering<br/>(Corrosion<br/>Engineering)</b>  |
| 8. Ms. Subhadra Sahoo   | B.Tech (IGIT, Sarang),<br>M. Tech (Jadavpur<br>University),                    | <b>Metallurgical and<br/>Materials<br/>Engineering</b>  |
| 9. Dr. Renu Prava Dalai   | B.Tech (IGIT, Sarang),<br>M.Tech (NIT, Rourkela),<br>Ph.D. (IIT, Kharagpur)    | <b>Metallurgical and<br/>Materials<br/>Engineering</b>  |
| 10. Dr. Manila Mallik   | B. Tech (IGIT, Sarang),<br>M. Tech (NIT, Rourkela),<br>PhD (IIT, Kharagpur)    | <b>Metallurgical and<br/>Materials<br/>Engineering</b>  |
| 11. Mr. Gourahari Behera  | B. Tech (NIT, Rourkela),   | <b>Materials Science</b>  |

**3. Courses offered :**

B.Tech. in Metallurgy &amp; 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<br>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.<br>Visiting research fellow at IIT, Kanpur (2015).<br>Best oral presentation in NMD ATM, 2015<br>2 <sup>nd</sup> Prize in poster presentation in CSIR-NML Jamshedpur, 2015 |
| 3    | Ms. Suneeeti        | Nanoscience & Nanotechnology,   |   |

|     |                         |   |   |
|-----|-------------------------|---|---|
|     | Purohit                 | 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.<br>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 of MMC by powder metallurgy             | Institute silver medal in M.Tech at NIT, RKL.<br>First Prize in oral presentation in composite 2010, IIT, Kharagpur.<br>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 most challenging 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. The department 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  |
|---------------------------------------|--|---|
| <b>Dr. Umaranjan Jena<br/>(H.O.D)</b> | B.Sc. (Engg.) (UCE,<br>Burla),<br>M.Tech (III, KGP),<br>Ph.D (Jadavpur University) | <b>Computer Vision &amp;<br/>Image Processing</b>                         |
| <b><u>PROFESSORS</u></b>              |  |   |
| 1. Prof. Piyush Ranjan Das            | M.Sc. (Revenshaw),<br>Ph.D. (IIT Kharagpur)  | <b>Condensed Matter<br/>Physics</b>                                       |
| 2. Prof. Manas Ranjan Panigrahi       | Ph.D (NIT, Rourkela)   | <b>Experimental<br/>Condensed Matter<br/>Physics</b>                      |
| <b><u>ASSOCIATE PROFESSORS</u></b>    |  |   |
| 3. Dr. Akhyaya Kumar Pattanaik        | M.Sc. (B.U.),<br>Ph.D. (IIT, Guwahati)   | <b>Solid State Physics<br/>(Experimental)</b>                             |
| 4. Dr. Ganeswar Nath                  | M.Sc., M.Phil.,<br>Ph.D. (Ultrasonics)<br>(Ravenshaw)                              | <b>Ultrasonic<br/>(Experimental),<br/>Plasma<br/>Physics(Theoretical)</b> |
| 5. Dr. Santanu Sengupta               | M.Sc.,<br>Ph.D. (IIT Kharagpur)  | <b>Computational<br/>Physics</b>  |
| 6. Dr. Sunanda Kumari Patri           | M.Sc. (B.U.),<br>M.Phil. (B.U.),<br>Ph.D. (IIT Kharagpur)                          | <b>Condensed Matter<br/>Physics</b>                                       |

## ASSISTANT PROFESSORS

|     |                                |  |   |
|-----|--------------------------------|--|---|
| 7.  | Mr. Sidheswar Behera           | M.Sc. (B.U.)   | <b>Materials Science</b>                      |
| 8.  | Dr. P. Lakshmi Praveen         | M.Sc., M.Phil., Ph.D.                                      | <b>Condensed Matter Physics</b>               |
| 9.  | Dr. Soumya Saswati Sarangi     | M.Sc , Ph. D (JNCASR, Bangalore), Post-doc (IISc., IOP)    | <b>Computational Condensed Matter Physics</b> |
| 10. | Dr. Jasvinder Pal Singh Viridi | 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<br>2. Fourier Analysis Kit<br>3. Hall Effect Set Up<br>4. Planck's Constant Kit<br>5. Energy Band Gap Setup<br>6. Photodiode Characteristics Kit<br>7. Optical Fiber Kit: Estimation of Numerical Aperture<br>8. Calculation of e/m by Thompson's Method<br>9. Michelson's Interferometer |

|    |                      |  |
|----|----------------------|--|
| 2. | <b>B.Tech. Lab</b>   | 10. B-H Curve Kit<br>11. LED & Laser Diode Characteristics<br>12. GM Counter<br>13. Curie Temperature Setup<br>14. Four Probe Method<br>15. Fermi Energy Kit<br>16. Stefan's Constant Kit<br>17. Solar Cell Apparatus<br>18. ESR Spectrometer<br>19. Young's Modulus by Searle's Method<br>20. Millikan's oil drop Experimental set up<br>1. Determination of acceleration due to gravity<br>2. Barton's Apparatus<br>3. Determination of Thermal Conductivity with Lee's Apparatus<br>4. Capillary Rise Method<br>5. Newton's Rings Apparatus<br>6. Determination of Grating Element<br>7. Sonometer<br>8. Characteristics of BJT |
| 3. | <b>Research Labs</b> | <u><b>Advanced Materials Laboratory</b></u><br>1. Muffle Furnace ( up to 1700 <sup>0</sup> C)<br>2. Tubular Furnace<br>3. Planetary Ball Milling Machine<br>4. Hydraulic Pressure<br>5. Oven<br>6. Vibrating Ball Milling Machine<br>7. Sonicator<br>8. Density Measurement Kit<br><br><u><b>Ultrasonics &amp; Acoustics Laboratory</b></u><br>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,<br>Materials Science      |  |
| 2.     | Prof. M. R. Panigrahi | Experimental Condensed<br>Matter Physics, Thin Film | Nominated for world's who's<br>who in 2012, 2015<br>Nominated for Top 100 scientist<br>by CBS, England |
| 3.     | Dr.A. K. Pattanaik    | Condensed Matter Physics,<br>Materials Science      |  |
| 4.     | Dr. G. Nath           | Ultrasonics,<br>Plasma Physics                      | Dr.M.Pancholy Award-2013, Dr.<br>Parthasarathi Award-2016<br>by Ultrasonic Society of India.           |
| 5.     | Dr. S. Sengupta       | Computational Quantum<br>Mechanics                  |  |
| 6.     | Dr. S. K. Patri       | Condensed Matter Physics                            |  |
| 7.     | Mr. S. Behera         | Materials Science                                   |  |
| 8.     | Dr. P. L. Praveen     | Soft Condensed Matter<br>Physics, Liquid Crystals   | Young Scientist Award-2012 by<br>Dr.K.V.Rao Scientific Society,<br>Hyderabad.                          |
| 9.     | Dr. S. S. Sarangi     | Computational Condensed<br>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<br>Matter Physics            |  |

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

| <b>S. No.</b> | <b>Title of the Project</b>   | <b>Faculty Name</b>    | <b>Funding Agency</b> | <b>Amount In Lakhs</b> |
|---------------|---|------------------------|-----------------------|------------------------|
| 1             | Development of high temperature piezoelectric ceramics based on (1-x) Bi (Me□, Me□)O <sub>3-x</sub> PbTiO <sub>3</sub> Systems<br>Project No.: SR/FTP/PS-63/2008      | Dr A. K. Pattanaik     | DST,<br>New Delhi     | 20.28                  |
| 2             | Ultrasonic Characterisation of nanofluids for various concentration at different temperatures<br>ProjectNo.F.20-1(28)/2012(BSR)                                       | Dr. G. Nath            | UGC,<br>New Delhi     | 6.00                   |
| 3             | Development of ultrasonic absorbant composite material using date palm leaf fiber<br>Project No.ERIP/ER/1203119/M/01/1529   | Dr. G. Nath<br>(Co-PI) | DRDO,<br>New Delhi    | 7.38                   |
| 4             | Study of propagation of ultrasonic waves in solvent mixture used in preperation of natural fiber from agricultural wastes<br>Project No.<br>ERIP/ER/1203150/M/01/1559 | Dr. G. Nath            | DRDO,<br>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 parsing.

## 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:

| <b>Name</b>              | <b>Qualification</b>  | <b>Specialization</b>   |
|--------------------------|---|---|
| <b><u>PROFESSORS</u></b> |   |   |
| 1. Dr. Debadutta Mishra  | B.Sc. (Engg.) (CET),<br>M.Sc. (Engg.) (NIT,<br>Rourkela)<br>Ph.D (S.U.)                                     | <b>Production Engg.</b>   |
| 2. Dr. Debabrata Dhupal  | B.E.( Utkal University),<br>M.E (Jadavpur University)<br>Ph.D(Engg), Jadavpur<br>University DIBM<br>(IGNOU) | <b>Micromachining,<br/>Advance<br/>Manufacturing<br/>Process,<br/>RP &amp; Non-<br/>traditional<br/>machining, Metal<br/>Cutting.</b> |

### **ASSOCIATE PROFESSORS**

|                                   |   |                                      |
|-----------------------------------|---|--------------------------------------|
| 3. Dr. Kamal Pal<br>(H.O.D)       | B.E (Jadavpur University),<br>M.E (BEC, Kolkata),<br>Ph.D (IIT Kharagpur)       | <b>Production<br/>Engineering</b>    |
| 4. Dr. Arun Kumar Rout            | B.E,<br>M.Tech,<br>Ph.D.,   | <b>Mechanical<br/>Systems Design</b> |
| 5. Dr. Nirmal Kumar Kund          | B.Tech (IGIT, Sarang),<br>M.Tech (IISc, Bangalore),<br>Ph. D- (IISc, Bangalore) | <b>Mechanical<br/>Sciences</b>       |
| 6. Dr. Pankaj Charan Jena         | B.E, M.Tech, (BPUT,<br>Odisha)<br>Ph.D ( Jadavpur<br>University).               | <b>Mechanical System<br/>Design.</b> |
| 7. Dr. Sudhansu Ranjan Das        | B.E. (BPUT, Odisha),<br>M.Tech. (KIIT<br>University),<br>Ph.D (NIT, Jamshedpur) | <b>Manufacturing<br/>Engineering</b> |
| 8. Dr. Trupti Ranjan<br>Mahapatra | B.E,<br>M.Tech (UCE, Burla),<br>Ph.D.   | <b>Design and<br/>Manufacturing</b>  |

