

INSTITUTIONAL DISTINCTIVENESS

“A Collaborative and Skill-Integrated Educational Ecosystem through Networking, Research and Experiential Learning”

Introduction

Holy Cross College (Autonomous), Nagercoil has developed a distinctive institutional ecosystem that integrates **academic networking, research engagement, skill enhancement and experiential learning** to promote the holistic development of students and faculty. During the academic year 2024–2025, the institution adopted the focused theme **“Networking, Research Grants, and Skill Enhancement”** and translated this theme into a wide range of academic, research, professional, entrepreneurial, technological, cultural and community-oriented initiatives.



The distinctiveness of the institution lies not merely in conducting individual programmes, but in creating opportunities through which **students and faculty connect with external institutions, industries, NGOs, research organisations and professional bodies; engage in research and innovation; and transform academic knowledge into practical skills and real-world applications**. Thus, networking becomes an enabler for research and career opportunities, research becomes a platform for innovation and knowledge creation, and skill enhancement converts academic learning into competencies required for higher education, employment, entrepreneurship and responsible citizenship.

This integrated approach has resulted in a vibrant academic environment in which students are encouraged to **learn, collaborate, experiment, create, communicate and lead**. The institutional initiatives have extended beyond conventional classroom learning to include MoUs, international collaborations, research publications, grants, internships, industrial visits, hands-on training, certificate courses, value-added courses, entrepreneurship initiatives, technological applications, competitive examination coaching, placements, cultural activities and sports.

The institution recorded **102 networking-related activities**, established **85 MoUs** with institutions, industries and NGOs, and developed academic collaborations with institutions in **ten countries**. These partnerships facilitated conferences, workshops, seminars, endowment

lectures, research activities, staff and student exchange, career development, innovation and entrepreneurship.

The institution also undertook **53 research grant activities, funded projects and collaborative initiatives**, while providing internal research support through the **Crossian Research Seed Money Scheme Projects (CRSMSP)**. Faculty and research scholars were encouraged to develop research proposals, undertake interdisciplinary research, publish in quality journals and pursue patents.

Parallely, **118 programmes** were initially documented under skill enhancement, covering soft skills, career guidance, competitive examinations, cybersecurity and communication, along with workshops, hands-on training, industrial visits and value-added courses. The detailed evidence further records capability enhancement programmes, certificate courses, generic value-added courses, MOOCs, training, placements, entrepreneurship and other skill-oriented initiatives.

Networking as a Platform for Academic and Professional Growth

The international dimension of networking was strengthened through MoUs with **Lincoln University** and **Tunku Abdul Rahman University of Management and Technology, Malaysia**. These collaborations supported academic publications, staff and student exchange, career development, innovation, entrepreneurship, seminars and workshops.

The Dean of Academic Affairs also facilitated academic collaborations with institutions in ten countries and integrated international experts into the Boards of Studies of departments. This enabled departments to incorporate global perspectives and contemporary international trends into their academic processes.

Thus, networking at Holy Cross College functions as an academic bridge connecting classroom learning with the wider academic, professional and research community.

Research as a Culture of Knowledge Creation

Research forms the second important dimension of the institutional distinctiveness. The institution undertook 53 research grant activities, funded projects and collaborative research initiatives during 2024–2025. Faculty members and research scholars applied for funding from state and national agencies and received training in research proposal preparation.

The **Crossian Research Seed Money Scheme Projects (CRSMSP)** provided internal financial support to faculty and scholars. Each scholar received ₹10,000, while faculty members received ₹1,00,000 for research-related activities. The projects covered areas including Zika virus modelling, green synthesis of nanoparticles, biomedical applications, plant-derived nanoparticles, marine biotechnology, literature and cinema, green entrepreneurship, computational mathematics and environmental remediation.

Research productivity was further strengthened through financial support for patents and incentives for quality publications. The institution supported patent-related work with ₹1,65,370, resulting in 14 patents being filed. It also awarded ₹1.23 lakhs to 52 faculty members who published in high-impact Q1 and Q2 journals. The reported research output included papers in SCI, Scopus, Web of Science and UGC-CARE-listed journals, along with conference proceedings, books and book chapters.

Research therefore becomes an integral part of the learning ecosystem, connecting faculty expertise, student research, external collaborations, funding opportunities and knowledge dissemination.

Experiential Learning and Skill Integration

The third dimension is the conversion of academic knowledge into practical competence. The institution organised workshops, hands-on training, industrial visits, internships, value-added courses and other capability enhancement initiatives. These activities were designed to bridge academic learning with practical application and industry readiness.

The institution also created three domains of excellence—**Academic Excellence, Entrepreneurial Excellence and Service-Learning Excellence**—to provide platforms for students to showcase their talents, achievements and innovations. The NAAC Peer Team appreciated this initiative as a reflection of the institution's commitment to quality education and student empowerment.

