

JALPAIGURI GOVERNMENT ENGINEERING COLLEGE
(Autonomous)

Research & Consultancy
Policy Document



Approved by AICTE & Affiliated to MAKAUT, West Bengal,
Accredited by NAAC

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Research & Consultancy Policy

1. Introduction

It is important ‘to be the fountainhead of new ideas and of innovation in technology and science’ and with its general goal of ‘creating an ambience in which new ideas, research and scholarship flourish and from which the leaders and innovators of tomorrow emerge’. Research & Consultancy is the foundation of knowledge that brings new energy, builds state of the art facilities, promotes research publications and develop collaborations. Research and Consultancy activities create and disseminate new knowledge and promote innovation that motivates better teaching and learning among faculties and students at Jalpaiguri Government Engineering College (JGEC). Jalpaiguri Government Engineering College Research and Consultancy Policy is designed to support research culture among faculty and students and to encourage consultancy works among the faculty and staffs of the institute for the betterment of the society. With this objective, JGEC established Research & Development Cell, Centre for Innovation (CFI), Robotics Club, and Coders Club. In this endeavor, this document states the Research & Consultancy policy so that individuals involved in these activities will abide by certain rules and regulations pertinent to research and consultancy.

Vision

To motivate students and faculties and inculcate multi-disciplinary research and innovative thinking for the betterment of the society.

Mission

1. To create awareness on evolving technologies and industrial standards for products.
2. Strengthen industry institute interaction.
3. Create opportunities for students to work on research and industrial projects.
4. Generate innovative ideas on societal problems.
5. To solve real life problems

2. Objectives of the Research & Development Cell

- To set up infrastructure for research and consultancy work.
- To build the industry - institute relationship and aid the better product development in

quality at reduced cost.

- To build relationships through of MOUs for long term relationships with national and international research organization and industries for widening the scope of research options and funding opportunities for faculty and students.
- To facilitate and encourage the quality publications of the research work and share the results to the entire research community.
- To promote and encourage societal problem solving.
- To encourage faculty members for getting sponsored research projects from different agencies.
- To develop, prescribe and administer rules and regulations to ensure the compliance of all researchers to the research quality assurance framework and the research code.

3. Composition of Research & Development Cell

Research Cell will have the following composition

Principal	– R&D Chairperson
Two industry experts	– Advisory Board members
One senior professor	– Central R&D Coordinator
One senior faculty from each Department	– Department R&D Coordinators
One alumnus	–Advisory Board members

4. Research Policy Implementation Mechanism

The Research & Development Cell of the college shall be responsible for implementing the research policy by working closely with the college management. The specific roles and functions of the research cell will be as follows:

1. Conduct R&D Advisory board meeting twice a year with the external members to evaluate the research activates and schedule plan of action for the subsequent year.
2. Provide research facilities in terms of laboratory equipment, research journals aid, research incentives etc. required by the faculty.
3. Assist the faculty in undertaking research

4. Promote and uphold a research culture
5. Organize workshops/ training programs to execute research and consultancy works on campus.
6. To assist in Patent filing process
7. To facilitate industry to use the infrastructure of the college and sponsor research projects.
8. Develop facilities to check plagiarism in research.

5. Promotion of Research

The faculty and students are given freedom to choose the research area of their choice and guidance is given to seek funding from various Government organizations and industries. The institute encourages the faculties and students for peer reviewed publications, consultancy works, writing books and filing patents. The institute arranges workshop for patent filing. Institute provides the necessary infrastructural facilities, conducive work culture to promote research; consultancy, innovation and intellectual property right. Due to limited resources the college may not be able to fund all the research activities taken up by the faculty and students. It is the responsibility of the faculty to apply for various funding agencies and pursue their research.

The UG and PG students are encouraged to take up a specific task in the research projects funded by various government agencies / industry under the guidance of faculty investigators. The students who are participating in such funded projects should undertake the task of technology transfer to undergraduate and postgraduate students for further continuation of the research projects.

