



THE COCHIN COLLEGE

Koovapadam, Kochi-2

Affiliated To Mahatma Gandhi University

Re-accredited by NAAC With B+ Grade



Fourth Cycle
NAAC Accreditation 2024

Criterion 3 Research, Innovations and Extension

3.2 - Innovation Ecosystem

Metric No. 3.2.1

Institution has created an ecosystem for innovations, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the creation and transfer of knowledge/technology and the outcomes of the same are evident

Research Promotion

Submitted to



National Assessment and Accreditation Council



THE COCHIN COLLEGE

KOCHI - 682 002

(Affiliated to Mahatma Gandhi University and Accredited by NAAC)

Website: www.thecochincollege.edu.in

email: email@thecochincollege.edu.in

Declaration on Principal

This is to declare that The Cochin college has research centres in Commerce and Physics.

Mrudula Menon V.





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Research Centres at The Cochin College

1 Introduction

The Cochin College aims to create and support a research culture for developing and promoting scientific temper and research aptitudes among its teachers, staff, and students. The Research Policy of the Institution provides standard norms for conducting research in an effective and safe manner. The policy aims to contribute to capacity building by encouraging the scientific temper and research aptitude of the faculty and students and by implementing advanced research methodologies. This Research Policy is implemented in all departments and serves as the guidelines for the functioning of the Research Centres of the college.

2 Research Policy

The purpose of the Research Policy is to create a vibrant atmosphere of research among faculty and researchers in The Cochin College. The policy shall serve as an overall framework within which research activities may be carried out.

1. Identifying and informing researchers about the appropriate research opportunities announced by different academic, research, industry, or government organizations.
2. Encouraging and facilitating the publication of the research work/projects in reputed academic journals.
3. Nurturing an environment of undertaking socially useful research with potential for commercialization.
4. Promoting the development of a research culture amongst students of the UG and PG Programs. The Committee coordinates the research projects of students by preparing guidelines for UG and PG research projects.
5. Encouraging faculty to apply for recognition as research guides.
6. Showcasing the research carried out by the student and the faculty through its registered peer review, UGC CARE recognized journal, *Xplore*, with separate editions for Sciences and Humanities.
7. Strictly prohibiting plagiarism at all levels and facilitating the monitoring and mitigation of malpractices through online tools.





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3 Research Committee

The Research Committee is headed by the Principal and consists of faculty with doctoral degrees to promote and monitor research activities. The committee advocates high standards of responsibility for ethical conduct from the faculty engaged in research in all aspects of their research activity. The Cochin College Research Committee consists of 9 faculty members: 3 from Arts/Humanities and 4 from Science, one of whom will be the Convenor. This committee works with the Principal in reviewing proposals and encouraging research in the College.

4 Research Centres- The Thrust Areas of Research Centres

4.1 Physics Research Centre

The thrust area of Physics research centre is advanced material science research, with a particular emphasis on the synthesis and characterization of multiferroic perovskite nanoparticles. These materials, including bismuth ferrite, barium titanate, strontium titanate, and their doped variants, are pivotal in various cutting-edge applications due to their unique properties.

- **Synthesis and Characterization of Multiferroic Perovskite Nanoparticles:** The centre focuses on developing nanoparticles with enhanced multiferroic properties, which are materials that exhibit more than one ferroic property, such as ferroelectricity, ferromagnetism, and ferroelasticity. The synthesis process involves creating nanoparticles with precise control over their composition and structure to optimize their properties.
- **Exploration of Structural, Optical, and Magnetic Properties:** The synthesized nanoparticles undergo rigorous analysis to understand their structural, optical, and magnetic properties. This includes detailed studies using various spectroscopic and imaging techniques to map out their behavior at the nanoscale. Understanding these properties is crucial for tailoring the materials for specific applications.
- **Doping Techniques for Enhanced Functional Properties:** The centre places a significant emphasis on doping, which involves introducing small amounts of other elements into the perovskite structure to alter its properties. This technique aims to enhance the functional properties of the nanoparticles, such as improving their magnetic response or increasing their stability under different environmental conditions.
- **Applications in Biomedical Technology and Energy Storage:** The research on these nanoparticles has significant implications for various fields. In biomedical technology, these materials could be used for targeted drug delivery, magnetic resonance imaging (MRI) contrast agents, or hyperthermia treatment for cancer. In energy storage, their unique properties make them candidates for use in capacitors, batteries, and other energy storage devices.





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4.2 Commerce Research Centre

The Commerce Research Centre is dedicated to advancing knowledge and understanding in various areas of commerce and management. The centre's research thrust areas encompass a broad range of topics critical to both academia and industry.

- **Marketing:** The centre's research in marketing explores the dynamics of consumer behavior, market trends, and strategic marketing practices. Studies focus on how businesses can effectively reach and engage their target audiences, the impact of digital marketing, and the development of brand strategies.
- **Finance:** Research in finance at the centre covers a wide spectrum, from corporate finance and investment strategies to financial markets and institutions. The focus is on understanding financial decision-making processes, risk management, and the development of financial models.
- **Behavioral Finance:** Behavioral finance is a growing field that combines psychology and economics to explain why and how investors make financial decisions. The centre explores the cognitive biases and emotional factors that influence financial behavior, with the goal of improving investment strategies and financial planning.
- **Entrepreneurship:** The centre emphasizes research on entrepreneurship, focusing on how new businesses are created and sustained. This includes studies on entrepreneurial motivation, innovation, business development, and the challenges faced by startups.
- **Human Resource Management:** Research in human resource management examines the strategies and practices that organizations use to manage their workforce effectively. Topics include talent acquisition, employee retention, performance management, and leadership development.
- **Consumer Governance and Ethics** This area explores the ethical dimensions of consumer behavior and business practices. The centre investigates issues related to consumer rights, corporate social responsibility, and the role of governance in protecting consumer interests.
- **Organizational Behaviour:** The study of organizational behavior at the centre focuses on understanding how individuals and groups behave within organizations. Research includes topics such as motivation, team dynamics, leadership, and organizational culture.
- **Financial Derivatives:** Research in financial derivatives involves studying financial instruments like options, futures, and swaps. The centre examines how these derivatives are used for hedging, speculation, and risk management in financial markets.





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- **Management:** The management research thrust covers various aspects of organizational management, including strategic planning, decision-making processes, and the implementation of management theories and practices in real-world scenarios.
- **Consumer Behaviour:** The centre explores the psychological, social, and economic factors that influence consumer purchasing decisions. Research includes studies on consumer preferences, decision-making processes, and the impact of marketing strategies on consumer behavior.
- **Tourism:** Research in tourism focuses on understanding the economic, social, and environmental impacts of tourism. The centre examines trends in tourism demand, destination management, and the development of sustainable tourism practices.
- **Crisis Management and Contingency Planning:** This area of research is critical for understanding how organizations can prepare for and respond to crises. The centre investigates best practices in crisis management, the development of contingency plans, and the role of leadership during emergencies.

5 Activities

- **Coursework and Classes:** Full-time and part-time research scholars attend coursework classes at the Commerce Research Centre, as mandated by the University. The institution arranges relevant talks by external experts on pertinent subjects to enhance the scholars' learning experience.
- **Progress Presentations:** Research progress presentations are scheduled regularly, following the guidelines provided by the University.
- **Publication Opportunities:** The Commerce Research Centre offers an in-house ISBN journal, providing scholars with the opportunity to publish their research works.

