



Trident  
Academy of  
Technology



# Research & Development Policy



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## Introduction

In accordance with the New Education Policy (NEP), 2020, research in the fields of materials, medicine, engineering, environmental science, ecology, and management is deeply incorporated into academic and teaching program. Trident Academy of Technology (TAT) conducts multidisciplinary and inter-disciplinary research that is at the forefront of academic innovation in some of these fields. The research conducted at TAT investigates profound concepts, generates novel insights, and unveils significant discoveries. TAT cultivates a thriving interdisciplinary research community and environment that supports the research endeavours of faculty members, master's candidates, and other collaborative public and private academic and research organizations, including those engaged in industrial collaboration.

Present engineering curricula prescribed by many universities including BPUT offers ample of scope to incorporate course supplementation in order to address the need for solution driven social research which is highly essential to give shape to vital national projects, like our Honourable Prime Minister Sri Narendra Modi's flagship projects – Smart Cities, Skill India, Digital India, Startup India, Make In India, etc. Such dream projects crucial in the path of growth and success of our country will come true if the students and faculties in the technical institutions are empowered with appropriate knowledge and show inclinations towards research and innovations. Therefore, it is of paramount importance for the faculties of engineering institutions to dive into the research areas of versatile science and technology application domain.



## 1.1 Mission and Vision

The mission and vision of TAT are to enhance and expedite fundamental and translational, research, as well as to build novel start-up ventures and platform technologies in the fields of engineering, biomedical and environmental sciences. It fosters strong collaboration with industries and other utility sectors and stays updated with cutting-edge technology.

### 1.1.1 Vision:

Provide platform to induct a sound culture of innovative multi-disciplinary research in the institute where the researchers get a scope to establish their immense potential and demonstrate their capability in hosting state-of-the-art high-end technical, industrial and social research.

### 1.1.2 Mission:

- Inculcate excellent research culture and provide best research infrastructure
- Serve as a platform for the students and faculty members to undertake solution driven social research, strong interdisciplinary collaborations and knowledge sharing
- Publish high quality research papers in standard research journals of international repute
- Create quality human resources for scientific, industrial and social research
- Promote industrial collaborations involving active and mutually beneficial R&D projects
- To establish Trident Research as a renowned institute and a trusted name in the field of high-end technical research.



### **1.1.3 Goals:**

Two primary goals of the focused research initiative at TGI through Trident Research are:

- To build interdisciplinary collaborations that inspire innovation among faculty as well as student, and
- Focus on capacity building to meet global challenges of societal as well as industrial need where we can achieve greatest impact and excellence and achieve clear leadership position in promising new and growing areas of engineering research.

### **1.2 Objectives**

TAT actively promotes research collaborations among its multiple academic departments to accomplish the following objectives:

- Establish secure and favourable conditions that facilitate research for active members within individual departments and units.
- Promote national and international research funding through partnerships with various academic universities and institutions at both national and international levels.
- Engage in collaboration with private and public sectors to facilitate funded research.
- Ensure the integration of research findings into the teaching process to the fullest extent possible.



- To coordinate and host a wide range of national and international conferences, workshops, seminars, FDP/MDP, and other events throughout the year at the organization.
- The goal is to enhance industry-academia research collaboration by establishing connections with diverse industries in India.

TAT has established a high-level Research Advisory Committee (RAC) and a Research Motivation Committee (RMC) in response to this.

### 1.3 Research Committee

TAT has established Research Advisory Committee (RAC) and a Research Motivation Committee (RMC) , an independent research setup through a group of committed, dedicated persons to explore hidden capabilities and untapped potentiality available among the young faculties and students for carrying out advanced research and to come up with innovative solutions in varieties fields of application. Currently Trident Research is in active operation in the state of Odisha as a non-profit research organization and is focused to conduct cross-disciplinary research projects in diverse areas to collectively address a wide variety of social and industrial problems.

The core R&D team in the form of **Research Committee** working behind the **Trident Research** is composed of a group of individuals talented in a broad array of areas ranging from the ICT spectrum to core branches of engineering, biotechnology and management science. Collectively they bring the capability to see the problems as opportunities and possibilities for advancement and the expertise to realise a creative vision, tasked with turning ideas into reality. The core



R&D team shoulders the responsibility of managing the development of innovative products, supporting the software and ICT product development and building research drive at Trident Research. The core R&D team comprises of the following professors:

**Research Advisory Committee (RAC):**

Prof. P.K. Meher	Professor, NTU, Singapore
Prof. Ganapati Panda	Emiritus Professor, IIT Bhubaneswar
Prof. Rajib Mall	Professor, IIT Kharagpur
Prof. Raju Daniel	Scientist, IPR, Ahmedabad
Prof. Subhankar Bedanta	Associate Professor, NISER, Bhubaneswar

**Research Committee (RC):**

<b>Prof. (Dr.) D.N.Pattanayak</b>	Principal of TAT(Chairman)
<b>Prof.(Dr.) Sakuntala Mahapatra</b>	Dean, Research & Development
Dr. Subhra Swetanisha	Convener
<b>Prof.(Dr.) Pravat Kumar Mohanty</b>	Dean School of Business (Member)
<b>Prof. (Dr.) Kalpana Dash</b>	Principal of TACT (Member)
<b>Prof. (Dr.) Abhaya Ku. Samal</b>	Dean School of Computing (Member)
<b>Prof. (Dr.) A. K. Baral</b>	Dean School of Humanitics (Member)

## 1.4 Research Facilities

The Research Center offers superb facilities and support services to ensure that the research community at TAT enjoys an ideal environment for conducting cutting-edge research.

