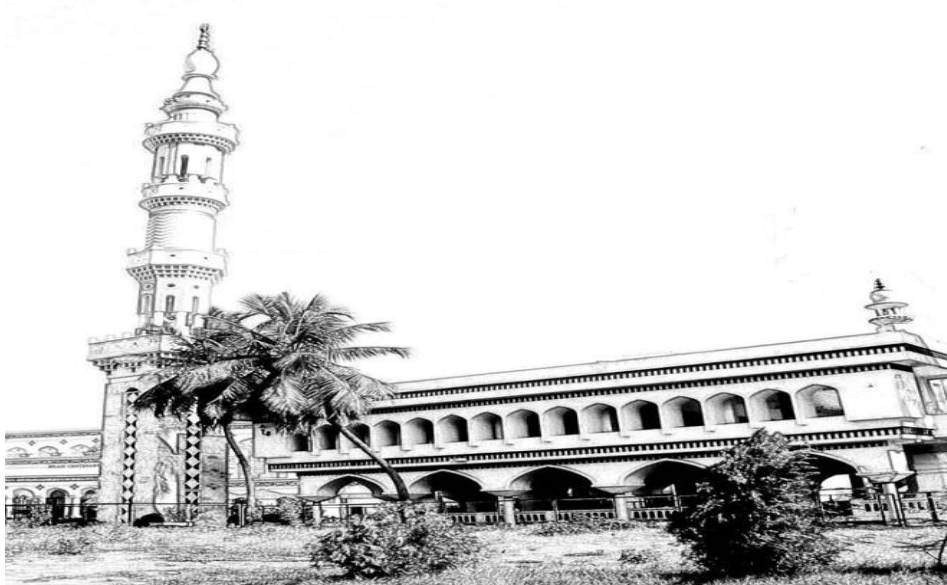


Report on Research Activities of Sciences and Humanities Departments (2010-2015)

A Hearty Welcome to the NAAC PEER TEAM



**Research and Development Wings
The New College (Autonomous)
Chennai-14**

1.1 Objectives

- To provide an opportunity for the faculty and students to pursue their academic/research work leading to the award of M.Phil and Ph.D
- To facilitate an opportunity for the Faculty and students to enable them present papers in academic conferences/ seminars / workshops for fostering knowledge and exchange of Ideas.
- To enable Faculty members to carry out research projects to enhance their research exposure.

1.2 Promotion of Research

Research and Development Wing of The New College acts as a support and enabling system for faculty members to pursue research work successfully along with imparting knowledge to the students.

Forty two staff members have been awarded Doctorate in Philosophy (Ph.D.) during the assessment period.

Fifty Two staff members have cleared NET / SLET examinations in the last five years. The College has eight recognized research centres affiliated to the University of Madras at present viz., Tamil, English, Arabic, Economics, Commerce, Chemistry, Physics and Zoology.

1.3 Research policy

The College promotes and monitors creation of new knowledge in an ethical and evidence-based research environment, knowledge acquired is disseminated through publications and research to meet the emerging social and industrial needs.

1.4 Prioritised research areas

Environment and Gender Studies are the two prioritised research areas of the college. The areas of expertise available in the college in different departments are as:

Areas of expertise

| Departments | Areas of expertise |
|-------------|--|
| Arabic | Indo Arabic and Islamic literature, Modern and Classical Arabic literature |
| English | Gender Studies, Post modernism, Cultural Studies & ELT |
| Tamil | Islamic Tamil Literature |
| Commerce | Entrepreneurship studies, FDI |
| Economics | Development Economics, Policy Analysis |
| Physics | Material Science, Crystallography and Biophysics, Ultrasonic |
| Chemistry | Nano Chemistry, Organic Synthesis, Electrochemistry, Polymer Chemistry, Green Chemistry, Bio-inorganic chemistry |
| Zoology | Aquaculture, Environmental Sciences |

1.5 Proactive Mechanisms

The research committee and the Research coordinator approach the funding agencies like the UGC, Tamil Development Council, CSIR, DST and ICSSR to seek funds to carry out research work. The management encourages research work by providing basic infrastructure for the research projects.