### **ASSISTANT PROFESSORS**

|                              |   |   |
|------------------------------|---|---|
| 9. Ms. Anisha Ekka           | B.Tech (CET,<br>Bhubneswar), M.Tech<br>(IIT Guwahati) | <b>Fluid and Thermal</b>                    |
| 10. Mr. Birendra Kumar Barik | B.Tech. (VSSUT Burla),<br>M.Tech. (NIT Trichy),       | <b>Manufacturing<br/>Technology</b>         |
| 11. Ms. Lipsamayee Mishra    | B.Tech. (BPUT),<br>M.Tech. (VSSUT Burla)              | <b>Manufacturing<br/>System Engineering</b> |
| 12. Mr. Premananda Ekka      | B.Tech ( VSSUT, Burla),<br>M.Tech (IIT, Guwahati)     | <b>Computer Assisted<br/>Manufacturing</b>  |
| 13. Mr. Sambeet Kumar Sahu   | B.Tech. (BPUT, Burla),                                | <b>Production</b>                           |

|                      |  |  |
|----------------------|--|--|
| 14. Ms. Smita Padhan | M.Tech (VSSUT, Burla)<br>B.Tech. (VSSUT, Burla),<br>M.Tech.(NIT, Warangal) | <b>Engineering<br/>Manufacturing<br/>Engineering</b> |
| 15. Ms. Sunita Sethy | B.Tech ( BPUT),<br>M.Tech. (VSSUT Burla)                                   | <b>Production<br/>Engineering</b>                    |

### 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
- 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<br>2. Polishing Machine<br>3. Tool Grinder<br>4. Acoustic analyzer<br>5. Tool Maker's Microscope | 1. Vibration analysis of cutting tool.<br>2. Noise analysis of cutting tool<br>3. Polishing of specimen            |
| 2       | Metal Forming Lab. | 1. Shearing Machine<br>2. Hydraulic Bulging machine<br>3. Hydraulic press<br>4. Universal testing machine        | 1. Forward & Backward Extrusion<br>2. Hydraulic bulging & Deep draining<br>3. Tensile, compression & Bending Test. |
| 3.      | CAD Lab.           | 1. CATIA, ANSYS, Solidhllar VS   | 1. Modelling & Simulation  |
| 4.      | Virtual Mfg. Lab.  | 1. Open CIM<br>2. I-GRIP<br>3. QUEST<br>4. SIMUL@  | 1. CIM Model simulation<br>2. Robot Workspacesimulation  |



|    |                                |  |                                       |
|----|--------------------------------|--|---------------------------------------|
|    |                                | 5. Workspace 5<br>6. 3D Printer<br>7. 3D Scanner   |                                       |
| 5. | Robotics & FMS Lab.            | 1. CNC Lathe,<br>2. CNC Milling,<br>3. ASRS<br>4. Linear shuttle conveyor<br>5. Pallet conveyor<br>6. Loading unloading arm<br>7. Aristo robot<br>8. Scara robot | FMS model simulation                  |
| 6. | Metrology Lab.                 | 1. Profile Projector<br>2. Portable Surface roughness testing,<br>3. Micro hardness testing<br>4. CMM  |                                       |
| 7  | Non Traditional Machining Lab. | 1. Laser beam machining<br>2. USM Set up<br>3. EDM set up<br>4. AJM set up   | Micromachining of metals and ceramics |
| 8  | Advance Manufacturing Lab.     | 1. CNC EDM<br>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 Charecterization 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<br>Smart (SMA, PZT and Magnetostrictive material)<br>Composite Structures<br>Vibro-acoustic Analysis of Laminated/ Smart<br>Structures<br>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 | of 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 | of 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                     |            | Not applied                        |

|    |                               |  |      |                |            |  |
|----|-------------------------------|--|------|----------------|------------|--|
|    |                               |  |      | Accredited     |            |  |
| 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         |
| <b>TOTAL</b> |  |      | <b>840</b> | <b>10</b> | <b>42</b> | <b>84</b> | <b>976</b> |

\* *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 Starting | of 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 Starting | of 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                   |
| <b>TOTAL</b> |                   |   |               | <b>36</b>            |

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

| Sl.No | Department        | Name of the Specialisation           | Year Starting | of 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           |
| <b># – NBA Accredited * AICTE approved</b> |                               |   |      | <b>TOTAL</b> |
|  |                               |   |      | 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/<br>Organic Chemistry | 2010             | 36                |
| 3.           | M.Sc. (Mathematics) | Applied Mathematics                        | 2011             | 18                |
| <b>TOTAL</b> |                     |  |                  | 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                |
| <b>TOTAL</b> |                            |                  | 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                |
| <b>TOTAL</b> |                            |                  | 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 | 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            |

#### 3 YEARS MCA PROGRAMME (FULL TIME)

| Sl.No | Name of the Specialisation                    | Year of Starting | Sanctioned Intake | Actual Intake |
|-------|---|------------------|-------------------|---------------|
| 1.    | <sup>#</sup> 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 |

#### 1. STUDENTS STRENGTH PHD : ACTUAL INTAKE

| Sl. | Regn.No.   | Name                    | Branch | Category  | Date of Enrollment | Supervisor          |
|-----|------------|-------------------------|--------|-----------|--------------------|---------------------|
| 1   | 1810030001 | NIRJHARINI SAHOO        | CE     | GEN-3-RDS | 30.01.2018         | Prof. P. K. Das     |
| 2   | 1810030002 | MOUSUMEE HARAPRIYA ROUL | CE     | GEN-3-RDS | 30.01.2018         | Prof. S. S. Das     |
| 3   | 1810030003 | PRIYANKA PRADHAN        | CE     | GEN-3-RDS | 30.01.2018         | Dr. S. K. Panigrahy |
| 4   | 1810030004 | ANKITA BOHIDAR          | CE     | GEN-3-RDS | 30.01.2018         | Prof. P. K. Das     |
| 5   | 1810090001 | CHANDRAKANTA MISHRA     | ME     | GEN-8-DS  | 30.01.2018         | Dr. C.R. Deo        |

|    |            |                            |     |               |            |                          |
|----|------------|----------------------------|-----|---------------|------------|--------------------------|
| 6  | 1810090002 | RASHMI RANJAN<br>LENKA     | ME  | GEN-8-DS      | 30.01.2018 | Dr. S.K. Sarangi         |
| 7  | 1810090003 | SASMITA KAR                | ME  | GEN-3-<br>RDS | 30.01.2018 | Dr. S.R. Pattnaik        |
| 8  | 1810090004 | SADANANDA PATTANAYAK       | ME  | GEN-8-DS      | 30.01.2018 | Dr. H.K. Barik           |
| 9  | 1810090005 | SANGEETA DAS               | ME  | GEN-8-DS      | 30.01.2018 | Dr. H.K. Barik           |
| 10 | 1810090006 | DEEPAK KU.<br>MOHAPATRA    | ME  | GEN-8-DS      | 20.02.2018 | Dr. P.P. Mohanty         |
| 11 | 1810050001 | GAURI SAHOO                | EE  | GEN-8-DS      | 30.01.2018 | Dr. R.K. Sahu            |
| 12 | 1810050002 | RAJIB LOCHAN DASH          | EE  | GEN-8-DS      | 30.01.2018 | Dr. P.K. Hota            |
| 13 | 1810050003 | DEBASHISH MISHRA           | EE  | GEN-8-DS      | 30.01.2018 | Dr. S.P. Panigrahi       |
| 14 | 1810050004 | ABHISEK GANTAYAT           | EE  | GEN-3-DS      | 30.01.2018 | Dr. Shanti Behera        |
| 15 | 1810050005 | SUNITA PATEL               | EE  | GEN-8-DS      | 30.01.2018 | Dr. Banaja Mohanty       |
| 16 | 1810070001 | V CH SEKHAR RAO RAYAVARAPU | ETC | GEN-8-DS      | 30.01.2018 | Dr. A. Mahapatro         |
| 17 | 1810070002 | SUBRAT KUMAR SETHI         | ETC | SC-4-INT      | 30.01.2018 | Dr. A. Mahapatro         |
| 18 | 1810070003 | SUBHASHREE SAMAL           | ETC | GEN-3-DS      | 30.01.2018 | Dr. H.K. Sahoo           |
| 19 | 1810070004 | MD RIZWAN KHAN             | ETC | GEN-8-DS      | 30.01.2018 | Dr. B. Das               |
| 20 | 1810070005 | LOPAMUDRA GHADAI           | ETC | GEN-4-<br>INT | 30.01.2018 | Dr. H.K. Sahoo           |
| 21 | 1810070006 | PREMANANDA MISHRA          | ETC | GEN-9-DS      | 30.01.2018 | Dr. S. Agrawal           |
| 22 | 1810040001 | KAUSHIK MISHRA             | CSE | GEN-3-<br>RDS | 30.01.2018 | Dr. S.K. Majhi           |
| 23 | 1810040002 | NIBEDAN PANDA              | CSE | GEN-3-<br>RDS | 30.01.2018 | Dr. S.K. Majhi           |
| 24 | 1810040003 | BANDITA SAHU               | CSE | GEN-3-RB      | 30.01.2018 | Dr. M.R. Kabat           |
| 25 | 1810040004 | MADUGULA MURALI<br>KRISHNA | CSE | GEN-8-DS      | 30.01.2018 | Dr. S.K. Majhi           |
| 26 | 1810040005 | MUNMUN SAHA                | CSE | GEN-3-DS      | 30.01.2018 | Dr. S. Panigrahi         |
| 27 | 1810080001 | ANIMA PRADHAN              | IT  | GEN-3-<br>RDS | 30.01.2018 | Dr. M.R. Senapati        |
| 28 | 1810080002 | PRAGYAN PARIMITA SAHOO     | IT  | GEN-3-<br>RDS | 30.01.2018 | Dr. M.R. Senapati        |
| 29 | 1810080003 | ALINA DASH                 | IT  | GEN-4-<br>INT | 30.01.2018 | Dr. Kshiramani<br>Naik   |
| 30 | 1810080004 | SATYAJIT PATTNAIK          | IT  | GEN-8-DS      | 30.01.2018 | Dr. P.K. Sahu            |
| 31 | 1810110001 | SMITA PADHAN               | PE  | SC-4-INT      | 30.01.2018 | Dr. S.R. Das             |
| 32 | 1810110002 | BINITA DASH                | PE  | GEN-3-DS      | 30.01.2018 | Dr. T.R. Mohapatra       |
| 33 | 1810110003 | RANJAN MAJHI               | PE  | 3             | 30.01.2018 | Dr. N.K. Kund            |
| 34 | 1810110004 | SARITPRAVA SAHOO           | PE  | GEN-3-        | 16.02.2018 | Dr. P.C. Jena            |
| 35 | 1810100001 | RUDRANARAYAN<br>BEHERA     | MME | 3             | 30.01.2018 | Dr. Manila Mallik        |
| 36 | 1810010001 | SHASWAT SEKHAR SARANGI     | ARC | GEN-4-<br>INT | 30.01.2018 | Dr. B. Mohapatra         |
| 37 | 1810010002 | AMIT CHATTERJEE            | ARC | GEN-4-<br>INT | 30.01.2018 | Dr. B. Mohapatra         |
| 38 | 1810150001 | HEMANTA KUMAR PAIKRAY      | CA  | 3             | 30.01.2018 | Dr. Sucheta Panda        |
| 39 | 1810150002 | BISWA RANJAN<br>ACHARYA    | CA  | 3             | 30.01.2018 | Dr. Sasmita Ku.<br>Padhy |
| 40 | 1810120001 | SAYALA RAJESH BABU         | CH  | 8             | 30.01.2018 | Dr. Ramakrishna<br>DS    |
| 41 | 1810120002 | SWAGATIKA TRIPATHY         | CH  | 8             | 30.01.2018 | Prof. R.B. Panda         |
| 42 | 1810120003 | RUPASHREE DASH             | CH  | 3             | 01.02.2018 | Dr. Sukalyan Dash        |
| 43 | 1810120003 | RUBI BEHURA                | CH  | GEN-3-        | 19.02.2018 | Dr. B.R. Jalli           |
| 44 | 1810140001 | SIDHESWAR BEHERA           | PHY | SC-4-INT      | 30.01.2018 | Dr. J. S. Virdi          |
| 45 | 1810140002 | PUNYATOYA DAS              | PHY | GEN-3-        | 30.01.2018 | Dr. P. L. Praveen        |

|    |            |                        |      |   |            |                    |
|----|------------|------------------------|------|---|------------|--------------------|
| 46 | 1810140003 | SADHWI SUMAN DASH      | PHY  | 3 | 30.01.2018 | Dr. M. P. K. Sahoo |
| 47 | 1810130001 | ARPITA ANINDITA DAS    | MATH | 3 | 30.01.2018 | Dr. S.K. Paikray   |
| 48 | 1810130002 | SHUBHASHREE<br>BEBARTA | MATH | 2 | 30.01.2018 | Dr. M.K. Jena      |
| 49 | 1810180001 | M. AISHVARYA           | HUM  | 3 | 30.01.2018 | Dr. P. K. Padhee   |