- Offices equipped with air conditioning and high-speed internet connections
- Rewards for publishing articles in reputed journals



- Digital library equipped with air conditioning, high-speed LAN, and Wi-Fi connectivity
- Ability to use IEEE Xplore.
- Financial assistance for patenting
- IEEE membership is sponsored by the institute
- Internet-based plagiarism detection software TURNITIN

## **1.5 Change of Guidelines**

The Research Committee of TAT has the authority to periodically revise, alter, or modify the regulations as found necessary.

If there are any matters that are not addressed in the Guidelines on Research Policy, or if there are any uncertainties or ambiguities in the interpretation or application of the Regulation, the final decision will be made by the Chairperson.



## Chapter 2

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# Research Policy

The following principles and proposals serve as the foundation for the initiation of future policies pertaining to the development, promotion, and execution of research:

**Fundamental Principles:** TAT places great importance on its goal to conduct and share the results of both fundamental and applied research. This commitment will adhere to core principles, including the wide range of academic pursuits, and upholding ethical standards in research.

**Freedom of research:** It is a fundamental aspect of the liberal arts tradition in education. It allows scholars to conduct their study without restrictions, as long as they adhere to ethical norms and align with the organization's goal and objectives. The researchers at TAT are encouraged to conduct scholarly research in accordance with the New Education Policy 2020 (NEP 2020) and focus on areas of national significance in their field of interest. They are also advised to seek funding for their research from suitable funding agencies.

**Organization Support for Research:** TAT is dedicated to establishing and fostering a superior research environment that is closely intertwined with its academic and teaching initiatives. TAT offers targeted intramural research support to faculty members who are in the early stages of their research careers, prioritizing individuals from various Departments.



## 2.1 Research and Development Activity

The Institute's research and development (R&D) efforts focus on fostering innovation and technological advancement. This is achieved through partnerships with universities, governments, and corporations, with the goal of addressing both current and future societal and industrial demands. The academics, research staff, and students of the Institute engage in research with a variety of aims, including intellectual exploration, tackling current concerns, advancing technology, and producing scholarly publications. The Institute greatly benefits from these activities and, in fact, flourishes due to the faculty's pursuit of knowledge.

Our Institute aims to foster an atmosphere conducive to conducting both fundamental and applied research activities in several professional domains. Consequently, the members proactively address local, regional, national, and global concerns and strive to find constructive solutions to reduce their impact by employing effective strategies.

- **Research Idea** : Make a list of the top ideas from the research field of interest. When serving as a Principal Investigator (PI), it is crucial to consider one's professional inclination towards identifying novel and significant research inquiries. In addition, the process of choosing creative ideas that one may comfortably pursue entails refining their research proposal to ensure its feasibility given limited resources.
- **Funding Agency** : It is necessary to acquire knowledge about the funding agency's objective, research priorities, financial resources, recent awards, and current announcements. Faculty members should proactively engage with individuals or agencies and get the necessary information regarding the alignment of their research idea with the objectives of the agency. The



faculty members must carefully examine and assess the request for proposals in the agency's funding application.

- **Responsibilities of a research investigator :** Research at the Institute is carried out through individual efforts, collaborations, or established groups focusing on specific projects. Various research initiatives often involve a combination of faculty members, students, and/or external collaborators. Every participant involved in a specific project bears the responsibility for their own activities and must ensure that their acts align with and maintain high ethical principles.

Experimental research projects often have a Principal Investigator (PI) or a group of co-PI's who oversee and guide the research project. The principal investigators (PIs) are also responsible for taking a prominent role in upholding ethical standards. The individual should diligently and consistently oversee the experimental procedures employed and establish guidelines for documenting data and assembling findings in the format of publications and reports. It is essential that all participating individuals fulfill their respective roles to ensure the maintenance of ethical standards.

- **Data Management :** One of the most crucial ethical issues in undertaking a research project is the assignment and assurance of duty for collecting and keeping data. Responsibilities encompass the subsequent significant matters:
  - Supervising the development of the data collection process.
  - Ensuring the safety and well-being of research subjects
  - Safeguarding and securely storing data to maintain its accuracy and confidentiality
  - Assigning data-related tasks to others and overseeing their work
  - Using data responsibly and accurately representing the results



- **Sharing of facilities:** The software, equipment established at our institution is intended to be shared among colleagues who possess the necessary expertise to operate the tools and need access for purposes of research. However, this access should not hinder the original purpose for which the tools was acquired. Wherever the use of time-sharing is suitable, it is necessary to establish clear and open protocols for its implementation.

## 2.2 How to Develop Research, Intellectual Property Enablers

To enhance new knowledge creation and intellectual property enablers, our institution can implement various strategies, including:

- a) Involving all stakeholders in research, innovation, and scholarly publication.
- b) Cultivating a culture of innovative thinking.
- c) Promoting systematic institutional research.
- d) Collaborating with universities, research centres, industry, and the community.
- e) Focusing on quality research programs and intellectual property development.
- f) Encouraging faculty participation in research projects.
- g) Setting aspirational goals and creating resource optimization mechanisms.
- h) Monetizing research outcomes through IP protection and commercialization efforts.
- i) Identifying commercially valuable research outcomes and engaging with industry and fostering collaborations with industry stakeholders.
- j) Providing training programs for researchers on research monetization and IP protection.
- k) Defining clear licensing and technology transfer processes.
- l) Offering mentorship and support to startups.
- m) Exploring funding mechanisms and cultivating an entrepreneurial culture.



