



MAHATMA GANDHI UNIVERSITY

**INTERNAL QUALITY ASSURANCE CELL
PRIYADARSINI HILLS PO, KOTTAYAM, KERALA**

Annual Quality Assurance Report

[2012-13]

Submitted to the
**National Assessment and Accreditation Council
(NAAC)**

Part – A

1. Details of the Institution

1.1 Name of the Institution

Mahatma Gandhi University

1.2 Address Line 1

Priyadarsini Hills P O

Address Line 2

Athirampuzha

City/Town

Kottayam

State

Kerala

Pin Code

686560

Institution e-mail address

registrar@mgu.ac.in

Contact Nos.

+914812731001, +914812731007

Name of the Head of the Institution:

Prof. (Dr) Rajan Gurukkal P M
(till 14/11/12)
Dr. K M Abraham IAS
(15/11/2012 -04/01/2013)

Tel. No. with STD Code:

+914812731001

Mobile:

+919447120845 (Dr Rajan Gurukkal)
+918547497773 (Dr K M Abraham)

Name of the IQAC Co-ordinator:

Dr. P. P. Raveendran

Mobile:

9447120845

IQAC e-mail address:

iqac@mgu.ac.in

1.3 NAAC Track ID

KLMGU 68656

1.4 NAAC Executive Committee No. & Date:

EC/54/RAR/121 dtd 08/01/2011

1.5 Website address:

www.mgu.ac.in

Web-link of the AQAR:

http://mgu.ac.in/index.php?option=com_content&view=article&id=1648&Itemid=1619

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	B+		2003	15 th September, 2008
2	2 nd Cycle	B	2.90	2011	6 th Jan 2016
3	3 rd Cycle				
4	4 th Cycle				

1.7 Date of Establishment of IQAC:

DD/MM/YYYY

03/11/2009

1.8 AQAR for the year (for example 2010-11)

2012-13

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC (for example AQAR 2010-11 submitted to NAAC on 12-10-2011)

i. AQAR 2011-12 -----(12/01/2016)

1.10 Institutional Status

University State Central Deemed Private

Affiliated College Yes No

Constituent College Yes No

Autonomous college of UGC Yes No

Regulatory Agency approved Institution
(eg. AICTE, BCI, MCI, PCI, NCI) Yes No

Type of Institution Co-education Men Women

Urban Rural Tribal

Financial Status Grant-in-aid UGC 2(f) UGC 12B

Grant-in-aid + Self Financing Totally Self-financing

1.11 Type of Faculty/Programme

Arts Science Commerce Law PEI (Phys Edu)

TEI (Edu) Engineering Health Science Management

Others (Specify)

Technology & Applied Sciences, Behavioural Sciences, Environmental & Atmospheric Sciences, Paramedical Sciences, Journalism

1.12 Name of the Affiliating University (for the Colleges)

NA

1.13 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc - NA

Autonomy by State/Central Govt. / University

- NA

University with Potential for Excellence

UGC-CPE

DST Star Scheme

UGC-CE

UGC-Special Assistance Programme

DST-FIST

UGC-Innovative PG programmes

Any other (*Specify*)

UGC-COP Programmes

Inter University Centres established in 2012-13:

- a. Inter University Instrumentation Centre (IUIIC)

Centres established during 2012-13

- a. Centre for Communicable Diseases Control and Prevention (CCDCP) was established in the Inter University Centre for Biomedical Research & Superspeciality Hospital
- b. Advanced Molecular Materials Research Centre (AMMRC)
- c. Syndicate resolved to start the Department of Indian Sign Language and start courses in sign languages interpretation

2. IQAC Composition and Activities

2.1 No. of Teachers	<input type="text" value="9"/>
2.2 No. of Administrative/Technical staff	<input type="text" value="Nil"/>
2.3 No. of students	<input type="text" value="Nil"/>
2.4 No. of Management representatives	<input type="text" value="2"/>
2.5 No. of Alumni	<input type="text" value="Nil"/>
2.6 No. of any other stakeholder and community representatives	<input type="text" value="Nil"/>
2.7 No. of Employers/ Industrialists	<input type="text" value="Nil"/>
2.8 No. of other External Experts	<input type="text" value="03"/>
2.9 Total No. of members	<input type="text" value="14"/>
2.10 No. of IQAC meetings held	<input type="text" value="Four"/>
2.11 No. of meetings with various stakeholders: No.	<input type="text" value="1"/> Faculty <input type="text" value="1"/>
Non-Teaching Staff /Students	<input type="text" value="1"/> Alumni <input type="text" value="1"/> Others <input type="text" value="1"/>
2.12 Has IQAC received any funding from UGC during the year? Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/>
If yes, mention the amount	<input type="text" value="Rs 4.5 lacs"/>
2.13 Seminars and Conferences (only quality related)	
(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC	
Total Nos.	<input type="text" value="4"/> International <input type="text" value="Nil"/> National <input type="text" value="2"/> State <input type="text" value="0"/> Institution Level <input type="text" value="2"/>

