DHANALAKSHMI SRINIVASAN COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution)



Research Promotion Policy

Objectives:

Research, innovation and consultancy are central to the vision and mission of the institute. This policy provides a single set of guidelines to help teachers, researchers and students with:

- generating funds and maintaining the quality of research (Research Promotion);
- encouraging quality publications of research papers, articles and books (Publication);
- protecting and benefiting from patents and copyrights (IPR and Copyright);
- attracting start-ups and agencies to use the college facilities for product development, and giving students exposure to it (Incubation); and
- enabling teachers to take up consultancy work for industries and others (Consultancy).

Scope:

Teaching and research complement each other. The college is committed to promoting research activities in academic, industrial and socially relevant areas, and aims to establish itself as a centre for research, innovation and intellectual work. This policy applies to all teachers, researchers and students of the college, and to start-ups and external organizations that work with the college.

The quality of research is generally assessed by research productivity, i.e. publications, development of new products or improvement in the quality of services. The core parameters used to assess the institute's research promotion ability are:

- the research promotion policy, and output in terms of knowledge creation;
- publications in reputed refereed journals, citations, impact factors and h-index;
- honours and awards received, sources and value of funding, and patents;
- collaboration with other research agencies, faculty recognition for guiding research, research committees and research centres;
- faculty involvement in research, major and minor research projects, and internal and external research grants;
- MoUs with academic, NGO and industrial organizations, relevance and problem solving, and process quality; and

- research income, which supports research and the building and maintenance of infrastructure, and attracts young researchers to research as a career.

Intellectual property ownership and consultancy awards add to the credibility of both the teachers and the institute, and are positive points in the assessment of the college.

Research Promotion:

Research Funding:

- Full-time teachers are encouraged to apply to various funding agencies, including AICTE, through the college. The fund is received and managed by the college.
- Each research project must have one Principal Investigator (PI) and one Co-Investigator (CI), who are responsible for implementing the project. In the absence of the PI, the CI assumes the PI's responsibilities.
- Teachers are encouraged to apply to prospective industries and non-government organizations. The fund is received and managed by the college.
- **Seed Money:** The management encourages research by providing seed money and makes a budgetary provision for it. Teachers apply against the call for applications. The Research Committee scrutinizes the applications and recommends the grant.
- Researchers must follow the guidelines for financial discipline. The PI and Co-Investigators are responsible for ethical and legal compliance.

Collaborative Research:

Teachers are encouraged to take up collaborative research with researchers of other institutes or research organizations. Formal approval of the college and an MoU between the two parties are essential. The MoU should clearly state each party's contribution and responsibilities.

Research and Infrastructure Facilities:

The college is committed to creating and maintaining the facilities needed by teachers and other researchers. The library is well equipped with books and electronic resources, to which researchers have good access. The college establishes a Human Ethics Committee and an Animal Ethics Committee where required.

Procurement and Financial Utilization:

Research materials, including equipment, should be purchased as per the funding body's guidelines and the college's procurement guidelines. At the end of the project period, the college issues the utilization certificate that the PI is required to submit.

Ethical Standards:

The college stresses high ethical standards and encourages data integrity.

Incentives to Researchers:

- Researchers are encouraged to attend conferences to present their research outcomes. The period of absence is treated as on duty.
- Researchers going to another organization to carry out part of their work are also treated as on duty.
- Travel support, partial or full, is provided on the recommendation of the Research Committee.

Publication :

Publication is an important indicator of performance for the individual and the institution. The number of papers published by the institution and per faculty member, the number of books published per faculty member, publications in peer-reviewed national and international journals, citation index and impact factor are the quality assessment parameters. Teachers are advised to focus on publication to build their credibility, which in turn adds to the reputation of the institution.

Publication Guidelines:

- **Scientific articles / research papers:** Peer review is the most widely used method of judging research quality. Researchers and teachers are encouraged to publish in peer-reviewed, high-impact journals listed in the UGC List, Scopus, Web of Science and PubMed.
- **Responsibility:** When student project work is meant for publication, the students should be the first author(s) and the guide or concerned teacher may be the corresponding author. The concerned teacher is responsible for the originality of the work and for keeping plagiarism within the acceptable limit.

- **General articles / books:** Teachers are encouraged to contribute general articles to newspapers, science magazines and general magazines, and to write books. The author(s) are responsible for the contents and the college is not. Books should be published with reputed publishers and carry an ISBN.
- **Newsletters / college magazine:** The college forms a committee / editorial board to supervise these publications.

Support and Incentives:

The college supports the author(s), partially or fully, with a publication grant to publish in good and prestigious journals. The recommendation of the Research Committee is necessary. Publications are part of the appraisal system for teachers.

