



Sri Indu

College of Engineering & Technology

UGC Autonomous Institution

Recognized under 2(f) & 12(B) of UGC Act 1956,

NAAC, Approved by AICTE &

Permanently Affiliated to JNTUH

Estd.2001



NAAC

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL



POLICY DOCCUMENT

ON

PROMOTION OF RESEARCH

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Sri Indu College of Engineering and Technology
(VII): SHERIGUDA-501 5&O,
Brahmapatnam(M), R.R.Dist.

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SRI INDU COLLEGE OF ENGINEERING AND TECHNOLOGY

RESEARCH AND DEVELOPMENT CELL

Scope

SICET motivates R & D activities among faculty members and students to increase the core value and competencies. Because academic research is the back bone of our institution. Research and Development is very essential for innovative experimentation of the knowledge acquired from the theoretical study. The growth of the academic institution is measured by the research oriented faculties that are working in the institution. As researchers, they need to understand the past and recent developments in their subject areas. Research & Development(R&D) activities exhibits a very high correlation between quality teaching-learning and adopting with the skill based approach .



AIM


Research and Development Cell of the college is established to endorse, Synchronize and Implement Research and Development Programs and also to create upright infrastructural facilities and conducive environment to inculcate research culture.

OBJECTIVES

- To boost up the research ability of the institute by encouraging the staff members to publish their research paper in reputed conferences and referred journals.
- To nurture research skills among the faculty and students.
- To be in touch with the industrial needs that results in new or improved products, processes, systems or services that can increase the company's productivity and also for benefit for the common people.
- To nurture creativity towards research among students and faculty.
- Find the budgetary obligations and assets for funding the research.

BENEFITS

- To achieve excellence in R&D, Technology Innovation and Business start-ups.
- To promotes interdisciplinary culture, ethical conduct of research and compliance among students and teaching community.
- To create foster knowledge and technology transfer by engaging with government agencies, research institutions and industries.

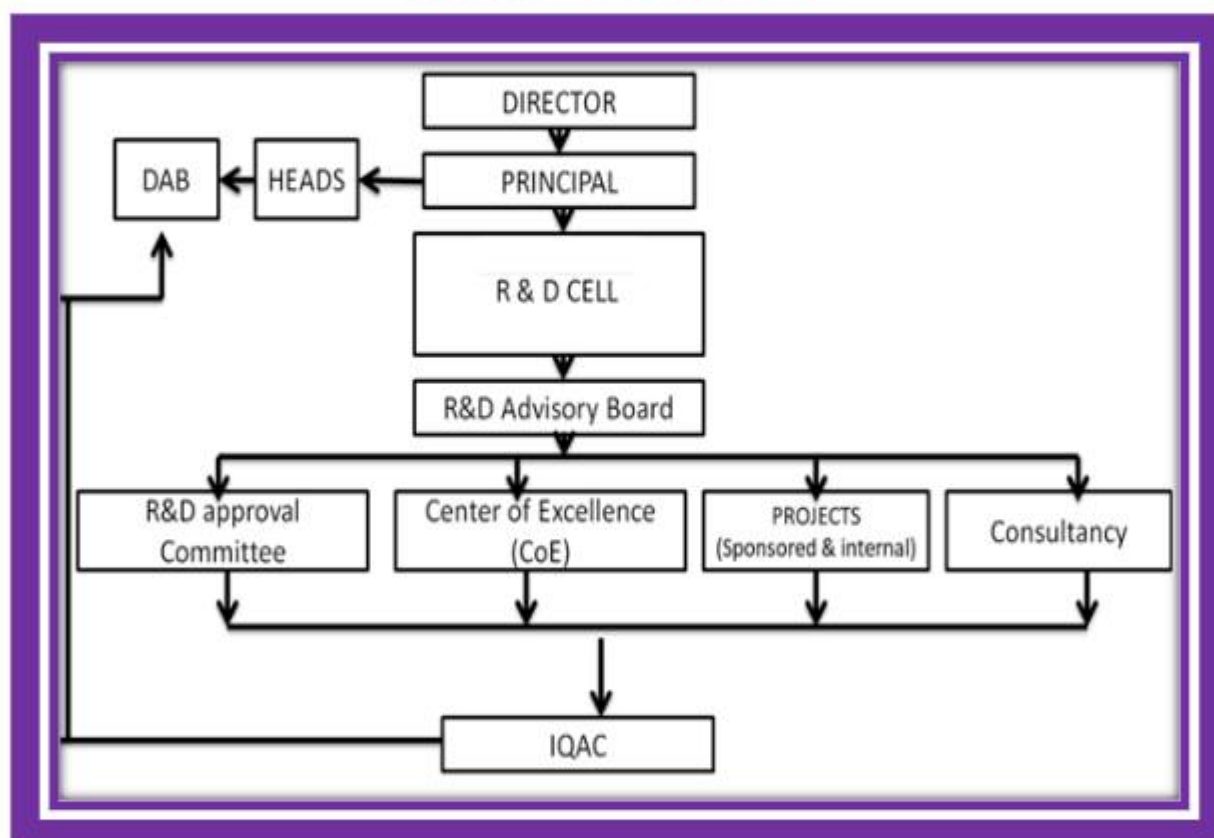

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- To produce exceptional scientific results, manage projects and grants, thus enabling an environment by addressing global challenges and encouraging economic progress in the region for the society.

OUTCOMES

- Enhanced Quality of UG and PG Projects
- More number of research proposals, Publications and Patents
- Awareness in students about Recent Advances and developments in Technology
- Student participation in National Level Innovation activities like BAJA, SUPRA, ROBOCON, ISIE Bhopal etc.
- Interaction with Industries and research Institutes
- Improve the placement of students.

R & D CELL STRUCTURE



Roles and Responsibilities of R & D Cell

The Role of R & D Cell:

1. To enhance the Research Ecosystem of the college
2. To promote Academic Research in the college with Faculty and students
3. To preserve the Code of ethics of the college while publishing
4. To help the faculty in applying for funds in the form of Sponsored research / Grants from government and non-government agencies
5. To pave path for the teachers, students and researchers to collaborate for research

Responsibilities of R & D Cell:

1. To help faculty, researchers and students to

2. Know research methodology
3. Methodology to develop projects
4. Process of converting projects into prototype and in turn into products
5. Enhancing their knowledge on Intellectual property rights and Patents
6. Preserve code of ethics while publishing papers / thesis
7. Conduct skill development courses that enhancing the capability of students and faculty

Research Promotion Policy

The college has a Research Board that facilitates and monitors research activities. The total R&D is organised into six categories:

- I. Academic Research
- II. Sponsored Research
- III. Extension and Extramural
- IV. Excellent Centres
- V. Consultancy
- VI. IPR & IIE

I. ACADEMIC RESEARCH POLICY

- a) All eligible faculty can register for doctoral program within one year.
- b) Faculty of each department shall conduct research in focused areas of research identified by central government in addition to research areas preferred by the faculty.
- c) Faculty publication in either WEB of science or SCOPUS indexed journals are appreciated with appropriate incentives.
- d) All publications and research papers of faculty have to go through plagi- check.
- e) As per the API norms the institute fixed the number of articles to be published by faculty of different cadres.
- f) Term papers of B. Tech and M. Tech projects shall be research focussed. Every project shall lead to at least one research publication in a journal indexed in SCOPUS or WEB of SCIENCE.
- g) Faculty are given the option to pursue research work leading to a Ph.D degree in reputed institutions under Quality Improvement Programme(QIP)

II. SPONSORED AND INTERNAL RESEARCH RELATED POLICIES:


- a) Every doctorate shall apply for a minimum of one government funded project.
- b) Every faculty shall apply for internal project with an aim to apply for external funding. The required seed money for internal projects is provided.
- c) The institution shall provide the basic infrastructure required to conduct either internal funded or external funded research.