(ii) Themes

- i. One day National Seminar on “Inclusive Education: Challenges” was conducted at the School of Behavioural Sciences on 26th March 2013
- ii. Organised one day Seminar on “Rough Sets” at the School of Computer Sciences on 31st May 2011
- iii. Organised National Level Conference on “Computing Paradigms and Bioinformatics” at the School of Computer Sciences on 17th & 18th Jan 2012
- iv. Organised one day workshop on “How to use internet for research purpose in a better way” at the School of Computer Sciences on 10th July 2012
- v. Organised a one day seminar on “Research Objective, Motivation, Approaches and Process” at the School of Computer Sciences on 17th July 2012
- vi. Organised one day seminar on “High Performance Computing Paradigms and Super Computing” at the School of Computer Sciences on 24th Aug 2012
- vii. Seminar on “Digital Image Processing” was conducted at the School of Computer Sciences 10th Sept 2012
- viii. Seminar on “Research Design and Principles of Experimentation” was conducted at the School of Computer Sciences 17th Sept 2012
- ix. Seminar on “Statistical Tools in Research” was conducted at the School of Computer Sciences 10th Sept 2012
- x. Seminar on “How to prepare a good research paper for publication” was conducted at the School of Computer Sciences 3rd Oct 2012
- xi. Seminar on “Statistical Testing Methods of Hypothesis” was conducted at the School of Computer Sciences 6th Nov 2012
- xii. National Seminar on “Family as an Institution: Modern realities and trends in law” was conducted in school of Indian Legal Thought on 28th Feb – 2nd March 2013

2.14 Significant activities and contributions made by IQAC

- a. Organised two National Seminars and two Institutional Level Seminars related to Quality Assurance in University
- b. Organised “Interface2012” - 3 days students festival at the School of Computer Sciences from 7th Dec 2012 – 9th Dec 2012
- c. The School of Computer Sciences published an International Journal : “Mahatma Gandhi University International Journal on Computing and Communication (MGUJCC2012) Vol - I” in Dec 2012 as directed by the IQAC (ISSN:2913 8850)
- d. Two orientation programmes were conducted for the teaching faculty of the University
- e. The syllabi and curriculum of the post graduate programmes, M Phil etc conducted in the University Schools/Departments were revised as per the CSS pattern as recommended by the IQAC
- f. Word Environment Day was celebrated on 5th June 2012 in the auspices of IQAC at the School of Environmental Sciences: Theme – Green Economy: does it include you?
- g. One Inter University Centre and two Centres were established following the recommendation from the IQAC
- h. Proposals for the establishment of more Inter School Centres have been prepared and submitted to the funding agencies for financial assistance
- i. The proposal for the establishment of the Inter University Centre for Sophisticated Instruments and Analytical Sciences (IUCSIAS), Inter University Centre for Academic Administration, Research & Training, Centre for Human Resource Development among SC /ST and Minorities , Centre for Differently Abled, Dr. Ambedkar Centre for Constitutional Law and Parliamentary Studies, Inter University Centre for Women Studies and Empowerment , University-Industry Collaborative Centre and Incubation Unit, Diaspora Centre, School of Mathematics and School of Mathematics was submitted to the University Grants Commission for financial assistance under the UGC XIIth Plan
- j. Steps have been taken to construct the Convergence Academia Complex to house all the Inter University and Inter School Centres following a recommendation from IQAC.
- k. Admissions to PG programmes conducted in the Schools and Departments of the University have been conducted through Centralised Allotment Process from the year 2012 following a recommendation from IQAC.
- l. Academic and Administrative Audit (AAA) was conducted in all Schools and Departments of the University
- m. CBCSS and CSS have been successfully implemented for all UG and PG programmes conducted in the statutory Departments/Schools and affiliated colleges of the University
- n. Workshops were conducted by respective Board of Studies for improving the curriculum
Established a new Centralised Computer Wing in the Pareeksha Bhavan exclusively for the examination purpose

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year

Plan of Action	Achievements
Revision of syllabi and curriculum	Syllabi and curriculum are frequently updated by the respective faculty councils with the formal approval of the CSS Academic Advisory Committee. Syllabi and curriculum of the UG programmes conducted in affiliated colleges are revised periodically by the respective Board of Studies.
Establishment of Inter University Centres for promoting interdisciplinary research and for promoting collaborative research work among the research and academic institutions within the state	Following Inter University Centres were established with Government of Kerala support in the year 2012-2013: a. Inter University Instrumentation Centre (IUIIC)
Establishment of Inter School Centres for supporting the academic activities of the Schools / Departments	Following Inter School Centres were established with financial support from various funding agencies in the year 2011-2012 a. Advanced Molecular Materials Research Centre (AAMRC) b. Centre for Communicable Diseases Control and Prevention (CCDCP)
Academic and Administrative Audit	Academic and Administrative Audit was conducted in all the Schools and Departments
Providing basic amenities to the employees	<ul style="list-style-type: none"> • Construction of staff quarters have been completed and allotted to the nonteaching staff of the University according to the seniority • The construction of Professor's and Lecturer's quarters are being progressing fast
To conduct one day workshop for the faculty members, alumni, students and stakeholders on various themes to be suggested by the IQAC for quality enhancement	The workshops were conducted for the faculty members, alumni, students and stakeholders
Construction of the Convergence Academia Complex	Construction of the Convergence Academia Complex –envisaged to house all the Inter University and Inter School Centres of the University to facilitate and promote inter disciplinary and participatory research have been commenced. The Central Public