- n) Continuously monitoring and evaluating research monetization efforts.

### 2.3 Research Enablers

- a) Recognising and engaging with Government, Industry, Academia, and Society as key stakeholders in research and development activities, with evolving roles in a knowledge-based society and economy.
- b) Choosing to play an appropriate role in advancing knowledge and creating a robust research ecosystem relevant to the Institution’s aims.
- c) Pursuing appropriate opportunities for the institution would include establishing a powerful research vision and portfolio. Improving resource availability, and enhancing research ecosystem support is a powerful driver.
- d) Enabling interventions in the institution may involve creating research management structures, industry liaison offices, and fundraising offices to strengthen governance and collaboration.

S. No.	Types of intellectual property infrastructure	Details of intellectual property infrastructure & its generation
1	Quality Research	<ul style="list-style-type: none"> <li>• undertaking quality research projects</li> <li>• establish a portfolio approach to research projects and quality research facilities and research labs</li> </ul>
2.	Research oriented experienced faculty members	<ul style="list-style-type: none"> <li>• self-sustaining model</li> <li>• undertake basic and applied research</li> <li>• enable development of disruptive and affordable technologies</li> </ul>



		<ul style="list-style-type: none"><li>• Faculty members who are research oriented are usually research inclined.</li></ul>
3.	<b>API based faculty compensation</b>	<ul style="list-style-type: none"><li>• They encourage participation in research and innovation among academics, staff, and students, strengthening the institutuin's framework for intellectual property.</li></ul>
4.	<b>Targeted research and collaborative research</b>	<ul style="list-style-type: none"><li>• The institution finds some new fields in several disciplines and helps the competent faculty members in such fields do research, publish papers, and file patents.</li><li>• In the portfolio approach this is called targeted research and the university can create IPR as well as an international brand through such efforts based on a strategic approach.</li></ul>



# Types of Research Projects

## 3.1 Sponsored Research

A sponsored project is one in which the Principal Investigator (PI) does not request payment for honoraria or consultation fees. The PIs are authorized to utilize the amount as approved in the corresponding budget category by the funding agency. A faculty member may seek collaboration with different national and international funding agencies and industry to secure financing for research projects aligned with their specific areas of interest.

### 3.1.1 Individual Research Projects:

The Institute promotes research in fundamental and practical fields of science and technology, as well as the advancement of cutting-edge technology through sponsored initiatives. Government bodies and corporations provide research funds for such projects. Typically, these studies last over a period of 3-5 years and include regular evaluations. However, the research objectives and goals may be adjusted as the project progresses.

### 3.1.2 Collaborative Research Projects:

Faculty members have the opportunity to engage in joint initiatives with both domestic and foreign partners. For such projects, it is necessary to have a distinct



budget and scope of work statement prepared by the teachers and staff of the Institute. The brief statement submitted to the Institute should largely focus on the component of the work that will be carried out by the Institute. The Institute will handle this in the same manner as any other sponsored project.

### **3.1.3 Duties and Responsibilities of the Principal Investigators (PIs):**

1. Every proposal will be collaboratively developed by the Principal Investigator (PI), Co-Principal Investigator (Co-PI), and Co-Investigator (Co-I). The finalized proposal will then be submitted to the Research and Development (R&D) cell for approval. The PI will receive the signed copy of the endorsement certificate for the approved proposal. The authorized versions of the whole proposal, including financial specifics, will be submitted to the R&D Cell.
2. Once the project is approved by the funding agency, the Principal Investigator (PI) must submit the sanctioned order and release order to the Head of the School's Research and Development (R&D) Cell.
3. The principal investigator (PI) is responsible for organizing and managing all documentation pertaining to progress and financial transactions, in collaboration with the Account department.
4. The Principal Investigator (PI) is responsible for ensuring the satisfactory completion of the Project within the approved funding and timeline.
5. The principal investigator (PI) have a responsibility to annually submit a scientific and technical progress report to the funding agency.
6. The principal investigator (PI) should coordinate with the funding agency to secure the subsequent year's funding allocation following the submission of the scientific progress report, as well as the details regarding the UC and, manpower, and assets.



### 3.1.4 Manpower:

1. The appointment of Project Assistant/JRF/SRF/RA/other supporting personnel will typically follow the guidelines set by the sponsoring agency and require the permission of the competent authority at the Institution.

The recruitment of project staff will be conducted by a selection committee including

- Principal Investigator (PI)/Co-PI,
- Expert member from the University appointed by the Dean and Chairman of the Research and Development (R&D) cell
- External expert member chosen by the Chief Mentor of the institution.

The Merit list is prepared by the Selection Committee and then approved by the Research Committee.

2. Appointment letter(s) will be issued with the signature of the Principal of the Institution.
3. All project appointments will be temporary in accordance with the guidelines set by the Funding agency.
4. Automatic transfer from one project to another, whether it is completed or in progress, is strictly prohibited.
5. In the case that the Principal Investigator (PI) leaves from the institution, the Co-Principal Investigator (Co-PI) shall have the responsibility for carrying out the project. If the Co-PI does not belong to the same organization, obtaining extra approval from the funding agency will be necessary in order to incorporate another Co-PI.
6. Nevertheless, if the principal investigator (PI) intends to move to a different institution within India and wishes to transfer the project, the institution



may consider the transfer. However, this is subject to the approval of the funding agency and requires the submission of a no-objection certificate (NOC) and other necessary documents from both the current and new organizations.