**2. FACULTY POSITIONS : SANCTIONED POSITIONS & FILLED IN POSITIONS  
PROFESSOR**

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

**(ASSOCIATE PROFESSOR)**

| <b>Name of Dept.</b>                         | <b>Sanctioned Strength</b> | <b>Existing</b> | <b>No. of vacancy</b>    |
|--|----------------------------|-----------------|--------------------------|
| <b>CIVIL ENGINEERING</b>                     | 13                         | 06              | <b>07</b>                |
| <b>MECHANICAL ENGINEERING</b>                | 13                         | 12              | <b>01</b>                |
| <b>ELECTRICAL ENGINEERING</b>                | 09                         | 04              | <b>05</b>                |
| <b>ELECTRONICS &amp; TC ENGINEERING</b>      | 11                         | 09              | <b>02</b>                |
| <b>COMPUTER SCIENCE &amp; ENGINEERING</b>    | 06                         | 03              | <b>03 (01 Subjudice)</b> |
| <b>PRODUCTION ENGINEERING</b>                | 06                         | 06              | <b>00</b>                |
| <b>ELECTRICAL &amp; ELECTRONICS ENGG</b>     | 03                         | 02              | <b>01</b>                |
| <b>INFORMATION TECHNOLOGY</b>                | 05                         | 04              | <b>01 (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 (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 (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 (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 APPLICATION (MCA)</b>                     | 04         | 04         | <b>00</b>                |
| <b>ARCHITECTURE</b>                                   | 03         | 02         | <b>01</b>                |
| <b>PHYSICS</b>  | 08         | 07         | <b>01</b>                |
| <b>CHEMISTRY</b>                                      | 06         | 04         | <b>02</b>                |
| <b>MATHEMATICS</b>                                    | 07         | 05         | <b>02</b>                |
| <b>HUMANITIES</b>                                     | 05         | 05         | <b>00</b>                |
| <b>TOTAL</b>  | <b>164</b> | <b>145</b> | <b>19</b>                |

**Vice-Chancellor** - **01** - **Filled**  
**Professor, T & P** - **01** - **Filled**  
**Dean, Students' Selfare** - **01** - **Vacant**  
**Workshop Superindent** - **01** - **Filled**  
**Controller of Examination** - **01** - **Vacant (Subjudice)**

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

| Sl 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                           | <b>12</b>  | 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      | Attendant (Class-IV)     | 2   | 2  | -                          | YES                            |
|        | <b>TOTAL</b>             | <b>40</b>   | <b>27</b>  | <b>13</b>                  |                                |

#### 4. 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> |

## 5. TRANSITION RATE OF UG STUDENTS:

98% of students transition without backlog in Undergraduate Programmes.

## 6. 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        |
| Tejeswar 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        |
| Anwasha 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 |
| Soyongsidha Dey         | Civil Engineering      | D243U77       | Yes | 384   |
| Susanta Behera          | Electrical Engineering | EE20S56042039 | Yes | 213   |
| Satyanjan 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 |

## 7. 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 | Matru diwas | 20 <sup>th</sup> Feb 2020 |
| 04 | Boot Camp   | 17- 18 Feb 2020           |

## 8. TRAINING PROGRAMMES HELD FOR TEACHERS

| TEQIP CUNDUCTED TRAINING PROGRAMME |             |                |  |            |            |
|------------------------------------|-------------|----------------|--|------------|------------|
| Sl No.                             | Dept        | Training mode  | Title of training  | From       | To         |
| 01                                 | Production  | Workshop       | OTAM   | 15-01-2019 | 19-01-2019 |
| 02                                 | Chemical    | Workshop       | MSDAER-2019  | 28-01-2019 | 01-02-2019 |
| 03                                 | Civil       | Workshop       | Life Skill Management  | 07-02-2019 | 12-02-2019 |
| 04                                 | Civil       | Workshop       | Water Urbanism   | 12-03-2019 | 16-03-2019 |
| 05                                 | Mechanical  | Workshop       | AOTAMP-2019  | 25-03-2019 | 30-03-2019 |
| 06                                 | Physics     | Conf.          | NCFAM-2019   | 27-07-2019 | 28-07-2019 |
| 07                                 | EE          | Conf.          | NCGTR  | 19-10-2019 | 20-10-2019 |
| 08                                 | Physics     | FDP/Workshop   | Design and Development of Materials for technological Applications | 21-10-2019 | 26-10-2019 |
| 09                                 | EE          | STC            | Modeling & Simulation Electrical System using Matlab Simulation    | 28-10-2019 | 02-11-2019 |
| 10                                 | EE          | Workshop       | MEPSN  | 05-08-2019 | 10-08-2019 |
| 11                                 | Chemistry   | National Conf. | RAIMS - 2019   | 24-12-2019 | 25-12-2019 |
| 12                                 | Mathematics | Int. Conf.     | ICAMC - 2020   | 07-02-2020 | 08-02-2020 |

9. **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   | 20.05.2019               | NIT, Rourkela   |

|    |                       |            |     |                     |                             |   |
|----|-----------------------|------------|-----|---------------------|-----------------------------|---|
|    |                       |            |     | Internship          | to<br>08.07.2019            |   |
| 14 | Atulya Sahoo          | 1602100015 | MME | Summer Internship   | 20.05.2019 to<br>19.07.2019 | NIT, Rourkela                                       |
| 15 | K. R. Satyajit        | 15011308   | EEE | Industrial Training | 16.05.2019 to<br>28.06.2019 | DRDO, Gas Turbine Research Establishment, Bengaluru |
| 16 | Shakti Prasad Mohanty | 1702111053 | PE  | Summer Internship   | 16.05.2019 to<br>21.06.2019 | DRDO,DRDL, Kanchanbagh, Hyderabad                   |
| 17 | Suprava Patel         | 1602100052 | MME | NMD ATM             | 11.11.2019 to<br>20.11.2019 | IIM, Kerala   |
| 18 | Ajit Mohanty          | 1702070012 | ETC | Summer Internship   | 16.05.2019 to<br>17.06.2019 | Integrated Test Range, Chandipur, Balasore          |
| 19 | Tanweer Alam Raza     | 1602100058 | MME | Summer Internship   | 20.05.2019 to<br>10.07.2019 | NIT, Rourkela                                       |
| 20 | Abhinav Kumar Padhan  | 1602030002 | CE  | Summer Internship   | 17.05.2019 to<br>22.06.2019 | Civil Engg. Dept. IIT, Bombay                       |
| 21 | Atulya Sahoo          | 1602100015 | MME | Summer Internship   | 19.05.2019 to<br>10.07.2019 | NIT, Rourkela                                       |
| 22 | Bibhudatta Nanda      | 1602100019 | MME | Industrial Training | 15.05.2019 to<br>17.06.2019 | Tata Steel Jamshedpur                               |
| 23 | Biswajit Beuria       | 1702070035 | ETC | Summer Internship   | 16.05.2019 to<br>17.06.2019 | Integrated Test Range, Chandipur, Balasore          |
| 24 | Bismaya Sahoo         | 1602100020 | MME | Summer Internship   | 19.05.2019 to<br>10.07.2019 | NIT, Rourkela                                       |
| 25 | Rutumber Nath         | 1702050068 | EE  | Summer Internship   | 18.05.2019 to<br>17.06.2019 | ITR, Chandipur, Bilasore                            |
| 26 | K. R. Satyajit        | 15011308   | EEE | Industrial Training | 16.05.2019 to<br>28.06.2019 | DRDO, Gas Turbine Research Establishment, Bengaluru |
| 27 | Shakti Prasad Mohanty | 1702111053 | PE  | Summer Internship   | 16.05.2019 to<br>21.06.2019 | DRDO,DRDL, Kanchanbagh, Hyderabad                   |

|    |                       |            |     |                     |                          |  |
|----|-----------------------|------------|-----|---------------------|--------------------------|--|
| 28 | Biswajit Beuria       | 1702070035 | ETC | Summer Internship   | 16.05.2019 to 17.06.2019 | Integrated Test Range, Chandipur, Balasore |
| 29 | Ajit Mohanty          | 1702070012 | ETC | Summer Internship   | 16.05.2019 to 17.06.2019 | Integrated Test Range, Chandipur, Balasore |
| 30 | Tanweer Alam Raza     | 1602100058 | MME | Summer Internship   | 20.05.2019 to 10.07.2019 | NIT, Rourkela                              |
| 31 | Abhinav Kumar Padhan  | 1602030002 | CE  | Summer Internship   | 17.05.2019 to 22.06.2019 | Civil Engg. Dept. IIT, Bombay              |
| 32 | Atulya Sahoo          | 1602100015 | MME | Summer Internship   | 19.05.2019 to 10.07.2019 | NIT, Rourkela                              |
| 33 | Bibhudatta Nanda      | 1602100019 | MME | Industrial Training | 15.05.2019 to 17.06.2019 | Tata Steel Jamshedpur                      |
| 34 | Bismaya Sahoo         | 1602100020 | MME | Summer Internship   | 19.05.2019 to 10.07.2019 | NIT, Rourkela                              |
| 35 | Rutumber Nath         | 1702050068 | EE  | Summer Internship   | 18.05.2019 to 17.06.2019 | ITR, Chandipur, Bilasore                   |
| 36 | Shakti Prasad Mohanty | 1702111053 | PE  | Summer Internship   | 16.05.2019 to 21.06.2019 | DRDO, DRDL, Kanchanbagh, Hyderabad         |
| 37 | Biswajit Beuria       | 1702070035 | ETC | Summer Internship   | 16.05.2019 to 17.06.2019 | Integrated Test Range, Chandipur, Balasore |
| 38 | Ajit Mohanty          | 1702070012 | ETC | Summer Internship   | 16.05.2019 to 17.06.2019 | Integrated Test Range, Chandipur, Balasore |
| 39 | Tanweer Alam Raza     | 1602100058 | MME | Summer Internship   | 20.05.2019 to 10.07.2019 | NIT, Rourkela                              |
| 40 | Abhinav Kumar Padhan  | 1602030002 | CE  | Summer Internship   | 17.05.2019 to 22.06.2019 | Civil Engg. Dept. IIT, Bombay              |
| 41 | Atulya Sahoo          | 1602100015 | MME | Summer Internship   | 19.05.2019 to 10.07.2019 | NIT, Rourkela                              |
| 42 | Bismaya Sahoo         | 1602100020 | MME | Summer              | 19.05.2019 to            | NIT, Rourkela                              |