	Works Department have been entrusted with the constructed work.
Organising seminars/workshops/symposia/academic carnivals in various Departments/Schools/Centres	Various Statutory Departments/Schools/Centres have been given financial assistance for organising seminars/workshops/symposia/academic carnivals. University have given financial assistance to the tune of Rs 14,39,966/- (Rs Fourteen Lacs Thirty Nine Thousand Nine Hundred and Sixty Six only) to various Departments/Schools/Centres to organise Seminars on Curriculum Development/Symposia and Workshops.
Modernisation of Examination Procedures	The genuine modernisation of the University System, especially the examination related activities are being carried out in a big way with the help of ICT.
Syllabus revision by Board of Studies	The respective board of studies in various programmes conducted workshops for improving the curriculum. Curriculum review workshops are organised in Malayalam, English, Sanskrit, Tamil, Music, Chemistry, Botany, Physics, Mathematics, Commerce, History, Aquaculture and fisheries, Philosophy, Sociology, Economics Board for studies at various College and in the University.
Activities to help the disabled/differently abled sections of the society	University have earmarked Rs 55,60,000/- (Rs Fifty Five Lacs Sixty Thousand only) in the year 2012-13 as financial assistance for the research on the Physically Challenged in the School of Social Sciences
Expansion of NSS activities in the colleges affiliated to the University	The NSS programme coordinator as well as the university have received the prestigious India Gandhi award for the best coordinator and University at National level
Extension activities/Environment friendly activities	The School of Environmental Sciences have been engaged in eco-friendly extension activities like Rainwater for Humanity in collaboration with Brown University, USA, Local Self Governing Institutions and Self Help Groups. The Department of Life Long Learning and Extension have been conducting various short term programmes

	in Organic Farming and related fields.
International Collaborations and Linkages	Among the various Departments and Schools, the School of Environmental Sciences was selected for the Obama Singh 21 st Century (Collaborations with Duke University & Plymouth State University, (an Indo - US Institutional partnership programme) Knowledge Initiative Programme. Various other linkages and collaborations have been signed by the other academic departments also. The International and Inter University Centre for Nanoscience and Nanotechnology have industrial collaboration with industries like Apollo tyres, MRF Tyres, General cables besides collaborating with various foreign institutions.

2.16 Whether the AQAR was placed in statutory body Yes No

Management Syndicate Any other body

Provide the details of the action taken

The AQAR was placed in the Syndicate dated 18/12/2015 by the Vice Chancellor

Part – B (2012- 13)

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	58	3	1	-
MPhil	25	1	1	-
PG	33	3	19	-
UG	2	-	25	-
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	1	-	-	-
Certificate	13	-	-	-
Others	1	-	-	-
Total	133	7	46	-
Interdisciplinary	21	2	-	-
Innovative	7	1	-	-

Please see annexure 1.1

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options

(ii) Pattern of programmes:

Pattern	Number of Programmes
Semester	94
Trimester	-
Annual	18

1.3 Feedback from stakeholders*

(On all aspects)

	Alumni	<input type="checkbox"/> Yes	Parents	<input type="checkbox"/> Yes	Employers	<input type="checkbox"/> Yes	Students	<input type="checkbox"/> Yes
Mode of feedback:	Online	<input type="checkbox"/> Yes	Manual	<input type="checkbox"/> Yes	Co-operating schools (for PEI)			<input type="checkbox"/> Yes

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

- The UGC regulations for pursuing Ph D Degree in various disciplines have been implemented successfully.
- Syllabus for the coursework has been designed and finalised after due consultations with the experts in the field.
- The Faculty council of the schools updates the syllabi periodically to integrate the latest knowledge.
- Every semester, the syllabi and the regulations undergo stern assessment by the Faculty Council of each school.
- University have resorted to incorporate more interdisciplinary component in the syllabi.
- Open courses from various disciplines with freedom of choice and with sufficient credits were introduced in each programme during the year.
- Integrated PhD programme in Nanosciences and Nanotechnology have commenced in the current academic year.
- The CSS Academic Advisory Committee has been constituted to continuously monitor and evaluate the Credit and Semester System followed in the University Schools and Departments.
- The M Tech Programme as envisaged in the year 2011-12 was commenced in School of Computer Science in the year 2012-13.
- The respective board of studies in various programmes conducted workshops for improving the curriculum.
- Curriculum review workshops are organised in Malayalam, English, Sanskrit, Tamil, Music, Chemistry, Botany, Physics, Mathematics, Commerce, History, Aquaculture and fisheries, Philosophy, Sociology, Economics Board for studies at various College and in the University.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

- a. Inter University Instrumentation Centre (IUIIC)
- b. Advanced Molecular Materials Research Centre (AMMRC)
- c. Centre for Communicable Diseases Control and Prevention (CCDCP) – Inter University
Centre for Biomedical Research & Super Speciality Hospital

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty	Total	Asst. Professors	Associate Professors	Professors	Others
	102	47	26	29	186 + 353

2.2 No. of permanent faculty with Ph.D. 103

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year	Asst. Professors		Associate Professors		Professors		Others		Total	
	R	V	R	V	R	V	R	V	R	V
	4	16	5	5	1	3	-	-	10	24