7. Employees involved in the project are eligible to take leave in accordance with the guidelines set by both their institution and the funding agency.

## **3.2 Consultancy Projects**

Our institution allows academic staff to engage in consultations with public and private entities,. This is because such activities can enhance the professional growth and reputation of the faculty member, which in turn can benefit both the institution and the faculty member.

### **3.2.1 Consultancy Rules and Norms Scope of Consultancy Services offered:**

1. Consultancy Services may be offered to Industries, Service Sector, Govt. and Nongovernment Departments and other National and International agencies in niche areas of expertise available in the Institute.
2. The service offered shall be along the lines of 'Professional Services' and will hence carry with them obligations and ethical requirements associated with such services as indicated in the 'Standard Terms and Conditions' (Annexure-A).
3. Consultancy services offered may cover a variety of activities such as Feasibility Studies; Technology Assessments; Assessment of Designs and/ or Current Manufacturing Process; Material, Energy, Environmental and Manpower Audits; Product Design; Process Development, Software Development; General Troubleshooting, Retrofitting Exercises, Intensive efforts for transfer of highly focused skills and expertise to selected groups in specific organizations, vision and strategy statement and so on.



4. Testing & Evaluation services are to be normally offered in selected specialized areas. In order to meet the needs of certain Governmental and related agencies, and special clients (with long term association with the Institute) routine testing services may be offered, but to a limited extent.
5. Standardization and Calibration services may be offered in areas in which facilities are available or can be augmented. Such services should normally be backed by periodic Calibration/ Standardization of laboratory equipment used for such purposes.
6. Jobs which are too complex to handle, by virtue of certain constraints inherent in any academic and research environment - such as execution of certain types of works, should not normally be taken up irrespective of the availability of expertise and perceived needs of the clients.
7. All Consultancy and related Jobs need to be structured and executed in the spirit of promoting Industry Institution Interactions, as a vehicle for augmenting levels of excellence in teaching and research, for proper placement of students registered under various B.Tech. and M.Tech. programs at TAT and in the process, generating funds.

### **3.2.2 Project Category:**

Each project shall be undertaken either under

- Standard Terms and Conditions (included in Annexure-A), or
- Specific consultancy agreement or Memorandum of Understanding (MOU) describing the details of the contract.

In the former case, the work is taken up in good faith between the consultant and the client, the obligations and responsibilities of both parties being limited by the standard terms and conditions as included in Annexure-A.



In the latter case, projects that usually involve non-disclosure agreements, detailed negotiations of contract terms and signing of contracts in the form of agreement or MOU covering various aspects such as deliverables, milestones, payment schedules, role and responsibilities of the parties, non-disclosure of confidential information, disputes resolution, liability, IPR matters, arbitration, and applicable law. These projects involve significant amount of effort and time associated with the negotiation and implementation of the research contracts.

Consultancy and related services offered will be divided mainly into two categories:

**Expert Advice and Development (EAD) Projects:** This type of project will be Expertise intensive and based on the expertise of the Consultant.

**Testing and Calibration (TAC) Projects:** This type of project will be Infrastructure intensive and will be based on extensive usage of the institute infrastructure.

### **3.2.3 Eligibility for Undertaking Consultation:**

Consultancy and related assignments can be taken up by full time faculty and staffs of the institution. Any other employee of the Institute may take up consultancy work with prior approval of the Dean (Consultancy) or other competent authority. All employees undertaking consultancy shall hereinafter be referred to as Consultant of TGI.

### **3.2.4 Conflict of Interest:**

Consultants shall disclose to the Dean (Consultancy) in writing, the existence of



- (i) any relationship between him / her and the client funding the consultancy project or any vendor to whom payments are made from the project funds, in the form of involvement of any immediate relatives or
- (ii) any scope for potential disproportionate self-gain. Dean (Consultancy) will review such cases and decide appropriately, with the advice of a committee, to ensure that no actual conflict of interest exists and that such an involvement by the consultant does not adversely affect the consultant's objectivity, integrity, or commitment to the Institute and to the profession.

Consultants may not use the Institute name or the fact that they are affiliated with the Institute, in a manner that

- (i) suggests that the Institute approves or disapproves of a product or service provided by a profit, nonprofit or governmental entity or
- (ii) suggests that the Institute has performed research or issued research findings when it has not done so, or misleadingly states the results of Institute research or
- (iii) may be interpreted to communicate the official position of the Institute on any issue of public interest.

### **3.2.5 General Consultancy Rules:**

Consultancy work taken up by the Consultants of TAT is subject to the following limits:

1. The time spent on consultancy and related assignments shall be limited to the equivalent of 52 working days in a year, preferably at the rate of one



working day per week. In addition, Consultants may be permitted to utilize, on an average one non-working day per week.

2. Consultancy assignments may be taken up and implemented, within the constraints and guidelines indicated in the RCP-2024 provided they do not have any adverse impact on the ongoing academic, research and related activities of interest to the institution. Further, such assignments need to be carefully scheduled in the light of ongoing commitments. If required, a clear indication of the earliest date on which the assignment can commence may be clearly spelt out in the proposal form.
3. The services of permanent employees of the Institute may be utilized for the execution of the consultancy projects provided it does not affect their primary functions and responsibilities to the Institute.
4. Students who are willing to work on consultancy projects may be permitted as per Institute norms to do so provided it does not affect their academic commitments and performance. Such work by students may be compensated by suitable honoraria.

