Sree Ayyappa College for Women
Ayyappanagar, Chunkankadai, Nagercoil, Kaniyakumari, Tamil Nadu-629003

IIC R&D Connect

2026

The Annual Research and Innovation Letter

Institution's Innovation Council (IIC) R&D Cell



Bridging Academics & Industry

A retrospective on our landmark Industry R&D Roundtable, exploring new horizons in research collaboration, consultancy, and student internship opportunities.

Foundations of Research

Equipping scholars with cutting-edge AI & e-tools for problem statement databases and research proposal submissions.

The Deep-Tech Frontier

Inside the student breakthroughs from our recent Deep-Tech Innovation Challenge and the Annual Research Conclave.

Secretary's Message



It gives me immense pleasure to convey my best wishes to the Institution's Innovation Council (IIC) R&D Cell of Sree Ayyappa College for Women, Chunkankadai, for bringing out its newsletter. Research and innovation are essential for academic excellence and societal progress. It plays a vital role in shaping the future of higher education by encouraging critical thinking, creativity, and problem-solving skills among students.I appreciate the dedicated efforts of the faculty members and students in fostering a culture of creativity, scientific inquiry, and collaborative research. I hope this newsletter will serve as a valuable platform for showcasing innovative ideas, research achievements, and academic initiatives, while inspiring young minds to explore new possibilities and contribute meaningfully to society. I wish the IIC R&D Cell continued success in all its endeavours.

I am confident that the collective efforts of the management, faculty, and students will continue to strengthen the institution's commitment to quality education, research, and innovation. Let this newsletter reflect our shared vision of creating an academic environment where knowledge is nurtured, ideas are encouraged, and achievements are celebrated. I wish the IIC R&D Cell every success in its mission of fostering a spirit of inquiry and innovation.

Principal's Message



I am delighted to extend my heartfelt wishes to the Institution's Innovation Council (IIC) R&D Cell of Sree Ayyappa College for Women on the publication of its newsletter. The initiatives undertaken by the IIC R&D Cell provide valuable opportunities for students and faculty members to engage in research, explore emerging technologies, and transform ideas into meaningful outcomes. I congratulate the team for its commitment to nurturing an innovative and research-oriented academic environment. May this newsletter inspire greater participation in research activities and strengthen the institution's pursuit of academic excellence and innovation.

As an institution committed to holistic education, we encourage our students to move beyond classroom learning and develop the confidence to question, investigate, and innovate. Through the sustained efforts of the IIC R&D Cell, we aim to provide meaningful opportunities for experiential learning, collaborative research, and the practical application of knowledge. I hope this newsletter will motivate our academic community to pursue new challenges with enthusiasm and contribute to a progressive and knowledge-driven society.

Message from the IIC President



It gives me great pleasure to convey my best wishes for the publication of the newsletter of the Institution's Innovation Council (IIC) of Sree Ayyappa College for Women, Chunkankadai. Innovation is the driving force behind progress, and higher education institutions have a significant role in nurturing creativity, entrepreneurial thinking, and problem-solving abilities among students. The IIC provides a vibrant platform for transforming innovative ideas into practical solutions through various activities, workshops, and collaborative initiatives. I appreciate the dedicated efforts of the faculty members and students in promoting an innovation-driven culture on campus. I hope this newsletter will inspire young minds to think creatively, embrace new challenges, and contribute to the development of society.

I encourage every student to recognise their potential as a young innovator and actively participate in activities that promote design thinking, entrepreneurship, and creative problem-solving. May the IIC continue to empower aspiring innovators and nurture the entrepreneurial spirit of our institution.