2.4 No. of Guest and Visiting faculty and Temporary faculty 101 41 44+353

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended Seminars/ Workshops	118 +13	173 +21	47 + 22
Presented papers	97 + 2	150 + 5	27 + 4
Resource Persons	45	95 + 1	40 + 3

Please see annexure 2.5

2.6 Innovative processes adopted by the institution in Teaching and Learning:

The Schools have sustained innovative transparent and rigorous internal tools to weigh up the cognitive faculty of students and research scholars as well as to determine the depth of knowledge, intelligence and articulation they have gained over time. Periodic review sections are put in place, group-wise and individual-wise, to keep an eye on the levels of disparity, if any, and to recommend remedial means thereof. The Schools have developed a learner- friendly, need- based instructional/learning system to endow the students and research scholars with adequate skills and capacity to meet the emerging challenges. The instructional pattern, a part from its information- based mode, inculcates values of theory-embeddedness, self-reflexivity and policy- alternative thinking. The learner-friendly instructional system seeks to foster cognitive-analytical skill of students and, wherever necessary, provides space for the empowerment of the disadvantaged in the learning process through informal counselling and tutorial interface. While classroom lectures continue to be an essential prerequisite for the imparting of knowledge, periodic seminars, book/article review sections and group interface provide the necessary intellectual climate for the learning and research in the school. The Schools have also introduced a variety of audio-visual information systems such for lectures and seminars. Students get opportunity to interact with Nobel laureates and outstanding academic personalities through the prestigious Erudite Scholar in Residence Programme introduced by the Kerala State Higher Education Council. The Erudite Scholar in Residence programme was effectively utilized by various Schools to organise lectures and interactive sessions of Doyens of international repute. The smart class rooms in the Schools and Departments of the University have state of art electronic facilities. 24X7hr accessibility to e-resources through our cyber consortium is available. Most of the online journals are available in all University Schools and Departments besides the Central Library. University have introduced MOOC programmes in Nanoscience & Nanotechnology and Environmental Science. University have online repository of digitized theses of doctoral degrees awarded so far. Most of the University Departments/Schools have smart classrooms especially ICT enabled classrooms for conducting seminars and facilitating participatory education. Extensive filed work, online interactive session with the academicians and researchers worldwide. University have introduced formative and summative assessment index and open book system course assessment.

Please see annexure 2.6

2.7 Total No. of actual teaching days during this academic year

186

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

Double Valuation, Online Internal exam, Open Book Examination, Machine interface exam for the qualitative improvement of listening skills of students

2.9 No. of faculty members involved in curriculum Restructuring/revision/syllabus development as member of Board of Study/Faculty/ Curriculum Development workshop

69 47 29

2.10 Average percentage of attendance of students

87

2.11 Course/Programme wise Distribution of pass percentage:

Title of the Programme	Total no. of students appeared	CGPA			
		> 8.00	6.00-7.99	5.00-5.99	Pass %
PG	311	25	229	27	90.35
PhD Course Work		-	-	-	-
UG	42	19	76	-	95
M Phil	39	2	34	-	92.3
Others	154	-	76	78	100

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

IQAC conducts periodic meetings to monitor the academic programmes of various academic Schools/Departments and makes suggestions and recommendations in the department council. The IQAC team prepares strategies at Schools/Department level for qualitative teaching and research. Periodic Academic Audit and assessment based on PBAS furnished by the teaching faculty is carried out by the IQAC and evaluation reports are sent to each Head of the Department/School for compliance. IQAC have directed the Schools/Departments/Centres to continuously evaluate through internal tests, assignments and seminars, direct question answer sessions, remedial coaching, tutorials, Subject familiarization through videos, visiting resource persons and special lectures and expert lectures from industry. The IQAC prepares a plan of action for each semester at the commencement of the semester and ensures that all activities get completed as per schedule. The schedule is also given to the students so that they can plan their studies accordingly. The IQAC also collects feedback from students and gives valuable suggestions and guidelines as and when needed. IQAC also improves faculty motivation for competence and promotes adoption of innovative teaching learning strategies.

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	14
UGC – Faculty Improvement Programme	3
HRD programmes	3
Orientation programmes	5
Faculty exchange programme	11
Staff training conducted by the university	7
Staff training conducted by other institutions	8
Summer / Winter schools, Workshops, etc.	41
Others	9

Please refer annexure 2.13

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	1041	9	9	57
Technical Staff	423	19	26	0