- d) All departments shall strive for recognition by National/International agencies through schemes/funding such as DST-FIST, SAP, CAS etc.,
- e) Faculty are encouraged to identify inter-disciplinary research in their chosen field of research.
- f) The faculty of all the departments shall tie-up with industries and corporate bodies to undertake funded research in emerging areas and industry relevant areas.
- g) The institute shall create special research groups to concentrate research in government listed areas.
- h) All innovative projects of faculty are earmarked for filing patents on successful completion, suitable recognition and remuneration is given to those faculties with patents.
- i) Norms are fixed to pay expenses towards procurement of equipment to those faculty working on funded projects.
- j) Meritorious research work by faculty is awarded with monetary incentives.
- k) All research conducted shall be covered by IPR and copyright protected.

iii. EXTENSION AND EXTRAMURAL RESEARCH AND ACTIVITIES

- a) Eminent and enterprising professionals from the industry are invited to take up joint resource projects with the faculty.
- b) The faculty of all the departments are encouraged to select society specific problems and conduct research and provide feasible solutions. Such research topics could include problems related to chronic diseases, women and child welfare and protection and health care and environmental studies etc.,
- c) The institution shall organise educational programmes relevant to a community, society outside organisation.
- d) The faculty shall visit at least one village in the neighbourhood, investigate the problems, find solutions and implement the same using technology expertise.
- e) Students are encouraged to participate in the extension and outreach programmes organised by the institute.
- f) The institute shall conduct outreach programmes related to aging, life course development that lead to national integration, intervention programmes that lead to reduction in social isolation of the people and elderly people, improving the quality of care provided by nurses in nursing homes, engaging elder persons in environmental volunteering. Outreach programmes in the field of chronic pain, child related abuse, neglect, preventive interventions, transactional research, stress and coping etc.,




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iv. EXCELLENCY CENTRES:

- a) The institution shall develop Centre of Excellence in the frontier areas of research which shall be open to faculty, students and industry persons to conduct research.

V. CONSULTANCY:

1. INTRODUCTION

Consultancy is well recognized as an effective way to disseminate knowledge and make an early and direct impact on society. However, the balance between consultancy and the traditional roles of the academic staff needs to be managed and the interests of the institution must be protected. This Policy provides provisions for conducting consultancy to ensure that consultancies undertaken by staff are consistent with the institution's strategic and operational objectives and the costs are sustainable.

2. THE POLICY

All Research and Non-research consultancies as described in this Policy are governed by the following guiding principles:

- (a) There should be demonstrable benefit to the institute from the consultancy through income, enhanced reputation, and/or expanding the expertise of the staff member.
- (b) The Consultancy must not be in conflict with institution's policies including those governing employment; such as the Code of Conduct Policy.
- (c) The Consultancy must not be in conflict with the functions, objectives or interests of the University or damage the University's reputation.

3. CONFLICT OF INTEREST

Engagement in consultancies must not create a conflict of interest, perceived or actual. Any conflict of interest, actual or perceived must be reported to the relevant authority for resolution. A conflict of interest may arise where an employee engages in consultancies at the expense of the institution's interests or the interests of other employees or students.

An example of a potential conflict of interest includes, but is not limited to:

- financial or non-financial interests;
- teaching or course work for another institution;
- work performed for a supplier of goods or services to the institution; or
- work undertaken with an organisation to which the institution supplies goods or services.




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VI. INNOVATIONS, INCUBATIONS, ENTREPRENEUR DEVELOPMENT, PATENTS, IPRS AND COPY RIGHTS:

- a. The institution shall create an innovation culture by organising various kinds of programs such as ideation programs, collection of innovations from research undertaken in respect of academic, extension, extramural and outreach.
- b. Every major invention achieved out of conducting research shall be innovated and the same shall be incubated in the incubation centre which will be augmented from time to time.
- c. Students shall be allowed to select an incubated product and use the same to be developed in large scale through separately established start-up. All the training required for the students to become entrepreneurs shall be imparted
- d. The University shall incorporate an incubation centre that has all the facilities for incubating the innovations
- e. Every innovation shall lead to filing a Patent
- f. The institute shall provide support required for filing the patents and also for completing the ground work required to get the patents registered and licensed.
- g. The institute shall provide required support to the faculty for filing IPRs and copyrights when it has been proved by the faculty that such a filing is necessary to protect the value of the research done.

USEFUL LINKS

1. [Open Access Theses and Dissertations](#)
2. [Shodhganga](#)
3. [Shodhgangotri](#)
4. [Google Scholar](#)
5. [IEEE Xplore](#)
6. [PubMed](#)
7. [Springer Link](#)
8. www.ugc.ac.in/journallist/
9. <https://www.scopus.com/>



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**SRI INDU COLLEGE OF ENGINEERING AND TECHNOLOGY
(AUTONOMOUS)**

R & D Committees


Date: 07.08.2021

The College has constituted a dedicated team of Research Advisory committee for activating and guiding both faculty and students to pursue quality research. The Research and Development committee consists of a well experienced, academic and industry members to guide and co-ordinate the research related issues of each department.

R&D Advisory Committee

S. No	Coordinators	Designation
1	Dr.R.Gunasekaran, Professor and Head, Department of Information Technology, Madras Institute of Technology, Chennai-600044 99626 90099 Gunasekaran.mit@gmail.com	Academician
2	Dr DV Ramana Data Strategist-Consultant Wissen Infotech.	Industry Expert
3	Dr.P.Arulmozhivarman, ,Ph.D., Dean/SELECT VIT University, Vellore - 632 014 Tamil Nadu.	Academician
4	Dr.S.Manikandan,M.E., Ph.D., Scientist-E Electronics Radar Development Establishment(LRDE), Defence Research & Development Organisation (DRDO), CV Raman Nagar, Bangalore - 560093	Industry Expert




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	manikandan.s@lrde.drdo.in mobile: +918892948002	
5	Dr. S. Mohan Kumar, Professor & Director (Research), CMR University, Bangalore, Karnataka. 9686308745	Academician
6	Mr.P.Dhandapani Vice president, Wells Fargo India Pvt. Ltd. Bangalore-560103 96321 14174 Dhandapani.p@gmail.com	Industry Expert
7	Mr.M.Bhaskar, Team Lead,Wipro Technologies Electronics city,Bangalore-560100 9448796537 baskar.marappan@wipro.com	Industry Expert

R & D Coordinators & Ethics committee

S. No	Coordinators	Designation
1	Dr. S. R. Mukunthan	Professor/CSE, R&D Coordinator
2	Dr.P.Mukunthan	Professor/ECE
3	Dr. A. Naga Malleshwar	Professor/EEE
4	Dr.Joseph Prabhakar Williams	Professor/EEE
5	Dr. P. Ramesh	Associate Professor/ECE
6	Dr.N.Sadhasivam	Professor/CSE



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SICET INNOVATION STARTUP POLICY



INSTITUTION'S INNOVATION COUNCIL

(Ministry of Education Initiative)

Saah

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INSTITUTION VISION

To be a premier Institution in Engineering & Technology and Management with competency, values and social consciousness.

INSTITUTION MISSION

- IM1 Provide high quality academic programs, training activities and research facilities.
- IM2 Promote Continuous Industry-Institute interaction for employability, Entrepreneurship, leadership and research aptitude among stakeholders.
- IM3 Contribute to the economical and technological development of the region, state and nation.

Objectives


To cater the needs of young student entrepreneurs with innovative ideas of social relevance and there by introducing a culture of entrepreneurship inside campus which will strengthen our education system and there by promoting the national economic and social growth.

Short Term Goals

- To help student groups to prototype their ideas.
- To improve innovation, creative and design thinking among student community.
- Incubation facility for faculty driven start-up and student/Alumni start-up.
- Organize FDP, seminars and workshops, distinguish talks for students, Faculty and Alumni and promote entrepreneurial culture.

