

RESEARCH AND DEVELOPMENT CELL, ABIT



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Research & Development Cell,
ABIT, Cuttack.

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R&D Centre Details

Research is the backbone of academics. It simplifies concept building and transforms new ideas into innovations in pursuance of a new era of passion for researches. Each finding gives immense pleasure and multiplies enthusiasm towards achieving the target. A research and development job allows graduate engineers to use their skills to push the frontiers of science forward. The aim of research and development (R&D) is to improve the current technologies offered by an organization or to develop innovations that strengthen the organization's position in the marketplace.

The aim of the research and development cell (R&D) is to improve the current technologies offered by an organization or to develop innovations that strengthen the organization's position in the marketplace. In view of this, the Research and Development Cell of ABIT aims to nurture research culture by promoting research in newly emerging and challenging areas. It encourages the students and faculty to undertake research in newly emerging frontier areas of Engineering, Technology, Management, Science, and Humanities including multidisciplinary fields. This enhances the general research capability of budding technocrats by way of participating in conferences, seminars, workshops, project competitions, etc.

Vision

To be the best Institution by conducting world-class research, Innovation in cutting-edge technologies, and creative activities that develop knowledge and contribute to the economic growth and social advancement of the nation and benefit of Society.

Mission

- To develop and expand innovative research programs that align well with institutional mission and strategic plan, address important national and global needs, and through technology transfer and commercialization noticeably support the economic development of the nation.
- To develop the culture and practice of innovation among the students and transform the innovative ideas into technologies, start-ups for creating students as innovators and entrepreneur
- To promote collaboration with other premier institutions, R&D organizations, and industries.

❖ OBJECTIVE AND OUTCOMES:

The Research and Development Cell is functioning with the following objectives:

1. To lead signature areas of research and economic development to drive breakthroughs that have societal impact, and enabling methods of publication.
2. To train under-graduate and PG students to become outstanding technical leaders and innovative researchers.
3. To generate momentum in paper publications by the association of students and faculties of “Centres for Applied Research (CAR)”.
4. To understand and introduce the concept of IP oriented product development and extend publications for patents and product.
5. To align academic activities in projects, internships and CAR activities in outcome-based work resulting in patents and publications.
6. To coordinate writing proposals in multidisciplinary research grants basically in identified research areas.
7. To maintain a good number of research proposals to be submitted by faculty members as PI's and co-PIs.
8. To decide good number of research and undergraduate student training proposals in targeted research areas.

9. To identify, monitor, and address barriers to student success.
10. To provide pre- and post-award support.
11. To develop a mechanism for broad appreciation of disciplinary and/or interdisciplinary research contributions from faculty, staff, and students.

Mechanism:

1. Support a collegiate culture in which all faculty, staff, and students advance the research mission through their pursuit of excellence.
2. Maintain and enhance our leadership position on campus and beyond when confronting the grand challenges of the 21st Century
3. Enhance the quality, size, and diversity of the student body while focusing on their success.

STRATEGIES:

The Institute develops strategies in the following strategic focus areas

- ❖ Motivate the faculty members and students to publish papers in Journals and Conferences
- ❖ Motivate the faculty to file patents
- ❖ Motivate the faculty members to do consultancy work
- ❖ Organise conferences/seminars/workshops
- ❖ Procure research funding by applying projects to funding agencies, Procure funding for conferences.

To promote research and development activities, the college extends its full support to students/faculty/staff. Full/Partial financial support is given to all innovative research & development works taken up by the students, faculty and staff members. The college encourages students, faculty, and staff to participate in National/International Conferences, Training Programs, and Tech-Festivals organized by reputed institutes (IITs/NITs/State Engineering Colleges etc.) by giving full/partial financial support.

❖ Guidelines for Awards & Incentives

Awards:

The special awards should be available for

- ❖ PhD completed faculties during the year.
- ❖ Faculties doing projects under Government grants
- ❖ Paper published in SCOPUS/SCI/ESCI Journals.

- ❖ PhD Guided during the year.