Publication Ethics:

Teachers must ensure that their work is original and free of plagiarism in the paper or book.

Intellectual Property Rights (IPR) and Copyright (Part C):

There are two types of intellectual property of concern to the college: patents, which relate to innovative inventions, and copyrights, which relate to literary works. The college encourages its teachers to acquire both.

Patents:

A patent is a statutory right granted to the inventor for an invention. It prevents others from making, using, selling or importing the patented product, or the process of producing it, without the patentee's consent. An invention, whether a product or a process, is patentable if it satisfies the following criteria:

- it should be new;
- it should have an inventive step, i.e. it must be non-obvious;
- it should have industrial application; and
- it should not fall under the non-patentable items mentioned in the Patent Act.

The college encourages researchers to patent their inventions.

Copyrights:

Literary, dramatic, musical and artistic works are protected under the Copyright Act. For example, books and computer programs are protected as literary works. The college should be kept in the loop, but the earnings from the work belong entirely to the individual.

Institutional Support:

- The institution organizes programmes to educate teachers and researchers on the various forms of intellectual property, patenting procedures and filing of patents.
- The institution supports the inventor(s) financially for filing and maintaining granted patents. An agreement should be made between the inventor and the college.

Revenue Sharing:

An agreement should be made between the inventor and the institution clearly specifying the revenue sharing if the patent is commercialized. Fifty per cent (50%) goes to the inventor and fifty per cent (50%) to the institute.

Incubation:

The college sets up an Incubation Centre as part of its innovation ecosystem, to attract start-ups and other agencies to use its facilities for product development and to give students exposure to product development. It is a win-win arrangement: students gain exposure, the institute helps others grow, and the start-up gets its work done at nominal expenditure. The college provides infrastructure and shares its resources, including research expertise; start-ups bring capital and expertise to the college. Once the centre is functional, innovative growth companies may take an interest in partnering with the college, providing investment and helping to generate wealth.

Definition of a Start-up:

A start-up is as defined by the Department for Promotion of Industry and Internal Trade (formerly Department of Industrial Policy and Promotion), Ministry of Commerce and Industry, Government of India, namely:

- an entity up to seven years from the date of incorporation / registration, if incorporated as a private limited company or registered as a partnership firm or a limited liability partnership (up to ten years for start-ups in the biotechnology sector); and

- whose turnover has not exceeded ₹25 crore in any financial year since incorporation / registration.

Guidelines:

- The facilities available at the incubation centre should be mentioned on the college website.
- A committee may be constituted to supervise and manage incubation-related activities.
- The college provides infrastructure facilities such as space and equipment.
- Incubated companies are not permitted to use the campus address for registration and commercial activities.

Incubation Committee:

Composition:

- Principal
- Incubation Cell Coordinator / Director
- Two HoDs
- One faculty member (other than those mentioned above)

Responsibilities:

- Developing SOPs for the various activities.
- Identifying thrust areas.
- Creating a pool of mentors with varied background, expertise and experience, drawn from alumni, industry experts, entrepreneurs, faculty members, etc.
- Selecting interested parties (start-ups) for incubation of their ideas.
- Identifying and conducting activities, including training of prospective innovators, including students who wish to convert their ideas into start-ups.
- Submitting the annual report.

Consultancy (Part E):

Consultancy is the providing of professional service. The college has good potential to offer its expertise to solve the problems of industries and others, using the expertise of its

teachers. Consultancy generates revenue and brings reputation to the institute, and students benefit through exposure and opportunities to work in the field. The college promotes faculty participation in consultancy as a win-win activity for faculty and institution. The institute publicizes the expertise available for consultancy, and teachers with such expertise should inform the administration so that the information can be made available on the website.

Guidelines:

- Consultancy may be paid or free. Every staff member interested in offering consultancy should inform the college, and such activities can be undertaken with the college's approval.
- The college website lists prospective consultants with their expertise, so that others know of the institute's capacity and interest.
- The consultant, through the institute, should sign an agreement with the organization or individual for whom the service is intended.
- The college infrastructure and facilities may be used.
- The consultant is responsible for revenue collection on delivery of services or as per the agreement.
- Accounts are to be maintained as per the institution's practice.

Sharing of Revenue:

The revenue generated (consultation charge) is shared 75% to the consultant and 25% to the institution.

Summary of Revenue and Earnings Sharing:

Activity	**Individual / Inventor / Consultant**	**Institution**
Patent commercialization	50%	50%
Consultancy charges	75%	25%
Copyright (books, software, etc.)	100%	Nil (college to be kept informed)
Funded research projects	Funds are received and managed by the college	-

Conflict Resolution:

Wherever conflicts arise, for example among authors of a publication or in matters relating to intellectual property, the view of the Research Committee should be taken into consideration.