

FATIMA MATA NATIONAL COLLEGE

AUTONOMOUS

(Reaccredited with 'A' Grade by NAAC)

Affiliated to University of Kerala



3.1.1

Research Priorities

IQAC INTERNAL QUALITY ASSURANCE CELL

RESEARCH PRIORITIES@FATIMA

DEPARTMENT OF BOTANY

Centre for Advanced Research in Botanical Science (CARBS) is the research wing of Botany Department, instituted for carrying out quality research in Plant Science. Department is recognized as a research centre by Kerala University, for doing research leading to Ph.D. CARBS is now stepping into active research, with three recognized research supervisors and eight registered Ph.D. scholars. In addition to the Ph.D. programme, CARBS is also assisting and guiding the UG and PG students in the department to pursue their research, leading to the submission of dissertations. Now an external funded research project (SERB funded in the tune of Rs. 39 Lakhs) is ongoing, and the centre is now selected for infrastructural funding in the form SARD from KSCSTE, in the tune of Rs. 15 Lakhs. The thrust areas of research are:

1. Plant Biodiversity- Identification, Characterization and Sustainable Utilization
2. Reproductive Botany
3. Plant Physiology & Biochemistry
4. Nano Biotechnology
5. Biotechnology & Tissue Culture

UNIVERSITY OF KERALA

(Abstract)

Recognition of Dept. of Botany, Fatima Mata National College, Kollam as approved Research Centre of University of Kerala— Sanctioned – Orders issued.

ACADEMIC E.I SECTION

No. Ac.E1.A3/29367/2014

Dated, Thiruvananthapuram, 07/07/2015

- Read: 1. Application received from the Principal, Fatima Mata National College, Kollam.
2. Item No. A3 of the Minutes of the Meeting of the Standing Committee of the Syndicate on Academics and Research held on 18/04/2015.
3. Item No. 06.111.A3 of the Minutes of the Meeting of the Syndicate held on 05/05/2015.
4. Item No. 23 of the Minutes of the Meeting of the Academic Council held on 19th May 2015.

ORDER

The Academic Council at its meeting held on 19th May 2015, vide Item No. 23 considered along with the recommendations referred to as (2) and (3) above, the matter of granting recognition to the Department of Botany, Fatima Mata National College, Kollam as an approved Research Centre of the University of Kerala and resolved to grant the same.

Orders are issued accordingly.

Sd/-
MEENA ASHOK
Deputy Registrar (Acad.III)
For Registrar

To

1. The Principal, Fatima Mata National College, Kollam.
2. PS to VC/PVC/Director, Research/Director, Computer Centre.
3. P.A to Registrar/C.E/Finance Officer.
4. Ac.E.VI Section/Ac.EVII/PRO Section
5. Stock File/ File Copy/ Office Copy.

Forwarded/By Order,


Section Officer

SR-3

10, AD
14/07/15

DEPARTMENT OF PHYSICS

There are three broad areas in which the faculty members of the department are carrying out research. First area is Applied Nuclear Physics, in which the major research has been on environmental radioactivity, radiation dosimetry and health effects of environmental radiation. The department has very successfully completed two minor research projects and three major research projects funded by various agencies including UGC, KSCSET, BARC and DAE. The studies carried out include effect of high background radiation in the area on congenital malformations (mental retardation, cleft lip and palate), ingested radiation dose to the public through food and Chromosome aberration frequency studies in the inhabitants of coastal Kollam. Minor research works include microanalysis of uranium in natural water, radio activity in building materials and the like.

Second branch in which a very high quantum of research has been carried out in the Department is Spectroscopic studies of medically and biologically imported complex molecules. The research activities in this area include Spectroscopic investigations, both experimental and theoretical, of aromatic bioactive molecules, Density Functional Theory computations of some organic compounds, FT-IR, FT-Raman, SERS and quantum chemical calculations of bioactive compounds. The researchers in this area have published numerous articles in high impact journals.

The third area in which active research has been initiated is on Nano materials, their preparation and their properties. The focus on this area ranges from solar cells to thin batteries.

Apart from these, research investigations on the ill effects of microwave communications on human health has also been started and meaningful studies are being carried including simulation studies on the Specific absorption rates of human cells of interest, mainly brain, eye and the like.