|    |                       |            |     |                     |                          |  |
|----|-----------------------|------------|-----|---------------------|--------------------------|--|
|    |                       |            |     | Internship          | 10.07.2019               |  |
| 43 | Rutumber Nath         | 1702050068 | EE  | Summer Internship   | 18.05.2019 to 17.06.2019 | ITR, Chandipur, Bilasore                   |
| 44 | Shakti Prasad Mohanty | 1702111053 | PE  | Summer Internship   | 16.05.2019 to 21.06.2019 | DRDO,DRDL, Kanchanbagh, Hyderabad          |
| 45 | Biswajit Beuria       | 1702070035 | ETC | Summer Internship   | 16.05.2019 to 17.06.2019 | Integrated Test Range, Chandipur, Balasore |
| 46 | Ajit Mohanty          | 1702070012 | ETC | Summer Internship   | 16.05.2019 to 17.06.2019 | Integrated Test Range, Chandipur, Balasore |
| 47 | Shakti Prasad Mohanty | 1702111053 | PE  | Summer Internship   | 16.05.2019 to 21.06.2019 | DRDO,DRDL, Kanchanbagh, Hyderabad          |
| 48 | Shakti Prasad Mohanty | 1702111053 | PE  | Summer Internship   | 16.05.2019 to 21.06.2019 | DRDO,DRDL, Kanchanbagh, Hyderabad          |
| 49 | Tanweer Alam Raza     | 1602100058 | MME | Summer Internship   | 20.05.2019 to 10.07.2019 | NIT, Rourkela                              |
| 50 | Abhinav Kumar Padhan  | 1602030002 | CE  | Summer Internship   | 17.05.2019 to 22.06.2019 | Civil Engg. Dept. IIT, Bombay              |
| 51 | Atulya Sahoo          | 1602100015 | MME | Summer Internship   | 19.05.2019 to 10.07.2019 | NIT, Rourkela                              |
| 52 | Bibhudatta Nanda      | 1602100019 | MME | Industrial Training | 15.05.2019 to 17.06.2019 | Tata Steel Jamshedpur                      |
| 53 | Bismaya Sahoo         | 1602100020 | MME | Summer Internship   | 19.05.2019 to 10.07.2019 | NIT, Rourkela                              |
| 54 | Rutumber Nath         | 1702050068 | EE  | Summer Internship   | 18.05.2019 to 17.06.2019 | ITR, Chandipur, Bilasore                   |
| 55 | Bismaya Sahoo         | 1602100020 | MME | Summer Internship   | 20.05.2019 to 19.07.2019 | NIT, Rourkela                              |
| 56 | Shweta Bose           | 1702110024 | PE  | Industrial Training | 04.06.2019 to 16.07.2019 | Tata Steel Jamshedpur                      |
| 57 | Ankita Meher          | 1702110003 | PE  | Industrial Training | 24.06.2019 to 23.07.2019 | Nalco, Nalconagar, Angul                   |

10. **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.

| PLACEMENT STATISTICS 2019-20 |                                  |           |     |          |          |            |            |       |          |           |    |     |          |           |       |  |
|------------------------------|----------------------------------|-----------|-----|----------|----------|------------|------------|-------|----------|-----------|----|-----|----------|-----------|-------|--|
| Sl. No                       | Name of the recruiting Companies | CTC (LPA) | MME | EE Engg. | EEE Engg | Mech Engg. | CIVI Engg. | Engg. | IT Engg. | ETC Engg. | PE | Che | MCA (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 |

## 11. SPONSORED R&D PROJECT IN HAND

| No. | Year    | Funding Agency | Scheme | Project Name  | Principal Investigator | Department                                   | Amount (Lakhs) |
|-----|---------|----------------|--------|---|------------------------|--|----------------|
| 1   | 2016-17 | AICTE          | MODROB | Data mining Laboratory  | Manas Ranjan Senapati  | Information Technology                       | ₹ 10.65        |
| 2   | 2016-17 | AICTE          | MODROB | MODROBS of Microwave Laboratory   | Debasis Mishra         | Electronics & Tele-Communication Engineering | ₹ 6.03         |
| 3   | 2017-18 | AICTE          | MODROB | Modernization of Electrical power System Laboratory                                 | Ajit Barisal           | Electrical Engineering                       | ₹ 18.00        |
| 4   | 2017-18 | AICTE          | MODROB | Modernization Structural Engineering laboratory                                     | Sanjaya Patro          | Civil Engineering                            | ₹ 18.50        |
| 5   | 2017-18 | AICTE          | MODROB | 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  | SER B       | Fundamental investigation of biopolymers- bio surfactants interaction towards understanding their physicochemical behaviour using fluorescent drug molecules | Monalisha Mohapatra | Chemistry                            | ₹ 37.62 |
| 8  | 2017-18 | CPRI |             | IEC 61850 Compliant SF6 Monitoring System for Gas Insulated SwiTele-Communication hgear  | GyanRanjan Biswal   | Electrical & Electronics Engineering | ₹ 33.64 |
| 9  | 2017-18 | DST  | SER B       | 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  | UKI ERI-III | FRP shear strengtdening of damaged concrete beams subjected to fatigue loading   | Amar Natd Nayak     | Civil Engineering                    | ₹ 12.19 |

|    |         |           |             |  |                       |  |            |
|----|---------|-----------|-------------|--|-----------------------|--|------------|
| 11 | 2016-17 | AICT<br>E | MOD<br>ROB  | Development<br>of Advanced<br>Concrete<br>laboratory for<br>Development<br>of Sustainable<br>Concrete<br>incorporating<br>Recycled<br>Coarse<br>Aggregators<br>Ground<br>Granulated<br>Blast furnace<br>Slag | Amar<br>Nayak         | Natd<br>Civil<br>Engineering                               | ₹<br>19.00 |
| 12 | 2017-18 | AICT<br>E | MOD<br>ROB  | Modernization<br>of<br>Communicatio<br>n Laboratory  | Bikramaditya<br>Das   | Electronics<br>& Tele-<br>Communicat<br>ion<br>Engineering | ₹ 7.97     |
| 13 | 2018-19 | AICT<br>E | RPS-<br>NDF | Development<br>of Fluidized<br>Bed-Hot<br>Abrasive Jet<br>Machining<br>(FB-HAJM)<br>for Micro<br>Machining.  | Debbbrata<br>Dhupal   | Production<br>Engineering                                  | ₹<br>24.80 |
| 14 | 2018-19 | AICT<br>E | RPS-<br>NDF | Assessment of<br>tde Potential<br>for River Bank<br>Filtration in<br>tde State of<br>Odisha  | Rakesh<br>Roshan Dash | Civil<br>Engineering                                       | ₹<br>10.00 |

## 12. CANDIDATES DOING PHD

| Sl. No.      | Department                            | No. Of Student Enrolled |
|--------------|---------------------------------------|-------------------------|
| 01           | Architecture                          | 02                      |
| 02           | Chemical Engineering                  | 01                      |
| 03           | Chemistry                             | 05                      |
| 04           | Civil Engineering                     | 06                      |
| 05           | Computer Application                  | 01                      |
| 06           | Computer Science & Engineering        | 03                      |
| 07           | Electrical Engineering                | 05                      |
| 08           | Electrical & Electronics Engineering  | 01                      |
| 09           | Humanities                            | 03                      |
| 10           | Information Technology                | 02                      |
| 11           | Mathematics                           | 02                      |
| 12           | Mechanical Engineering                | 07                      |
| 13           | Metallurgical & Materials Engineering | 03                      |
| 14           | Physics                               | 02                      |
| 15           | Production Engineering                | 04                      |
| 16           | Electronics and Telecommunication     | 04                      |
| <b>TOTAL</b> |                                       | <b>51</b>               |

## 13. 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.

#### 14. 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   |                  |

#### 15. Books Published / Edited

*Bionanocomposites for packaging applications*, Editors: Dr. Mohammad Jawaid 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 Jawaid, 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., Sindhvani 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., DhupalD. (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**

## 16. Paper Published

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

| Title of the Paper  | Name of Author   | Title of journal                                       |
|---|--|--|
| 7-Hexyloxy-3-[4'-(3-methylbutyloxy) phenyl]-4H-1-benzopyran-4-one: Study of Smectic behaviour and UV absorption profile                   | P. Lakshmi Praveen                                     | Molecular Crystals Liquid Crystals                     |
| A Certain Class of Deferred Weighted Statistical B-Summability Involving (p; q)-Integers and Analogous Approximation                      | Amjed Zraiqat, S. K. Paikray and H. K. Dutta           | Filomat  |
| A certain class of statistical deferred weighted A-summability based on (p; q)-integers and associated approximation theorems             | L. N. Mishra, M. Patro, S. K. Paikray and B. B. Jena   | Applications and Applied Mathematics                   |
| A certain class of statistical probability convergence and its applications to approximation theorems                                     | H. M. Srivastava, B. B. Jena and S. K. Paikray         | Appl. Anal. Discrete Math.                             |
| A Certain Class of Weighted Statistical Convergence and Associated Korovkin Type Approximation Theorems Involving Trigonometric Functions | H.M. Srivastava, B.B. Jena, S. K. Paikray, U. K. Misra | Mathematical Method and Applied Sciences               |
| A compact, ultrawide band planar antenna with modified circular patch and a defective ground plane for multiple applications              | S. Hota, S. Baudha, B. B. Mangaraj, M. V. Yadav        | Microwave Optical Technology Letter                    |
| A Comparative Study for Machining of Ti-6Al-4V Alloy for Multi-Criteria Response  | Manisha Priyadarshini, Kamal Pal                       | Journal of Advanced Manufacturing Systems              |
| A comparative study of stability characteristics of mahua and jatropha biodiesel and their blends   | N. Acharya, P.Nanda & S. Panda                         | Journal of King Saud University – Engineering Sciences |
| A comparative study on laminated and randomly oriented Luffa-Kevlar Reinforced hybrid composites  | Alok Behera, JANAKI DEHURY, M M Thaware                | Journal of Natural Fibres                              |