Long Term Goals

- Associate with DST, CII, MSME and other academic institutions for transferring world class facility.
- Improve quality of research work among students and to attain patent which can be commercially used in production
- Provide a platform for students to develop innovative products with global recognition and generate business opportunities.
- Generate revenues through consultancy work and student start-ups.
- Spread awareness to students and faculty regarding IPR related activities.
- Strategic partnership linkage with
- Entrepreneurship Development Institute of India(EDII),
- National Innovation Foundation (NIF) of India to submit ideas and apply for schemes
- Procure fund from AICTE for Entrepreneurship Development Cell


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Committee for SICET National Innovation and Start up Policy

List of Coordinators	Designation	Role
Dr. P. Mallesham	Director (Mechanical)	Chairperson
Dr. Sampath Korra	Associate Professor/CSE	NISP Coordinator
Dr.N.C. Sendhilkumar	Professor/ECE	Member
Dr. Naga Malleshwar	Professor/EEE	Member
Dr.P.Ramesh	Associate Professor/ECE	Member
Prof. Abdul Khaja Pasha	Assistant Professor/ECE	Member
Prof.E.Parusha Ramu	Assistant Professor/ECE	Member
Deekshith Saganti	Student	Member
Siva Pranam Tunguturi	Student	Member
Nannuri Ruchika Reddy	Student	Member
Dr.I.SATYANARAYANA	External	Member
G.Bhaskar	External	Member

Introduction

SICET Innovation, Incubation, Entrepreneurship & Startups, is set up to promote innovation and entrepreneurship among the Faculty, Staff, Students at Sri Indu College of Engineering and Technology. To accomplish its goal, SICET innovation startup cell runs and manages a innovata schemes and policies. This policy will also facilitate Intellectual Property ownership management, technology licensing and institutional Startup policy, thus enabling creation of a robust innovation and Start up ecosystem across the institution.

1. Strategies and Governance

- A. Entrepreneurship promotion development will be one of the major dimensions of our strategies. To facilitate development of an entrepreneurial ecosystem in the SICET and nearby area, specific objective and associated performance indicator will be periodically defined for assessment.
- B. Implementation of entrepreneurial vision in SICET will be achieved through mission statements rather than stringent control system. The entrepreneurial agenda will be responsibility of the Chairperson & Coordinator to bring in required commitment and well understood by the Top Management. However, promoting entrepreneurship requires a different type of mind set as compared to other academic activities.

- C. Resource mobilization plan will be worked out at the institution level for supporting innovation, pre-incubation, incubation infrastructure and facilities. A sustainable financial strategy will be defined in order to reduce the organizational constraints to work on the entrepreneurial agenda.
- i. Investment in the entrepreneurial activities will be a part of the institutional financial strategy. Minimum 1% fund of the total annual budget of the institution will be allocated for funding and supporting innovation and startups related activities through creation of separate 'Innovation fund'.
 - ii. The strategy will also involve raising funds from diverse external funding sources through government (state and central) such as DST, DBT, MHRD, AICTE, TDB, TIFAC, DSIR, CSIR, BIRAC, NSTEDB, NRDC, Startup India, Invest India, MeitY, MSDE, MSME, etc. and non- government sources.
 - iii. To support technology incubators, institution will approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) activities.
 - iv. We will actively engage alumni network for promoting Innovation & Entrepreneurship.
- D. For expediting the decision making, hierarchical barriers will be minimized through empowering the SICET Council team and individual autonomy and ownership of initiatives will be promoted.
- E. Importance of innovation and entrepreneurial plan will be known across the institution and will be promoted and highlighted at Academic Calendar programs such as conferences, convocations, workshops, etc. Action plan will be formulated at institution level, having well-defined short-term and long-term goals.
- F. Development of entrepreneurship culture should not be limited within the boundaries of the institution.
- i. SICET will be the driving force in developing entrepreneurship culture in its vicinity (regional, social and community level). This shall include giving opportunity for regional startups, provision to extend facilities for outsiders and active involvement of the institution in defining strategic direction for local development.
 - ii. Strategic international partnerships should be developed using bilateral and multilateral channels with international innovation clusters and other relevant organizations. Moreover, international exchange programs, internships, engaging the international faculties in innovation and entrepreneurship will also be promoted.

2. Startups Enabling SICET Infrastructure

Pre-incubation and incubation facilities for nurturing innovations and startups will be created. Incubation and Innovation can be organically interlinked and effort will be to link Innovation to Enterprises to Financial Success.

- A. Our institution will create Centre of Innovation, Incubation, Entrepreneurship and Startup under which Centre of Innovation, Technology Business Incubator and Student Innovation and Entrepreneurship Club will be working by mobilizing resources from internal and external sources.
- B. Pre-Incubation/Incubation facility will be accessible 24x7 to students, staff and faculty of all disciplines and departments across the institution including startup from vicinity.
- C. Technology Business Incubator (TBI) will offer mentoring and other relevant services through Pre-incubation/Incubation process in-return for fees, equity sharing and (or) zero payment basis. The modalities regarding Equity Sharing in Startups supported through TBI will depend upon the nature of services offered.

3. Nurturing Innovations and Start ups

- A. SICET will establish processes and mechanisms for easy creation and nurturing of Start-ups/enterprises by students, staff, faculty, alumni and potential start up applicants even from outside the institutions.
- B. Technology Business Incubator will define their processes and will ensure to achieve the following:
 - i. Incubation support: Pre-incubation & Incubation facility to start ups by students, staff and faculty for mutually acceptable time-frame.
 - ii. SICET may allow their students / staff to work on their innovative projects and setting up start-ups (including Social Start-ups) or work as intern / part-time in start-ups (incubated in any recognized Incubators) while studying / working with due approval of competent authority. Student Entrepreneurs may earn credits for working on innovative prototypes/Business Models.
 - iii. SICET will develop clear guidelines to formalize this mechanism. Student inventors may also be allowed to opt for start-up in place of their mini project/major project, seminars, summer trainings. The area in which student wants to initiate a start-up may be interdisciplinary or multidisciplinary. However, the student must describe how they will separate and clearly distinguish their ongoing research activities as a student from the work being conducted at the start up.
- C. Students who are under incubation, but are pursuing some entrepreneurial ventures while studying will be allowed to use their address in the institute to register their company with due permission from the Director and principal.

- D. Students entrepreneurs will be allowed to sit for the examination, even if their attendance is less than the minimum permissible percentage, with due permission from Director and principal.
- E. SICET will allow their students to take a semester/year break (or even more depending upon the decision of review committee constituted by the institute) to work on their start-ups and re-join academics to complete the course. Student entrepreneurs may earn academic credits for their efforts while creating an enterprise.
- F. SICET will facilitate the startup activities/ technology development by allowing students/ faculty/ staff to use infrastructure and facilities, as per the choice of the potential entrepreneur in the following manners:
- i. Short-term/ six-month/ one-year part-time entrepreneurship training.
 - ii. Mentorship support on regular basis.
 - iii. Facilitation in a variety of areas including technology development, ideation, creativity, design thinking, fund raising, financial management, cash-flow management, new venture planning, business development, product development, social entrepreneurship, product costing, marketing, brand-development, human resource management as well as law and regulations impacting a business.
 - iv. SICET may also link the startups to other seed-fund providers / angel funds/ venture funds or itself may set up seed-fund once the incubation activities mature. Further, necessary incentive in terms of resources, infrastructure, finance, time and support for students and faculties will be provided as per need basis.
- G. In return of the services and facilities, Technology Business Incubator may take 2% to 9.5% equity/ stake in the startup/ company, based on brand used, faculty contribution, support provided and use of institute's IPR (a limit of 9.5% is suggested so that institute has no legal liability arising out of startup. The institute will normally take much lower equity share, unless its full-time faculty/ staff have substantial shares). Other factors for consideration should be space, infrastructure, mentorship support, seed funds, support for accounts, legal, patents etc.
- For staff and faculty, institute can take no-more than 20% of shares that staff / faculty takes while drawing full salary from the institute; however, this share will be within the 9.5% cap of company shares, listed above.
 - No restriction on shares that faculty / staff can take, as long as they do not spend more than 20% of office time on the startup in advisory or consultative role and do not compromise with their existing academic and administrative work / duties. In case the faculty/ staff holds the executive or managerial position for more than three months in a startup, then they will go on sabbatical/ leave without pay/ earned leave.

- In case of compulsory equity model, Startup may be given a cooling period of 3 months to use incubation services on rental basis to take a final decision based on satisfaction of services offered by the TBI.