### **3.2.6 Travel Rules to Render Consultancy Related Services:**

1. Travel out of the campus on account of consultancy activities should be undertaken with intimation to the respective Dean of the School. In case of Dean of the School involved in the consultancy project, intimations should be sent to the Dean (Consultancy)/ Principal.
2. Outstation travel on Consultancy Assignments may be undertaken normally with the prior approval of the respective Dean of the School, the Dean (Consultancy) and Principal. It is, however, anticipated that such approvals will be given within two working days in order to ensure that prior commitments to clients are honoured. In emergencies, prior intimation and subsequent sanction could be considered acceptable.



### **3.2.7 Consultancy Rules for Execution of Consultancy Projects:**

1. Consultancy projects are normally initiated by requests/ enquiries from the industry directly to the Institute or by discussion between the industry and the Consultants. When the enquiry is directly received by the Institute, the work will be assigned to specific consultants or groups of consultants depending on their expertise, and existing commitments, by the Dean (Consultancy).
2. In the event of a client preferring the services of a specific consultant, the assignment may normally be assigned to the identified person, provided the requirements in respect of 3.2.5.1 and 3.2.5.2 are satisfied.
3. All acceptance letters will be sent by the Dean (Consultancy).
4. Consultancy project proposals (prepared in response to a client's request) are to be approved by the Dean (Consultancy) who may examine the scope of the work and cost estimates. It is essential to discuss proposed work plans with a client vis-a-vis the scope, in order to obtain clarity before the consultant prepares the cost estimates.
5. In extreme emergencies, a consultant may take up an assignment with intimation to the Dean (Consultancy), and then seek approval. It would, however, be necessary to ensure that the task involved is not a major one entailing total charges not more than Rs.25,000/- or, two days of faculty time, and payments are made immediately, well before submission of any formal report.
6. The charges, once finalized, will not be negotiable. However, if the scope is altered, a fresh estimate may be considered.
7. The minimum charges applicable in respect of consultancy jobs will be Rs.10,000/- excluding any applicable tax.
8. It is desirable that Preliminary Diagnostic Discussions/ Site Visits, leading to the generation of consultancy proposals may be charged at a minimum rate of Rs.2,000/- (or US\$100 or equivalent in the case of international



assignments) per day or part thereof, in addition to travel and incidental expenses as applicable. As an industry-friendly move, the consultant may decide to absorb such charges for potentially large projects, into the final project cost.

9. The services of external consultants (especially retired Faculty / Research Scientists / Research Engineers) may be utilised to a limited extent in order to provide comprehensive services to clients. Such external consultants which may include will be entitled to a lump sum consultant fees which may be fixed after taking into account essential expenditure directly related to the assignment. Normal deductions by the way of Institutional charges, and mandatory taxes will, however, be made. The consultant fees payable to External Consultants may not, normally, exceed 40% of the total project cost.

### **3.2.8 Consultancy Rules for Payment Schedule:**

1. The charges for any assignment are normally payable in advance. However, exceptions may be made in respect of assignments involving charges exceeding Rs.50,000/- and with implementation periods exceeding 3 months.
2. In the case of large assignments, a payment schedule linked to milestones can be worked out. Such a payment schedule should ensure that (i) advance payment is received for every segment of the consultancy work, and (ii) number of instalments are reasonable and consistent with ease of implementation. The number of instalments may not exceed four for a project implemented over a one-year period, and, this number needs to be scaled down accordingly for shorter duration projects.

### **3.2.9 Costing of Consultancy Projects:**

The consultancy project costing is based on the following component charges:



1. Consultant Fees (CF): This will include charges for the time of the Institute and External Consultants. The CF is limited to 20% of the project cost for the jobs falling under TAC Category.
2. Charges for Personnel engaged in Technical Services (CPTS): This refers to the charges payable to the permanent employees of the Institute for their effort in the execution of the project. The CPTS is limited to 30% of the project cost for jobs falling under TAC Category.
3. Project Staff Salaries (PSS): This refers to the salaries payable to temporary staff employed specifically for the project.
4. Operational Expenses (OE): These include expenses incurred on consumables, contingencies, travel and daily allowance, honoraria for students and all other expenses related to the consultancy project. These also include Equipment Utilisation Charges for the usage of institute equipment for all consultancy projects.
5. Overheads (OH): Overheads will be charged at the rate of 20% of PSS, and OE (see 3.2.9.3 and 3.2.9.4 above) as applicable.
6. Capital Equipment (CE): This will include charges for the purchase of specific equipment for implementation of consultancy projects. No overheads are charged on this.
7. Contract Negotiation/ Legal Expenses (CNLE) may be levied for projects involving contract/negotiations.
8. Service tax and other taxes (STAT) as applicable shall be provided for in the project cost. The details of the costing are given in Annexure-B.