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| A Comparison of Machinability in Hard Turning of EN-24 Alloy Steel Under Mist Cooled and Dry Cutting Environments with a Coated Cermet Tool   | A. Das, N. Tirkey, S.K. Patel, Sudhansu Ranjan Das, and B.B. Biswal | Journal of Failure Analysis and Prevention                          |
| A comprehensive review on soft computing and signal processing techniques in feature extraction and classification of power quality problems  | P. Ray, G. Budumuru and B.K.Mohanty                                 | Journal of Renewable and Sustainable Energy                         |
| A detailed investigation on thermal and micro-structural properties of hexagonal boron nitride composites   | D Mishra, S Mohapatra, A Satapathy                                  | Materials today: proceedings  |
| A Distributed Multi-event Ensnaing Scheme based on Scalar Leader Determination for Data Redundancy Minimization   | S. B. B. Priyadarshini, Suvasini. Panigrahi                         | IEEE Consumer Electronics Magazine, IEEE                            |
| A higher-order polynomial shear deformation theory for geometrically nonlinear free vibration response of laminated composite plate   | Swain PR, Adhikari B, Dash P  | Mechanics of Advanced Materials and Structures                      |
| A hybrid chemical reaction-particle swarm optimisation technique for automatic generation control   | B.Mohanty, P.K.hota   | Journal of Electrical Systems and Information Technology            |
| A Hybrid Mobile Call Fraud Detection Model using Optimized Fuzzy C-Means Clustering and Group Method of Data Handling-based Network   | S.Subudhi, Suvasini Panigrahi                                       | Vietnam Journal of Computer Science, Springer                       |
| A multi objective optimum design approach for rolling element bearing   | S. Panda & S. N. Panda  | International Journal on Interactive Design and Manufacturing       |
| A Multiobjective Ideal Design of Rolling Element Bearing Using Metaheuristics   | SN Panda, S Panda, P Mishra   | Smart Computing and Informatics                                     |
| A New Adaptive Maximum Power Point Controller for a Photovoltaic System   | Raseswari Pradhan and B. Subudhi                                    | IEEE transactions on Sustainable Energy                             |
| A New Hybrid Multifocus Image Fusion Model Using Single Optimum Gabor Filter.   | S Agrawal, R Panda, S Kumari, L Dora, A Abraham                     | Revue d'Intelligence Artificielle                                   |
| A new perspective on wind integrated optimal power flow considering turbine characteristics, wind correlation and generator reactive limits   | M. Tripathy, Rajat Kanti Samal                                      | Electric Power Systems Research                                     |
| A Novel Approach Using Optimum Camera Actuation in Event Boundary Detection Method for Redundant Data Minimization  | S. B. B. Priyadarshini, Suvasini. Panigrahi                         | Ain Shams Engineering Journal, Elsevier                             |
| A Novel Diagonal Class Entropy Based Multilevel Image Thresholding Using Coral Reef Optimization  | S. Agrawal, R. Panda, and A. Abraham                                | IEEE Systems Man and Cybernetics, IEEE SMC, Systems                 |
| A novel distance metric for evaluating impact of wind integration on power systems  | Rajat Kanti Samal, M. Tripathy                                      | Renewable Energy  |
| A Novel Dual Slot Circular Patch Antenna Design for Multi-band Applications   | A. B. Sahoo, Guru Prasad Mishra, and B. B. Mangaraj                 | Microwave Review  |
| A novel joint histogram equalization based image contrast enhancement   | S. Agrawal, R. Panda, P.K. Mishra and A. Abraham                    | Computer and Information Sciences , Elsevier                        |
| A Novel Model for Stock Price Prediction using Hybrid Neural Network  | S.Das, S.N.Mishra, Manas Ranjan Senapati                            | IEIB, Springer  |
| A novel modified differential evolution algorithm optimized fuzzy proportional integral derivative controller for load frequency control with thyristor controlled series compensator | D.K. Sahoo, R K Sahu, G.T.C. Sekhar, S. Panda                       | Journal of Electrical Systems and Information Technology (Elsevier) |
| A novel multi-attribute decision making approach for selection of appropriate product conforming ergonomic considerations   | PP Mohanty, SS Mahapatra, A Mohanty                                 | Operations Research Perspectives                                    |

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| A Quadrigeminal Scheme based on Event Reporting Scalar Premier Selection for Camera Actuation in Wireless Multimedia Sensor Networks       | S. B. B. Priyadarshini, Suvasini Panigrahi                 | Journal of King Saud University: Engineering Sciences, Elsevier                       |
| A reference-based multiobjective bacteria foraging optimization technique for QoS multicast routing  | SP Sahoo, S Nayak, MR Kabat                                | Arabian Journal for Science and Engineering   |
| A Review of Automated Methods for the Detection of Sickle Cell Disease”  | P. Das, S. Meher, R. Panda, A. Abraham                     | IEEE Reviews in Biomedical Engineering, IEEE  |
| A study on Erosion Performance Analysis of Glass-Epoxy Composites filled with Marble Waste using ANN                                       | Subhrajit Ray, Arun Kumar Rout, A. K. Sahoo                | U.P.B. Sci.Bull., Series B  |
| A study on erosion wear performance of Linz-Donawitz sludge filled polypropylene matrix composites   | Abhilash Purohit and Alok Satapathy                        | Materials Science and Engineering   |
| A survey on region based image fusion methods  | B Meher, S Agrawal, R Panda, A Abraham                     | Information Fusion  |
| Aluthge transform of operators on the Bergman space  | C. Padhy, P. K. Jena, S. K. Paikray                        | Arab. J. Math.  |
| An ANFIS estimator based data aggregation scheme for fault tolerant Wireless Sensor Networks   | S. Acharya, C.R. Tripathy                                  | Journal of King Saud University - Computer and Information Sciences                   |
| An Application of Data Mining Techniques for Flood Forecasting: Application in Rivers Daya and Bhargavi                                    | B. K. Panigrahi, S. Das, T. K. Nath, Manas Ranjan Senapati | IEIB, Springer  |
| An efficient redundant binary adder with revised computational rules.  | Barik, R. K., Bhoi, B. K., & Pradhan, M.                   | . Computers & Electrical Engineering  |
| An Improvement Intended for Multiple Crack Diagnosis Adopting Combo Artificial Intelligence Technique                                      | Jajneswar nanda, Layatitdev Das & D.R. Parhi               | International Journal of Engineering and Technology.                                  |
| An investigation of dielectric material selection of RF-MEMS switches using Ashby's methodology for RF applications                        | M. K. Bonthu, A. K. Sharma                                 | Microsystem Technologies, Springer  |
| An Optimal Design of Super-Directive Dipole Linear Antenna Array Using Gravitational Search Algorithm and Large Perfect Reflecting Surface | S. K. Mohanty and B. B. Mangaraj                           | Recent Advances in Electrical & Electronic Engineering                                |
| An overview of advanced fiber reinforced polymer composites and its applications   | Arun Kumar Rout, Jitesh Singh                              | Int. Journal of Mechanical and Production Engineering Research and Development        |
| An overview on economic machining of hardened steels by hard turning and its process variables   | Abhishek Anand, Ajay Kumar Behera, Sudhansu Ranjan Das     | Manufacturing Review  |
| Analytical approach assisted simulation study of Si, SiGe, and InP based BJT   | M.R.Jena, A.K.Panda, G.N.Dash                              | International journal of nano electronics and materials                               |
| Application of Moth Flame Optimization Algorithm for AGC of Multi-Area Interconnected Power Systems  | Ajit Kumar Barisal, and Deepak Kumar Lal                   | International Journal of Energy Optimization and Engineering (IGI Global Publication) |
| Bacterial Foraging Optimization Approach to Parameter Extraction of a Photovoltaic Module  | B. Subudhi and Raseswari Pradhan                           | IEEE Transactions on Sustainable Energy 9 (1), 381-389,                               |
| Biconcave Microstrip Antenna   | Suwendu N. Mishra, D. Konhar, D. Mishra, R. K. Mishra      | International Journal of Recent Technology and Engineering                            |
| Biodiesel from Non-Edible Vegetable Oils: A Review on Engine Performance and Emission  | N. Acharya, P.Nanda & S. Panda                             | Nature Environment and Pollution Technology   |

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| Characteristics   |  |  |
| Biomedical applications of acrylic based nanohydrogels: A review  | S. K. Swain and K. Prusty  | Journal of Materials Science   |
| Block and Fast Block Sparse Adaptive Filtering for Outdoor Wireless Channel Estimation and Equalization                           | Harish Kumar Sahoo, B.Mohanty,B.Pattnaik                               | Wireless Personal Communications(Springer)                                 |
| Carbon Nanomaterials Reinforced Epoxy Composites: A Review  | S. Gantayat, D. Rout, and S. K. Swain                                  | Polymer-Plastic Technology and Engineering                                 |
| Comparative performance analysis of 2DOF state feedback controller for automatic generation control using                         | K.S Simhadri, B.Mohanty  | Optimal control and applications   |
| Comparative study of different converter with its controller for grid connected WECS with PMSG                                    | S. Behera, M. Jyotiranjana,  | IJEEO, IGI Global publisher  |
| controller with filter controller for automatic generation control  | Achyut K. Panda  | Environ Prog Sustainable Energy  |
| Cooperative Navigation Planning of Multiple Mobile Robots Using Improved Krill Herd   | D. Chandrasekhar Rao, Manas R. Kabat, Pradipta K. Das & Prabir K. Jena | Arabian Journal for Science and Engineering                                |
| Cost and emission additionality of wind energy in power systems   | Rajat Kanti Samal, M. Tripathy   | Sustainable Energy, Grids and Networks,                                    |
| Cost savings and emission reduction capability of wind-integrated power systems   | Rajat Kanti Samal, M. Tripathy   | International Journal of Electrical Power & Energy Systems                 |
| Creating More Efficient Distributed Cameras: A Distributed Multievent Ensuring Scheme Based on Scalar Leader Determination        | Sushree Bibhuprada B. Priyadarshini ; Suvasini Panigrahi               | IEEE Consumer Electronics Magazine   |
| Deferred Cesaro statistical probability convergence and its applications to approximation theorems                                | H. M. Srivastava, B. B. Jena and S. K. Paikray                         | J. Nonlinear Convex Anal.  |
| Deferred Weighted A-Statistical convergence based upon (p, q)-Lagrange polynomials and its' Application to Approximation Theorems | H.M. Srivastava, B.B. Jena, S. K. Paikray, U. K. Misra                 | Journal of Applied Analysis  |
| Degree of approximation by product summability of Fourier series of a signal belonging to Lipschitzs class                        | P. Parida, S. K. Paikray, M. Dash, U. K. Misra                         | TWMS (Turkic World Mathematical Society)                                   |
| Delamination of Mg-Al Layered Double Hydroxide on Starch: Change in Structural and Thermal Properties                             | S. K. Swain, S. Barik, G C Pradhan and L. Behera                       | Polymer-Plastics Technology and Engineering                                |
| Design of a new prototype of a MLI  | S Sekhar, Raseswari Pradhan, S Mohanty                                 | International Journal on Recent Technology and Engineering                 |
| Design of optimal high pass and band stop FIR filters using adaptive cuckoo search algorithm                                      | S.K. Sarangi, R. Panda , A. Abraham                                    | Soft Computing   |
| Designing of epoxy matrix by chemically modified multiwalled carbon nanotubes   | S. Gantayat, N. Sarkar, G. Prusty, D. Rout, and S. K. Swain            | Advances in Polymer Technology   |
| Detection of Automobile Insurance Fraud using Feature Selection and Data Mining Techniques  | S.Subudhi, Suvasini. Panigrahi   | International Journal of Rough Sets and Data Analysis (IJRSDA), IGI Global |
| Detection of vowel in speech signal degraded by Speech like Noise   | A Kumar, S Sahanawazuddin, S Garnaik                                   | NCC Conference,  |
| Determination of Layerwise Material Properties of Composite Plates Using Mixed Numerical Experimental Technique                   | Asim Kumar Mishra, Sushanta Chakraborty                                | Inverse Problems in Science and Engineering                                |