4. Ownership Rights for Technologies Developed

- A. When facilities / funds are used substantially or when IPR is developed as a part of curriculum/ academic activity, IPR is to be jointly owned by inventors and the institution.
- i. Inventors and institution could together license the product / IPR to any commercial organization, with inventors having the primary say. License fees could be either / or a mix of
 1. Upfront fees or one-time technology transfer fees
 2. Royalty as a percentage of sale-price
 3. Shares in the company licensing the product
 - ii. If one or more of the inventors wish to incubate a company and license the product to this company, the royalties would be no more than 4% of sale price, preferably 1 to 2%, unless it is pure software product. If it is shares in the company, shares will again be 1% to 4%. For a pure software product licensing, there may be a revenue sharing to be mutually decided between the Incubation centre and the incubated company.
- B. On the other hand, if product/ IPR is developed by innovators not using any facilities, outside office hours (for staff and faculty) or not as a part of curriculum by student, then product/ IPR will be entirely owned by inventors in proportion to the contributions made by them. In this case, inventors can decide to license the technology to third parties or use the technology the way they deem fit.
- C. If there is a dispute in ownership, a minimum five membered committee consisting of two faculty members (having developed sufficient IPR and translated to commercialization), two of the institution's industry experts / alumni (having experience in technology commercialization) and one legal advisor with experience in IPR, will examine the issue after meeting the inventors and help them settle this, hopefully to everybody's satisfaction. The institution can use alumni/ faculty of other institutes as members, if they cannot find sufficiently experienced alumni / faculty of their own.
- D. SICET Centre of Innovation or Technology Business Incubator will only be a coordinator and facilitator for providing services to faculty, staff and students. They will have no say on how the invention is carried out, how it is patented or how it is to be licensed however in specific case, clarifications can be sought. When institution is paying for patent filing, institute will constitute a committee which can examine whether

the IPR is worth patenting. The committee should consist of faculty who have experience and excelled in technology translation. If inventors are using their own funds or non-institutional funds, then they alone should have a say in patenting.

- E. SICET decision-making body with respect to incubation / IPR / technology-licensing will consist of faculty and experts who have excelled in technology translation. Interdisciplinary research and publication on startup and entrepreneurship will be promoted.

5. Organizational Capacity, Human Resources and Incentives

- A. The institution will recruit staff that have a strong innovation and entrepreneurial/ industrial experience, behaviour and attitude. This will help in fostering the Innovation and entrepreneurial culture.
- i. Some of the relevant faculty members with prior exposure and interest should be deputed for training to promote innovation and entrepreneurial.
 - ii. To achieve better engagement of staff in entrepreneurial activities, institution policy on career development of staff should be developed with constant upskilling.
- B. Faculty and departments of the SICET will work in coherence and cross-departmental linkages will be strengthened through shared faculty, cross-faculty teaching and research in order to gain maximum utilization of internal resources and knowledge.
- C. Periodically some external subject matter experts such as guest lecturers or alumni can be engaged for strategic advice and bringing in skills which are not available internally.
- D. Faculty and staff will be encouraged to do courses on innovation, entrepreneurship management and venture development.
- E. The reward system for the staff may include sabbaticals, office and lab space for entrepreneurial activities, reduced teaching loads, awards, trainings, etc.
- F. The recognition of the stakeholders may include offering use of facilities and services, strategy for shared risk, as guest teachers, fellowships, associateships, etc.
- G. A performance matrix will be developed and used for evaluation of annual performance.

6. Creating Innovation Pipeline and Pathways for Entrepreneurs

- A. To ensure exposure of maximum students to innovation and pre incubation activities at their early stage and to support the pathway from ideation to innovation to market, mechanisms will be devised.
- i. Spreading awareness among students, faculty and staff about the value of entrepreneurship and its role in career development or employability will be a part of the entrepreneurial agenda.

- ii. Students/ staff will be taught that innovation (technology, process or business innovation) is a mechanism to solve the problems of the society and consumers. Entrepreneurs will innovate with focus on the market niche.
 - iii. Students will be encouraged to develop entrepreneurial mindset through experiential learning by exposing them to training in cognitive skills (e.g. design thinking, critical thinking, etc.), by inviting first generation local entrepreneurs or experts to address young minds. Initiatives like idea and innovation competitions, hackathons, workshops, bootcamps, seminars, conferences, exhibitions, mentoring by academic and industry personnel, throwing real life challenges, awards and recognition will be routinely organized.
 - iv. To prepare the students for creating the start up through the education, integration of education activities with enterprise-related activities will be done.
- B. SICET will link their start-ups and companies with wider entrepreneurial ecosystem and by providing support to students who show potential, in pre-startup phase. Connecting student entrepreneurs with real life entrepreneurs will help the students in understanding real challenges which may be faced by them while going through the innovation funnel and will increase the probability of success.
- C. The institution will establish Institution's Innovation Councils (IICs) as per the guidelines of MHRD's Innovation Cell and allocate appropriate budget for its activities. IICs should guide institutions in conducting various activities related to innovation, startup and entrepreneurship development. Collective and concentrated efforts should be undertaken to identify, scout, acknowledge, support and reward proven student ideas and innovations and to further facilitate their entrepreneurial journey
- D. For strengthening the innovation funnel of the SICET, access to financing must be opened for the potential entrepreneurs.
- i. Networking events must be organized to create a platform for the budding entrepreneurs to meet investors and pitch their ideas.
 - ii. Provide business incubation facilities: premises at subsidized cost. Laboratories, research facilities, IT services, training, mentoring, etc. will be accessible to the new startups.
 - iii. A culture needs to be promoted to understand that money is not FREE and is risk capital. The entrepreneur must utilize these funds and return. While funding is taking risk on the entrepreneur, it is an obligation of the entrepreneur to make every effort possible to prove that the funding agency did right in funding him/ her.

7. Norms for Faculty Startups

- A. For better coordination of the entrepreneurial activities, norms for faculty to do startups will be created. Only those technologies will be taken for faculty startups which originate from within the institution.
- i. Role of faculty may vary from being an owner/ direct promoter, mentor, consultant or as on-board member of the startup.
 - ii. The institution will work on developing a policy on 'conflict of interests' to ensure that the regular duties of the faculty don't suffer owing to his/her involvement in the startup activities.
 - iii. Faculty startup may consist of faculty members alone or with students or with faculty of other institutes or with alumni or with other entrepreneurs.
- B. In case the faculty/ staff holds the executive or managerial position for more than three months in a startup, they will go on sabbatical/ leave without pay/ utilize existing leave.
- C. Faculty must clearly separate and distinguish on-going research at the institution from the work conducted at the startup/ company.
- D. In case of selection of a faculty start up by an outside national or international accelerator, a maximum leave (as sabbatical/ existing leave/ unpaid leave/ casual leave/ earned leave) of one semester/ year (or even more depending upon the decision of review committee constituted) may be permitted to the faculty.
- E. Faculty must not accept gifts from the startup.

8. Pedagogy and Learning Interventions for Entrepreneurship Development

- A. Diversified approach should be adopted to produce desirable learning outcomes, which will include cross disciplinary learning using mentors, labs, case studies, games, etc. in place of traditional lecture-based delivery.
- i. Student clubs/ bodies/ departments will be created for organizing competitions, boot camps, workshops, awards, etc. These bodies will be involved in institution's strategy planning to ensure enhancement of the student's thinking and responding ability.
 - ii. SICET will start annual 'INNOVATION & ENTREPRENEURSHIP AWARD' to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the institute.



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- iii. For creating awareness among the students, the teaching methods will include case studies on business failure and real-life experience reports by startups.
 - iv. Innovation champions will be nominated from within the students/ faculty/ staff for each department/ stream of study.
- B. Entrepreneurship education will be imparted to students at curricular/ co-curricular/ extracurricular level through elective/ short term or long-term courses on innovation, entrepreneurship and venture development. Validated learning outcomes will be made available to the students.
- i. Integration of expertise of the external stakeholders will be done in the entrepreneurship education to evolve a culture of collaboration and engagement with external environment.
 - ii. In the beginning of every academic year, institution will conduct an induction program about the importance of Innovation and Entrepreneurship, so that freshly inducted students are made aware about the entrepreneurial agenda of the institution and available support systems. Curriculum for the entrepreneurship education will be continuously updated based on entrepreneurship research outcomes. This will also include case studies on failures.
 - iii. Industry linkages will be leveraged for conducting research and survey on trends in technology, research, innovation, and market intelligence.
 - iv. Sensitization of students will be done for their understanding on expected learning outcomes.
 - v. Student innovators, startups, experts must be engaged in the dialogue process while developing the strategy so that it becomes need based.
 - vi. Customized teaching and training materials will be developed for startups.
 - vii. It must be noted that not everyone can become an entrepreneur. The entrepreneur is a leader, who would convert an innovation successfully into a product, others may join the leader and work for the startup. It is

important to understand that entrepreneurship is about risk taking. One

must carefully evaluate whether a student is capable and willing to take risk.