Incentives:

The incentives should be available for

- ❖ Faculties involved in projects with external funding.
- ❖ Faculty with publication in a journal (SCI/ESCI/SCOPUS/WOS/UGC) with the affiliation of ABIT subject to the approval of the Research committee, comprising of the Principal, Dean Academic, Research coordinator, and two subject experts.
 - (a) SCI / ESCI indexed Journals – INR 4,000
 - (b) Springer / Scopus indexed Journals – INR 3,000.
 - (c) WOS / UGC indexed Journals – INR 1,000.
- ❖ Attending FDP/STTP in the Institute of National Importance shall be provided with on duty + 50 % registration fee. (One faculty from each department may attain the FDP/SSTP at a time by the approval of the Research committee comprising of the Principal, Dean Academic, Research coordinator, and HOD of the corresponding department)
- ❖ For the patent filing: Institute will take care of filling, Registration, and Examination for Patents, 50% of Registration fees will be paid by the institution. Filing the copyright – Registration fee (50%)
- ❖ Authored Book/ Edited Book/ Book chapter with Scopus indexed.
 - International Publisher – INR 5,000
 - National Publisher – INR 3,000.

❖ Research (Ph.D) Supervisors

2023-2024: Number of PhD Supervisors = 04

1. Dr. Leena Samantaray (Department of ENTC)
2. Dr. Rajesh Kumar Sahoo (Department of CSE)
3. Dr. Abhiram Satapathy (Department of PHYSICS)
4. Dr. Manoj Kumar Praharaj (Department of PHYSICS)

2022-2023: Number of PhD Supervisors = 02

1. Dr. Leena Samantaray (Department of ENTC)
2. Dr. Rajesh Kumar Sahoo (Department of CSE)
3. Dr. Abhiram Satapathy (Department of PHYSICS)

2021-2022: Number of PhD Supervisors = 02

1. Dr. Leena Samantaray (Department of ENTC)
2. Dr. Rajesh Kumar Sahoo (Department of CSE)

2020-2021: Number of PhD Supervisors = 02

1. Dr. Leena Samantaray (Department of ENTC)
2. Dr. Rajesh Kumar Sahoo (Department of CSE)

2019-2020: Number of PhD Supervisors = 01

1. Dr. Leena Samantaray (Department of ENTC)

❖ Research Scholars Continuing / Pursuing PhD. (Total = 11)

| Academic Year. | Name of Scholar | Enrolment No. | Discipline | Supervisor | Co-Supervisor |
|--------------------|------------------------|-----------------------|------------|---------------------------|------------------------|
| 2023 - 2024 | Santosh Kumar Pandav | DSW05001/ 22.02.2024 | PHYSICS | Dr. Manoj Kumar Praharaj | Dr. Abhiram Satapathy |
| | Smruti Ranjan Dash | DSW01013 /03.02.2024 | CSE | Dr. Aswini Kumar Mohanty | Dr. Rajesh Kumar Sahoo |
| | Epari Madhusmita Patra | DSW05003 / 03.02.2024 | CSA | Dr. Rajesh Kumar Sahoo | Dr. Leena Samantaray |
| | Sunita Panda | DSW01012 / 03.02.2024 | CSE | Dr. Aswini Kumar Mohanty | Dr. Rajesh Kumar Sahoo |
| | Amalendu Bag | DSW01014 / 03.02.2024 | CSE | Dr. Aswini Kumar Mohanty | Dr. Rajesh Kumar Sahoo |
| | Santosh Kumar Sahu | DSW01011 / 03.02.2024 | CSE | Dr. Rajendra Prasad Nayak | — |
| | Annapurna Sahoo | DSW01006 / 03.02.2024 | ETC | Dr. Leena Samantaray | — |
| 2022-2023 | | | | | |
| 2021-2022 | | | | | |
| 2020-2021 | Shiba Prasad Dash | | | Dr. Rajesh Kumar Sahoo | |
| 2019-2020 | Tapashi Das | | | DR. Anil Kumar Mishra | |
| 2019-2020 | Sonam Panden Barfungpa | | | Dr. Leena Samantaray | |

❖ Research Advisory and Research Ethics Committee

The institution has a research and development committee to facilitate and monitor research activities.