I believe that a strong innovation ecosystem is built through continuous learning, teamwork, and the courage to explore unconventional ideas. The IIC will continue to encourage students to identify real-world challenges, develop innovative solutions, and gain exposure to emerging opportunities in entrepreneurship and technology. I sincerely hope that the initiatives undertaken will help our students become responsible innovators and future leaders who can make a positive difference to society

Message from R&D Coordinator



I am delighted to share my wishes on the release of the newsletter of the R&D Cell of Sree Ayyappa College for Women, Chunkankadai. Research and development are fundamental to academic advancement, knowledge creation, and societal transformation. The R&D Cell strives to cultivate a strong research culture by encouraging scientific inquiry, interdisciplinary collaboration, research publications, and innovative practices among faculty members and students. This newsletter serves as a platform to highlight research initiatives, achievements, and activities while motivating the academic community to explore new avenues of knowledge. I sincerely appreciate the collective efforts of everyone involved in strengthening research and innovation at our institution. May these endeavours continue to inspire curiosity, creativity, and a commitment to excellence.

I look forward to strengthening research initiatives through collaborative projects, academic networking, research-oriented programmes, and the dissemination of scholarly work. Encouraging ethical research practices, interdisciplinary approaches, and the sharing of knowledge will remain essential to building a sustainable research culture. I hope this newsletter will serve not only as a record of our accomplishments but also as a source of inspiration for future research endeavours and meaningful academic contributions.

With the continued support of the management and the active involvement of the academic community, I am confident that our institution will achieve greater milestones in research and development.

From the Editorial Desk

It gives us immense pleasure to present this newsletter of the Institution's Innovation Council (IIC) R&D Cell of Sree Ayyappa College for Women. In an era where knowledge, creativity, and technology drive progress, research and innovation have become essential components of higher education. This newsletter reflects our institution's commitment to fostering a culture of curiosity, critical thinking, scientific inquiry, and entrepreneurial spirit among students and faculty members.

The IIC R&D Cell provide valuable platforms for nurturing innovative ideas, promoting research aptitude, and encouraging collaborative learning. Through seminars, workshops, expert interactions and other academic initiatives, the cells strive to equip students and faculty members with the knowledge and skills needed to address emerging challenges. These activities encourage the exchange of ideas, interdisciplinary collaboration, and the practical application of knowledge, thereby strengthening the institution's research and innovation ecosystem.

This newsletter is a testament to the collective efforts, achievements, and aspirations of our academic community. We express our sincere gratitude to the management, Principal, faculty members, students, and all contributors for their continued encouragement and support. We hope this publication inspires readers to explore new avenues of research, transform creative ideas into meaningful innovations, and contribute positively to society. Let us continue to work together towards building a vibrant academic environment where knowledge flourishes, innovation thrives, and new possibilities emerge.

Vision

To foster a vibrant ecosystem of research, innovation, and entrepreneurship that empowers students and faculty members to develop creative solutions, advance knowledge, and contribute to sustainable societal development.

Mission

- To promote a culture of innovation, scientific inquiry, and research among students and faculty members.
- To encourage creative thinking, problem-solving, and entrepreneurial skills through workshops, seminars, and hands-on activities.
- To facilitate interdisciplinary research, collaborative projects, and partnerships with industries and research institutions.
- To support the development of innovative ideas into practical solutions, prototypes, and socially relevant applications.
- To create awareness of intellectual property rights, research ethics, start-up opportunities, and emerging technologies.
- To nurture young innovators and researchers who contribute to academic excellence and national development.

Editorial Team

- Dr. Smitha Nair
  (President, IIC;
  Associate Professor and Head, Dept. of Chemistry)
- Dr. S. S. Sandhya
  (R&D Cell Coordinator, IIC;
  Associate Professor and Head, Dept. of Mathematics)
- Dr. R. Radha
  (Start-up Coordinator, IIC;
  Assistant Professor, Dept. of Zoology)
- Mrs. S. Latha
  (Committee Member, IIC;
  Assistant Professor, PG Dept. of Mathematics)
- Anchu S. Kumar
  (Research Scholar, Dept. of Mathematics)
- Akhshaya P. S.
  (Research Scholar, Dept. of Mathematics)

COMMITTEE MEMBERS

Principal



Dr. V. R. Anjana
Principal

IIC President



Dr. Smitha Nair
Head and Associate Professor of Chemistry

R&D Cell Coordinator



Dr. S. S. Sandhya
Head and Associate Professor of Mathematics

Start-up Coordinator



Dr. R. Radha
Assistant Professor of Zoology

>>> External Experts



Dr. R. Kala
Professor of Mathematics, MS University, Tirunelveli



Dr.S.Mary Mettilda Bai
Associate Professor of Zoology, Holy Cross College (Autonomous), Nagercoil.