1.6 Inter-disciplinary Research

The College promotes interdisciplinary research by encouraging and motivating faculty and research scholars from different disciplines, some of the faculty members in the College are Research Advisors in Zoology, Chemistry, Physics, Economics, Commerce, English, Tamil and Arabic. They undertake research work in select areas of inter-disciplinary study.

1.7 Visiting Scholars on Campus

The College has taken efforts to invite researchers of eminence and academicians in the various disciplines to visit the campus and interact with teachers and scholars. Over 60 resource persons have visited the campus in the last four years.

1.8 Faculty Development

The College facilitates faculty members to pursue research through Faculty Development Programme (FDP) and grants leave as per UGC norms. Three faculty members availed Fellowship under FDP during 2011-2015 and four faculty members applied Fellowship under FDP in the year 2016.

1.9 National/international seminars/workshop/conferences organised by the college

Department of Tamil, English, Chemistry, Economics, Commerce, Arabic, Urdu, Hindi, Computer Science and Zoology conducted National/international Seminar/workshop at New College. The sciences and humanities departments of the College organised 2 International seminars, 29 National/state level seminars and 12 workshop/special lectures sponsored by UGC/ICSSR/Management Grants in the past five years, more than 90 eminent scholars, Resource Persons participated in the events.

1.10 Research Papers presented in the national and international seminars/conferences

The staff members of Sciences and Humanities Research Department have actively participated and presented more than 500 research papers in National/International conferences in various universities, research institutes and colleges in the last five years. Ph.D and M.Phil research scholars from PG and Research Departments also presented research papers in national/international seminars. Mr. R. Rajeshkanna, Ph.D. Research scholar under the guidance of Dr. A. Abdul Raheem from economics department bagged the best research paper award by the Association of Economists of Tamil Nadu (AET) Conference in 2014.

1.11 Guiding Research (M.Phil. /Ph.D)

Faculty members from Sciences and humanities department are proactively involved in guiding Post graduate, M.Phil and Ph.D. scholars in their research projects in the campus and outside the College. Presently, 45 faculty members are involved in guiding M.Phil. Scholars on fulltime/part time basis while 29 faculty members have been recognised as Ph.D. research guides on full time/part time basis.

Research Supervisors from Tamil, English, Chemistry, Economics, Commerce, Arabic and Zoology departments are effectively supervising M.Phil and Ph.D. Research Scholars, more than 100 students have registered for Ph.D and 30 students for the M.Phil Programme.

The research guides of M.Phil. /Ph.D. programmes convene regular meetings with the scholars and discuss the research, research design, the schedule to be followed etc., the research scholars are given assignments to be reviewed by their respective guides. Subject experts are invited to share their knowledge with the research scholars.

More than 140 M.Phil and 25 Ph.D degrees were awarded in Sciences and Humanities Research Departments in the last five years.

1.12 Financial Supports for Research programme

Research scholars from sciences and humanities departments have benefitted / obtained financial assistance to pursue Ph.D. programme through UGC-JRF/State Govt. Fellowship.

The management is ever ready to support, provide financial assistance to augment research activities at PG, M.Phil and Ph.D levels.

Representations from respective HoD's is sought and placed before the management through the principal for sanction of required financial support to meet costs towards improvement of infrastructure and material management.

There is adequate provision in the institution to provide seed money for the respective research departments. A contingency amount is also allocated for each department to enable overall maintenance, purchase of books and materials for research related work .

1.13 Research Facilities

The College has upgraded the infrastructure by providing a Computing Centre equipped with Desktop computers, uninterrupted power supply and up to date software, Wi-Fi connectivity, printing, copying and scanning facilities is available in research departments and in the general library.