UNIVERSITY OF KERALA

(Abstract)

Department of Physics, FMN College, Kollam – Recognition as approved Research Centre
of the University of Kerala – Sanctioned - Orders issued.

ACADEMIC E1.A. SECTION

No. Ac. E1.A3/26224/2011

Dated, Thiruvananthapuram, 03.01.2013.

- Read:-
1. Application received from the Principal, FMN College, Kollam.
 2. Item No. A8 of the minutes of the meeting of the Standing Committee of the Syndicate on Research and Scholarships held on 18.10.2012.
 3. Item No. 14.104 of the minutes of the meeting of the Syndicate held on 03.11.2012.
 4. Item No 59 minutes of the meeting of the Academic Council held on 22nd November 2012.

ORDER

Academic Council (Read 4 above) considered the decision of the Syndicate (Read 3 above) along with the recommendation of the Standing Committee (Read 2 above), the request of the Principal, FMN College, Kollam for the recognition of the Department of Physics as an approved research centre of the University of Kerala and resolved to grant recognition.

Sanction is therefore, accorded by the Vice-Chancellor, to the Department of Physics, FMN College, Kollam being granted recognition as an approved Research Centre of the University of Kerala for the existing guides only..

Orders are issued accordingly.

Sd/-

SULEKHA S.
DEPUTY REGISTRAR (Acad. III)
for REGISTRAR

To

1. The Principal, FMN College, Kollam.
2. The P.S. To V.C./P.V.C./Director Research.
3. P.A to Registrar/CE/Finance Officer.
4. Ac.E1.B Section/Ac.E1.II Section.
5. Stock file/File copy/Office copy.

Forwarded/By Order,



SECTION OFFICER

CHEMISTRY

The PG Department of Chemistry was elevated to the research status in 2013 and active research is progressing. We have six faculty registered as research guides. Dr Suma N (Polymer Technology), Dr Biju Mathew (Analytical & Inorganic Chemistry), Dr Manohar D Mullassery & Dr Noeline B Fernandez (Medicinal & Environmental Chemistry), Dr Shibu Joseph (Nanomaterials), Dr Sarau Devi A (Co-ordination Chemistry)

The topics of present research are

- Environmental studies
- Water quality analysis
- Drug delivery studies
- Polymer technology
- Nanomaterials
- Co-ordination Chemistry
- Environment Friendly Research Topics
 1. Synthesis of graphene by Solar Exfoliation method
 2. Removal of heavy metals using biochars from banana stem
 3. Removal of heavy metals and dyes using ion exchangers
 4. Detection of Uranium concentration in water bodies.

3.2.2
UNIVERSITY OF KERALA

(Abstract)

Department of Chemistry, FMN College, Kollam – Recognition as approved Research
Centre of the University of Kerala – Sanctioned - Orders issued.

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ACADEMIC E1.A. SECTION

No. Ac. E1.A3/26224/2011

Dated, Thiruvananthapuram, 03.01.2013.

- =====
- Read:-
1. Application received from the Principal, FMN College, Kollam.
 2. Item No. A8 of the minutes of the meeting of the Standing Committee of the Syndicate on Research and Scholarships held on 18.10.2012.
 3. Item No. 14.104 of the minutes of the meeting of the Syndicate held on 03.11.2012.
 4. Item No 59 minutes of the meeting of the Academic Council held on 22nd November 2012.

ORDER

Academic Council (Read 4 above) considered the decision of the Syndicate (Read 3 above) along with the recommendation of the Standing Committee (Read 2 above), the request of the Principal, FMN College, Kollam for the recognition of the Department of Chemistry as an approved research centre of the University of Kerala and resolved to grant recognition.

Sanction is therefore, accorded by the Vice-Chancellor, to the Department of Chemistry, FMN College, Kollam being granted recognition as an approved Research Centre of the University of Kerala.

Orders are issued accordingly.

Sd/-
SULEKHA S.
DEPUTY REGISTRAR (Acad. III)
for REGISTRAR

To

1. The Principal, FMN College, Kollam.
2. The P.S. To V.C./P.V.C./Director Research.
3. P.A to Registrar/CE/Finance Officer.
4. Ac.E1.B Section/Ac.E2.II Section.
5. Stock file/File copy/Office copy.