Academic Year: 2023-2024

| Sl. No. | Name and Designation | Designation | Position |
|---------|--------------------------|---------------------|-------------|
| 1 | Dr. Leena Samantaray, | Principal | Chairman |
| 2. | Dr. P. K. Pany, | Dean, Academic. | Member |
| 3. | Dr. B. N. Guru, | Dean Operation. | Member |
| 4. | Dr. Manoj Kumar Praharaj | Faculty, Physics | Coordinator |
| 5 | Dr. R. K. Sahoo | Faculty, CSE | Member |
| 6 | Dr. D. K. Jesti | Faculty, Mechanical | Member |
| 7 | Dr. Abhiram Satapathy | Faculty, Physics | Member |

Academic Year: 2022-2023

| Sl. No. | Name and Designation | Designation | Position |
|---------|--------------------------|---------------------|-------------|
| 1 | Dr. Leena Samantaray, | Principal | Chairman |
| 2. | Dr. P. K. Pany, | Dean, Academic. | Member |
| 3. | Dr. B. N. Guru, | Dean Operation. | Member |
| 4. | Dr. Manoj Kumar Praharaj | Faculty, Physics | Coordinator |
| 5 | Dr. R. K. Sahoo | Faculty, CSE | Member |
| 6 | Dr. D. K. Jesti | Faculty, Mechanical | Member |
| 7 | Dr. C. R. Pattanaik | Faculty, CSE | Member |

Academic Year: 2021-2022

| Sl. No. | Name and Designation | Designation | Position |
|---------|--------------------------|---------------------|-------------|
| 1 | Dr. Leena Samantaray, | Principal | Chairman |
| 2. | Dr. P. K. Pany, | Dean, Academic. | Member |
| 3. | Dr. B. N. Guru, | Dean Operation. | Member |
| 4. | Dr. Manoj Kumar Praharaj | Faculty, Physics | Coordinator |
| 5 | Dr. R. K. Sahoo | Faculty, CSE | Member |
| 6 | Dr. D. K. Jesti | Faculty, Mechanical | Member |
| 7 | Dr. C. R. Pattanaik | Faculty, CSE | Member |

Academic Year: 2020-2021

| Sl. No. | Name and Designation | Designation | Position |
|---------|--------------------------|------------------|-------------|
| 1 | Dr. Leena Samantaray, | Principal | Chairman |
| 2. | Dr. P. K. Pany, | Dean, Academic. | Member |
| 3. | Dr. B. N. Guru, | Dean Operation. | Member |
| 4. | Dr. Manoj Kumar Praharaj | Faculty, Physics | Coordinator |

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|---|---------------------|---------------------|--------|
| 5 | Dr. R. K. Sahoo | Faculty, CSE | Member |
| 6 | Dr. D. K. Jesti | Faculty, Mechanical | Member |
| 7 | Dr. C. R. Pattanaik | Faculty, CSE | Member |

Academic Year: 2019-2020

| Sl. No. | Name and Designation | Designation | Position |
|---------|--------------------------|---------------------|-------------|
| 1 | Dr. Leena Samantaray, | Principal | Chairman |
| 2. | Dr. P. K. Pany, | Dean, Academic. | Member |
| 3. | Dr. B. N. Guru, | Dean Operation. | Member |
| 4. | Dr. Manoj Kumar Praharaj | Faculty, Physics | Coordinator |
| 5 | Dr. R. K. Sahoo | Faculty, CSE | Member |
| 6 | Dr. D. K. Jesti | Faculty, Mechanical | Member |
| 7 | Dr. C. R. Pattanaik | Faculty, CSE | Member |

Academic Year: 2018-2019

| Sl. No. | Name and Designation | Designation | Position |
|---------|--------------------------|------------------|-------------|
| 1 | Dr. Leena Samantaray, | Principal | Chairman |
| 2. | Dr. P. K. Pany, | Dean, Academic. | Member |
| 3. | Dr. B. N. Guru, | Dean Operation. | Member |
| 4. | Dr. Manoj Kumar Praharaj | Faculty, Physics | Coordinator |
| 5. | Dr. C. R. Pattanaik | Faculty, CSE | Member |

❖ MOUs, Research Funding, Research Grants received from Govt. or Non-Govt. Agencies.

| Sl. N o. | Name of the MoU / Collaboration / linkage | Name of the collaborating agency / institution / industry / corporate house with whom the MoU / collaboration / linkage is made, with contact details | Year of signing MoU/ collaboration/ linkage | Duration of MoU / collaboration / linkage |
|----------|---|---|---|---|
| 1 | Research & Development work | ESSKAY Enterprises, Khurda, Bhubaneswar-751024 | 2023 | 5 years |
| 2 | Training, Internship & Project work | Java Technocrat, Saheed Nagar, Bhubaneswar, Odisha 751007 | 2023 | 1 Year |
| 3 | Training, Internship & Project work | Ashirbad Consultancy, Cuttack, Odisha, 753010 | 2023 | 1 Year |
| 4 | Training, Internship & Project work | Soft Tech Pvt. Ltd., Cuttack, Odisha, 753004 | 2023 | 1 Year |
| 5 | Centre of Excellence in Automation & IoT | Kemsys Technologies, Bangalore | 2023 | 02 Years |

