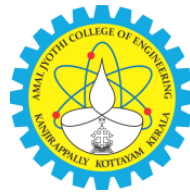


Amal Jyothi College of Engineering Kanjirappally



Research and Consultancy Policy

Preamble

Research and Consultancy enjoys a prominent place in higher education. Amal Jyothi College of Engineering, Kanjirappally, is committed to provide a vibrant atmosphere of research and an environment conducive to support high quality Research, Development and Consultancy activities in all departments by faculty and students. The technology developed will be delivered to the industries through transfer and proliferated in the society for their benefit in general. The policy framework of Research and Consultancy envisions the development of the College into a Knowledge Center which shares its knowledge and expertise with various stakeholders like related industries/ organizations/ institutions and communities.

This policy statement mainly deals with

Research Policy

- Research Promotion Measures
- Research Collaboration, Grants and Funding
- Research Facilities
- Promotion of Research culture among Faculty and Students
- Maintenance of Research Records, Data Storage and Retention.
- Research Publication, Authorship and IPR
- Conflicts of Interest

Consultancy Policy

- Encourage Consultancy by faculty
- Encourage Consultancy by department
- Financial benefits to the institution and staff
- Conflicts of Interest

Policy Review

- Need based review of policy matters

In order to advise/support the AJCE Management/Academic Council, a Committee is constituted with the following:

1. Director - Chairman
2. All Deans - Members
3. Two faculty members nominated by the HoI- Members
4. Dean (Research) - Convenor.

The Committee shall be called Amal Jyothi Research and Consultancy Council (AJRCC).

A. Research Policy

1. Definitions

For purposes of this Research policy, unless otherwise stated, the following definitions and abbreviations shall apply:

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|---------------------|--|
| AJCE | Amal Jyothi College of Engineering |
| AJRCC | Amal Jyothi Research and Consultancy Council |
| Manager | Custodian of the College |
| Principal | Academic Head |
| HoD | Head of the Department |
| Academic Council | Steering Body of the College |
| Management | Consists of the Patron, Manager, Director, Bursar, Principal, and the members of the Governing Body. |
| Research data | The data, records, files or other elements that form the basis of the main inferences, observations, findings, conclusions, outcomes or elements of a research project or publication, irrespective of the form in which it exists (eg. in print, electronic, physical, multi-media or other forms). |
| Researcher | Any staff member, student, or person associated with the College, who conducts research in the course of their Employment/ Study /Association. |
| Research Guide | Faculty of the college who are authorized to guide research /PhD /student projects. |
| Research Misconduct | Research misconduct as defined by COPE (Committee on Publication Ethics). |

2. Nature of Research

1. Basic Research - Exploratory Research leading to PhD by students and further Research & Development (R&D) that enable technology development and consultancy.
2. Application oriented Research, Design and Development (R, D&D) leading to consultancy, project management and product development.
3. Research, Development and Engineering (R, D&E) jointly with industries and R&D organization that can lead to Manufacturing and Transfer of Technology(ToT)

3. Research Policy - General

- 3.1 AJCE aims to provide a research environment that will promote a culture of quality research that is ethical, competent, safe and accountable.
- 3.2 Researchers with the support of Dean (Research) and the department HoD, are responsible for developing and maintaining an ethical and safe environment within each department. Researchers must comply with relevant legislation, guidelines, policies and directives with regard to ethical and safe practices in research.
- 3.3 Research within AJCE must be conducted in accordance with the principles outlined in the Vision and Mission of AJCE, and with relevant guidelines issued by the affiliating University.
- 3.4 AJRCC shall meet at least twice annually.
- 3.5 AJRCC shall present half yearly reports to the Management showing the achievements, specifying areas needing improvement etc. or on any significant issues that may arise with regard to the conduct of research.
- 3.6 Researchers will be responsible for conducting their research in compliance with this Policy under the directions of the Research Guide, in accordance with the provisions of the affiliating Universities and other Regulatory Bodies.
- 3.7 All interested faculties and students shall apply for funds or seek project funds from appropriate funding agencies wherever available, with the knowledge of AJRCC for their research.
- 3.8 Researchers shall submit research proposals to AJRCC (if facility is required to be added or arrangements need to be done by the college) in accordance with policies or guidelines specified by the College.
- 3.9 Researchers shall submit a copy of the research proposal for external funding to AJRCC. A copy of the progress report from time to time shall also be submitted to AJRCC.
- 3.10 Researchers shall keep the AJRCC informed of the funds they receive to support their research, and comply with any conditions specified by funding agencies with respect to their research.
- 3.11 Research conducted in any Department under a contractual arrangement with an external party shall be undertaken only based on an MoU/MoA signed by both the parties.
- 3.12 Research having potential for commercialization shall be undertaken only in compliance with the relevant College policies and procedures, in particular, with the college Policy on Intellectual Property Rights.
- 3.13 All academic staff are free to conduct research and publish their findings, subject to commercial and confidential sensitivity, in open literature.
- 3.14 The career enhancement of the faculty through research shall not affect their normal teaching and academic responsibilities. Every part-time researcher shall ensure that they meet the minimum work load specified by AICTE.