#### **3.2.10 Disbursement:**

The disbursement of Consultant Fees (CF) and Charges for Personnel engaged in Technical Services (CPTS) are as given below:



1. The disbursement of CF will entail a deduction of 30% as the Institute share for Consultant's earnings. The deduction of the Institute share will be on the actual amount disbursed to the Consultant(s). Consultant Fees (CF), as well as charges payable under CPTS, may be disbursed as indicated below:
  - In the case of short duration jobs entailing full advance payment, full disbursement to be made upon completion of the job and receipt of (i) a completion certificate from the project leader and (ii) the project completion report as in 3.2.13.2.
  - In the case of long duration jobs entailing advance payment of installments linked to milestones, partial disbursements may be made; such disbursements will be linked to the phase-wise CPTS Charges and Consultant Fees as per estimates to be provided by the project leader and the phase-wise completion certificate.
2. The disbursement of CPTS to permanent employees of the Institute will entail a deduction of 30% as Institute share.

### **3.2.11 Research Development Fund (RDF):**

To facilitate consultants close accounts of all concluded projects and at the same time enable them to provide for funds to support their ongoing research, equipment maintenance, laboratory development etc., the following will be applicable:

1. All unspent balances in closed projects (Category EAD and TAC), after deduction of 15% overheads will be transferred to an open ended RDF in the name of the Consultant for use in honoraria for work by students and project staff, consumables and contingencies, travel and daily allowance, and other expenses as approved by the Dean (Consultancy).



### 3.2.12 Distribution of Institute Share:

The details of distribution of the Institute share collected as Deductions, Overheads and Contract Negotiation/ Legal expenses are given below:

1. The amount that accrues as Deductions from CF and CPTS (defined in Section 3.2.10.1 and 3.2.10.2 above) will be distributed as given below:
  - 50%, to be retained as Departmental Development Fund of concerned Departments/ Inter Disciplinary Programmes to support their educational and research and development activities, and, infrastructure and related requirements. The Departmental Development Funds may be utilized by the Head of the Department, in consultation with the Principal, with the prior approval of the Dean (Consultancy).
  - 30% to be retained by TRF to meet major infrastructure augmentation, promotion of R&D through seed money grants and TIFR Projects, etc. and operational expenses.
  - 10% to be transferred to Institute Main Account to support library expenses.
  - 10% to be transferred to the Main Account to be divided equally to Student and Staff Welfare Funds.
  
2. The amount that accrues as Overheads or OH (as defined in Item 3.2.9.5 above) will be distributed as given below:
  - 75% to be retained by IRCC as operating expenditure of the TRF.
  - 25% to be transferred to Institute Main Account as charges towards expenses for utilization of equipment and other Institute facilities.



3. The amount that accrues as Contract Negotiation/ Legal (CNLE) expenses will be retained by the institute in the separate R&D account to meet Legal and related expenses.

### **3.2.13 Review and other Related Matter of Consultancy Projects:**

It is essential to provide an effective framework to ensure smooth implementation of consultancy projects in the context of Educational, R&D and related activities. Also, TRF should be in possession of basic information in respect of consultancy activities to meet various proactive as well as reactive needs. To meet these requirements, the implementation needs to be within the framework given below:

1. Proposals for large sized consultancy assignments may be reviewed by a small standing committee, comprising a segment of the Research Advisory Committee (RAC).
2. A short report on every consultancy project, upon completion shall be submitted to the Dean (Consultancy) by the Consultant. The reports shall be preserved as 'Classified Documents' for a period of typically five years, to be destroyed thereafter.



## Website of Major Funding Agencies

Sl. No	Major Funding Agencies	Website
1	Department of Science and Technology (DST)	<a href="http://dst.gov.in">http://dst.gov.in</a>
2	Council for Scientific and Industrial Research (CSIR)	<a href="http://www.csir.res.in">http://www.csir.res.in</a>
3	Department of Scientific and Industrial Research (DSIR)	<a href="http://www.dsir.gov.in">http://www.dsir.gov.in</a>
4	Centre for Development of Advances Computing (CDAC)	<a href="http://www.cdac.in">http://www.cdac.in</a>
5	Ministry of Electronics and Information Technology (MeitY)	<a href="https://www.meity.gov.in/">https://www.meity.gov.in/</a>
6	Department of Biotechnology	<a href="https://www.dbtindia.gov.in/">https://www.dbtindia.gov.in/</a>
7	Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers	<a href="https://chemicals.gov.in/">https://chemicals.gov.in/</a>
8	Indian Council of Agricultural Research (ICAR)	<a href="http://www.icar.org.in">http://www.icar.org.in</a>
9	Indian Space research Organisation	<a href="https://www.isro.gov.in/">https://www.isro.gov.in/</a>



	(ISRO)	
10	Ministry of Environment and Forest	<a href="https://moef.gov.in/moef/index.html">https://moef.gov.in/moef/index.html</a>
11	Ministry of Health and family Welfare	<a href="https://main.mohfw.gov.in/">https://main.mohfw.gov.in/</a>
12	Technology Information, Forecasting and Assessment Council (TIFAC)	<a href="http://www.tifac.org.in">http://www.tifac.org.in</a>
13	Department of Atomic Energy	<a href="http://www.dae.gov.in">http://www.dae.gov.in</a>
14	Ministry of Earth Sciences (MoES)	<a href="https://moes.gov.in/">https://moes.gov.in/</a>
15	Department of Space (DoS)	<a href="https://www.isro.gov.in/DOS&amp;ISROHQ.html">https://www.isro.gov.in/DOS&amp;ISROHQ.html</a>
16	Ministry of New and Renewable Energy (MNRE)	<a href="https://mnre.gov.in/">https://mnre.gov.in/</a>
17	Technology Development Board	<a href="https://tdb.gov.in/">https://tdb.gov.in/</a>
18	Science and Engineering Research Board (SERB)	<a href="https://serb.gov.in/">https://serb.gov.in/</a>
19	Indian Council of Forestry Research and Education (ICFRE)	<a href="https://icfre.gov.in/">https://icfre.gov.in/</a>
20	Tata Institute of Fundamental Research (TIFR)	<a href="https://www.tifr.res.in/">https://www.tifr.res.in/</a>