>>> Committee Members



Dr. C. Lakshmi Prasad
Assistant Professor of English



Dr. S. Sreelatha
Assistant Professor of English



Dr. S. Latha
Assistant Professor, PG Dept of Mathematics

Dates and Events

Date	Activity
12-12-2025	Faculty & Student R&D Orientation Session/ Orientation Session on Foundations of Research Excellence
13-02-2026	Session on Problem Statement Database & Collaborative Research Projects – AI & e-Tools
23-02-206	IIC R&D – Industry R&D Roundtable/ Meet-up with Industry Partner to discuss Research Collaboration, Consultancy and Internship Opportunities
28-02-2026	Session on Research Paper Writing and Journal Publication Support Workshops
09-03-2026	Training on Technology Readiness Level (TRL) and Manufacturing Readiness Level (MRL)
07-04-2026	National Workshop on From Idea to Funding: Prepration and Submission of Research Proposals
08-04-2026	Hybrid Workshop on Prepration and Submission of Research Proposals
10-09-2026	Deep-Tech Innovation Challenge
26-09-2026	Workshop on Technology Readiness Level and Manufacturing Readiness Level
13-10-2026	Annual Research Coclave/ Symposium
15-10-2026	Workshop on IPR Awareness and Patent Filing

Activities at a Glance

Faculty & Student R&D Orientation Session/ Orientation Session on Foundations of Research Excellence (12-12-2025)

The programme began with prayer song, followed by welcome address and introduction of chief guest by Miss. Neha (II M. Sc Mathematics). Dr. V. R. Anjana (Principal) delivered Presidential address. Resource person Dr. S. Mary Mettilda Bai (Vice-Principal & Associate Professor of Zoology, Holy Cross College (Autonomous), Nagercoil) engaged the participants in thought provoking sessions. The programme concluded with a vote of thanks proposed by Mrs. Akhshaya P S (Research Scholar of Mathematics) followed by the National Anthem.

The primary objective of the programme was to orient faculty members and students towards research and development activities, to create awareness about research opportunities, innovation practices, and academic publishing and to encourage active participation in research projects. The programme also aimed to strengthen the research culture within the institution by highlighting the role of IQAC and IIC in promoting quality research and innovation.

The programme successfully enhanced awareness among faculty and students regarding the importance of research and innovation in higher education. Participants gained valuable insights into research methodologies, publication practices and funding opportunities. The session motivated students to pursue higher studies and research careers, while faculty members were encouraged to undertake collaborative and interdisciplinary research. Overall, the programme contributed positively towards fostering a research-oriented academic environment in the institution.





Session on Problem Statement Database & Collaborative Research Projects – AI & e-Tools (13-02-2026)

Internal Quality Assurance Cell and Institution's Innovation Council R&D Cell in collaboration with the Department of Mathematics organized an insightful session on the topic " Problem Statement Database & Collaborative Research Projects – AI & e-Tools" on 13-02-2026 at 02.00 pm in the the Seminar Hall. The programme began with prayer song, followed by welcome address. Dr. V. R. Anjana (Principal) delivered Presidential address.

The resource person for the session was Dr. S. Immaculate Shyla, Assistant Professor and Head, Department of Artificial Intelligence and Data Science, Holy Cross College, Nagercoil.

The session was organized to familiarize research scholars and students with emerging research opportunities, digital problem statement repositories, and AI-driven tools that enhance research efficiency and collaboration. The programme aimed to promote interdisciplinary research, strengthen innovation practices, and equip participants with practical knowledge of e-tools that support proposal development, data analysis, academic writing, and collaborative project execution.