- 3.15 Various facilities (testing and computational) available at different departments can be availed by the researchers in consultation with the respective HoDs /faculty in charge of labs.
- 3.16 AJRCC shall extend support in setting up research centers to promote, streamline and execute research activities in line with the national policy and the specialization of faculty.

4. Research Promotion Measures

Constitution of AJRCC at the college level is to advise Principal/Management on research related matters and monitor research activities in the college. The activities which may be undertaken under research promotion are given below:

- 4.1 Setting up of a research wing in each department to promote, streamline and execute research activities in the department. The Co-ordinator of the research wing in the department de facto shall be the point of contact in the department for AJRCC.
- 4.2 Agreements (MoU/MoA) on collaboration shall be scrutinized by the Chairman of AJRCC in consultation with members and the Registrar, if so required. Infrastructure buildup and its MoUs shall be signed by the Manager, and the MoAs related to research/ projects by the Principal.
- 4.3 Organize workshops on research methodology or key research areas in the college for students, faculty and interested third parties.
- 4.4 Identify faculty group/s to undertake research and development projects that are announced by the various funding agencies and guide them in proposal drafting.

Documentation

- 4.5 All research/ projects will be identified with a numbering system to keep track of the technical, administrative and financial progress. One set of documents will be kept under the custody of Dean(Research).

Steps to nurture early stage research

- 4.6 To promote research and innovation among students and faculty, a scheme called Innovation Ideas Unleashed (I2U) is in place, where good student projects are identified and seed money awarded by the college.
- 4.7 MTech students are eligible for a Research/ Teaching Assistantship.
- 4.8 Any faculty member who joins the College as an Assistant Professor with a PhD is granted a special pay of Rs 15,000/- per month for a period of three years to encourage research and project-related initiatives. All faculty with PhD are expected to take an active part in initiating project proposals and FDPs that lead to funding from user agencies. The performance is reviewed after three years and will be continued if their contribution is satisfactory.
- 4.9 To explore new developments in the area of specialization all faculty are permitted to attend the training program with TA/DA. The training shall have to be of one to two weeks

duration. Two training programs are allowed per year per faculty and shall be attended without affecting the academics. One training has to be in IISc/ IIT/ NIT/ Public sector undertakings that come under Navarathna or higher. The faculty who attend the training have to submit a report to the department and disseminate their knowledge among colleagues by conducting lectures to interested faculty and PG students.