# Trident Academy of Technology

Bhubaneswar

<b>Project Title:</b>	
<b>Type of Project/ Agency</b>	
<b>Organization &amp;Country:</b>	
<b>Project Duration:</b>	
<b>Expected Start Date:</b>	
<b>Expected End Date:</b>	
<b>School/Dept.:</b>	
<b>Principal Investigator:</b>	
<b>Co-Principal Investigator*:</b>	1. 2.
<b>Approval of the Dean, Research*</b>	

**SUMMARY OF THE SPONSORED RESEARCH PROPOSAL TO BE  
SUBMITTED BY THE PI TO R&D CELL ALONG WITH THE DETAILED  
PROJECT PROPOSAL**



## Research and Development Cell

<b>Sponsoring Agency:</b> (with complete address)	

\* In case, the Co-PI is from other School/Department, the Dean/HOD of the concerned School/Dept. has to approve the same and in case Co-PI is from outside Institute then the concurrence from his/her parent institute/organization is also required, before submission of the proposal.

### Budget Details: Funds Break Up

Heads	Ist Year	IInd Year	IIIrd Year	IVth Year	Vth Year	Total
Salary						
Equipment						
Consumables						
Travel						
Contingency						
Honorarium						
Overhead Charges						
Service Tax (if any)						
<b>Budget Total:</b>						

(Summary of proposed Research Project Proposal and about 8-10 key words relevant to the project proposal may please be attached.)

**Signature of P.I** .....

**Date**.....



# Publications

## 5.1 Authorship

Authorship refers to the act of determining the individuals who should be credited with their names on a research article. Research often develops via the collaborative efforts and support of professionals and colleagues. Some of this assistance will require acknowledgement and some will require joint authorship.

The authorship in publications is a crucial matter as it determines how authors are recognized and acknowledged for their work. Every author named in a publication should have made substantial contributions to it. Granting "guest authorship" to individuals who have not made any substantial contribution is wrong. Similarly, it is incorrect to omit anyone who deserves to be recognized as an author from the list of authors. Including someone as an author of a paper without their explicit consent is morally wrong and goes against ethical standards. The sequence of authorship might also hold significance.

## 5.2 Plagiarism

Plagiarism in research is a serious ethical offense that undermines the integrity of scientific inquiry. It involves the unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one's own original work. This can range from copying text without attribution to claiming credit for someone else's findings or ideas. In the realm of research,



where the advancement of knowledge relies on building upon previous work, plagiarism not only discredits the individual but also can lead to a ripple effect, tarnishing the reputation of institutions and eroding public trust in scientific findings. It is essential for researchers to meticulously cite sources and contribute original ideas to foster a culture of honesty and innovation in the scientific community.

Self-plagiarism, is a contentious issue in the research community. It occurs when an author reuses substantial parts of their own published work without providing the appropriate references. This practice is problematic because it can lead to multiple counts of the same research, which can skew the literature and inflate an author's publication record unfairly. It also contravenes the fundamental principle of originality in research. While there may be instances where one's previous work is relevant to current research, it is crucial to disclose this and reference it properly. Transparency and honesty are key to maintaining the integrity of the research process and ensuring that each publication provides a distinct contribution to the field.

"Duplicate publication," which refers to the act of submitting identical research findings to many journals and presenting them as distinct articles, is considered a type of self-plagiarism and should be avoided.

A researcher preparing a written manuscript should cite the original source if he or she:

- Quotes another person's actual words, either oral or written;
- Paraphrases another person's words, either oral or written;
- Uses another person's idea, opinion, or theory; or
- Borrows facts, statistics, or other illustrative material, unless the information is common knowledge."



### 5.3 Research Publication Incentives

In order to strengthen the high-quality scientific publications of TAT, the following incentives will be provided to the full time academic staff of TAT however, the published article must be with TAT affiliation.

Sl. No	Category of Journal/Conference /others	Incentive Details
1	For every publication in a ESCI / SCI / SCIE /ABDC Journal	Rs.10,000 (Applicable to 1 <sup>st</sup> Author)
2	For every publication in a Scopus Indexed Journal	Rs.7,000(Applicable to 1 <sup>st</sup> Author)
3	For every publication in a UGC Care Journal	Rs.5000(Applicable to 1 <sup>st</sup> Author)
4	Book Chapter (Scopus Indexed/its equivalent journals)	Rs.9000(Applicable to 1 <sup>st</sup> Author)
5	Book Publication through a reputed publisher	Rs.15000/-
6	IEEE/Springer/Elsevier/AIMS/AMDISA Conference	Registration Fees and to and fro travel by A.C 2 tier or flight (Minus what is borne by the organisers)