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| 6 | Mentoring academic interventions for technological research & innovation | CSIR-Institute of Minerals & Materials Technology (IMMT)-InTEC, Bhubaneswar, Odisha | 2022 | 5 Years |
| 7 | Internship and Project Assistance | Anvi Anaya Engineering & Construction, Cuttack, Odisha | 2022 | 1 Year |
| 8 | Research & Development work | Oltron Technology, Nayapalli, Bhubaneswar, Odisha 751015 | 2022 | 3 years |
| 9 | Entrepreneurship & Start Ups Developments | OASME COUNCIL FOR ENGINEERING&TECHNOLOGY (ACURATE), Satya Bhawan, Industrial Estate, Cuttack, Odisha | 2022 | 2 years |
| 10 | Research & Development work | Prativa Software, Cuttack, Odisha | 2022 | 5 Years |
| 11 | Research & Development work | Dayanidhi Enterprises, Cuttack, Odisha | 2022 | 5 Years |
| 12 | Internship & Project work | Soft Tech Pvt. Ltd., Cuttack, Odisha, 753004 | 2022 | 1 Year |
| 13 | Internship & Project work | Java Technocrat, Saheed nagar, Bhubaneswar, Odisha | 2022 | 1 Year |
| 14 | Training, Internship & Project work | Ashirbad Consultancy, Cuttack, Odisha, 753010 | 2022 | 1 Year |
| 15 | Training and Internship | Central Institute of petrochemicals Engineering & Technology, Bhubaneswar | 2022 | 1 Year |
| 16 | Eastern Engineering, Industrial Estate, Madhupatna, Cuttack-753010 | Eastern Engineering, Industrial Estate, Madhupatna, Cuttack-753010 | 2021 | 5 Years |
| 17 | PYTHONSOFT LLP, Bhubaneswar, Odisha | PYTHONSOFT LLP, Bhubaneswar, Odisha | 2021 | 5 Years |
| 18 | Internship & Project work | Java Technocrat, Saheed nagar, Bhubaneswar, Odisha | 2021 | 1 Year |
| 19 | Training and Internship | ECOLIZER VENTURES, Cuttack, Odisha | 2021 | 1 Year |
| 20 | Internship & Project work | Soft Tech Pvt. Ltd., Cuttack, Odisha, 753004 | 2021 | 1 Year |
| 21 | Internship & Project work | Ashirbad Consultancy, Madhupatna Cuttack, Odisha | 2021 | 1 Year |
| 22 | Research and Development in the Area of Computing and Image processing of Satellite Image. | MAPSCOPE Pvt. Ltd, Infocity, Bhubaneswar | 2021 | 2 Years |