Criterion – III

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- ✓ IQAC encourages the student groups to undertake community projects on real-time issues with social relevance using a problem based learning approach and it offered real and practical value to the students as future managers.
- ✓ Data collection, project management and case study are done by the students and are guided by the faculty of the Department/Schools under instruction from the IQAC. The programme is monitored and evaluated accordingly and is used to refurbish the acquired knowledge.
- ✓ Faculty continue ongoing evaluation and do individual research on relevant topics and is used to acclimatize with the syllabus and distribution of knowledge.
- ✓ Regular report presentations and discussions are organized. Motivated research paper presentations in the classroom.
- ✓ To promote and co-ordinate academic the research activities in the frontier areas to address issues related to water security, energy security, food security and health security. Several extensive highly focussed research programs are being planned incorporating physical, chemical, biological and environmental aspects pertaining to Nanoscience & Nanotechnology for product realization and societal developments.
- ✓ IQAC closely monitors the progress of research in various fields, make discussions with the faculty members, give suggestions for improvement and inspires the research students. The IQAC has been instrumental in designing the sophisticated instrumentation for analytical work. Several new projects were framed based on the recommendations of the IQAC.
- ✓ To imbibe research culture into the minds of the students, regularly organizes Conferences/ Workshops/ Seminars on cutting edge technologies. The University as well as departmental library, fully computerized, has a very good collection of carefully selected reference books, periodicals and research journals (National & International).
- ✓ The IQAC has taken several steps by holding internal orientation exercises and thereby Faculty members started showing interest in putting research projects across.
- ✓ Encouraged faculty and faculty student co-publicizing by undertaking short term workshops. Places suggestions before the faculty council and Board of Studies on different academic matters including design of the curriculum, teaching research, programmes and new course of study.
- ✓ Various Schools/Departments/Centres has taken steps to organize workshops / Seminars / training programmes / invited talks there by giving the students an opportunity to understand the current thrust areas and get into research programmes.
- ✓ The IQAC of the Schools urge the students to undertake community projects on real time issues with social relevance using a problem based learning approach and it offered real and practical value to them as student and future managers.. The programme is monitored and evaluated accordingly and is used to refurbish the acquired knowledge. Faculty continues ongoing evaluation and does individual research on relevant topics and is used to acclimatize with the syllabus and distribution of knowledge.
- ✓ Inter University Centres have been established for promoting the interdisciplinary participatory research among the research and academic institutions within the State.
- ✓ Inter School Centres have also been established for supporting the academic activities of the Schools/Departments of the University.
- ✓ The Department of Life Long Learning and Extension have been acting as a Centre for coordinating the extension activities.
- ✓ Conduct of manpower development programs related to the use of sophisticated analytical equipments
- ✓ Majority of the proposals submitted to various funding agencies and the proposals submitted to the State Planning Board and the UGC are envisaged to promote research in the areas which may benefit the common man

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	45 + 1	58	9	14
Outlay in Rs. Lakhs	423.20 + 11.15	2135.166	1307.06	1348.00

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	4 + 7	5	6	2
Outlay in Rs. Lakhs	2.60 + 0.76	73.6503	372.00	3.00

3.4 Details on research publications

	International	National	Others
Peer Review Journals	161 + 8	101 + 1	10
Non-Peer Review Journals	10	23 + 22	3
e-Journals	11	2	1
Conference proceedings	234	144 + 4	1

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant Sanctioned Rs. in Lakhs	Received
Major projects	2-4 Years	GoK, ICSSR, SSRC,UGC, KSHEC, GFATM, SAPDRS, DST, FIST, SERB, KSCSTE, DBT, DRDO, BRNS, Indo-French Arcus Fund, ISRO, KSCSTE, CSIR, DIT, BRNS, ICMR	1459.17	418.616
Minor Projects	3 Years	DAE-IUC, DoECC, KBC, UGC, DST	41.40	6.40
Interdisciplinary Projects	5 Years	DBT	500.00	-
Industry sponsored	-	-	-	-
Projects sponsored by the University/ College	-	-	-	-
Students research projects <i>(other than compulsory by the University)</i>	-	-	-	-
Any other(Specify)	1 Years	UGC	0.5	0.5
Total			650.107	425.516

3.7 No. of books published i) With ISBN No. Chapters in Edited Books
 ii) Without ISBN No.

Please see Annexure 3.7

3.8 No. of University Departments receiving funds from

UGC-SAP CAS DST-FIST
 DPE DBT Scheme/funds

3.9 For colleges Autonomy DBT Star Scheme
 INSPIRE Any Other (specify)

3.10 Revenue generated through consultancy

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	13	18	2	11	10
Sponsoring agencies	BRNS, CSIR, ISRO, DRDO, DST, ICMR, MGU, BRNS	UGC, KSCSTE, DST, Govt. of India, GoK Biodiversity, Board, MGU, Indian Academy of Sciences	MGU	MGU	

3.12 No. of faculty served as experts, chairpersons or resource persons

3.13 No. of collaborations International National Any other

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs:

From funding agency From Management of University/College
 Total

3.16 No. of patents received this year

Type of Patent	Status	Number
National	Applied	2
	Granted	Nil
International	Applied	Nil
	Granted	Nil
Commercialised	Applied	Nil
	Granted	Nil

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	Dist	College
17	5	6	5	1	-	-

3.18 No. of faculty from the Institution who are Ph. D. Guides and students registered under them

108 + 1

399 + 5

3.19 No. of Ph.D. awarded by faculty from the Institution

49 + 1

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF SRF Project Fellows Any other

3.21 No. of students Participated in NSS events:

University level State level

National level International level

3.22 No. of students participated in NCC events:

University level State level

National level International level

3.23 No. of Awards won in NSS:

University level State level

National level International level

3.24 No. of Awards won in NCC:

University level State level

National level International level

3.25 No. of Extension activities organized

University forum College forum

NCC NSS Any other

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

Extension activities are organised by the Department of Life Long Learning and Extension, Department of Students Services, National Student Services and School of Behavioural Sciences, School of Biosciences, School of Indian Legal Thought, School of Social Sciences and School of Environmental Sciences. The extension activities are envisaged to directly benefit the rural population of the state with special importance to the areas under the jurisdiction of the University. Few of the extension activities are as detailed below:

- ✓ Life skill education for adolescents, Early identification & intervention for childhood disorders, Counselling services for parents and children, Mental health programmes, Sensitization and awareness programmes on Drug addiction & alcoholism are coordinated by the School of Behavioural Sciences.
- ✓ The Department of Life Long Learning and Extension have conducted Geriatric Health survey in collaboration with the University College of Medical Education, established Centralised Allotment Process help desk at all the affiliated colleges and information centres of the University, facilitated UID Registration in collaboration with the Akshya Center, Vayala and organised Cancer Awareness Programmes and Seminar on Healthy Life Style
- ✓ Facility for analysing drinking water quality and microbial contamination is made available in the School of Environmental Sciences on nominal charges. Facility for analysing soil quality for agricultural purpose has also been made
- ✓ Actively participated in mission of relieve the water scarcity problem in the Kuttanad region of Kerala.
- ✓ Conducts activities like; Life skill education for adolescents, Counseling services, mental health programmes, sensitization and awareness programmes etc.
- ✓ Departmental student's forms conduct programs in connection to international and national days to disseminate academic knowledge to common people
- ✓ Conducting quiz competitions, poster exhibitions, skits, seminars, workshops etc. Cleaning operations.
- ✓ The School of Pure and Applied Physics has conducted INCULCATE programs in association with Government of Kerala for School children. The faculty members of the School also guiding students of M.Sc. and M. Tech from affiliated institutions of Mahatma Gandhi University in particular, and other institutions within Kerala as well as national institutions like IISER & NISER. Faculty members also deliver invited talks on a regular basis in Colleges and Universities
- ✓ Conducted projects for the differently - abled, school children to make them equal access to academic environment
- ✓ Create collaboration with industries, tourism sector and related institutions

- ✓ University involved in various social activities such as documentation, collection and dissemination of traditional knowledge on agriculture, medicine, water conservation etc
- ✓ Department of Life Long Learning and Extension is conducting lot of activities to propagate the idea of Organic Farming among the masses as part of the extension activities
- ✓ University is coordinating organic farming programmes and demonstrations in various affiliated colleges of the University
- ✓ The School of Environmental Sciences has launched a major extension programme known as 'Rainwater for Humanity' in collaboration with the Brown University (USA), Athirampuzha Grama Panchayat and the Self Help Groups (www.rainwaterforhumanity.org). As part of this programme, the School has installed 1 community rainwater harvesting structure with a capacity of 1.1 lakh litres and 7 ten thousand litre capacity harvesting tanks at Achinakam village in Vechoor Grama Panchayat in Kuttanad region during December 2009. Construction of additional rainwater harvesting tanks is in progress.
- ✓ Established 'ABILITY', AN INTEGRAL ENABLING UNIT in the School of Social Sciences, to address the differential academic requirements of physically challenged students and researchers (including hearing and visually impaired and persons with motor disabilities) of all teaching and research schools/departments of the Mahatma Gandhi University, and to the best extent possible, for students and teachers with disabilities studying in neighbouring colleges.
- ✓ The Students of the School of Tourism Studies in four groups undertook a project on "barrier free tourism in Kochi with special reference to Home Stays, Ayurvedic Resorts and Amusement Parks" in collaboration with the local tourism/leisure industry suppliers which enabled the students and department to analyse the imperative needs of the field concerned. This was a continuation of study conducted during the previous year. Faculty members engaged in dissemination of knowledge by handling regular columns in national newspapers and wrote 39 articles.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	158.3281 acres	-	University Fund/State Plan Fund	
Class rooms	76+345	03	University Fund/State Plan Fund	79+345
Laboratories	71+134	01	University Fund/State Plan Fund	72+134
Seminar Halls	14+39	-		14+39
No. of important equipments purchased (≥ 1 -0 lakh) during the current year.	223 + 87	70	UGC, SAP DRS, DST, UTY FUND, GoK, IUIC	293 + 87
Value of the equipment purchased during the year (Rs. in Lakhs)	579.78 + 29.55	250.49	UGC, SAP DRS, DST, UTY FUND, GoK, IUIC	609.32+29.55
Others	5		UGC, GoK	5

4.2 Computerization of administration and library

The departmental libraries are automated technological advancements are adopted on administration, admission and examination activities. Internet & Computer facilities for the use of students, faculty, Library and the office introduced already was extended during the year. The activities and services of the University Library are automated using the Open Source Library Management Software KOHA. For the effective implementation of KOHA system, Library has conducted two in house training programmes, a four day in-house training programme for the library staff of the University Library and Department of Libraries. A KOHA server is being maintained by the University. Computerization of Administration and Library services are going on. In addition to the University Library, most of the department libraries are also using the KOHA software for library management. Mahatma Gandhi University is the first Indian University to adopt Open Access to theses of doctoral degrees awarded by the University by establishing an institutional repository of theses (www.mgutheses.org). Mahatma Gandhi University is the first University to sign MoU with INFLIBNET in the submission of online theses into “Shodhganga” and as per the latest statistics available, the University is holding the fifth position among the contributing Universities. The library is providing access to a considerable number of e journals throughout the University Campus.