- C. Pedagogical changes need to be done to ensure that maximum number of student projects and innovations are based around real life challenges. Learning interventions developed by the institution for inculcating entrepreneurial culture will be constantly reviewed and updated.

9. Collaboration, Co-creation, Business Relationships and Knowledge Exchange

- A. Stakeholder engagement will be given prime importance in the entrepreneurial agenda of the institution. SICET will find potential partners, resource organizations, micro, small and medium sized enterprises (MSMEs), social enterprises, schools, alumni, professional bodies and entrepreneurs to support entrepreneurship and co-design the programs.

- i. To encourage co-creation, bi-directional flow/ exchange of knowledge and people will be ensured between institutes/ organizations such as incubators, software technology parks of India and science parks, etc.
- ii. Institution will organize networking events for better engagement of collaborators and will open up the opportunities for staff, faculty and students to allow constant flow of ideas and knowledge through meetings, workshops, space for collaboration and lectures etc.

- B. SICET will develop policy and guidelines for forming and managing the relationships with external stakeholders including private industries.

- C. Knowledge exchange through collaboration and partnership will be made and will provide support mechanisms and guidance for creating, managing and coordinating these relationships.

- i. Through formal and informal mechanisms such as internships, teaching and research exchange programmes, clubs, social gatherings, etc., faculty, staff and students will be given the opportunities to connect with their external environment.

- ii. Single Point of Contact (SPOC) mechanism will be created in the institution for the students, faculty, collaborators, partners and other

stakeholders to ensure access to information.

- iii. Mechanisms will be devised by the institution to ensure maximum exploitation of entrepreneurial opportunities with industrial and commercial collaborators.
- iv. Knowledge management will be done by the institution through development of innovation knowledge platform using in-house Information & Communication Technology (ICT) capabilities.

10. Entrepreneurial Impact Assessment

- A. Impact assessment of SICET entrepreneurial initiatives such as pre- incubation, incubation, entrepreneurship education will be performed regularly using well defined evaluation parameters.
 - i. Monitoring and evaluation of knowledge exchange initiatives, engagement of all departments and faculty in the entrepreneurial teaching and learning will be assessed.
 - ii. Number of start-ups created, support system provided at the institution level and satisfaction of participants, new business relationships created by the institution will be recorded and used for impact assessment.
 - iii. Impact will also be measured for the support system provided by the institution to the student entrepreneurs, faculty and staff for pre-incubation, incubation, IPR protection, industry linkages, exposure to entrepreneurial ecosystem, etc.
- B. Formulation of strategy and impact assessment will go hand in hand. The information on impact of the activities will be actively used while developing and reviewing the entrepreneurial strategy.
- C. Impact assessment for measuring the success will be in terms of sustainable social, financial and technological impact in the market. For innovations at pre-commercial stage, development of sustainable enterprise model is critical. Commercial success is the only measure in long run.



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IIC Institutes should guide student innovation on the following Thrust Areas:

1. Healthcare & Biomedical devices.
2. Agriculture & Rural Development.
3. Smart Vehicles/ Electric vehicle/ Electric vehicle motor and battery technology.
4. Food Processing.
5. Robotics and Drones.
6. Waste management.
7. Clean & Potable water.
8. Renewable and affordable Energy.
9. IoT based technologies (e.g. Security & Surveillance systems etc.)
10. ICT, cyber-physical systems, Blockchain, Cognitive computing, Cloud computing, AI & ML.



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NAAC

NATIONAL ASSESSMENT AND
ACCREDITATION COUNCIL



HUMAN VALUES AND PROFESSIONAL ETHICS

HAND BOOK



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VISION OF THE INSTITUTE

To be a premier Institution in Engineering & Technology and Management with competency, values and social consciousness.

MISSION OF THE INSTITUTE

IM1: Provide high quality academic programs, training activities and research facilities.

IM2: Promote continuous Industry-Institute interaction for employability, entrepreneurship, leadership and research aptitude among stakeholders.

IM3: Contribute to the economical and technological development of the region, state and nation.




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SCOPE: HUMAN VALUES & PROFESSIONAL ETHICS

Engineering is changing science into valuable products for human comfort. Ethics in is the ability as well as responsibility of an engineer to judge his decisions from the context of the general wellbeing of the society. It is the study of moral issues that confront it is the study of moral issues that stand up to engineers and engineering organizations when some essential choices are taken. Engineering research and practice necessitates that the errand being performed considers all the advantages and disadvantages of a specific activity and its execution. Teaching engineering ethics in academic institutions is embraced to a great extent through many case studies for creating awareness interactively among engineering students of all disciplines. By studying engineering ethics, the students develop awareness and are able to take their decisions on moral and ethical grounds.

Ethical standards in engineering are influenced by many factors:

1. Engineering as an experimentation for the good of mankind is a notable factor involving far reaching consequence.
2. Ethical dilemmas make engineering decisions relatively difficult to make.
3. Risk and safety of citizens as a social responsibility is a prime concern of an engineer.
4. Technological advancement can be very demanding on the engineering skill in the global context.
5. Moral values and responsible conduct will play a crucial role in decision making.

The study of engineering ethics within an engineering program helps students prepare for their professional lives. A specific advantage for engineering students who learn about ethics is that they develop clarity in their understanding and thought about ethical issues and the practice in which they arise. The study of ethics helps students to develop widely applicable skills in communication, reasoning and reflection. These skills enhance students' abilities and help them engage with other aspects of the engineering program such as group work and work placements.



OBJECTIVES: HUMAN VALUES & PROFESSIONAL ETHICS

The prime objective of knowing and prescribing to Human Values are as follows:

1. To understand the moral values that ought to guide the engineering profession,
2. To create an awareness on Engineering Ethics and Human Values.
3. To inspire Moral and Social Values and Loyalty.
4. To appreciate the rights of others.
5. Resolve the moral issues in the profession,
6. To justify the moral judgment concerning the profession.
7. Intended to develop a set of beliefs, attitudes, and habits that engineers should display concerning morality.

The prime objectives of the Professional Ethics are as follows:

1. Moral awareness (proficiency in recognizing moral problems in engineering like plagiarism and patenting)
2. Convincing moral reasoning (comprehending, assessing different views)
3. Moral coherence (forming consistent viewpoints based on facts)
4. Moral imagination (searching beyond obvious the alternative responses to issues and being receptive to creative solutions)
5. Moral communication, to express and support one's views to others.

MORALLY DESIRABLE AND RESPONSIBLE CONDUCT

1. Moral reasonableness i.e., willing and able to be morally responsible.
2. Moral hope i.e., believes in using rational dialogue for resolving moral conflicts.
3. Respect for persons, which means showing concern for the well-being of others, besides oneself.
4. Tolerance of diversity i.e., respect for ethnic and religious differences, and acceptance of reasonable differences in moral perspectives.



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PART-I

HUMAN VALUES

Morals: Morals are the worthy ideals or principles that one follows to distinguish the right from the wrong. These ideals or virtues are considered worthy in building up the character of an individual. They were edited, changed or modified rulers (dynasty) according with the development of knowledge in engineering and technology time to time. Moral Value refers to the good virtues such as honesty, integrity, truthfulness, compassion, helpfulness, love, respectfulness, hard work, etc. Morality is concerned with principles and practices of morals such as: (a) what ought or ought not to be done in a given situation? (b) What is right or wrong about the handling of a situation? And (c) What is good or bad about the people, policies, and ideals involved?

Values: Human value is defined as “a principle that promotes well-being or prevents harm. The various people responsible for inculcating and evolving human values are parents, religious leaders & gurus in daily life and teachers at the institute’s level. Human values can assure a happy and harmonious human society. At Bharat Institute of Engineering and Technology, we cultivate and inculcate these values in the students and staff through teaching and conducting various value based activities.