Leave for PhD and PDF by faculty

- 4.10 Leave shall be granted to academic staff to pursue academic/ research interests at premier Indian and foreign Institutes /Universities relating to the primary employment at the College. During leave, faculty won't be committed to College activities. The period of service at the College shall be protected during the leave. Only a faculty having a service of three years in the College shall be eligible. Leave shall not be granted during probation.
- 4.11 The faculty admitted to national-level institutes under external-registration scheme for PhD is eligible for a stipend of Rs. 25,000.00 during their course work period of 180 days and lab facilities will be provided by the college to carry out their research. The same facility is extended to faculty who carry out part time research work leading to PhD under KTU.
- 4.12 For a faculty member, who is the presenting author for paper presentations in international conferences organized by the national research /academic institutes, 50% of the expenses for presenting the paper shall be borne by the college and 25% by the Department to which the faculty member belongs. The expenses shall include registration fee, accommodation, and travel cost, subject to the approval of the same by the Manager on the recommendation of the Principal. A faculty shall be eligible to avail this facility only once in two years. For international travel for paper presentations, 50% of the expenses shall be borne from the external funding, 25% by the college and 12.5% by the department.
- 4.13 In case of research activities leading to patent applications, the patentee shall be solely the college, and the inventors shall be the concerned staff/ students /the collaborators. The college shall bear 50% of the financial expenses, up to the grant of patent. But, this shall not include the consultancy or attorney fee, if any. However, the college shall bear the full cost upon the grant of patent, and also its renewal fee. In return, the patent rights would be bestowed with the college. As a measure to encourage development of patentable research work, faculty members associated with the patent will be provided with 50% of any revenue realized from the patent rights, while 50% of the revenue would rest with the college. Sharing of rights would be based on case-to-case recommendation of AJRCC to the Management. All patentable research works/ project works carried out at AJCE shall be patented with AJCE as the patentee, with or without any financial support from AJCE, but with the involvement of AJCE students and staff.
- 4.14 All reasonable expenses for submission of research proposals shall be reimbursed by the institute from department funds
- 4.15 The students who carry out their research as part of a funded project will be granted research fellowships following the guidelines of the funding agency in this regard. They may register for Ph D at the affiliating university (KTU) in which AJCE faculty are approved as guides.

5. Research Collaborations, Grants and Funding

- 5.1 College considers collaborations as an ideal step for furthering research for the mutual benefit of the parties involved. Collaborations facilitating sharing of resources, human and infrastructure are promoted by the college provided it benefits the research endeavors of the college as well.
- 5.2 Collaborations with Universities abroad and premier institutions in India are/ will be given special attention. However, due care shall be taken so that such collaborations are in tune with relevant national policies and college regulations.
- 5.3 The collaborating departments/faculty shall inform their plans in advance and get the guidance of AJRCC for any type of collaboration with third parties.
- 5.4 Copies of external grant applications shall be provided to AJRCC as soon as the applications are submitted.
- 5.5 All internal grant applications submitted by the faculty must be submitted through AJRCC. Internal funding may be given as per the recommendations of AJRCC who will evaluate each proposal as per given criteria and recommend projects which are worth pursuing. AJRCC may also:
 - provide advice regarding the preparation of applications,
 - review applications which are submitted in accordance with internal deadlines.

6. Research Facilities

The Research Faculty/ HoD shall evaluate and identify the facilities required for the smooth conduct of research. The recommendations may be submitted to the AJRCC for appropriate actions preferably by the end of each academic year:

- 6.1 An analytical instrumentation center may be established with modern facilities to the extent possible for research.
- 6.2 HoD's/directors are responsible for seeing that research equipment in their department/center is accounted for and optimally utilized.
- 6.3 Purchase electronic journals as per the needs of each department and make it available in all systems in the library/lab.
- 6.4 Inter library collaborations such as book loan facility, documentation services, sharing of databases etc. will be made available to researchers.
- 6.5 Researchers and Librarians shall make arrangements to publish all student and faculty research reports on the college website and update them periodically.

7. Conduct of Research by Students and Faculty

- 7.1 Students conducting research must comply with the provisions contained in the Policy on Research of the College and the University.

- 7.2 The Research Supervisor of a student is responsible for providing guidance to students on all matters of research practice, and ensuring that students are informed of relevant University policies and procedures that affect the conduct of the student's research.
- 7.3 The use and storage of research data, publication of research findings, confidentiality, or commercialization or other agreements will apply to all members of the research group.
- 7.4 A supervisor is entitled to have access to research data and other relevant information about the research of a student for the purposes of undertaking normal supervisory responsibilities and ensuring compliance with this Policy and other University policies.
- 7.5 Students are required to:
- (i) Maintain regular contact with the Research Supervisor (Co-supervisor or internal supervisor in absence of research supervisor), and complete the review of progress, as specified in the Research Policies or as specified in University regulations for conducting research as part of the curriculum.
 - (ii) Obtain prior approval from the Research Supervisor and AJRCC to enter into a contractual agreement for commercial research.
 - (iii) Maintain confidentiality in respect of the student's research data, methodology, and findings.
- 7.6 A supervisor should advise the research student to take such steps to ensure the validity of experimental data, research methodology, requirements for maintenance of records, storage and retention of research data and provide verbal and written feedback to the student on a regular basis.
- 7.7 If a supervisor has concerns about the validity of a student's data, the student's record keeping, data storage or research practices, the following steps shall be taken:
- (i) the supervisor should provide written advice to the student, and document any steps taken by the student to address the matter;
 - (ii) if the matter is not addressed expeditiously to the satisfaction of the Research Supervisor, the supervisor should apprise the HoD and notify the student accordingly.
 - (iii) if the HOD is unable to resolve the matter expeditiously, the matter shall be referred to the Chairperson of the AJRCC who will recommend further action to the Principal in accordance with the relevant Research Policy of College/University
- 7.8 Upload all the student research /project reports on the college website. Each department shall collect one hard copy of the Project report and the same shall be submitted to the college library. No dues certificate for students from the library may be issued only after getting a PDF version of the report. A notice informing students about such a requirement may be circulated in the month of January every year.