Please see Annexure.4.2

4.3 Library services: (Information from University Library to be received)

	Existing		Newly added		Total	
	No.	Value (Lakh)	No.	Value (Lakh)	No.	Value (Lakh)
Text Books	152206	46747029	8106	7624828	160312	54371857
Reference Books	15342	5695918	401	1347262	15743	7043180
e-Books	2500				2500	
Journals	407	4435870	28	4451398	435	8887268
e-Journals	11001					
Digital Database	42	737456	2	737456	44	1474912
CD & Video	1252	19000	165	51597	1417	70597
Others (specify)	15424	10800	112	1371225	15536	1382025

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	742	26	Internet Connection of 100 Mbps bandwidth is available throughout the campus	18	21	32	32	NIL
Added	99	7		5	-	-	-	NIL
Total	841	32		23	21	32	32	NIL

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

- ✓ High speed internet connectivity and state of art technology have been made available to the all the Departments, Schools, academic Centres as well as to the academic, administrative, finance and examination wings of the University.
- ✓ University has introduced Centralized Allotment Process for PG programmes in the year 2010 and Centralized Allotment Process for UG Programmes first time in the country in the year 2011. The success of the Centralized Allotment Process has been a milestone in the history of the University and shows the technological competency of the University. The Centralized Allotment Process has been moving on with tremendous success.
- ✓ Various types of online facilities such as registration for centralized admissions, examinations, grievances, examination results etc are available to the students. Mobile applications are also available for checking examination results and filing grievances online. Facility for online filing of grievances has been made available in the Centralized Allotment Process website and the grievances/queries are redressed/attended on the very same day.
- ✓ The International Centre for Nanoscience and Nanotechnology has organized Faculty Development Programme for junior faculties in the state, in collaboration with North Carolina A & T state university USA and Kerala State Higher Education Council. Computer and internet

facility is being provided to students and faculties. Online access to different research journals is available through the University library network.

- ✓ All the faculties, students and staffs have unlimited access to internet of 100mbps bandwidth. Internet connection to the schools, administrative wings and allied offices are secured through advanced firewall systems (sonic wall). All the Departments/Schools/Inter University Centres/Inter School Centres of the University are connected through high speed campus wide network and Wi-fi facility has been made available where ever necessary for easy access to digital resources. The network activity of the campus is strictly monitored by network administrators to prevent inappropriate use and prevent chances of digital hacking. Network polices of the university undergo revisions according to the students, faculty and staffs opinion.
- ✓ Training and refresher courses were given to students and faculties for the use of UGC-Inflibnet services and use of digital consortium encompassing thesis in digital format.
- ✓ Centre for High-performance Computing, student's web centre, printing facilities and internet kiosk are available in campus. Besides this, each school have their own computer lab and each departmental library are connected through specialized network. All e-journals are available in the campus network.
- ✓ A-View online facility is used for conducting online courses (eg: GIS and remote sensing course in association with ISRO&IIRS in school of Environmental sciences), broadcasting of seminars and Skype and similar facilities are frequently used for research meetings.
- ✓ University has a well established Software Development Team which has been engaged in the development of various types of software required for the various branches of the University.
- ✓ Each student has been provided with a Permanent Registration Number (PRN) at the time of admission which shall be used for all future interactions and activities of the student with the University. The concept is to minimise procedural delays by establishing Single Window System for all services o the students.
- ✓ Training on familiarizing the University employees to various free software available worldwide has been initiated by the Centre for High Performance computing.

See Annexure 4.5 for details.

4.6 Amount spent on maintenance in lakhs :

i) ICT	81.69248
ii) Campus Infrastructure and facilities	1277.96592
iii) Equipments	140.90444
iv) Others	263.59070
Total :	1764.15354

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- ✓ The IQAC has Formed Anti Harassment Cell, Conducts orientation programmes at the time of admission of new students
- ✓ The IQAC regularly conducts orientation programme for the students to train them for UGC-CSIR examinations
- ✓ The IQAC strives to provide an environment conducive to the overall development of the students. Students are encouraged to participate in seminars, workshops and technical meets organized by various institutions. The School also conducts personality development workshops for the students. It also collects feedback from students and gives valuable suggestions and guidelines as and when needed.
- ✓ Placement Cell to enhance placements.
- ✓ Remedial Coaching for academically weak students.
- ✓ Interacting with Alumni for placement/Project support
- ✓ The IQAC periodically monitors and evaluates the activities of the Students Grievance Redressal Cell functioning in the office of the Vice Chancellor.
- ✓ Personal Accident Insurance Scheme and Financial aid for serious illness are being provided by the Department of Students Services on recommendation from IQAC.
- ✓ Grace marks are being awarded to the students for their outstanding contribution in cultural activities. University level youth festival and cultural competitions are organised each year by the DSS and the participation of winners are ensured in the Inter University and National Level Competitions.
- ✓ IQAC with its insistence on feedback from the students, alumni etc., and emphasis on various student support services for the remedial of various grievances, NSS, NCC etc., innovation in teaching and learning, has helped in enhancing the awareness about student support services considerably.
- ✓ University is providing research fellowships for the students pursuing Ph D degree in various research centres of the University. Training for GATE/NET/SET is given by the Career Guidance Bureau.