The session enabled participants to gain practical exposure to AI-based research tools and understand the significance of structured problem statement databases in initiating quality research projects. It enhanced awareness of collaborative research opportunities and motivated faculty and scholars to integrate digital tools into their research activities. The programme contributed to strengthening the institution's research ecosystem by encouraging innovation, efficiency, and interdisciplinary engagement.







FIIC R&D – Industry R&D Roundtable / Meet-up with Industry Partner to discuss Research Collaboration, Consultancy and Internship Opportunities (23-02-2026)

Department of Zoology, Sree Ayyappa College for Women, Chunkankadai, in collaboration with the Institution's Innovation Council (IIC R&D Cell), organized an Industry R&D Roundtable / Meet-up with Industry Partner on 23 February 2026 at 11.00 AM. The programme was conducted in association with Vivek Laboratories, Nagercoil, to foster meaningful collaboration between academia and industry.

The programme commenced with brief welcome remarks by Dr. Sreeya G. Nair, Head, Department of Zoology. This was followed by the opening remarks by Dr. V. R. Anjana, Principal, who emphasized the role of Industry–Academia interaction in bridging the gap between theoretical knowledge and practical applications. Dr. Smitha Nair, IIC President and IQAC Coordinator, presented an overview of the IIC R&D initiatives and objectives.

A significant highlight of the programme was the MoU Signing Ceremony between the Department of Zoology, Sree Ayyappa College for Women and Vivek Laboratories, Nagercoil.

The Industry–Academia Roundtable Discussion provided a platform for faculty members and industry representatives to deliberate on research collaboration, consultancy projects, certificate courses, and student internship programmes. This was followed by an interactive session, where students and faculty actively interacted with the industry experts, gaining insights into laboratory practices, diagnostic techniques, and emerging opportunities in the biomedical and life sciences sectors.

The programme concluded with concluding remarks by Dr. S. S. Sandhya, IIC R&D Coordinator, who expressed gratitude to the industry partner, faculty members, and participants for their valuable contributions and emphasized the future scope of the collaboration. The programme strengthened Industry–Academia collaboration through formal MoU signing,enhanced awareness among students regarding career opportunities in diagnostic laboratories and biomedical research sectors and promoted innovation, research culture, and skill development among faculty and students.





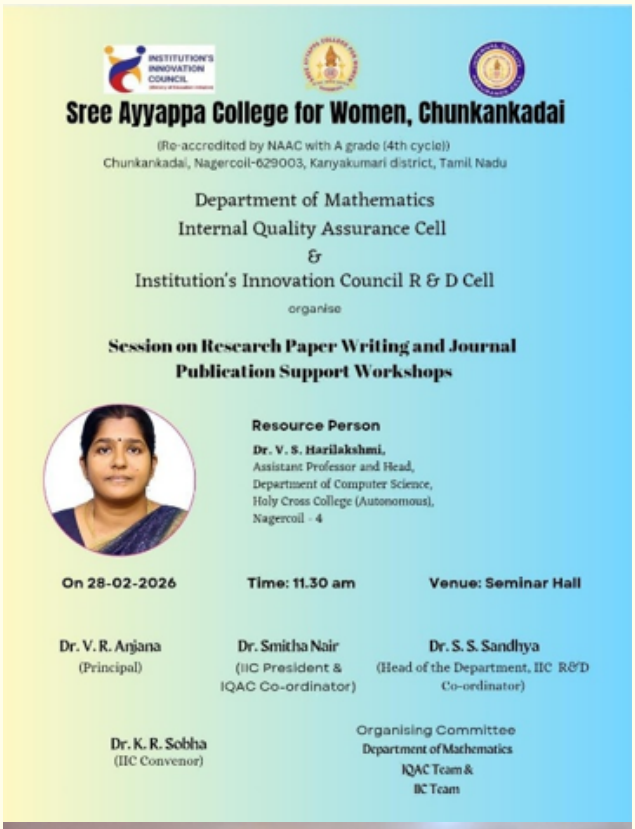
Session on Research Paper Writing and Journal Publication Support Workshops (28-02-2026)