6. Funding for Faculty and Students

The Institute shall provide grant to faculty and students for Research Projects with the prior approval of Governing Body as per the availability of fund. The following are the rules for sanctioning the Research Projects from the Institute:

- a. Concerned faculty or student have to apply to principal for the grant required for doing project/ attending conference, workshop etc.
- b. Principal may approve and provide fund with the approval of

Governing Body.

7. Sponsored Research Projects

The faculty can submit Research Project proposals to various funding agencies like AICTE, UGC, DST, DRDO, ISRO and in different private and public sector. The proposals to be submitted are scrutinized at the department level before submitting the same to funding agency. The Institute provides all kinds of infrastructure facilities required for conducting a preliminary Research for Project. The funding must be obtained from the organization for which the project is sanctioned. This funding must cover all aspects which include equipment, testing facilities, specialized manpower resources etc. The system to be adopted for conducting the research will be discussed with the Principal and approval of the Principal is obtained before such an effort is undertaken.

Every department faculty may associate with the Industry for collaborative research, which lead to publications and patents in collaborative with industry. Students, either from UG or PG programs can be involved in the sponsored research projects and can be paid research assistant allowance from sponsored research funding as per the rules and regulations of the project.

8. Collaborative Research & Consultancy Projects

- (i) **Industry Sponsored Research Project:** A public/private sponsored projects can utilize experts of the institution concerned to conduct research. If any patent is registered, then there shall be a sharing of income generated from patenting among the industry, researcher and institute. This will lead to three kinds of benefits:
 - a. The researcher will get an exposure to the concerned area of research.
 - b. The industry will get solutions to their problem.
 - c. The researcher, institute and industry can earn money and at the end, the society will be ultimately benefited.

- (ii) **Interdisciplinary Research:** Interdisciplinary research is the order of the day. No department, institution, researcher or scholar can address a research problem in which more

than one discipline is involved. It is only when they interact with each other that interdisciplinary research is possible and yields results. Therefore, the Institute has decided to conduct interdisciplinary research activities for which the following actions will be taken:

- a. Identify the interdisciplinary area.
- b. Identify the different experts from concerned disciplines who can work together.
- c. Study the requirement of the infrastructure to conduct the concerned interdisciplinary research.
- d. Explore possibilities to find resources for such interdisciplinary research.

(ii) **Inter-institutional Research:** The faculty is encouraged to prepare the proposals in collaboration with well-established research institutes such as IIT's, NIT's, Central Universities and other engineering colleges having research interest. The faculty may be as Principal Investigator or Co-Principal Investigator depending on the contribution towards the research with the collaborating Institute.

(iii) **Consultancy Projects :** The Institute allows staff to engage in Research, Non-research and/or Private Consultancies provided they do not affect the regular duties. Consultancies shall be undertaken only with the approval of Principal. No limit is placed on earnings. However there is a limit on the time spent on Consultancy. The sharing of fee for Consultancy and related services offered are as West Bengal Government Order 649 Edn (T) dated 31st October, 2006.

The order is as follows:

GOVERNMENT OF WEST BENGAL
Department of Higher Education
Technical Branch
Bikash Bhawan, 9th Floor,
Salt lake, Kolkata - 700 091

Memo No 649 -Edn.(T)

Dated : 31st October, 2006

From .. Shri A M Chakrabarti,
Principal Secretary to the
Govt. of West Bengal.

To The Principal Accountant General (A&E),W.B.,
Treasury Building,
Kolkata - 700 001.

Sir,

I am directed to state that the four Govt Engineering & Technological Colleges viz. Kalyani Govt Engineering College, Kalyani, Jalpaiguri Govt Engineering College, Jalpaiguri, Govt. College of Engineering & Ceramic Technology, Kolkata and Govt College of Engineering & Textile Technology, Serampore have been receiving financial assistance under the Govt. of India sponsored externally aided Technical Education Quality Improvement Programme along with seven other Engineering institutions of this State including three state aided universities.

In terms of the Development Credit Agreement sign by the Govt. of India and International Development Agency (IDA) and the Project Agreement signed by the Govt. of West Bengal and the International Development Agency, the major legal covenants of this programme, to be complied with by the participating State are :

1. Granting Academic, Financial, Administrative and Managerial autonomies to the participating institutes with Accountability ;
2. Changing pattern of non-plan funding to 'Block Grant' for the publicly funded and aided institutions ;
3. Establishment of Corpus Fund, Staff Development Fund, Depreciation Fund and Maintenance Fund in each Programme Institutions.