Forwarded/By Order,


SECTION OFFICER

DEPARTMENT OF ZOOLOGY

The Department of Zoology became research centre under Kerala university in the year 1987. During the 32 years of its journey, produced 36 doctoral degrees, undertaken 19 major and 4 minor research projects from various funding agencies like University Grants Commission (UGC), MoEF, Asian Fishery Society, Philippines, Norway, IFS (International Foundation for Science), Sweden, CDS, KSCSTE, DBT, Western Ghat cell, Govt of Kerala.

Thrust areas of research

- Pollution, Fish Biology, Gene Manipulation and Transgenesis, Fish Breeding and Aquaculture.
- Water pollution studies of various wetland ecosystem- Sasthamkotta freshwater system, Ashtamudi Lake (The Ramsar sites) and Vattakkayal (The notified wetland) got wide media attention. The centre have developed disease resistant transgenic fish, artificial breeding technology for endemic fish, live feed Daphnia culture etc. A first report of sexual dimorphism of a Western ghat fish *Hypselobarbuskurali* and an estuarine fish *Oxyurichthystentacularis* were done.
- Study on Macrobenthos of Kerala Coast, Immunostimulant Effects of various Herbal Extracts on Fishes were also undertaken.

UNIVERSITY OF KERALA

(ABSTRACT)

Recognition as research centre of the University - Provisional recognition granted to the Zoology Department, F.M.N.College, Quilon - Sanctioned - Orders issued.

ACADEMIC 'EI' SECTION

No. Ac. EI. 2. 2652/87.

Trivandrum, dated, 30th April 1988.

- Read:
1. Letter No. Adm. 1/3/86 dated 29-9-86 and application for recognition as research centre of the University received from the Principal, F.M.N.College, Quilon.
 2. U.O. No. Ac. EI. 2. 2652/87 dated 29-1-87.
 3. Item No. 74 of the minutes of the meeting of the Syndicate held on 12-4-88.

O R D E R

Sanction has been accorded by the Syndicate for the Zoology Department of the F.M.N.College, Quilon, being granted provisional recognition as a research centre of the University. The Syndicate has further instructed that a greater number of books may be purchased to strengthen the Department Library.

Orders are issued accordingly.

Sd/-
P.K.Ambujam
Deputy Registrar (Academic II)
for Registrar.

To

- ✓ 1. The Principal, F.M.N.College, Quilon.
2. The Ac. E. Section.
3. The Ac. EII Section
4. The Ad. Misc. section
5. The Ad. EI. Section
6. Stock File
7. File Copy.

Forwarded / By Order

M. Jayalalitha
Section Officer.
Assistant Registrar

*11/3/88
R. S. S. a copy*

*11355
9/5/88*

*To R. D.
M. J.*

DEPARTMENT OF ENGLISH

The Post Graduate Department of English is recognized as a research centre of the University of Kerala for doing research leading to PhD degree. There are four research guides and 16 registered Ph D scholars. In addition to the PhD programmes, the research centre also provides facilities for the UG and PG students in the department to pursue their research, leading to the submission of dissertations/projects.

The thrust areas of research are as follows:

- Psychoanalytic theory
- Autobiographical studies
- Black feminism
- Literary theory
- Cultural Studies
- Dalit Writing
- Diasporic Studies
- Prison Literature

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UNIVERSITY OF KERALA

(Abstract)

FMN College, Kollam – Department of English – Recognition as Research Centre of the University – Sanctioned – Orders issued.

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ACADEMIC E.I. A. SECTION

No. Ac. E1.A2.20154/05

Dated, Thiruvananthapuram, 11.01.2006.

- =====
- Read: 1. Application received from the Principal, FMN College of Kollam dated 6.7.2005
2. Item No.C-4 of the appendix to item No.55 of the minutes of the meeting of the Syndicate held on 6.12.2005.

ORDER

The Syndicate at its meeting held on 6.12.2005 considered along with the recommendations of the Standing Committee on Research and Scholarships the report of the Inspection Commission which visited the Department of English, FMN College Kollam and resolved to grant recognition as a research Centre.