The Department of Mathematics, in collaboration with the Internal Quality Assurance Cell and Institution's Innovation Council R&D Cell of Sree Ayyappa College for Women Chunkankadai, organized an insightful session on the topic "Research Paper Writing and Journal Publicaton Support Workshops" on 28-02-2026 at 11.30 am in the Seminar Hall. The programme began with prayer song, followed by welcome address. Dr. J. Prasanna Kumari (Principal-in-charge) delivered Presidential address.

The resource person for the session was Dr. V. S. Harilakshmi, Assistant Professor and Head, Department of Computer Science, Holy Cross College, Nagercoil.

The objective of the session was to equip faculty members and students with essential knowledge, practical skills, and valuable guidance on academic research writing and the process of publishing research papers in reputed journals. The programme aimed to familiarise participants with the various stages of research, beginning with the identification of relevant and meaningful research problems, formulation of research objectives, and selection of appropriate research methodologies.

The outcome of the programme was an improved understanding of research methodologies, academic writing techniques, and publication practices among the participants. The session helped faculty members and students gain greater clarity regarding the preparation of well-structured research papers and the selection of suitable journals for publication. It also enhanced their awareness of ethical considerations and quality standards in academic research, thereby encouraging responsible and meaningful scholarly contributions.







Training on Technology Readiness Level (TRL) and Manufacturing Readiness Level (MRL) (09-03-2026)

The Department of Mathematics, in collaboration with the Internal Quality Assurance Cell and Institution's Innovation Council R&D Cell of Sree Ayyappa College for Women, Chunkankadai, organized an informative session on the topic "Training on Technology Readiness Level (TRL) and Manufacturing Readiness Level (MRL)" on 09-03-2026 at 02.30 pm in the Seminar Hall. The programme began with a prayer song, followed by the welcome address.

The resource person for the session was Dr. R. S. Rimal Isaac, Assistant Professor in Nanotechnology, NSS Program Officer and IIC Convenor, Noorul Islam Centre for Higher Education, Kumaracoil.

The objective of the session was to familiarize students and faculty members with the concepts of Technology Readiness Level (TRL) and Manufacturing Readiness Level (MRL), and to provide an understanding of how research innovations progress from initial stages to real-world applications and commercialization. The session aimed to enhance participants' knowledge of innovation frameworks, technology assessment, and the importance of bridging the gap between academic research and industrial practices.

The programme enabled participants to gain a clear understanding of the various stages of technology and manufacturing readiness, improved their awareness of innovation and product development processes, and motivated them to align their research work with practical and industry-oriented applications. It encouraged participants to explore opportunities for interdisciplinary collaboration and industry partnerships to strengthen the practical relevance of their research. Overall, the programme inspired participants to pursue innovation-driven research and contribute to the development of sustainable, commercially viable, and socially relevant technological solutions.









National Workshop on From Idea to Funding: Prepration and Submission of Research Proposals (07-04-2026)

The Department of English and Research Centre, in collaboration with the Institution's Innovation Council (IIC) R&D Cell of Sree Ayyappa College for Women, Chunkankadai, and in association with Shiksha Sanskruthi Utthan Nyas, South Tamil Nadu, organized a National Workshop on "From Idea to Funding: Preparation and Submission of Research Proposals" on 7 April 2026, from 10.00 a.m. to 1.00 p.m. The programme was conducted in hybrid mode at the Conference Hall. The inaugural address was delivered by Dr. Ramakrishnan, Deputy Registrar and Administration, Somaiya Vidyavihar University, Mumbai. The keynote addresses were delivered by Dr. M. Santhosh Kumar, Assistant Professor, Department of Biochemistry, Kongunadu Arts and Science College, Coimbatore, and Dr. Harshith Joseph, Assistant Professor, The University of Trans-Disciplinary Health Sciences and Technology (TDU), Bengaluru.