2 All the three Universities viz. University College of Technology, Calcutta University, Bengal Engineering & Science University, Shibpur, Faculty of Engineering & Technology, Jadavpur University participating in the programme, enjoy full autonomy in all respects and the non-plan fund from the State Budget is also being provided to them as Block Grants Four private self financing institutes under this programme also enjoy full Financial, Administrative and Managerial autonomies West Bengal University of Technology to which the eight programme institutions including four Govt. Engineering &

Technology colleges are affiliated to has already allowed substantial academic autonomy for them

~~Now with a view to adhering to the terms of the Development Credit Agreement,~~
it has been decided that as the first step towards granting desired autonomies to the four Govt Engineering and Technological Colleges under this programme, certain reforms may be introduced to meet the requirement of this programme

3. I am, therefore directed by order of the Governor to state that the Governor is pleased to introduce the following institutional reforms from the current financial year (2006-2007) in the four aforesaid Govt. Engineering and Technological Colleges participating in this externally aided Technical Education Quality Improvement Programme to enable them to enjoy significant Financial, Administrative and Managerial autonomies in running the institutes with proper accountability.-

(1) Block Grant Funding :

Non-plan funding pattern for non-salary items of expenditure in these four institutes has already been switched over to Block Grant funding vide Govt order No 598-Edn(T) dated 28th September, 2006.

(2) Retention of Tuition & Other fees :

(i) All these institutes are hereby authorized to prescribe tuition fees, Development fees etc. for their own students within the parameters including upper ceiling of Tuition and other fees as may be prescribed by the Govt from time to time on the basis of the recommendation of the Fee Structure Committee or otherwise. The revision of student's fee structure is a very sensitive issue and therefore the institutes should execute this part carefully. Increase in existing tuition fees should be adequately accompanied with suitable schemes of scholarships and free-ships for the weaker sections of the society to promote equity and access.

(ii) These institutes are also being allowed to retain such tuition and other fees collected from the student and utilize the same according to their own perspective plan in the manner as specified hereinafter with the approval of their respective Board of Governors.

(iii) Operation : The entire tuition fees and other fees, if any, collected from the students should be deposited in the Bank Account of the institute opened in terms of the G O No 598-Edn(T) dated 28th September, 2006. These will, however, be accounted for separately from the normal Block Grants and other receipts by the institute from the Govt. and other sources but will be appropriately reflected in the Annual Budget (Plan and Non-plan) of the institute. All transactions out of these Receipts will be

managed by the Financial Management Committee constituted in G.O. No. 598-Edn(T) dated 28th September, 2006 and will be under the overall supervision of the Board of Governors of the institute.

Utilisation

Income from tuition and other fees etc. will be utilized for institutional development relating to improvement of quality of education as per the perspective plan of Institute approved by the BOG and the State Govt. and if necessary, for meeting operational expenses within the Annual Budget of the institute that remains uncovered by the Block Grant from the Govt. with the prior approval of the Financial Management Committee and Board of Governors of the institute.

Full amount of Savings out of the tuition fees received and interest accrued thereon at the end of each financial year shall be deposited in the "Corpus Fund" and "Depreciation Fund" of the institute as prescribed hereinafter. Savings out of Development and other fees will be invested in corpus fund and Staff Development Fund as specified in this order

(3) Internal Revenue Generation (IRG) :

TEQIP envisages the need for greater thrust on generation of income by the institutes from sources other than Tuition Fees to ensure full sustenance of reform measures.

(a) All these institutes are, therefore, permitted to generate, retain and utilize revenue internally generated by the Institutes through sources other than tuition fees as detailed below in order to ensure optimum utilisation of both human and physical resources available in the institute as a whole including those acquired and developed through TEQIP

1. Calibration and Testing
2. Consultancy Services including projects sponsored by private or public sector industry.
3. Sponsored research Projects.
4. Continuing Education Programme.
5. Short-term courses for target groups from organized / unorganized sector
6. Self-financing degree programmes etc. with the approval of the statutory authority
7. Industry-Institute interaction programme ensuing mutual benefit including revenue generating activities.
8. Rational utilisation of available facilities like academic space, play ground, seminar / conference hall, equipment etc.