Sanction is therefore accorded to the Department of English, FMN College Kollam, being granted recognition as a research Centre in English of this University.

Orders are issued accordingly.

Sd/-
K.S. MOHAN
Deputy Registrar (Admn.III)
For Registrar

To

1. The Principal, FMN College Kollam.
2. The Professor & Head, Department of English, FMN College, Kollam.
3. Ac.E.II Section
4. Election Section
5. Ac.E1.B. Section
6. Office copy
7. Stock file
8. File copy

Forwarded/By Order

Section Officer

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HOD. English
24/11

25/11

DEPARTMENT OF COMMERCE

The Commerce Department was elevated to a Research centre of University of Kerala in 1996. Thrust areas of Research offered by the Department of commerce:

1. Banking and finance
2. Portfolio management
3. Rural management
4. Behavioural Finance
5. Micro Finance

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UNIVERSITY OF KERALA
(Abstract)

Provisional Recognition as Research centre of the University
Department of Commerce - F.M.N. College, Kollam - Sanctioned -
Orders issued.

ACADEMIC 'E.I' SECTION

No.Ac.E.1.2.2056/96

Thiruvananthapuram, Dated: 2.9.1998.

- Read:-
1. Application for recognition from the Principal, F.M.N.College, Kollam.
 2. Item No. C1 of the appendix to item No. 73 of the minutes of the meeting of the Syndicate held on 31-7-98.

O R D E R

The Syndicate at its meeting held on 31/7/98 considered along with the recommendations of the Standing Committee and the Inspection Commission, the application for recognition of Department of Commerce F.M.N.College Kollam as research centre and resolved to grant recognition Provisionally.

Sanction is therefore accorded to the Department of Commerce, F.M.N.College Kollam being granted recognition provisionally as an approved research centre of the University.

Orders are issued accordingly.

Sd/-

N.J. Sarojini Devi
Deputy Registrar (Acad.II)
for Registrar.

To

1. The Principal, F.M.N.College, Kollam.
2. The Professor and Head of the Department of Commerce, F.M.N.College, Kollam.
3. The Librarian, Association of Indian Universities, Rouse Avenue, New Delhi -
4. Ac.E.II Section.
5. Office copy.
6. Stock file.
7. File copy.

Forwarded / By


SECTION OFFICER.

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DEPARTMENT OF ECONOMICS

The Economics Department was elevated to a Research centre of University of Kerala in 2006. Thrust areas of Research offered by the Department of Economics:

1. Economics of Fisheries
2. Economics of International Migration

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UNIVERSITY OF KERALA

(Abstract)

FMN College Kollam – Department of Economics – Provisional recognition as
Research Centre of the University – Sanctioned – Orders issued.

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ACADEMIC E.I. SECTION

No. Ac. E1.A2.14366/05

Dated, Thiruvananthapuram, 11.01.2006.

- Read: 1. Application received from the Principal, FMN College Kollam
dated 01.06.2005
2. Item No.C-4 of the appendix to item No.55 of the minutes of the meeting of
the Syndicate held on 6.12.2005.

ORDER

The Syndicate at its meeting held on 6.12.2005 considered along with the
recommendations of the Standing Committee on Research and Scholarships the report of
the Inspection Commission which visited the Department of Economics, FMN College,
Kollam, and resolved to grant provisional recognition to the Department.

Sanction is therefore accorded provisionally to the Department of Economics,
FMN College Kollam on condition that the Department will have two research guides as
per norms, within two years of the Order granting recognition, failing which the
recognition will automatically be cancelled. An Inspection will be conducted after one
year.

Orders are issued accordingly.

Sd/-
K.S. MOHAN
Deputy Registrar (Admn.III)
For Registrar

To

- ✓
1. The Principal, FMN College Kollam.
 2. The Professor & Head, Department of Economics, FMN College Kollam.
 3. Ac.E.II Section
 4. Election Section
 5. Ac.E1.B. Section
 6. Office copy
 7. Stock file
 8. File copy

Forwarded/By Order

[Handwritten Signature]
23/1/06
Section Officer