8. Maintenance of Research records, Data Storage and Retention

- 8.1 The AJRCC will issue guidelines specifying the requirements for reporting research activities, maintaining research records and retaining and storing research data in the concerned department.

8.2 Each researcher will be responsible for

- (i) reporting on his or her research activities, projects and publications, as required, through half yearly progress reports;
- (ii) publishing research findings with other authors in suitable national/international journals/conferences.

8.3 The Management, Manager, Principal, Head of AJRCC, and other persons authorized by the Principal will be entitled to have access to research records and data of any researcher, for the purpose of ensuring compliance with this Policy.

8.4 A researcher who uses data or research materials obtained under an agreement between the College and an external agency is bound by the terms and conditions to which the college/researcher is a signatory, and is required to use the data or materials in compliance with such terms and conditions.

8.5 Access to research data of one research group to another research group may be limited by confidentiality provisions, normally for the purposes of protecting:

- a third party who is the subject of the research (Biomedical research),
- intellectual property right that may be the subject of a commercial exploitation,
- confidentiality of materials/results.

8.6 Supervisor of the researcher will be responsible for ensuring arrangements to protect the security of any confidential research data, including data held in computer systems.

9. Handling of research misconduct and fraud

9.1 Misconduct or fraud in research may include, but are not limited to, the following:

- (i) fabrication of data: claiming results where none has been obtained;
- (ii) falsification of data, including changing records;
- (iii) plagiarism, including the direct copying of textual material, the use from research work of other people without adequate attribution;
- (iv) misleading ascription of authorship, including the listing of authors without their permission, attributing work to others who have not in fact contributed to the research, and the lack of appropriate acknowledgment of the work of a student or associate;
- (v) an infringement of the College's Policy on Research Conduct or other research related policies that is either intentional or caused by negligence.
- (vi) not securing the approval of the relevant ethics committee in cases where research involves human or animal subjects

9.2 Misconduct does not generally include unintentional errors, or differences in interpretation or judgment about data.

9.3 Any complaint alleging research misconduct may be made to the AJRCC in writing. by a supervisor/research scholar/faculty Once a complaint has been received the following actions are taken

The AJRCC may appoint two senior academic faculty members who are experienced researchers as Contact Officers towards whom allegations of research misconduct can be directed. Principal may seek such additional information and advice, that may be required to establish whether the matter warrants further investigation, and will either,

- (a) decide that the allegations have no substance and dismiss the complaint; or,
- (b) refer the matter for consideration and action through an appropriate College process; or
- (c) decide that the allegations require further investigation as a potential matter involving misconduct or fraud, and initiate an investigation of the matter in accordance with section 9.1 above

9.4 In the event that an investigation is to be conducted, the AJRCC with the approval of Principal will take the following action:

- (i) in the case of a faculty or student, refer the matter for investigation and consideration in accordance with the disciplinary provision for Academic Staff.

10. Research Publications and Authorship

10.1 The researchers have the freedom to publish their results in any journal which appears in Thomson Reuters / UGC CARE list. Publication in **predatory** journals is highly discouraged.

10.2 The researcher with overall responsibility for the research should authorize publication of results. Authorization shall ensure integrity of results, protection of intellectual property rights and appropriate authorship for the persons helping him to interpret his results for suitable publication. All researchers/faculty members of AJCE shall include their affiliation as AJCE in their publication.

10.3 Anyone listed as an author in a paper must accept personal responsibility for ensuring familiarity with the contents of the paper, and that they should be able to explicitly identify their contributions to it. The practice of granting honorary authorship will be considered as research misconduct and is against the guidance referenced above. Other contributions to the work like permission to publish, financial support etc. shall be suitably acknowledged.