9 Income, if any, from non-formal Network activities should also be treated as IRG

The above list is not exhaustive but a suggestive one since there are various other avenues to generate revenue without sacrificing the academic interest of the students and faculty in the institute which institute shall explore.

This resource generation and knowledge dissemination activities should be adequately encouraged by the institute. The institute should prepare at the beginning of every semester Faculty Engagement Chart which should indicate teaching commitment as well as expected involvement in the aforesaid activities. Every Faculty should furnish Faculty Achievement Chart indicating his academic achievements and resource generation activities during this period including reasons for over or under fulfillment from planned hours. Similar system may also be adopted by the institute in respect of technical and non-technical staff who will be involved in resource generation activities.

The Board of Governors of the institute, if so decides, may evolve a mechanism to give recognition to significant achievements of Faculty and Staff through financial and non-financial awards out of the institutes own resources.

Utilisation :

To encourage the Faculty and the Staff of the Institute to be involved in IRG activities in addition to their normal academic and other duties, 60% (sixty percent) of net income from each of such revenue generation activities may be given to the concerned Faculty and Staff as Incentive. The institute with the approval of the BOG, should fix up appropriate sharing percentage of the incentive amount between the Faculty and the Staff engaged in IRG activities. Rest 40% of the net income along with interest, if any, accrued on IRG should be retained by the institute and utilized for the development of the institute in due course by way of investment in four types of funds as specified hereinafter. No part of this IRG should be used for deficit financing purposes. In respect of Sponsored Research project where element of Institutes' over head expenditure is provided the same shall be treated as IRG and invested in four different funds. Modalities in this regard may be formulated by the institute with the approval of the BOG keeping in view the terms and conditions of the sponsoring organization

Management :

* All receipts on account of these IRG activities should at first be deposited in the Institute's Bank Account opened in terms of G.O. 598-Edn(T) Dated 28th September, 2006. All expenses to be incurred for each individual IRG activity should be met out of this receipt. Any initial expenditure incurred for this purpose out of institutes own resources should be ploughed back out of the IRG receipt. Net income out of each

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individual IRG activity should be shared by the Institute, Faculty and Staff involved in the manner as indicated above.

The IRG Account for the Institute as a whole including distribution of the Institute's share in four different funds should be maintained separately. This should, however, be audited by the Accountant General, West Bengal as usual as apart of the institution's Accounts and a copy of annual IRG Account with the approval of Financial Management Committee and Board of Governors should be submitted to the H.E Deptt. & Finance Deptt immediately after the close of the financial year.

(4) Creation of Four Types of Fund In the institution :

To ensure sustainability of the reforms being implemented under TEQIP beyond the Project period institutes are also authorized to establish following four Funds :

- I. Corpus Fund .
- II Staff Development Fund.
- III Depreciation Fund.
- IV Maintenance Fund

The creation, operation and utilisation of all these four funds will be as per the following guidelines :

1 (a) Corpus Fund :

Each institute shall establish a Corpus Fund the sources of input being

- i) Contributions / donations / grants by
 - (a) Industry, Association, Foundation Trusts or any other organization in India or abroad ;
 - (b) Alumni, faculty, Staff, Student, Well-wishers of the Institute.
- ii) Matching or other grants etc. if any, sanctioned by the State Govt. / Govt. of India.
- iii) Savings from Tuition Fee and interest accrued thereon.
- iv) 50% savings from Development and other fees, if any, collected from the students
- v) 50% of Institution's share of the net income from self-financing degree programmes etc
- vi) 50% of Institute's share of net income from Institute-Industry interaction leading to internal revenue generation activities.