The objective of the workshop was to equip faculty members and researchers with the essential knowledge and practical skills required to identify promising research ideas, formulate effective research proposals, and prepare applications for research funding. The programme aimed to familiarise participants with funding opportunities, proposal-writing strategies, research planning, and the key components of a well-structured proposal.

The workshop enhanced participants' awareness of research proposal preparation, funding opportunities, and the procedures involved in submitting proposals to funding agencies. It provided valuable insights into transforming research ideas into feasible projects with clearly defined objectives and expected outcomes. Overall, the workshop contributed to fostering a research-oriented culture and promoting innovation within the institution



Deep-Tech Innovation Challenge (07-04-2026)

The Department of Library, in collaboration with the Institution's Innovation Council (IIC) R&D Cell of Sree Ayyappa College for Women, Chunkankadai, organized a session on "Deep-Tech Innovation Challenge" on 10 September 2026 at 2.00 p.m. in the Seminar Hall. The session was handled by Mr. Ahsan Akthar, UI/UX Designer at Alo Info Tech. The programme focused on the practical applications of Artificial Intelligence (AI) in academics, creativity, and career development.

The objective of the session was to familiarise students with emerging AI tools and their effective use in academic and professional settings. It aimed to introduce participants to prompt engineering, the use of AI tools for creating attractive presentations, and the application of AI in content generation and creative problem-solving. The session also sought to highlight how AI skills can support career building, improve productivity, and boost

students' employability in the evolving digital landscape.

The session enhanced students' awareness of prompt engineering and the practical use of AI tools for preparing presentations, generating ideas, and completing academic tasks more efficiently. Participants gained insights into leveraging AI for creative work, skill development, and career planning. The programme encouraged students to explore emerging technologies, develop digital competencies, and use AI responsibly to improve their academic performance and professional readiness. Overall, the session inspired participants to embrace technological innovation and prepare for future career opportunities. The session also highlighted the importance of adapting to rapidly evolving technological trends and continuously upgrading digital skills. Students were encouraged to explore AI-powered design tools and use them to communicate ideas effectively and creatively.







Hybrid Workshop on Prepration and Submission of Research Proposals (08-04-2026)

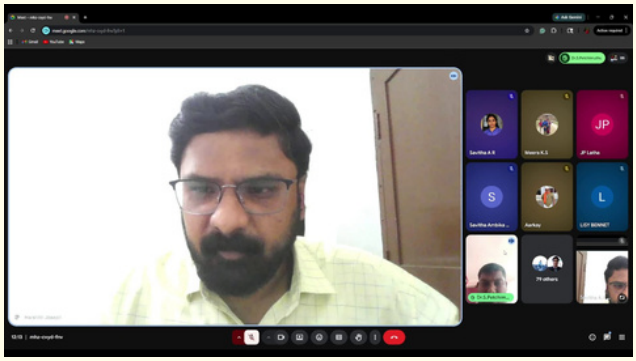
The Department of English in collaboration with the Institution's Innovation Council (IIC), successfully organized a comprehensive hybrid workshop focusing on the nuances of preparing and submitting competitive research proposals. Tailored specifically for faculty members, postdoctoral fellows, and postgraduate researchers, the event bridged physical and digital boundaries by utilizing advanced dual-mode broadcasting infrastructure. This technical arrangement allowed both on-site attendees and remote online participants to engage simultaneously in real-time technical modules, interactive chats, and collaborative Q&A sessions. The primary institutional focus of this initiative was to upgrade institutional research capacity, effectively transitioning innovative

academic concepts into viable, high-impact funded research ventures.

The technical curriculum was delivered across structured sessions that systematically demystified the lifecycle of grant proposal synthesis. Participants were guided through the strategic mapping of national and international funding windows, the formulation of precise problem statements, and the design of rigorous methodology frameworks. Special emphasis was placed on the mechanics of financial planning, instructing researchers on how to build transparent, itemized budgets that align perfectly with agency mandates and institutional overhead compliance rules. Furthermore, the workshop covered crucial ethical protocols, including navigating institutional clearances, managing plagiarism ceilings, and understanding digital submission portals through the evaluative lens of expert peer-review panels.