Types of Values

Values related to Right Conduct are:

- (a) **Self-help Skills:** Care of possessions, diet, hygiene, modesty, posture, self-reliance, and tidy appearance.
- (b) **Social Skills:** Good behavior, good manners, good relationships, helpfulness, No wastage, and good environment.
- (c) **Ethical Skills:** Code of conduct, courage, dependability, duty, efficiency ingenuity, initiative, perseverance, punctuality, resourcefulness, respect for all, and responsibility.

Peace: Attention, calmness, concentration, contentment, dignity, discipline, equality, equanimity, faithfulness, focus, gratitude, happiness, harmony, humility, inner silence, optimism, patience, reflection, satisfaction, self-acceptance, self-confidence, self-control, self-discipline, self-esteem, self-respect, sense control, tolerance, and understanding.



Truth: Accuracy, curiosity, discernment, fairness, fearlessness, honesty, integrity (unity of thought, word, and deed), intuition, justice, optimism, purity, quest for knowledge, reason, self-analysis, sincerity, spirit of enquiry, synthesis, trust, truthfulness, and determination.

Love: Acceptance, affection, care, compassion, consideration, dedication, devotion, empathy, forbearance, forgiveness, friendship, generosity, gentleness, humanness, interdependence, kindness, patience, patriotism, reverence, sacrifice, selflessness, service, sharing, sympathy, thoughtfulness, tolerance and trust.

Non-Violence

(a) Psychological: Benevolence, compassion, concern for others, consideration, forbearance, forgiveness, manners, happiness, loyalty, morality, and universal love

(b) Social: Appreciation of other cultures and religions, brotherhood, care of environment, citizenship, equality, harmlessness, national awareness, perseverance, respect for property, and social justice.

Integrity: Integrity is defined as the unity of thought, word and deed (honesty) and open mindedness. It includes the capacity to communicate the factual information so that others can make well-informed decisions. It yields the person's peace of mind, and hence adds strength and consistency in character, decisions, and actions. This paves way to one's success. It is one of the self-direction virtues. It enthruses people not only to execute a job well but to achieve excellence in performance. It helps them to own the responsibility and earn self-respect and recognition by doing the job. Moral integrity is defined as a virtue, which reflects a consistency of one's attitudes, emotions, and conduct in relation to justified moral values. Integrity comes in many forms, but honesty and dependability are two traits that are expected in most workplace situations. Without responsible behavior, distrust can make a work environment tense and uncomfortable. A strong work ethic shows co-workers and clients that you're reliable and take your responsibilities seriously. Polite communication, respectable behavior and fiscal responsibility also help you stand out as a trustworthy employee.

Follow Institutional Policies: Abiding by institution policies is a powerful way to demonstrate integrity. Cutting corners and neglecting to follow workplace regulations can lead to mistakes, problems and even dangerous situations.



Service Learning: Service-learning seeks to engage individuals in activities that combine both community service and academic learning. Because service-learning programs are typically rooted in formal courses (core academic, elective, or vocational), the service activities are usually based on particular curricular concepts that are being taught. Service-learning is a teaching method which combines community service with academic instruction as it focuses on critical, reflective thinking and civic responsibility. Service-learning programs involve students in organized community service that addresses local needs, while developing their academic skills, sense of civic responsibility, and commitment to the community.

Service-Learning Program Provides Educational Experiences: Under which students learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs and that are coordinated in collaboration with school and community. The engineering student analyzing and executing a socially-relevant project is another example of service learning. The service learning is a methodology falling under the category of experiential education. It is one of the forms of experiential learning and community service opportunities.

It is distinguished in the following ways:

1. Connection to curriculum: Integrating the learning into a service project is a key to successful service learning. Academic ties should be clear and built upon existing disciplinary skills.
2. Learner's voice: Beyond being actively engaged in the project, trainees have the opportunity to select, design, implement, and evaluate their service activity.
3. Reflection: Structured opportunities are created to think, talk, and write about the service experience. The balance of reflection and action allows the trainee to be constantly aware of the impact of their work.
4. Partners in the community: Partnership with community agencies are used to identify genuine needs, provide mentorship, and contribute input such as labor and expertise towards completing the project.



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Service-Learning Benefits


Service-Learning benefits students by:

- Linking theory to practice
- Deepening understanding of course materials
- Enhancing the sense of civic responsibility through civic engagement
- Allowing students to explore possible career paths
- Stressing the importance of improving the human condition
- Developing relevant career-related skills
- Providing experience in group work and interpersonal communication
- Promoting interaction with people from diverse backgrounds
- Instilling a sense of empowerment that enhances self-esteem

Service-Learning benefits faculty by:

- Providing exciting new ways to teach familiar material
- Offering professional development challenges
- Engaging faculty in meaningful interactions with the community at large
- Encouraging faculty to form close, interactive, mentoring relationships with students
- Reminding faculty of the direct consequences of their teaching for society
- Connecting faculty across academic disciplines through a shared approach to teaching and learning process.




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Civic Virtue: Civic virtues are the moral duties and rights, as a citizen of the village or the country or an integral part of the society and environment. An individual may exhibit civic virtues by voting, volunteering, and organizing welfare groups and meetings.

The duties are:

- To pay taxes to the local government and state, in time.
- To keep the surroundings clean and green.
- Not to pollute the water, land, and air by following hygiene and proper garbage disposal. For example, not to burn wood, tyres, plastic materials, spit in the open, even not to smoke in the open, and not to cause nuisance to the public, are some of the civic (duties) virtues.
- To follow the road safety rules.

Respect for Others

This is a basic requirement for nurturing friendship, team work, and for the synergy it promotes and sustains. The principles enunciated in this regard are:

- Recognize and accept the existence of other persons as human beings, because they have a right to live, just as you have.
- Respect others' ideas (decisions), words, and labor (actions). One need not accept or approve or award them, but shall listen to them first. One can correct or warn, if they commit mistakes. Some people may wait and watch as fun, if one falls, claiming that they know others mistakes before and know that they will fall! Appreciate colleagues and subordinates on their positive actions. Criticize constructively and encourage them. They are bound to improve their performance, by learning properly and by putting more efforts.
- Show goodwill on others. Love others. Allow others to grow. Basically, the goodwill reflects on the originator and multiplies itself on everybody. This will facilitate co linearity, focus, coherence, and strength to achieve the goals.



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Living Peacefully

To live peacefully, one should start install peace within (self. Charity begins at home. Then one can spread peace to family, organization where one works, and then to the world, including the environment. Only who are at peace can spread peace. You can't gift an article which you do not possess. The essence of oriental philosophy is that one should not fight for peace. It is oxymoron. War or peace can be won only by peace, and not by wars!

One should adopt the following means to live peacefully, in the world:

Nurture

Get

I Order in one's life (self-regulation, discipline, and duty).

I Pure thoughts in one's soul (loving others, blessing others, friendly, and not criticizing or hurting others by thought, word or deed).

I Creativity in one's head (useful and constructive).

I Beauty in one's heart (love, service, happiness, and peace).

I Good health/body (Physical strength for service to enjoy the academic environment in the institution).

Act

I Help the needy with head, heart, and hands (charity). Service to the poor is considered holier than the service to God.

I not hurting and torturing others physically, verbally, or mentally.

Caring

Caring is feeling for others. It is a process which exhibits the interest in, and support for, the welfare of others with fairness, impartiality and justice in all activities, among the employees, in the context of professional ethics. It includes showing respect to the feelings of others, and also respecting and preserving the interests of all others concerned. Caring is reflected in activities such as friendship, membership in social clubs and professional societies, and through various transactions in the family, fraternity, community, country and in international councils.



Sharing

Primarily, caring influences sharing. Sharing is a process that describes the transfer of knowledge (teaching, learning, and information), experience (training), commodities (material possession) and facilities with others. The transfer should be genuine, legal, positive, voluntary, and without any expectation in return. However, the proprietary information should not be shared with outsiders. Through this process of sharing, experience, expertise, wisdom and other benefits reach more people faster. Sharing is voluntary and it can't be driven by force, but motivated successfully through ethical principles. In short, sharing is charity For the humanity, sharing is a culture. The happiness and wealth are multiplied and the crimes and sufferings are reduced, by sharing. It paves the way for peace and obviates militancy. Philosophically, the sharing maximizes the happiness for all the human beings. In terms of psychology, the fear, divide, and distrust between the haves and have-nots disappear. Sharing not only paves the way to prosperity, early and easily, and sustains it. Economically speaking, benefits are maximized as there is no wastage or loss, and everybody gets one's needs fulfilled and satisfied. Commercially speaking, the profit is maximized. Technologically, the productivity and utilization are maximized by sharing.