(b) Operation :

A separate Bank Account christened as "Corpus Fund" should be opened in any of the Scheduled Banks with the due approval of the State Govt

For remittances from abroad, if there be any, a foreign currency bank account may also be opened with the approval of the State Govt. and Reserve Bank of India. All contributions etc. from sources indicated above shall be deposited in these accounts. The funds to be accumulated in these accounts will be invested as per guidelines to be prescribed by the BOG not at variance with the State Govt.'s instructions regarding investment of public fund. The status of the Corpus Fund, including deposits, interest, assets will be appropriately reflected in the Annual Accounts of the institute. Separate Books of Accounts should be maintained for this Fund. Proposals for utilisation of the interest accruals on the Corpus Fund and income from assets, will, however, form a separate part of Annual Budget of the Institute.

(c) Utilisation :

The "Corpus Fund" will be kept separate from the normal grants from the Govt. and other receipts of the institute. The Board of Governors may fix up a minimum level of accumulation of fund as Corpus to the institute before reaching of which no withdrawal from this fund shall be allowed and obviously after completion of the project life time. This fund should be used for development of Institute such as renewal of existing infrastructure, creation of new one etc. that are Capital expenditure in nature which are at times not covered through Govt. Funding If necessary, a part of the interest accrual may be utilized for operational expenditure of the institute as a budgeted expenditure with the approval of the BOG.

2

(i) Staff Development Fund :

A Staff Development Fund shall be established in each institute the sources of which will be :

- (1) Full amount of institutions share of net income from continuing education programme
- (2) 50% of Institutes share of net income from self-financing degree programmes etc.
- (3) 50% of Institute's share of net Income from Institute-Industry interaction relating to internal revenue generated activities.
- (4) 50% of the institutions share out of IRG from consultancy services.
- (5) Residual portion of institutions income from Development and other fees, if any.
- (6) Full amount of institute's share of net Income from non-formal Networking activities

(ii) Operation :

A separate Bank account in the name of "Staff Development Fund" shall be opened in any scheduled bank with the due approval of the State Govt. Amount to be accumulated in this Fund may be invested as per guidelines to be prescribed by the BOG from time to time in the manner as indicated above. Accumulation in this Fund, interest accrued thereon and investment made out of this fund will form a part of Annual Accounts of the Institute for which separate Books of Accounts should be maintained. Utilisation of this Fund as approved by the BOG shall be appropriately reflected in the Annual Budget.

(iii) Utilisation :

This Fund will be utilized for critical Staff Development activities including Faculty and Staff upgradation not covered by Govt Grant and as may be specified by the Board of Governors of the institute.

3 Depreciation Fund :

(a) A Depreciation Fund should be maintained by each institute with :

- (i) 25% of the institutions share of net income from consultancy services
- (ii) Upto 50% of the Internal Revenue generated by rational utilisation of available facilities like academic space, play ground, seminar, Conference Hall, equipment etc.
- (iii) Upto 50% of the savings from Block Grant and sanctioned Budgeted expenditure (non-plan). The BOG of the institute may also consider depositing in this Fund a fixed percentage of non-plan budget of the institute keeping last three years' average provision for "Equipment" in view.
- (iv) 50% of Institute's share of net income from calibration, testing, training courses for target groups etc

(b) Operation :

A separate bank account shall be opened with any scheduled bank styled as "Depreciation Fund" with the approval of the State Govt. All income and expenditure of this Fund shall be appropriately reflected as a part of the institutes' Annual Account for which separate Books of Accounts shall be maintained.

(c) Utilisation :

This Fund should be utilized for removing obsolescence i.e. unserviceable equipment replacement purposes. Detail norms of utilisation of this Fund will be as may be decided by the Board of Governors of the institute.

4 Maintenance Fund :

(a) Each institute shall create a "Maintenance Fund" by depositing the amounts from the following sources :

(1) Upto 25% of the institution's share of net income from consultancy;

(2) Upto 50% of the revenue generated by rational utilisation of available facilities in the institute like academic space, play ground, Seminar / Conference Hall Equipment etc.

(3) Upto 50% of the Savings from Block Grant and sanctioned Budgeted expenditure (non-plan).

(4) 50% of Institutes share of net income from calibration and testing, training courses for target groups etc.

The BOG of the institute may also consider depositing a fixed percentage of the non-plan Budget of the institute keeping last three years average expenditure on "Maintenance"

(b) Operation :

A separate bank account shall be opened with any scheduled bank styled as "Maintenance Fund" with the approval of the State Govt. All income and expenditure of this Fund shall be appropriately reflected as a part of the institute's Annual Account for which separate Books of Accounts shall be maintained.