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| Development and Characterization of Al <sub>2</sub> O <sub>3</sub> and SiC Reinforced Al-Cu Metal Matrix Hybrid Composites  | Bishnupriya Behera, Renuprava Dalai, Dinesh Kumar Mishra, S.K. BadJena          | Material Science Forum  |
| Development and characterization of glass/polyester composites filled with industrial wastes using statistical techniques   | Subhrajit Ray, Arun Kumar Rout, A. K. Sahoo                                     | Indian Journal of Engineering & Material Science  |
| Differential evolution algorithm optimized dual mode load frequency controller for isolated wind-diesel power system with SMES & fuel cell  | Deepak Kumar Lal, A. K. Barisal, and M. Tripathy                                | Recent Advances in Electrical and Electronic Engineering (Bentham Science Publications) |
| Differential evolution algorithm tuned tilt integral derivative controller with filter controller for automatic generation control  | R.K.Sahu, G.T.C. Sekhar, S.Priyadarshani  | Evolutionary Intelligence (Springer)  |
| Direct and electromagnetically coupled compact microstrip antenna design with modified fractal DGS  | G. P. Mishra, A. B. Sahoo, Smeeta Hota, B. B. Mangaraj                          | International Journal of RF and Microwave Computer-Aided Engineering                    |
| Discrete fourier transform based Vowel Onset Point Detection Using Spectral Peaks Energy  | A Das, S Garnaik  | IEEE Conference   |
| Dislocation Interaction and V-Shaped Growth of the Distorted Structure During Nanoindentation of Cu <sub>20</sub> Ni <sub>20</sub> Al <sub>20</sub> Co <sub>20</sub> Fe <sub>20</sub> (high-entropy alloy)-Coated Copper: A Molecular Dynamics Simulation-Based Study | Dinesh Kumar Mishra, Md. Meraj, S.K. BadJena, Snehanshu Pal                     | Transaction Indian Institute Metals   |
| Dry sliding wear characteristics of epoxy composites filled with steel industry slag and sludge particles: A comparative study  | Abhilash Purohit and Alok Satapathy   | Materials Today   |
| Dry turning of AISI D3 steel using a mixed ceramic insert: A study  | Debabrata Rath, Sumanta Panda and Kamal Pal                                     | Proc IMechE Part C: J Mechanical Engineering Science                                    |
| Duality of control problems in general Banach   | P.K. Behera, S.K. Padhan and C. Nahak   | International Journal of Operational Research   |
| Duality of variational problems with a new approach   | S.K. Padhan   | RAIRO-Oper. Res.  |
| Dynamic Investigation of FRP Cracked Beam Using Neural Network Technique  | Pankaj Charan Jena, Dayal R. Parhi and G. Pohit                                 | Journal of Vibration Engineering & Technologies   |
| Dynamic stability study on an exponentially tapered rotating asymmetric sandwich beam under the action of a pulsating axial load with variable temperature gradient   | M Pradhan and P R Dash  | Journal Of Aerospace Sciences & Technologies  |
| Effect of carbon/glass fiber symmetric inter-ply sequence on mechanical properties of polymer matrix composites   | D.K. Jesthi, P. Mandal, Arun Kumar Rout, R.K. Nayak                             | Procedia Manufacturing  |
| Effect of Catalyst Bed Height on the Yield and Composition of Non-edible Seed Pyrolytic Oil   | Gaurav Chatterjee, Krushna Prasad Shadangi, Kaustubha Mohanty                   | Waste and Biomass Valorization  |
| Effect of perforation on exhaust performance of a turbo pipe type muffler using methanol and gasoline blended fuel: A step to NO <sub>x</sub> control   | Mishra, P.C., Kar, S.K., Mishra, H.   | Journal of Cleaner Production   |
| Effect of Polyaniline-Coated Carbon Nanotube and Nanosilver Hybrid Nanoparticles on the Dielectric Properties of Poly(Methyl Methacrylate) Nanocomposites   | Sahu, S., Sahoo, A.P., Shubhadarshinee, L., Ramakrishna, D.S. and Barick, A.K.* | Polymer Composites  |
| Effects of flexible bottom on radiation of water waves by a sphere submerged beneath an ice-cover   | L. Das and S. Mohapatra   | Meccanica, Springer   |
| Emission and friction analysis of IC engine running in methanol blend   | Gupta, A., Mishra, P.C.   | Tribology in Industry   |

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| Enhancement of mechanical and specific wear properties of glass/carbon fiber reinforced polymer hybrid composite   | D.K. Jesthi, P. Mandal, Arun Kumar Rout, R.K. Nayak                       | Procedia Manufacturing   |
| Erosion wear response of epoxy composites filled with steel industry slag and sludge particles: A comparative study  | Abhilash Purohit and Alok Satapathy                                       | Materials Science and Engineering  |
| Estimating wind speed probability distribution based on measured data at Burla in Odisha, India  | Rajat Kanti Samal, M. Tripathy  | Energy Sources, Part A: Recovery, Utilization, and Environmental Effects |
| Evaluation of mechanical properties of functionalized carbon nanotube reinforced PMMA polymer nanocomposite  | Narasingh Deep, Punyapriya Mishra   | Karbala International Journal of Modern Science                          |
| Experimental analysis of a standalone solar photo voltaic cell for improved power quality  | A Mohanty, PK Ray, M Viswavandya, S Mohanty, PP Mohanty                   | Optik  |
| Experimental Analysis of Wire EDM Process Parameters for Micromachining of High Carbon High Chromium Steel by Using MOORA Technique                                  | Sarat Kumar Sahoo, Sunita Singh Naik, Jaydev Rana                         | Micro and Nano Machining of Engineering Materials                        |
| Experimental investigation, modelling and optimization in hard turning of high strength low alloy steel (AISI 4340)  | A. Panda, Sudhansu Ranjan Das, & D. Dhupal                                | Matériaux & Techniques   |
| Fingerprint Based Vehicle Security and Control   | S. Behera, D. Mahanta, O. Anshuman, D. Oram,                              | IJCAR  |
| Frequency mode identification using modified masking signal based Empirical Mode Decomposition   | Papia Ray, Rajesh Kumar Lenka and Monalisa Biswal                         | IET, GTD   |
| Friction stir welding of polypropylene sheet   | Sahu SK, Mishra D, Mahto RP, Sharma VM, Pal SK, Pal K, Banerjee S, Dash P | Engineering Science and Technology, an International Journal             |
| Fuel properties and composition study of Cassia siamea seed crude pyrolytic oil and char   | Gaurav Chatterjee, Krushna Prasad Shadangi, Kaustubha Mohanty             | Fuel   |
| Generalized equi-statistical convergence of the deferred Nörlund summability and its applications to associated approximation theorems                               | H.M. Srivastava, B.B. Jena, S. K. Paikray, U. K. Misra                    | RACSAM   |
| Geometrically nonlinear free vibration analysis of laminated composite plates: A finite element assessment of a higher order non-polynomial shear deformation theory | Adhikari, B, Dash P   | Mechanics of Advanced Materials and Structures                           |
| Gray Level run length matrix based on various illumination normalization techniques for texture classification   | Sonali Dash, Manas Ranjan Senapati  | Evolutionary Intelligence  |
| Hard Turning of HSLA Steel with Coated Ceramic Inserts: An Assessment, Modelling, Optimisation and Cost Analysis   | A. Panda, Sudhansu Ranjan Das, & D. Dhupal                                | International Journal of Automotive and Mechanical Engineering           |
| Hard Turning of HSLA Steel with Coated Ceramic Tool Based on Evaluation of Surface Roughness, Tool Wear, Chip Morphology and Economic Analysis                       | A. Panda, Sudhansu Ranjan Das, J.P. Davim, & D. Dhupal                    | Journal of Manufacturing Technology Research                             |
| h-BN huddled starch reinforced Polyethylhexylacrylate/Polyvinyl alcohol thin films for packaging applications  | K. Prusty and S. K. Swain   | Polymer Composites   |
| Hybrid IWD-DE: A Novel Approach to Model Cooperative Navigation Planning for Multi-robot in Unknown Dynamic Environment  | D. Chandrasekhar Rao, Manas R. Kabat, Pradipta K. Das & Prabir K. Jena    | Journal of Bionic Engineering  |
| Hydro-elastic wave proliferation over an impermeable seabed with bottom deformation  | M.R. Sarangi and S. Mohapatra   | Geophysical and Astrophysical Fluid                                      |