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| 23 | Center of excellence in GIS & Remote sensing | SPARC Pvt. Ltd., Bhubaneswar, Odisha | 2021 | 2 Years |
| 24 | Technology Incubation, Consultancy work | BeamX TechL Labs Private Limited, Hyderabad, Telangana 500034 | 2021 | 2 years |
| 25 | Internships & Training programs | Orissa Engineering Udyog Pvt. Ltd., Cuttack | 2021 | 5 years |
| 26 | Internship and Project Assisstance | Anvi Anaya Engineering & Construction, Cuttack, Odisha | 2021 | 1 Year |
| 27 | To promote and facilitate research & teaching | Social Planning Council of Peel (SPCP), Mr. Srimanta Mohanty, CEO, Address - 386 Watline Avenue, Mississauga, Ontario, Cananda | 2020 | 2 years |
| 28 | Internships & Training programs | Ashirbad Consultancy, Madhupatna, Cuttack, Odisha | 2020 | 1 year |
| 29 | Internships & Training programs | Softech, College Square, Cuttack, Odisha 753003 | 2020 | 1 year |
| 30 | Internships & Training programs | Java Technocrat, Saheed Nagar, Bhubaneswar, Odisha 751007 | 2020 | 1 year |
| 31 | R & D Activities | K-InfoTech & Engineering Services, Delta Square, Bhubaneswar | 2020 | 5 Years |
| 32 | Capability building on technologies | Cerebrionics Pvt.Ltd, Bengaluru, Karnataka | 2019 | 2 years |
| 33 | Internship and Industrial Project for the Students | Udvaban Technologies Pvt.Ltd., Bidyadharpur, Cuttack-753006, E-mail: ezibees8@gmail.com | 2019 | 5 years |
| 34 | MOU for Internship | Central institute of plastic engineering & technology,govt. of india,bhubaneswar | 2019 | 1 Year |
| 35 | Internships, Project & Training programs | Ashirbad Consultancy, Madhupatna Cuttack, Odisha | 2019 | 1 year |
| 36 | Internships, Project & Training programs | Softech, College Square, Cuttack, Odisha 753003 | 2019 | 1 year |
| 37 | Internships, Project & Training programs | Java Technocrat, Saheed Nagar, Bhubaneswar, Odisha 751007 | 2019 | 1 year |
| 38 | To promote and facilitate research & internship | KUBIK Design Solutions,Bhubaneswar, Odisha | 2019 | 1 year |
| 39 | To promote and facilitate research & internship | ARACHIS ZEPPELIN SERVICES PRIVATE LIMITED, Cuttack, Odisha | 2019 | 1 year |
| 40 | Research & Development | Oltron Technology, 52, near CRPF Square, N1, Block N1, IRC Village, Nayapalli, Bhubaneswar, Odisha 751015 | 2019 | 3 years |

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| 41 | Internships, Project & Training programs | Ashirbad Consultancy, Madhupatna Cuttack , Odisha | 2019 | 1 year |
| 42 | Internships, Project & Training programs | Softech, College Square, Cuttack, Odisha 753003 | 2019 | 1 year |
| 43 | Internships, Project & Training programs | Java Technocrat, Saheed Nagar, Bhubaneswar, Odisha 751007 | 2019 | 1 year |
| 44 | Technology Incubation,Consultancy work | BeamX TechLabs Private Limited,Hyderabad, Telangana 500034 | 2019 | 2 years |
| 45 | Internship and Industrial Project for the Students | Aether Innovations Pvt.Ltd., Bhawani Enclave-2, Cuttack-753014 | 2019 | 5 years |
| 46 | Exchange of academic information & material | Mahansaim Educational Institute (College), Dr. Ha Tae Hyun, Vice-Chancellor, Off Thika Road P.O Box 57329-00200, Nairobi, Kenya | 2018 | 1 year |
| 47 | Internships,Project & Training programs | Ashirbad Consultancy, Madhupatna Cuttack, Odisha | 2018 | 1 year |
| 48 | Internships,Project & Training programs | Softech, College Square, Cuttack, Odisha 753003 | 2018 | 1 year |
| 49 | Internships,Project & Training programs | Java Technocrat, Saheed Nagar, Bhubaneswar, Odisha 751007 | 2018 | 1 year |
| 50 | Training and Internship | SHREE ACHYUTANANDA CONSTRUCTION PVT. LTD, Cuttack | 2018 | 5 Years |
| 51 | Training and Internship | SP CONSTRUCTION, Cuttack | 2018 | 5 Years |
| 52 | Training and Internship | Real Align Engineering, Cuttack | 2018 | 5 Years |
| 53 | Training & Internship | INTERFACE SOFTWARE, Sahid Nagar, Bhubaneswar, Odisha | 2018 | 6 year |

❖ NITI Aayog DARPAN

Registered in the Year 2022

Unique ID: OR/2022/0313301

❖ Plan for academic year 2022-2023.

R&D plan for the year **2022-23**.

a. Mechanism to identify topics of publication and research for faculties as well as students

- i. Submission of paper to R&D cell for peer-reviewed.
- ii. Assessment by R&D cell

- iii. Submission to the journal by faculties/students.
- b.** Initiation of patentable Research work and process for developing on conceptual patent for product development
- c.** Institutional support for
 - i. publications – As per guidelines.
 - ii. product development - As per guidelines.
- d.** Target to each Department
 - i. Journal Paper- At least 08 papers (SCOPUS/SCI/ESCI) per annum.
 - ii. FDP – At least 02 per annum
 - iii. STTP – At least 02 per annum