The programmes demonstrate that skill development is not restricted to employability training. It includes communication, creativity, leadership, entrepreneurship, digital literacy, critical thinking, problem-solving, teamwork, adaptability, responsibility and initiative.

Programmes and Initiatives Reflecting the Distinctiveness

International and Academic Networking Initiatives

The institution's networking orientation is demonstrated through a wide range of collaborative activities.

Department of Botany

The Department of Botany collaborated with **CREATE Trust** for the preservation and propagation of traditional paddy varieties, food security and agricultural heritage. This resulted in the establishment of a **Heritage Paddy Sanctuary**. The department also collaborated with ISNA and a CSIR scientist to conduct the workshop “**Unlocking Nature’s Potential: Status, Sustainable Utilization, and Conservation of Biodiversity.**”

Department of Zoology

The Department of Zoology collaborated with institutions including **King Saud University, Saudi Arabia; Sejong University, South Korea; and Sethupathy Government Arts College, Tamil Nadu**. The collaboration resulted in three papers in SCIE journals and four papers in Web of Science-indexed journals. The department also provided internship training to students from Kannur University, Kerala, and research activities resulted in the identification of a new freshwater crab species.

Department of Chemistry

The Department of Chemistry organised industrial visits to **CSIR–Central Institute of Medicinal and Aromatic Plants, Bengaluru** and the **Aavin Milk Plant, Nagercoil**, benefiting 33 students. It also collaborated with several institutions on research projects, resulting in ten research articles in reputed journals.

Department of AI & Data Science

The department organised a two-day workshop on “**Machine Learning and Robotics**” in collaboration with Hiltek Centre for Artificial Intelligence & Robotics Pvt. Ltd. It subsequently developed a college chatbot and introduced QR code labelling for antique library collections. The department also collaborated with Botany, Zoology, Commerce and other departments for interdisciplinary research and academic networking.

Department of Commerce

The Department of Commerce collaborated with national and international academic institutions and scholars. These collaborations resulted in **ten books** and **19 articles in SSCI-indexed journals**.

Department of History

The Department of History established a five-year agreement with the Government Museum, Tirunelveli, enabling third-year undergraduate students to undertake internships. It also signed an MoU with Darrels AM Research and Reverse Engineering LABS Private Limited, Nagercoil, for internships for undergraduate and postgraduate students.

Department of Corporate Secretaryship

Career-oriented sessions were conducted in collaboration with **ICSI and Vallmond Academy**. As an outcome, 64 students enrolled as members of the Institute of Company Secretaries of India.

Research and Innovation Programmes

Research and innovation initiatives constitute a major component of the institutional distinctiveness.

Crossian Research Seed Money Scheme Projects

The CRSMSMP supported scholars and faculty through institutional research funding. The projects included:

- **Mathematics:** Sensitivity Analysis on the Parameters of Zika Virus Dissemination Using Graphical Modeling.
- **Physics:** Green synthesis of zinc oxide nanoparticles and bio-fabrication of hydroxyapatite composites.
- **Botany:** Chemoprofiling and biosynthesis of plant callus-derived nanoparticles.
- **Zoology:** Purification, characterization and antibacterial property of a novel lectin isolated from a marine crab.
- **English:** Scripted Identities: The Devadasi Woman in Literature and Cinema.
- **Commerce:** Artificial Intelligence adoption and green entrepreneurship for sustainable business growth.
- **Mathematics:** Computational approach using dominating sets.
- **Physics:** Eco-friendly synthesis of calcium nanoparticles for photocatalysis and environmental remediation.

Research Fellowships and External Funding

Four researchers received the **UGC National Fellowship for Single Girl Child under the Savitribai Jyotirao Phule Fellowship Scheme**, receiving ₹42,000 each. Three postgraduate student projects received ₹7,500 each from the Tamil Nadu State Council for Science and Technology. Two research scholars received ₹60,000 each from the same agency.

Patents and Quality Publications

The college provided financial support for patent-related research, resulting in **14 patents filed**. Fifty-two faculty members publishing in high-impact Q1 and Q2 journals received institutional recognition. Research outputs included 36 SCI-indexed papers, 29 Scopus papers, 14 Web of Science papers, 123 UGC-CARE-listed papers and 24 papers in other peer-reviewed journals. Faculty also contributed 185 conference proceedings, 52 books and 59 book chapters.

These initiatives demonstrate an institutional culture where research is supported through **funding, mentoring, collaboration, publication, patenting and recognition**.

Skill Development, Experiential Learning and Entrepreneurship

The institution's distinctiveness is further demonstrated through a comprehensive range of skill-oriented programmes.

Sustainable and Practical Skill Training

The Department of Zoology conducted training in **apiculture, sericulture and vermicomposting**. The initiative generated ₹10,000 while providing students with practical knowledge and hands-on experience in sustainable practices.