The students and research scholars utilize these facilities for carrying out their academic projects. The College Central Library has sufficient facilities to act as an information resource centre. It has good collection of books, reputed national and international journals, related to all subjects, e-Journals, e-Books, e-resources and Internet facilities. These facilities are made available to the staff and students.

All research departments have an exclusive room for research scholars which is equipped with a reference library, a computer with Wi-Fi connectivity, INFLIBNET. Information is accessed by researchers through these resources in the College.

1.14 Research Laboratory/research work station

The departments of zoology, Physics and Chemistry have a research work station to address the challenges of research programmes. Extended research activities are carried out in these departments to meet the challenges of the research programme.

Following is the equipment list available at these centres

Zoology - PCR, Gel Documentation, Refrigerated Centrifuge, Research microscope with image capture, electrophoresis, Deep freezer, Nano drop.

Chemistry - UV, FTIR, Electro Chemical Station, (Galvinostat Potentiostat), Electric balance (Research model), Dip Coating System.

Physics - Cryostat, Magnetic stirrer, Electric balance (Research model), dielectric constant instrument

1.15 Published research papers and books

The faculty members of sciences and humanities departments are actively involved in research activities by contributing research papers in reputed journals and books. Staff members regularly publish articles in journals and books.

During the last five years more than 700 research papers were published in the reputed national/international Journals with ISSN, 34 books were published with ISBN by the faculty members from sciences and humanities research department with reputed publishers.

1.16 Completed/On-going Research projects

The Faculty members from Physics, Chemistry, Urdu, Zoology departments have bagged minor and major research projects during the last five years, Faculty members have applied for UGC minor projects during 2015-2016 as well.

Four Major Projects (Zoology (2), Chemistry(1) , Urdu(1)) and Two minor projects in Economics have been completed by the College faculty in the last four years, all the projects were sponsored by UGC/NAIP-ICAR, Govt of India/ADAYAR POONGA TRUST, Govt. of Tamil Nadu.

On-going UGC Sponsored projects - One Major project for Zoology and 6 Minor Projects (Physics (2), Chemistry(3) and Zoology(1)).

1.17 Research activities recognized by national / international agencies

The College has been selected for DST – FIST funding “O” level for Post Graduate Science Departments in 2013 – 2014. Sixty Three lakhs were sanctioned for this project and the College Received Rs.6300000/- as the first instalment.

- Received Rs. 45, 00,000 under UGC- Additional Assistance fund.
- Received Rs. 20, 00,000 for developing infrastructure of science labs.
- Received Rs. 13, 11,000 under the Plant Block Grant scheme

1.18 Interdisciplinary research projects

The College promotes interdisciplinary research among different faculty members of various departments of the college in collaboration with academicians of universities. The college has 3 Interdisciplinary projects within the college involving Economics and Mathematics Departments.

1.19 Research awards

The college recognises the faculty members who have successfully completed their Ph.Ds. by honouring them annually on the Academic Day of the college. Special mention is made in the Academic and College Day reports.

1.20 Malpractices and misconduct in research

A Research Committee in the respective department monitors the research work for malpractice and misconduct. Plagiarism tools are used to keep track of publications. In case of malpractice or misconduct in research, appropriate action like resubmission or cancellation of the research work done is suggested by the Research Committee.

1.21 Incentives for research contributions

The institution encourages the members of the staff to pursue research by funding travel expenses incurred by them towards publication of their research in National / International journal and also for presenting research papers in National / International seminars, conferences, workshops and symposia both in India and abroad. Further, faculty members are motivated to involve in research by giving duty leave to participate and present papers in National/ International Conferences / Seminars.

1.22 Future Plan

- The College will initiate steps and motivate the faculty to file for patents for their research
- The College will commence National Journals with ISSN for Sciences, Social science and languages.
- The College will initiate steps to conduct PG Dip Courses
- The college will organise Research Methodology workshop every year
- The College will install Statistical Packages in Research Library