Honesty

Honesty is a virtue, and it is exhibited in two aspects namely,

- Truthfulness
- Trust worthiness.

Truthfulness is to face the responsibilities upon telling truth. One should keep one's word or promise. By admitting one's mistake committed (one needs courage to do that!), it is easy to fix them. Reliable engineering judgment, maintenance of truth, defending the truth, and communicating the truth, only when it does well to others, are some of the reflections of truthfulness. But trustworthiness is maintaining integrity and taking responsibility for personal performance. People abide by law and live by mutual trust. They play the right way to win, according to the laws or rules (legally and morally). They build trust through reliability and authenticity. They admit their own mistakes and confront unethical actions in others and take tough and principled stand, even if unpopular.



Courage

Courage is the tendency to accept and face risks and difficult tasks in rational ways. Self-confidence is the basic requirement to nurture courage. Courage is classified into three types, based on the types of risks, namely

- Physical courage
- Social courage
- Intellectual courage.

In physical courage, the thrust is on the adequacy of the physical strength, including the muscle power and armaments. People with high adrenalin, may be prepared to face challenges for the mere thrill or driven by a decision to excel. The social courage involves the decisions and actions to change the order, based on the conviction for or against certain social behaviors. This requires leadership abilities, including empathy and sacrifice, to mobilize and motivate the followers, for the social cause. The intellectual courage is inculcated in people through acquired knowledge, experience, games, tactics, education, and training. In professional ethics, courage is applicable to the employers, employees, public, and the press.

Look before you leap. One should perform Strengths, Weakness, Opportunities, and Threat (SWOT) analysis. Calculate (estimate) the risks, compare with one's strengths, and anticipate the end results, while taking decisions and before getting into action. Learning from the past helps. Past experience (one's own or borrowed!) and wisdom gained from self-study or others will prepare one to plan and act with self-confidence, succeed in achieving the desired ethical goals through ethical means. Opportunities and threat existing and likely to exist in future are also to be studied and measures to be planned. This anticipatory management will help anyone to face the future with courage.

Valuing Time

Time is rare resource. Once it is spent, it is lost forever. It can't be either stored or recovered. Hence, time is the most perishable and most valuable resource too. This resource is continuously spent, whether any decision or action is taken or not. The history of great reformers and innovators have stressed the importance of time and valuing time. The proverbs, Time and tide wait for nobody and Procrastination is the thief of time amply illustrates this point.



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PART-II

PROFESSIONAL ETHICS

INTRODUCTION

Professionalism is the conduct or qualities that characterize or mark a profession or professional; it implies quality of workmanship or service. Professional ethics guide how members of a professional organization should, or should not, affect others in the course of practicing their profession.

TEN GOLDEN RULES

- 1. Always strive for excellence** This is the first rule to achieving greatness in whatever endeavor you undertake this is the quality that makes you and your work stand-out. Excellence is a quality of service which is unusually good and so surpasses ordinary standards, it should be made a habit for it to make a good impression on your bosses and colleagues.
- 2. Be trustworthy** In today's society trust is an issue and any employee who exhibits trustworthiness is on a fast track to professionalism. Trustworthiness is about fulfilling an assigned task and as an extension- not letting down expectations, it is been dependable, and reliable when called upon to deliver a service. In order to earn the trust of your bosses and colleagues, worth and integrity must be proven over time.
- 3. Be accountable** To be accountable is to stand tall and be counted for what actions you have undertaken, this is the blameworthiness and responsibility for your actions and its consequences- good or bad.
- 4. Be courteous and respectful** Courteousness is being friendly, polite and well-mannered with a gracious consideration towards others. It makes social interactions in the workplace run smoothly, avoid conflicts and earn respect. Respect is a positive feeling of esteem or deference for a person or organization; it is built over time and can be lost with one stupid or inconsiderate action. Continued courteous interactions are required to maintain or increase the original respect gained.
- 5. Be honest, open and transparent** Honesty is a facet of moral character that connotes positive and virtuous attributes such as truthfulness, straightforwardness of conduct, loyalty, fairness,

sincerity, openness in communication and generally operating in a way for others to see what actions are being performed.

6. Be competent and improve continually Competence is the ability of an individual to do a job properly, it is a combination of knowledge, skills and behavior used to improve performance. Competency grows through experience and to the extent one is willing to learn and adapt. Continuous self-development is a pre-requisite in offering professional service at all times.

7. Always be ethical Ethical behavior is acting within certain moral codes in accordance with the generally accepted code of conduct or rules. It is always safe for an employee to “play by the rules”. This is always the best policy and in instances the rule book is inadequate, acting with a clear moral conscience is the right way to go. This may cause friction in some organizations but ethical organizations will always stand by the right moral decisions and actions of their employees.

8. Always be honorable and act with integrity Honorable action is behaving in a way that portrays “nobility of soul, magnanimity, and a scorn of meanness” which is derived from virtuous conduct and personal integrity. This is a concept of “wholeness or completeness” of character in line with certain values, beliefs, and principles with consistency in action and outcome.

9. Be respectful of confidentiality Confidentiality is respecting the set of rules or promise that restricts you from further and unauthorized dissemination of information. Over the course of your career, information will be passed on to you in confidence — either from the organization or from colleagues- and it is important to be true to such confidences.

10. Set good examples Applying the foregoing rules helps you improve your professionalism within your organization but it is not complete until you impact knowledge on those around and below you. You must show and lead by good example. Being a professional is about living an exemplary life within and without the organization. Professionalism is highly valued by every organization today and professionals are hardly out of work. Apply the ten golden rules of ethics and enjoy a wonderful, professional and prosperous career.



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WORK ETHICS

Work ethics is defined as a set of attitudes concerned with the value of work, which forms the motivational orientation. It is a set of values based on hard work and diligence. It is also a belief in the moral benefit of work and its ability to enhance character. A work ethic may include being reliable, having initiative, or pursuing new skills.

The work ethics are aimed at ensuring the economy (get job, create wealth, earn salary), productivity (wealth, profit), safety (in workplace), health and hygiene (working conditions), privacy (raise family), security (permanence against contractual, pension, and retirement benefits), cultural and social development (leisure, hobby, and happiness), welfare (social work), environment (anti-pollution activities), and offer opportunities for all, according to their abilities, but without discrimination. Work ethics are not just hard work but also a set of accompanying virtues, whose crucial role is the development and sustaining of high degree of professionalism.



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PROFESSIONAL VALUES

1. Integrity: Integrity is defined as the unity of thought, word and deed (honesty) and open mindedness. It includes the capacity to communicate the factual information so that others can make well informed decisions. It is one of the self-direction virtues. It entuses people not only to execute a job well but to achieve excellence in performance. It helps them to own the responsibility and earn self-respect and recognition by doing the job. Integrity is the quality of being honest and having strong moral principles; moral uprightness. It is generally a personal choice to uphold oneself to consistently moral and ethical standards.

2. Credibility& Responsibility: The obligation of an individual or organization to account for its activities, accept responsibility for the demand to disclose the results in a transparent manner. It also includes the responsibility for money or other entrusted property.

3. Loyalty: Loyalty is faithfulness or devotion to a person, country, group, or cause. Loyalty is a trait highly valued in working professionals. Students are taught to be loyal to the institute, the society, their fellow citizens and to the nation.

4. Commitment: Commitment means alignment to goals and adherence to ethical principles during the activities. One should have the conviction without an iota of doubt that one will succeed. Holding sustained interest and firmness, in whatever ethical means one follows, with the fervent attitude and hope that one will achieve the goals, is commitment. It is the driving force to realize success. This is bound to add wealth to oneself, one's employer, society, and the nation at large. Target oriented efforts are put to reap efficiency.