The Department of Physics installed **ten sensor-based water taps** in Green Paradise Park and installed solar lights in adopted villages. These activities provided hands-on experience in sustainable technology while addressing community needs.

The Department of Botany introduced **QR codes for tree and plant identification** and created a **Tulsi Garden with 28 varieties of Tulsi**, classified based on morphology, aroma and medicinal properties. Students also received coaching for NET, SET and TNPSC examinations.

Digital and Technological Skill Development

The Department of Computer Science developed an application for student elections and successfully conducted the election using the application. This provided students with practical experience in software development while contributing to a smooth and transparent election process.

The Department of AI & Data Science developed an AI-based chatbot for the college website to provide real-time information, respond to academic queries and enhance institutional outreach.

The Department of Botany's QR-based plant identification and the QR labelling of antique library collections further demonstrate the application of digital technologies to academic resources.

Communication, Creativity and Cultural Skills

The Department of English conducted **Scene Stealers**, an inter-class drama competition that developed teamwork, confidence and communication skills. The **English Cuisine Competition** enhanced culinary abilities and food safety awareness, while **Nature's Palette** promoted sustainable artistic practices through the use of natural paints. The **Speak with Confidence: English & Foreign Language Mastery** programme enhanced students' confidence in English and foreign-language communication.

The Department of English Literature with Media Communication conducted a photography workshop through **Crossian Frame**, enabling students to participate in photography contests and develop visual storytelling skills. The **Bringing Walls to Life – Wall Art** initiative provided students with opportunities for artistic expression and campus beautification.

Entrepreneurship and Business Skills

The Department of English SF conducted **HUCKSTER KIOSK 2024 – Student Entrepreneurial Fair**, through which students established and managed kiosks featuring homemade and locally sourced products. Students gained practical experience in pricing, consumer behaviour and marketing.

The Department of Commerce conducted a **Saree Pre-Pleating Course** under the WISE programme to motivate women to initiate businesses or become entrepreneurs. Eleven students started businesses and earned ₹5,500. Career orientation sessions also encouraged students to pursue CA, CMA, MBA and TANCET pathways; four students enrolled in CA and 19 opted for MBA.

The institution also recorded **100 Startsteps ventures**, demonstrating the emphasis placed on entrepreneurial development.

Career Readiness and Lifelong Learning

The institutional distinctiveness is strongly reflected in initiatives designed to prepare students for employment, higher education and lifelong learning.

- **563 students** registered for MOOCs, with 162 completing their courses.
- **224 students** participated in summer training programmes.
- **20 students** underwent in-plant training.
- **23 students** participated in industrial visits.
- **Four students** qualified for NET/SET.
- **177 students** secured on-campus placements.
- **Eight students** obtained off-campus opportunities.
- **Two students** entered government service.
- Students won **8 academic prizes, 66 cultural awards and 6 quiz prizes** at intercollegiate events.

The institution also organised **141 capability enhancement programmes** focusing on self-skills, career guidance, competitive examinations and cybersecurity. In addition, 12 certificate courses and 16 generic value-added courses were conducted.

These programmes developed critical thinking, problem-solving, communication, collaboration, digital literacy, creativity, innovation, leadership, responsibility, adaptability and initiative.

Student Excellence through Academic, Entrepreneurial and Service Learning

A significant institutional initiative was the establishment of three domains of excellence:

Academic Excellence

Students are provided opportunities to develop academic capabilities through research, competitive examinations, MOOCs, internships, academic networking, conferences, workshops and professional orientation.

Entrepreneurial Excellence

Students are encouraged to convert their skills and ideas into entrepreneurial activities through initiatives such as student entrepreneurial fairs, Startsteps ventures, business-oriented courses and WISE programmes.

Service-Learning Excellence

Students participate in practical initiatives that connect learning with community needs, sustainability and institutional development. Examples include solar-light installation in adopted villages, sustainable technology projects, biodiversity-related initiatives and environmental activities.

The NAAC Peer Team appreciated these three platforms as meaningful reflections of the institution's commitment to quality education and student empowerment.

The academic year 2024–2025 provides substantial evidence of this distinctive institutional approach. International and national collaborations expanded the academic network; research grants, seed money, publications and patents strengthened the research ecosystem; and workshops, internships, industrial visits, certificate courses, value-added courses, entrepreneurship initiatives and hands-on projects enhanced student capabilities.

The initiatives across departments demonstrate that the distinctiveness is **institution-wide rather than confined to a single department or programme**. Botany, Zoology, Chemistry, Physics, AI & Data Science, Computer Science, Commerce, History, English, Corporate Secretaryship and other departments translated the institutional thrust into discipline-specific activities while retaining the common focus on collaboration, research, skill development and practical application.

The institution's approach is therefore characterised by a continuous cycle:

**CONNECT → COLLABORATE → RESEARCH → APPLY → DEVELOP SKILLS →
CREATE IMPACT**