7	Patent	College will reimburse 15% of expenditure after it gets published and another 35% after it is granted.									
8	Consultancy Receipts	PI- 70% and College -30% of the net surplus after expenses									
9	Funded Projects/Any other grants	<p>PI will get following amount of the total project cost</p> <table border="1"> <tr> <td>International</td> <td>Grant &lt; 50 Lakhs</td> <td>Grant &gt;= 50 Lakhs</td> </tr> <tr> <td></td> <td>Rs. 1 Lakh</td> <td>Rs. 1.5 Lakh</td> </tr> <tr> <td>Any Other</td> <td>Rs. 30,000</td> <td>Rs 50,000</td> </tr> </table>	International	Grant < 50 Lakhs	Grant >= 50 Lakhs		Rs. 1 Lakh	Rs. 1.5 Lakh	Any Other	Rs. 30,000	Rs 50,000
International	Grant < 50 Lakhs	Grant >= 50 Lakhs									
	Rs. 1 Lakh	Rs. 1.5 Lakh									
Any Other	Rs. 30,000	Rs 50,000									
10	Intramural Research Grant	Initially Rs.10,000/- on acceptance of the synopsis and may be extended up to max Rs.50,000/- after review.									
11	For every OBE group PoC for realistic use, on satisfactorily progress of the assigned tasks on a S.M.A.R.T. framework	Annual Incentive of Rs.20,000									
12	All members of SACRED, on satisfactorily progress of the assigned tasks	Annual Incentive of Rs.15,000									
13	Every group/individual progressing satisfactorily on the 15 STRs	Annual Incentive of Rs.10 ,000									



14	Those publishing on important areas of SUSTAINABILITY and with h- index and/or I 10- index $\geq 10$	Will have additional weightage as a percentage(Ranging from 50% to 100%) of normal incentive fixed
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## Annexure-A

### Standard Terms and Conditions

1. **DECLARATION:** All work undertaken by TAT, Bhubaneswar as part of the project will be in good faith and based on material/ data/ other relevant information given by the Client requesting for the work.
2. **CONFIDENTIALITY:** Due care will be taken by TAT, Bhubaneswar to maintain confidentiality and discretion regarding confidential information received from the Client, including but not limited to results, reports and identity of the client.
3. **REPORTS:** Any test or other consultancy report given by TAT, Bhubaneswar will be based on work performed according to available standards and/ or open domain literature. In any event, this report may not be construed as a legal document, certificate or endorsement and may not be used for marketing of the products or processes, without prior consent from TAT, Bhubaneswar. The institute reserves the right to retain one copy of the report and use the results of the project for its internal teaching and research purposes.
4. **WORK PERFORMANCE:** Every effort will be made to complete the specified work according to the planned time schedule. However, TAT, Bhubaneswar will not be held responsible for delays caused beyond its reasonable control or due to any force majeure conditions.
5. **CONFLICT OF INTEREST:** TAT, Bhubaneswar may take up work for other



- clients also in the same area, provided, to the best of the institute's knowledge, there is no conflict of interest in undertaking such projects.
6. **PAYMENT:** The payment of consultation charges to TAT, Bhubaneswar are to be made in advance and in full before the start of the project, through a demand draft/ crossed valid cheque, drawn in favour of 'Trident Academy of Technology, Bhubaneswar' and sent to the Dean (Consultancy)/ Principal of TAT, Bhubaneswar. The charges will also include any applicable tax as prescribed by the Government of India from time to time.
  7. **TERMINATION:** The project work may be terminated by either party by giving the other party a notice period of 30 days. However, both parties will meet any residual obligations in connection with the project.
  8. **LIABILITY:** TAT, Bhubaneswar shall not be held liable for any loss, damage, delay or failure of performance, resulting directly or indirectly from any cause, which is beyond its reasonable control (Force Majeure). The liability of TAT, Bhubaneswar shall be limited to the funds received for the project.
  9. **INTELLECTUAL PROPERTY RIGHTS:** All rights pertaining to any intellectual property generated/ created/ invented in the due course of the project, will be the joint property of TAT, Bhubaneswar and the Client. Terms and conditions regarding transferring/ assigning/ selling these rights to the client shall be governed by a separate written and agreed to document if required.
  10. **RESOLUTION OF DISPUTES:** Any disputes arising out of the project shall be amicably settled by both the organizations. Any unsettled disputes may be subject to resolution as per the Indian Arbitration and Conciliation Act 1996. The following terms and conditions will apply to all projects taken up by TAT, Bhubaneswar, unless otherwise mutually agreed to in a separate document.



## **Annexure-B**

### **Costing of Consultancy Project**

1. Consultant Fees (CF)\*
2. Charges for Personnel engaged in Technical Services (CPTS)\*\* (For permanent employees of the Institute)
3. Project Staff Salaries (PSS)  
*(For temporary staff employed in the project)*
4. Operational Expenses (OE)  
*(All other expenses related to the consultancy project)*
5. Capital Equipment (CE)  
*(Expenses towards purchase of capital equipment for the consultancy project)*
6. Overheads (OH) (Charged at 20% of PSS and OE)
7. Contract Negotiations/ Legal expenses (CNLE)  
*(For projects involving contracts, agreements and MOUs, negotiation charges may be appropriately included by Dean Consultancy)*
8. Net Project Cost or NPC (items 1 + 2 + 3 + 4 + 5 + 6 + 7)
9. Service Tax and other Taxes or STAT (as applicable)
10. Total Project Cost (8 + 9)

*\* The Consultant Fee will be limited to 20% of Net Project Cost (Item 3.2.9.1 of the Consultancy rules) in case of TAC projects.*

*\*\*CPTS will be limited to 30% of Net Project Cost (Item 3.2.9.2 of the Consultancy rules) in case of TAC projects*



# Trident Academy of Technology

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