The workshop yielded substantial metrics of success, achieving satisfaction rating among participants and generating actionable research momentum across various departments. By evaluating the common structural errors and administrative non-compliance risks that typically lead to project rejections, attendees left equipped with practical frameworks to optimize their upcoming submissions. The immediate institutional impact was evidenced by the collaborative formation of twelve new interdepartmental draft proposals during the practical afternoon session. These frameworks are now being refined under the guidance of the R&D Cell, effectively accelerating the institution's strategic pipeline for upcoming national grant opportunities.

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Workshop on Technology Readiness Level and Manufacturing Readiness Level (26-09-2026)

The session commenced at 10:15 AM in the Seminar Hall with a solemn prayer song. Dr. S.S. Sandhya, Associate Professor of Mathematics, extended a warm welcome to the gathering. The Presidential Address was delivered by Principal Dr. V. R. Anjana. Chief Guest Dr. Sreeja J.P. led the technical presentation, comprehensively covering TRL stages 1 to 9, from basic principles to successfully proven operational systems. She subsequently unpacked the phases of

Manufacturing Readiness Levels (MRL), emphasizing supply chain maturity, quality control standards, and risk mitigation models. Interactive case studies on native startups were discussed, followed by an enriching Q&A session where students clarified parameters for prototype validation. The session drew to a successful close with a formal Vote of Thanks expressed by T. Sharmiya.





Annual Research Coclave/ Symposium (13-10-2026)

The Research Department of Mathematics, under the aegis of the Institution's Innovation Council (IIC) and R&D Cell, organized the Annual Research Conclave / Symposium on 13th October 2026. This technical forum provided a structured stage for students and faculty members across diverse disciplines to present their advanced investigative project findings. During the session, student cohorts actively displayed and discussed their group research projects across several modern mathematical and technical tracks, including Graph Theory, Fuzzy logic, Algebra, Introduction to Vedic Maths, Astronomy, Artificial Intelligence (AI), and Time Series analysis. The designated subject expert, Dr. S.S.Sandhya evaluated the presentation models, provided strategic methodology adjustments, and highlighted workflows to elevate the projects toward technology readiness and entrepreneurial application.





>>> Workshop on IPR Awareness and Patent Filing (15-10-2026)

The workshop on IPR Awareness and Patent Filing was organised on 15th October 2026 at the Seminar Hall of Sree Ayyappa College for Women, Chunkankadai. The programme was jointly organised by the Institution's Innovation Council (IIC) R&D Cell and the Internal Quality Assurance Cell (IQAC). Dr. B. Nalatha Vijilin, Assistant Professor, Department of Commerce, Scott Christian College, Nagercoil, served as the resource person. The workshop focused on creating awareness about Intellectual Property Rights and the importance of protecting original ideas and innovations. The session was intended to familiarise participants with different forms of intellectual property, including patents, copyrights, trademarks, and industrial designs. Particular emphasis was placed on the concept of patent filing, its significance in safeguarding inventions, and the role of intellectual property protection in encouraging innovation and research. The programme aimed to help students and faculty members understand the relevance of IPR in academic, research, entrepreneurial, and professional contexts. It also sought to encourage participants to recognise the value of their creative contributions and explore the importance of protecting innovative ideas.

The workshop was organised to create awareness among students and faculty members about Intellectual Property Rights and the importance of patent filing. It aimed to familiarise participants with the basic concepts of IPR, the significance of protecting innovative ideas, and the procedures involved in patent filing.

The workshop aimed to improve participants' awareness of Intellectual Property Rights and the importance of patent filing. It was intended to help students and faculty members recognise the value of original ideas, understand the need for intellectual property protection, and appreciate the role of IPR in promoting innovation and research.







Gallery













"Somewhere, something incredible is waiting to be known"