10.4 Any publication to journals other than 10.1 or in conference proceedings should be intimated to AJRCC.

11. Conflict of Interest

Researchers must disclose to the AJRCC any affiliation with or without financial involvement in any organization or entity with a direct interest in the subject matter or materials of the researcher. Any other conflicts of interests also shall be disclosed.

12. Research Fund with sub heads

12.1 A separate fund may be created to meet all expenses connected with research. Fund flow to this account shall be

- (i) amount allocated by the college for research in the budget
- (ii) overheads from funded projects
- (iii) college share of consultancy fee charged from beneficiaries
- (iv) any other fund flow related to research or consultancy. This fund shall be operated by the Head of the Institution on the advice of AJRCC.

12.2 Earmark every year a significant sum of money for research in the college budget

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The amount spent for procurement of equipment, upgrading library facilities, procurement of journals and e-learning tools may be shown under Research Head.

Heads such as consumables, seminar/conference, travel, internal grant, patenting expenses, contingency etc. can be considered as subheads of this Head.

B. Consultancy Policy

AJCE recognizes the relevance and importance of consultancy for the development of the society and the nation. So it promotes consultancy in all areas of its expertise. The Consultancy plays an important role in establishing institute-industry and institute-government organization interface. Institutionalizing a system for Consultancy and Extension of services to the society by developing faculty expertise is part of the Consultancy Policy.

13. Consultancy Policy - General

- 13.1 The college encourages faculty members to do consultancy service to support external engagements that facilitate knowledge and technology transfer contributing to economic and social enhancement.
- 13.2 This policy applies to all faculty and staff of the College.
- 13.3 The faculty members involved in the conduct of a consultancy service can avail on-duty for industrial visit and meeting concerned persons for discussion related to consultancy work.
- 13.4 The faculty or staff must ensure that the consultancy work does not create a conflict of interest with the role of the faculty in the college.
- 13.5 Consultancy work is expected to bring financial benefits both to the institution and its employees.
- 13.6 The lab facilities shall be extended to the general public, industry and organizations for the conduct of skill development with/ without the support of industries, testing & certification and for the conduct of exams by external agencies.

14. Systems and Strategies

- 14.1 All the departments shall constitute consultancy wings of their own.
- 14.2 Individual faculty/ group of faculty shall have the freedom to take up consultancy of their own based on their expertise and the general coordination at department level shall be done by the respective HoD.

- 14.3 As part of its overall strategy, the College explores fruitful linkages with industry /organizations by arranging interface meetings, organizing industrial visits, inviting industrialists as resource persons and appointing them in the advisory bodies etc.
- 14.4 To strengthen the institute-industry tie-up, faculty are encouraged to work in industries with prior intimation during vacation/ avail leave during a full semester period etc. AJRCC will study the industry and the job profile and recommend further approval by the college authorities, if beneficial to the institution.

15. Mode of Operation and Finance sharing

- 15.1 The Consultancy and Extension activity shall be taken up by the departments based on an existing /new Memorandum of Understanding (MoU) with the College Management and on a Memorandum of Agreement (MoA) with the department HoD where the commitments are clearly stated. If the consultancy involves continuous service and upgrades, then it has to be clearly spelt through the MoA. In the agreement the point of contact from all parties involved shall be clearly indicated.
- 15.2 A regular testing and extension activity shall be carried out after paying the standard fee fixed for the same.
- 15.3 All expenditure towards consumable, travel, contingencies etc., are to be met from the consultancy revenue.
- 15.4 The consultancy charges will be shared between College, Department and staff as follows after deducting the expenditure as per 15.3
1. Consultancy work involving use of college space, equipment and resources etc.,
 - a. Faculty and staff - 30%
 - b. Department - 20%
 - c. College - 50%
 2. Consultancy work providing solutions, expertise to the design problems of the customer not involving use of college space, equipment, resources etc.,
 - d. Faculty and staff - 40%
 - e. Department - 10%
 - f. College - 50%
- 15.5 The billing for the clients shall be as per the directions of the accounts department

3. C. Policy Review

AJRCC will periodically review and update this document based on National Research and Education policies and the College strategies on Consultancy and Extension activities.