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|  |   | Dynamics, Taylor & Francis   |
| Identification of Flood vulnerable zones in Mahanadi Delta based on post-Hirakud Historical data   | Anil Kumar Kar, Krishna Kumar Gupta, Joy Gopal Jena and Dipti Ranjan Jena | International Journal of Water   |
| Impact of Policy Reforms on the Productivity Growth of Indian Coal Mining: A Decomposition Analysis.   | Auro Kumar Sahoo, Naresh C. Sahu and Dukhabandhu Sahoo                    | Resources Policy   |
| Improved grey wolf optimization technique for fuzzy aided PID controller design for power system frequency control   | BP Sahoo, S Panda   | Sustainable Energy, Grids and Networks - Journal - Elsevier                    |
| Improving Energy Efficiency in Buildings through Responsible Design: Optimizing Use and Careful Selection of Building Materials  | Madhumita Roy & Bharati Mohapatra   | Encyclopedia of Renewable and Sustainable Materials                            |
| Intelligence Scheme for Fault Location in a Combined Overhead Transmission Line & Underground Cable  | P. Ray, S. Arya, D.Mishra   | International Journal of Emerging Electric Power Systems                       |
| Inverse Determination of Local Variations of Constituent Level Elastic Parameters of FRP Composite Plates  | Asim Kumar Mishra, Sushanta Chakraborty                                   | Inverse Problems in Science and Engineering                                    |
| Investigating Machinability in Hard Turning of AISI 52100 bearing steel through performance measurement: QR, ANN and GRA study   | A.K. Panda, A.K. Sahoo, I.Panigrahi and A.K. Rout                         | Int.journal of Automotive and Mechanical Engineering                           |
| Investigation of mechanical and abrasive wear behavior of blast furnace slag-filled needle-punched nonwoven viscose fabric epoxy hybrid composites                                 | PK Patnaik, PTR Swain, S Biswas   | Polymer Composites   |
| Investigation on controlling the process parameters for improving the quality of investment cast parts   | Sarojrani Pattnaik  | Journal of the Brazilian Society of Mechanical Sciences and Engineering        |
| Investigation on the effects of versatile deforming bed on a water wave diffraction problem  | M.R. Sarangi and S. Mohapatra   | Ocean Engineering, Elsevier  |
| K-NN based automated reasoning using bilateral filter based texture descriptor for computing texture classification  | Sonali Dash, Uma Ranjan Jena, Manas Ranjan Senapati,                      | Egyptian Informatics   |
| Laser Beam Micro Drilling– a Review  | Pattanaik S., Panda,S.  | Lasers in Manufacturing and Materials Processing                               |
| Load Frequency Control of Multi Source Multi-Area Nonlinear Power System with DE-PSO Optimized Fuzzy PID Controller in Coordination with SSSC and RFB                              | Deepak Kumar Lal, A. K. Barisal, and M. Tripathy                          | International Journal of Control and Automation (SERSC Australia Publications) |
| Low voltage ride through capability enhancement in a grid-connected wind/fuel cell hybrid system via combined feed-forward and fuzzy logic control, DOI: 10.1049/iet-gtd.2019.0021 | Amit Kumar Roy, Prasenjit Basak, and Gyan Ranjan Biswal                   | IET Generation Transmission and Distribution                                   |
| Manufacturing and Study of Thermo-Mechanical Behaviour of Surface Modified Date Palm Leaf/Glass Fiber Reinforced Hybrid Composite  | PTR Swain, SN Das, SP Jena  | Materials Today: proceedings   |
| MFO Optimised Fractional Based Controller on Power System Stability  | B.D.Rout, B.B. Pati   | Proceedings of Engineering and Technology Innovation,                          |
| Miniaturised microstrip patch design based on highly capacitive defected ground structure with fractal boundary for X-band microwave communications                                | G. P. Mishra and B. B. Mangaraj   | IET Microwaves, Antennas & Propagation   |
| Modified SCA Algorithm for SSSC Damping controller Design in Power System  | B.D.Rout, B.B. Pati, S.Panda  | ECTI Transaction on Electrical Engg.Electronics                                |

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|  |   | and Communications  |
| Monitoring of friction stir welding for dissimilar Al 6063 alloy to polypropylene using sensor signals   | Santosh K.Sahu, Raju P. Mahto, Kamal Pal Padmanav Dash      | The International Journal of Advanced Manufacturing Technology          |
| Moth-flame optimization algorithm optimized dual-mode controller for multiarea hybrid sources AGC system   | B.Mohanty,B.V.S Acharyulu, P.K.hota                         | Optimal control and applications  |
| Multi-objective Optimization of Pulsed Gas Metal Arc Welding Process Using Neuro NSGA-II   | Kamal Pal Surjya K. Pal                                     | J. Inst. Eng. India Ser. C  |
| Nano Silver Decorated Polyacrylamide/Dextran Nanohydrogels hybrid composites for Drug Delivery Applications  | K. Prusty and S. K. Swain                                   | Materials Science & Engineering: C                                      |
| Nano silver embedded starch hybrid graphene oxide sandwiched poly(ethylmethacrylate) for packaging application   | F. Mohanty and S. K. Swain                                  | Nano-Structures & Nano-Objects  |
| Nano silver imprinted graphene oxide as catalyst in reduction of 4-nitrophenol   | D. Sahu, N. Sarkar, G. Sahoo, P. Mohapatra, and S. K. Swain | Journal of Physical Organic Chemistry                                   |
| Nanostructured Chitosan Composites for Cancer Therapy: A Review  | K. Prusty and S. K. Swain                                   | International Journal of Polymeric Materials and Polymeric Biomaterials |
| Nanostructured gold dispersed polyethylmethacrylate/dextran hybrid composites for packaging applications   | K. Prusty and S. K. Swain                                   | Polymer-Plastic Technology and Engineering                              |
| Natural convection cooling of an infrared suppression (IRS) device with cylindrical funnels  | Mohanty A, Dash S K, Roy S                                  | International journal of thermal sciences                               |
| Nested cross-validation based adaptive sparse representation algorithm and its application to pathological brain classification  | L. Dora, S. Agrawal, R. Panda, A. Abraham                   | Expert Systems with Applications, Elsevier,                             |
| Niger Seed Thermal Pyrolysis: Characterization of Aqueous Phase Pyrolytic Liquid and Char  | Krushna Prasad Shadangi, Kaustubha Mohanty                  | SSRN-Elsevier   |
| On approximation of functions in the generalised Zygmund class via Product summability means of conjugate Fourier series   | T. Pradhan, S. K. Paikray, A. A. Das, Hemen Dutta           | Proyecciones Journal of Mathematics                                     |
| On the possibility of linear polarization in elliptical microstrip patch antenna   | Suvendu N. Mishra, D. Konhar, D. Mishra, R. K. Mishra       | Microw Opt Technol Lett.  |
| Operational Matrices from a Frame and their Applications in Solving Boundary Value Problems with Mixed Boundary Conditions,  | Mahendra Kumar Jena and Kshama Sagar Sahu                   | International Journal of Applied and Computational Mathematics          |
| Optimal allocation of agricultural land for crop planning in Hirakud canal command area using swarm intelligence techniques  | A. Rath and P. C. Swain                                     | ISH Journal of Hydraulic Engineering                                    |
| Optimisation of emission characteristics of petrol engine running on alternate fuel and fitted with chambered type muffler: Combined CFD and experimental methods                            | Gupta, A., Mishra, P.C                                      | Oxidation Communications  |
| Optimisation of WEDM process parameters during machining of HCHCr steel using TOPSIS method  | Sarat Kumar Sahoo,Sunita Singh Naik,Jaydev Rana             | International Journal of Process Management and Benchmarking            |
| Optimization of emission characteristics of spark ignition engine with chambered straight muffler running in methanol blend:An engine development technique for environmental sustainability | Gupta, A., Mishra, P.C.                                     | Journal of Cleaner Production   |
| Optimization of Process Parameters in Laser Microgrooving of Alumina Ceramic using Genetic Algorithm   | D. Dhupal, S.R. Dixit, Sudhansu Ranjan Das,                 | UBS Scientific Bulletin: Series D, Mechanical Engineering               |



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| Optimization of the process parameters of D2 steel on EDM using grey relational analysis  | Sunita Singh Naik, Jaydev Rana   | International Journal of Mechanical Engineering and Technology   |
| Parametric optimization of Nd:YAG laser microgrooving on aluminum oxide using integrated RSM-ANN-GA approach  | S.R. Dixit, Sudhansu Ranjan Das, & D. Dhupal                                 | Journal of Industrial Engineering International                  |
| Parametric Optimization of Surface Roughness and Overcut in Electric Roughness and Overcut in Electric Discharge Machining of Al-SiC Using Copper Electrode | Sambeet Kumar Sahu, Subhasree Naik, Sudhansu Ranjan Das and Debabrata Dhupal | Springer Nature Singapore Pte Ltd                                |
| Parametric Stability Analysis of a Parabolic-Tapered Rotating Beam Under Variable Temperature Grade   | R R Chand, P K Behera, M Pradhan and P R Dash                                | Journal of Vibration Engineering & Technologies                  |
| Performance analysis of moth flame optimization algorithm for AGC system  | B.Mohanty  | International Journal of Modelling and Simulation                |
| Performance of CSA optimized controllers of DFIGs and AGC to improve frequency regulation of a wind integrated hydrothermal power system                    | S. Chaine, M.Tripathy  | Alexendria Engineering Journal                                   |
| Performance, emission, energy, and exergy analysis of CI engine using Kaner seed pyrolysis oil blended diesel   | Achyut K. Panda  | Environ Prog Sustainable Energy                                  |
| Physical, Mechanical, and Erosion Characterization of Palm Leaf Stalk Fiber Reinforced Epoxy Composites Filled with PLSS                                    | Jnanaranjan Kar, Arun Kumar Rout and A.K. Sutar                              | BioResources   |
| Process Parameter Optimization of hydrostatic extrusion using Metaheuristic   | S. Panda D. Mishra   | Journal of Advanced Manufacturing Systems                        |
| Protection Coordination in Microgrid using fault current limiters   | T. Sinha, P.Ray and S.S.Reddy  | Journal of Green Engineering                                     |
| Pyrolytic conversion of protein rich microalgae <i>Arthrospira platensis</i> to bio-oil   | Achyut K. Panda  | Research Journal of Chemistry and Environment                    |
| Quantum and Thermodynamics Estimation of Mesostate Behaviour of Alkyl Benzoic Acids in Dielectric Medium: Comaprative Study                                 | P. Lakshmi Praveen   | Arabian J. Science & Engineering                                 |
| Reduced switch technique for solar PV systembased Multilevel Inverter for PQ improvement  | V. Rajgopal, V. Nagamalleswari, Papia Ray, S. R. Arya and J. Bangarraju      | International Journal of Emerging Electric Power Systems         |
| Remote Speed Control of BLDC Motor with Display   | Sasmita Behera, Prabhat Ku. Muduli,  | International Journal of Automation and Smart Technology (AUSMT) |
| Sandwich structured starch grafted polyethylhexylacrylate/polyvinylalcohol thin films   | K. Prusty, P. K. Sethy, and S. K. Swain                                      | Advances in Polymer Technology                                   |
| Second and higher order duality of variational problems in general Banach Spaces  | P.K. Behera, S.K. Padhan and R.N. Mohapatra                                  | Panamer. Math. J.  |
| Silver Nanoparticles Decorated Polyethylmethacrylate/Graphene Oxide Composite: As Packaging Material  | F. Mohanty and S. K. Swain   | Polymer Composites   |
| Smart Plugs: Paradigms and Applications in the Smart City-and-Smart Grid  | Nagender Kumar Suryadevara and Gyan Ranjan Biswal                            | Energies, MDPI   |
| Solvent Polarity and Chain Length Effects in Thermotropic Mesophase Formation Process: Comparative Quantum and Thermodynamic Approaches                     | Punyatoya Das, and P. Lakshmi Praveen  | Journal of Molecular Liquids                                     |
| Stability analysis of a tapered symmetric sandwich beam resting on a variable pasternak foundation  | M Pradhan, P R Dash, M K Mishra and P K Pradhan                              | International Journal Of Acoustics And Vibration                 |