(c) Utilisation :

This fund is meant for usual and regular maintenance of Equipment & Facilities of the Institute. Details norms of utilisation will be as decided by the BOG of the institute.

4. I am further to state that

(1) accumulation in these four funds including interest accrued on the deposits should not be used during the period of implementation of TEQIP in the institute since these funds are aimed to make the institute sustainable beyond the Project period. Utilisation of these Funds will commence with the approval of the BOG after the close of TEQIP ;

(2) Bank Interest on TEQIP Fund should be ploughed back to the Project Fund ;

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- (3) All Bank interest accrued on Block Grant and other receipts shall be invested in the Corpus Fund ;
- (4) No element of Plan Fund received from the Govt. should go to these Four Funds
- (5) Percentage of deposit from different IRG activities to these four funds as indicated above are suggestive and actual percentage will be decided by the BOG of the institute. Such percentages in respect of IRG activities not indicated in this order will also be fixed by the BOG
- (6) The entire financial transaction of the institute including those contained in this order shall be managed by the Financial Management Committee under the supervision of the Board of Governors of the institute and shall be subject to statutory audit by the A.G ,W.B
- (7) The Drawing & Disbursing Officer of the institute will also be the D.D O. in respect of all these funds.

5 The BOG of the institute is also hereby authorized to frame operational Regulations in respect of Implementation of the reforms including the Four Funds to be established in the institute with the approval of the State Govt.

6 This issues with the approval of the Finance Deptt -vide Group 'N' u/o no.3394 dated 06.01.2006 and u/o no. . 2224 Group 'T' dated 09.01.2006 and with the approval of the Cabinet

Yours faithfully,
Sd/- A M. Chakarbarti
Principal Secretary to the
Govt of West Bengal

1. Intellectual Property

In case of any innovation, the institute shall encourage the researcher to patent it. The institute will help for filing application towards patenting. This scheme is introduced by the management of Institute to impart research culture and to motivate faculty towards identifying new innovations.

2. Code of Ethics for Research

- **Academic Honesty**

The Institute holds high respect for Honesty in all scientific Communications-honesty in reporting data, results, methods and procedures, and publication status. The institute does not entertain fabrication, falsification, misrepresentation of data. Deceiving colleagues or funding agencies or public is considered misconduct on the part of the researcher.

- **Integrity**

The Institute gives high regard for keeping up promises and agreements, sincerity and consistency of thought and action.

- **Carefulness**

The principles of good research are to avoid careless errors and negligence. One must carefully and critically examine one's work and the work of peers and keep a record of research activities such as data collection, research design, and correspondence with agencies of journals.

- **Respect for Intellectual Property**

Another most important thing is to honor patents, copyrights, and other forms of intellectual property. One must not use unpublished data, methods, or results without permission. Credit needs to be given where credit is due. Research contributions must be given proper acknowledgement/credit and plagiarize must be avoided at any cost.

- **Confidentiality**

It is ethical on the part of any researcher to protect confidential communications such as papers giants submitted for publication, personal records, trade or military secrets, and patient records.

- **Social Responsibility**

Another principle is, to mitigate social harm through research, public education, and advocacy.

- **Competence**

It is desirable to improve professional competence and expertise through lifelong education and learning. One must take steps to promote competence in engineering or science as a whole.

- **Legality**

A researcher must know and obey government policies, relevant laws and institutional rules and regulations

- **Protection of Human Subjects**

It is advisable to minimize harm and risks to human subjects and take special precautions with vulnerable populations when conducting research. We need to respect human dignity, privacy, and autonomy. It is desirable to maximize the benefits from research and distribute the benefits and burdens of research fairly.

- **Rules for Preventing Plagiarism**

All Project/Seminar Reports, Dissertations/ Thesis, Research Papers, Case Studies, and any such documents need to be checked with the Standard Plagiarism Software Tool. In case of Project/Seminar Reports, Dissertations/ Thesis, the concerned student needs to submit a plagiarism report generated by a Software Tool to the department