5. Attitude: It is a psychological construct, a mental and emotional entity that inheres in, or characterizes a person. Attitudes is the most distinctive and indispensable concept in present day. Attitude can be formed from a person's past and present. Positive attitude people are most successful in their life. One should develop such attitude which provides synergy and satisfaction in their day to day life. Positive Mental Attitude (PMA) characterizes faith, integrity, hope, optimism, courage, initiative, generosity, tolerance, tact, kindness and good common sense.

6. Valuing Time: Time is rare resource. Once it is spent, it is lost forever. It cannot be either stored or recovered. Hence, time is the most perishable and most valuable resource too. This

resource is continuously spent, whether any decision or action is taken or not. The history of great reformers and innovators has stressed the importance of time and valuing time. Time management is the key to increase effectiveness, efficiency or productivity.

7. **Passion:** Passion is a feeling of intense enthusiasm towards or compelling desire for completion of the work. Passion defines performance enhancing aspects and work enjoyment. When an individual is passionate about their occupation they tend to work more resulting in more work satisfaction.



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**MINUTIES OF THE MEETING OF HODs HELD ON 10.03.2020 AT 11.30 AM IN
THE MEETING ROOM**

AGENDA:

1. To discuss and redefine the guidelines to be followed for faculty attending workshops/Conferences/ Paper Presentation/Training Programmes etc.,
2. To discuss the rules and regulations regarding students' promotion.

MEMBERS PRESENT

S. No	Name	Designation
1	Dr.G.Suresh	Principal
2	Prof.K.Ashok Babu	Professor & Convener
3	Dr.P.Mallesham	Director (Mech)
4	Mr.M.Srinivasa Rao	HoD/Mech
5	Mr.D.Rajendra Babu	HoD/Civil
6	Mrs. N.Shailaja	HoD/H&S
7	Mrs. B.Surekha Reddy	HoD/IT
8	Dr.T.Charan Singh	HoD/CSE
9	Dr.A.Nagamalleshwar Rao	HoD/EEE
10	Dr.N.C.Sendhilkumar	HoD/ECE
11	Dr.S.R.Mugunthan	R&D Coordinator
12	Mr.L.Sathyanaarayana	AO

Resolutions:

1. Discussed and finalized the guidelines for the faculty attending workshops /conferences /paper presentations / training programmes / to attend as judge or examiner and any other academic activity.

a) To attend Workshops/ Conferences:

- i) Shall have atleast one year service in the college.



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- ii) Shall execute undertaking for the continuation of service.
- iii) Each department can recommend at a time not more than two faculty for the same workshop/ conference.
- iv) Permitted during "No class work days" or with proper alteration and compensation of hours.
- v) Shall submit photocopy of certificate of attendance/ participation/ presentation.
- vi) Shall give a presentation in the department on workshop / conference attended within a week time and shall record the proceedings.
- vii) Total fund limit per department is Rs. 1,00,000 per year.

b) To attend workshops 1 day / 2days:

- i) If workshop is being organized by private Engineering College / private University, only special leave (maximum 2 days) with 50% registration charges will be sanctioned.
- ii) If organized by NIT/IIT/IISC and government universities or by recognized societies like ASME/IEEE/CSI/IETE etc., leave for 2 days with either registration charges or travel allowance whichever is lower will be paid.

c) To attend national level conference:

- i) Special leave (maximum 2 days) without any financial assistance if no paper presentation.
- ii) For paper presentation in private engineering colleges/NIT/IIT/IISC/ Universities or recognized societies- leave for a maximum of 3 days with travel allowance and DA & registration charges (actual not exceeding Rs.5000/ per year) permitted.

d) To attend international conferences outside the country:

- i) Once in three years only.
- ii) Shall be having more than 5 years of experience at the college.
- iii) Special leave including days of journey will be granted
- iv) Travel allowance, DA at the discretion of management.

e) To attend faculty development programmes/ training- one week or more than a week duration.



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- i) FDP sponsored by AICTE / UGC / ISTE or organized by NIT/ IIT/ IISC are permitted with special leave TA, DA may be paid by hosting organization.
 - ii) Special leave sanctioned beyond 7 days will be adjusted with summer vacation.
 - iii) For programmes attended by faculty during vacation, no compensation will be given.
- f) To attend as judges/ Examiners / Session Chairs / Ph.D adjudication etc.,**
- i) Special leave without any allowances for a maximum of 5 days in an academic year and more than that will be adjusted with summer vacation.
 - ii) Special leave without any allowances for a maximum of 4 days in an academic year for guest lectures only at NIT/ IIT / IISC and any other university and engineering colleges.
- g) To attend interview or Review Meeting for getting Research Projects / or from any funding agencies.**
- i) Special leave sanctioned with TA, DA and Accommodation.

The HODs are requested to circulate the above guidelines among their teaching faculty members.

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R & D Committees

Date: 07.08.2021

The College has constituted a dedicated team of Research Advisory committee for activating and guiding both faculty and students to pursue quality research. The Research and Development committee consists of a well experienced, academic and industry members to guide and co-ordinate the research related issues of each department.

R&D Advisory Committee

S. No	Coordinators	Designation
1	Dr.R.Gunasekaran, Professor and Head, Department of Information Technology, Madras Institute of Technology, Chennai-600044 99626 90099 Gunasekaran.mit@gmail.com	Academician
2	Dr DV Ramana Data Strategist-Consultant Wissen Infotech.	Industry Expert
3	Dr.P.Arulmozhivarman, ,Ph.D., Dean/SELECT VIT University, Vellore - 632 014 Tamil Nadu.	Academician
4	Dr.S.Manikandan,M.E., Ph.D., Scientist-E Electronics Radar Development Establishment(LRDE), Defence Research & Development Organisation (DRDO), CV Raman Nagar, Bangalore - 560093	Industry Expert


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	manikandan.s@lrde.drdo.in mobile: +918892948002	
5	Dr. S. Mohan Kumar, Professor & Director (Research), CMR University, Bangalore, Karnataka. 9686308745	Academician
6	Mr.P.Dhandapani Vice president, Wells Fargo India Pvt. Ltd. Bangalore-560103 96321 14174 Dhandapani.p@gmail.com	Industry Expert
7	Mr.M.Bhaskar, Team Lead,Wipro Technologies Electronics city,Bangalore-560100 9448796537 baskar.marappan@wipro.com	Industry Expert

R & D Coordinators & Ethics committee

S. No	Coordinators	Designation
1	Dr. S. R. Mukunthan	Professor/CSE, R&D Coordinator
2	Dr.P.Mukunthan	Professor/ECE
3	Dr. A. Naga Malleshwar	Professor/EEE
4	Dr.Joseph Prabhakar Williams	Professor/EEE
5	Dr. P. Ramesh	Associate Professor/ECE
6	Dr.N.Sadhasivam	Professor/CSE



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**SRIINDU COLLEGE OF ENGINEERING AND TECHNOLOGY
HYDERABAD -501510
RESEARCH AND DEVELOPMENT CELL**

NAAC
NATIONAL ASSESSMENT AND
ACCREDITATION COUNCIL



CIRCULAR

Ref. No.: SICET/R&D/2019-20/ETHICS/01

Date: 11.02.2019

R & D Cell of Sri Indu College of Engineering and Technology is established with the following objectives:

- To encourage the faculty to get actively involved in the research activities.
- To motivate the faculty members to apply for research grants.
- To support research scholars and UG/PG final year students to complete their project work successfully with publications.
- To enhance the research publications in the Scopus/web of science indexed journals.

In this regard, R&D cell is decided to establish an Ethics committee with the following **objective**:

- It must ensure that the rights of research participants are protected.
- Identifying and weighing up the risks and benefits of a study.
- Ensuring that all the research activities are recorded properly and reported in a responsible, honest, and objective way.

The research ethics committee is constituted with the following members to ensure the originality and to review the similarity status:

S.No.	Member(s)
1.	Dr.P,Mallesham Principal, Chairperson
2.	Dr.G.Suresh, Professor/ECE & Member
3.	Dr.N.C.Sendhil kumar,Professor/IQAC Coordinator & Member
4.	Dr.S.R.Mugunthan, Associate Professor/CSE & R&D coordinator

S. R. Myt
R&D coordinator



[Signature]
Principal

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