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| Stability Improvement of Isolated Wind-Diesel System with Optimized STATCOM Controller  | S. Behera, M.C.P. Sahoo,   | IJCA , SERSC publisher   |
| Stability Study of a Sandwich Beam with Asymmetric and Non-uniform Configuration Supported Viscoelastically Under Variable Temperature Grade  | M Pradhan and P R Dash   | Journal of Vibration Engineering & Technologies  |
| Statistical deferred Cesàrosummability and its applications to approximation theorems   | B.B. Jena, S. K. Paikray, U. K. Misra  | Filomat  |
| Statistical deferred weighted B-summability and its applications to associated approximation theorems   | T. Pradhan, S. K. Paikray, B. B. Jena, Heman Dutta                                       | Journal of Inequality and Applications   |
| Structural evolution and dislocation behaviour study during nanoindentation of Mo <sub>20</sub> W <sub>20</sub> Co <sub>20</sub> Ta <sub>20</sub> Zr <sub>20</sub> high entropy alloy coated Ni single crystal using molecular dynamic simulation | Dinesh Kumar Mishra, Md. Meraj, S.K. BadJena, Snehanshu Pal                              | Molecular Simulation   |
| Synthesis of soy protein/polyacrylamide nanocomposite hydrogels for delivery of ciprofloxacin drug  | K. Prusty, A. Biswal, S. B. Biswal, and S. K. Swain                                      | Materials Chemistry and Physics  |
| Synthesis, mechanical and thermal properties of carbon black/epoxy composites   | Tanusree Bera, SK Acharya, Punyapriya Mishra   | International Journal of Engineering, Science and Technology                                   |
| Tauberian theorems for Cesàrosummability of nth sequences   | P. Parida, S. K. Paikray, H. Dutta, B. B. Jena, M. Dash                                  | Filomat  |
| The effect of reduced graphene oxide intercalated hybrid nanoclay on the dielectric properties of polyvinylidene fluoride nanocomposite films   | G. Sahoo, N. Sarkar, and S. K. Swain   | Applied Clay Science   |
| Theoretical Model of a Nematogen: Estimation of Phase Stability, Absorption, Electrochemical, and Nonlinear Optical Properties  | P. Lakshmi Praveen   | Molecular Crystals Liquid Crystals   |
| Theoretical Study on Ultraviolet Profile and Reactivity Descriptors of Fluorinated Liquid Crystals: Effect of End Chain Length and Substituent  | P. Lakshmi Praveen   | Molecular Crystals Liquid Crystals   |
| Thermo-catalytic degradation of different plastics to drop in liquid fuel using calcium bentonite catalyst  | Achyut K. Panda  | International Journal of Industrial Chemistry  |
| Three-Dimensional Rice Straw Structured Magnetic Nanoclay Decorated Tri-polymeric Nanohydrogels as Superabsorbent of Dye Pollutants   | N. Sarkar, G. Sahoo, R. Das, and S. K. Swain   | ACS Applied Nano Materials   |
| Tracking of power quality disturbances using sparse model-based extended Kalman filters   | Harish Kumar Sahoo, U. Subudhi, S. Mishra  | Adaptive Control and Signal Processing (Wiley)   |
| Tribo-mechanical performance of glass-epoxy hybrid composites filled with marble powder with Taguchi Design and ANN   | S Ray, Arun Kumar Rout, A.K. Sahoo   | Composites: Mechanics, Computations, Applications: An International Journal                    |
| Truncated hexagonal bi-pyramidal gallium ferrite nanocrystals: integration of structural details with visible-light photo-activity and self-cleaning Properties   | M Mishra, I Mukherjee, AK Mall, A Mitra, Sukalyan Dash, S Chatterjee, S Mukherjee, A Roy | Journal of Materials Chemistry A, DOI: 10.1039/c8ta02749h                                      |
| Tuning commercial diesel to microemulsified and blended form: phase behavior and implications   | B Acharya, S Dash  | Journal of Dispersion Science and Technology   |
| Two-degree-of-freedom multi-input multi-output proportional-integral-derivative control design: Application to quadruple-tank system  | Jatin Kumar Pradhan, Arun Ghosh, Chandrashekhar Narayan Bhende                           | Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control |

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|   |  | Engineering  |
| Using TOPSIS method to optimize the process parameters of D2 steel on electro-discharge machining | Sunita Singh Naik, Jaydev Rana, Prasanta Nanda | International Journal of Mechanical Engineering and Technology |
| Workspace optimization of 3R manipulator-a multi-objective approach                               | Panda S., Mishra, D., and Biswal, B. B         | Int. J. Intelligent Machine and Robotics                       |
|   | I nayak  | IAENG Int5. j. of applied mathematics                          |

## 17. CONFERENCE HELD

| TEQIP CUNDUCTED TRAINING PROGRAMME |             |                |  |            |            |
|------------------------------------|-------------|----------------|--|------------|------------|
| Sl No.                             | Dept        | Training mode  | Title of training  | From       | To         |
| 01                                 | Production  | Workshop       | OTAM   | 15-01-2019 | 19-01-2019 |
| 02                                 | Chemical    | Workshop       | MSDAER-2019  | 28-01-2019 | 01-02-2019 |
| 03                                 | Civil       | Workshop       | Life Skill Management  | 07-02-2019 | 12-02-2019 |
| 04                                 | Civil       | Workshop       | Water Urbanism   | 12-03-2019 | 16-03-2019 |
| 05                                 | Mechanical  | Workshop       | AOTAMP-2019  | 25-03-2019 | 30-03-2019 |
| 06                                 | Physics     | Conf.          | NCFAM-2019   | 27-07-2019 | 28-07-2019 |
| 07                                 | EE          | Conf.          | NCGTR  | 19-10-2019 | 20-10-2019 |
| 08                                 | Physics     | FDP/Workshop   | Design and Development of Materials for technological Applications | 21-10-2019 | 26-10-2019 |
| 09                                 | EE          | STC            | Modeling & Simulation Electrical System using Matlab Simulation    | 28-10-2019 | 02-11-2019 |
| 10                                 | EE          | Workshop       | MEPSN  | 05-08-2019 | 10-08-2019 |
| 11                                 | Chemistry   | National Conf. | RAIMS - 2019   | 24-12-2019 | 25-12-2019 |
| 12                                 | Mathematics | Int. Conf.     | ICAMC - 2020   | 07-02-2020 | 08-02-2020 |

## 18. CONSULTANCY PROJECTS IN HAND

| SL. No | Consultancy work  | Agency   | Amount (Rs)      |
|--------|---|--|------------------|
| 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 differenc 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 evaluate 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> |

## **19. 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.

## **20. 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

## 21. 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<br>Kumar Sahoo                   | Physics    |
| 2      | Synthesis and Characterzation of A- site and B - site modified SrTiO <sub>3</sub> ceramics                                     | Akhyaya Kumar<br>Pattanaik                         | Physics    |
| 3      | Bio - ceramic radar absorbing material for stealth applictions   | 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 Characterzation 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 Forecastin using Evolutionary Neural Network   | H.S. Behera  | IT         |
| 10     | Secure sharing of medical images using watermarking technique  | Kshiramani Naik/<br>Alina Dash                     | IT         |
| 11     | Visual Perceptio and EEG Based robot control and application using Computational Intelligent 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<br>Behera<br>Asst. Professor, CSE | CSE        |
| 14     | Dynamic Slicing based test case prioritization for regression testing t design phase of software development                   | Mrs.Alina Mishra<br>Asst. Professor, Cse           | CSE        |
| 15     | Degradation of industrial pollutants using dye sensitization and bio - mediated doped photo - catalysts                        | Amit Kuamr Behera                                  | Chemical   |
| 16     | Recycling of Waste Engine Oil (WEO) by solvent extraction - adsorption method  | Nivedita Patel                                     | Chemical   |

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| 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 biomedicinal 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 stainless steels   | 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 Kumar Sahoo       | Mathematics |
| 28 | Duality of multiobjective variational and control problems in Branch spaces  | Saroj Kumar Padhan      | Mathematics |
| 29 | Design, Synthesis and Characterization of Polymer bio-composites by using natural resources.   | Trinath Biswal          | Chemistry   |

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| 30 | Synthesis and Characterization of Polyaniline/Graphene Quantum Dots Nanocomposites   | Aruna Kuamr Barick                      | Chemistry |
| 31 | Designing of some Biodegradable 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:<br>Theoretical and experimental analysis  | Trupti Ranjan Mahapatra/<br>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/<br>Debadutta Mishra  | PE        |
| 42 | Additive Manufacturing of AI 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/<br>Smita Padhan    | PE        |
| 44 | Knowledge based Smart System for Circular Friction Stir Processing in Industry 4.0   | Birendra Kumar Barik                    | PE        |



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| 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 | Studey 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/<br>Ashim Kuamr Mishra    | Civil |
| 49 | Modelling of overtaking manuever 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/<br>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 wasterwater using movin 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/<br>Sanghamitra Jena | Civil |

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| 59 | Confinement effect on the fibre reinforced fly ash mixed concrete subjected to elevated temperature using natural and recycled coarse aggregate      | Ramkrishna Dandpat                  | 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 metaalurgy technique                    | Prabir Kumar Jena / Rabindra Behera | Mechanical / Central Workshop |
| 63 | Characterzation 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 Mdel 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: fro design and constuction of Power Supply Unit.           | Layatitdev Das                      | Mechanical                    |
| 67 | Development of hybrid composite with palm leaf stalk-Glss 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   | Saroj Kumar Sarangi                 | Mechanical                    |

|    |   |                          |            |
|----|---|--------------------------|------------|
|    | inserts and its wettability characterization  |                          |            |
| 73 | Study and Analysis of Mechanical and metallurgical properties of friction stir welded similar and dissimilar materials  | Pragyan Paramita Mohanty | Mechanical |
| 74 | Preparation and characterization of data palm fiber reinforced epoxy composite  | Janaki Dehury            | Mechanical |
| 75 | Machinability performance of Bio Degradable Dielectric Fluids on Sustainable Electrical Discharge Machining (EDM) of Inconel Support Alloys.                        | Santosh Kumar 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 Continuous wave (CW) Doppler Radar for physiological signatures (Respiration and Heart rate) in non-invasive 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 Kuamr 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 Vehicle Equipment(s): A Smart Home                | Gyan Ranjan Biswal                           | EEE |

## 22. 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 Shah 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> Runners up 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 Minidrone 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 Techgium -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.

### **23. 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.

### **24. 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 60<sup>th</sup> Annual Technical Session of Odisha State Centre, The Institution of Engineers (India) on 30th March, 2019.

“Er Raj Kishore Mahapatra Award” at 59<sup>th</sup> 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/<br/>Medals</b>   | <b>Name of the Research work for which the Award/Medal is WON</b>                           | <b>Date/<br/>Month/<br/>Year of<br/>award</b> | <b>Name of<br/>Awarding<br/>Organizatio<br/>n</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             |



## 25. 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 Educatio Council            | 0                   | 0                                |
| (iii)        | Other Central Governmetn Departments | 52,916,664          | 52,916,664                       |
| 2            | Grants Recived from State Government | 702,558             | 702,558,000                      |
| 3            | Grants Recived 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 abslute Rs. |
| 01           | Salary, Allowances & Retirement Benefits | 556,779.601         | 556,799,601                     |
| 02           | Bulidings (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           | Itger Exoenses                           | 39,086.867          | 39,086,867                      |
| <b>Total</b> |  | 694,432.996         | 694,432,996                     |

## 26. INTERNAL REVENUE GENERATED

| Furnish figure for financial year :FY 2018-2019     |                         |
|---|-------------------------|
| <b>Revenue earned from</b>                          | <b>Amount (₹)</b>       |
| 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             |
| <b>TOTAL</b>  | <b>33,38,01,643. 00</b> |