Please see Annexure 5.1 for details.

5.2 Efforts made by the institution for tracking the progression

Various steps are taken to monitor and record the progress of students and researchers in their academic activities, like internal assessment and external examinations, assignments, dissertation etc.

5.3 (a) Total Number of students	UG	PG	Ph. D.	Others
	4791	1403	315	316

(b) No. of students outside the state 10

(c) No. of international students 08

Men:	<table border="1" style="width: 100%;"> <tr> <th>No.</th> <th>%</th> </tr> <tr> <td>3530</td> <td>51.72</td> </tr> </table>	No.	%	3530	51.72	Women:	<table border="1" style="width: 100%;"> <tr> <th>No.</th> <th>%</th> </tr> <tr> <td>3295</td> <td>48.28</td> </tr> </table>	No.	%	3295	48.28
No.	%										
3530	51.72										
No.	%										
3295	48.28										

Category	Last year	This year
General	3430	3371
SC	901	887
ST	133	131
OBC	2456	2414
Physically challenged/others	23	22
Total	6943	6825

Demand ratio- 1:7 Dropout % - 10

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

A Career Guidance Cell is functioning in the University coordinating Coaching classes for NET examination especially for SC, ST, OBC and other minorities. The Career Guidance Cell conduct spoken English classes, personality development activities, career guidance and proper orientation for the students. A faculty member is in charge to observe those activities.

No. of students beneficiaries 305

5.5 No. of students qualified in these examinations

NET	102 + 5	SET/SLET	11 + 5	GATE	17 + 5	CAT	Nil
IAS/IPS etc	0	State PSC	8 + 10	UPSC	Nil	Others	36

5.6 Details of student counselling and career guidance

Please see Annexure 5.6

No. of students benefitted

211 +100

5.7 Details of campus placement

<i>On campus</i>			<i>Self financing</i>		
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Organizations Visited	Number of Students Participated	Number of Students Placed
37	55	28	13	197	113

5.8 Details of gender sensitization programmes

As part of regular teaching gender sensitization programmes are done. Also seminars are conducted in the department and also in the university on gender issues. Women Empowerment programmes are conducted occasionally. The Grama Vikas Kendra of the Dept organise monthly get together of its women members. In the School of Social Sciences, Gender Studies is included as a component in Social Theory Course offered for MA and MPhil programmes. The School of Tourism Studies have celebrated international women's day with seminars conducted at the university level for women empowerment. A Women anti-harassment Cell is functioning in University. Services of the Cell can be utilized by students and employees to lodge their grievances. As a part of regular teaching gender sensitization programmes are done in School of Behavioral Sciences. Also seminars are conducted in the department and also in the University on gender basis. The school of chemical sciences organized and celebrated Women's Day. The School of Gandhian Thought and Development Studies organizes Women's Day every year. A course on women and Development is taught for MA Development Studies. Class Seminar on gender issues was conducted on School of Indian Legal Thought. School of Pedagogical Sciences celebrated Women's Day and Mother's Day in the department. In the School of Social Sciences 'Gender Studies' is included as a component in Social Theory course offered for MA and M Phil Programmes. School of Tourism Studies celebrated International Women's Day with Seminars conducted at University Level. The School of International Relations had arranged for interactions on themes based on gender equality, human rights and inclusive strategies.

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/ University level 38 + 1 National level 01 International level Nil

No. of students participated in cultural events

State/ University level 39 + 6 National level Nil International level Nil

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports: State/ University level National level International level
Cultural: State/ University level National level International level

5.10 Scholarships and Financial Support

	Number of students	Amount (Lakh)
Financial support from institution	221 + 70	43.79 + 14.21
Financial support from government	157 + 812	76.224 + 96.194
Financial support from other sources	28	42.738
Number of students who received International/ National recognitions	-	-

5.11 Student organised / initiatives

Fairs: State/ University level National level International level
Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students

5.13 Major grievances of students (if any) redressed:

- ✓ More e-journals for the research scholars
- ✓ Wi fi connectivity at selected areas
- ✓ Placement cell for the students
- ✓ Cafeteria in the campus
- ✓ Adequate number of toilets in the campus

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

"Mahatma Gandhi University envisions to excel in the field of higher education and cater to the scholastic and developmental needs of the individual, through continuous creation of critical knowledge base for the society's sustained and inclusive growth"

Mission

- ✓ To create an environment that would foster higher education in its area of jurisdiction
- ✓ To create educated individuals qualified in specialized areas of knowledge
- ✓ To plan and implement academic programmes of the highest quality that would foster the holistic development of individuals who will be empowered to act as the conscience of society
- ✓ To conduct and cause to be conducted undergraduate, postgraduate and research-level programmes of quality in sciences, the humanities, social sciences, and the professional disciplines
- ✓ To foster research and extension activities directed at the reorganization of existing knowledge and the creation of new knowledge for the development of society
- ✓ To help in the creation and development of manpower that would provide intellectual leadership to the community
- ✓ To provide skilled manpower to the professional, industrial and service sectors in the country so as to meet global demands
- ✓ To help promote the cultural heritage of the nation and preserve the biodiversity of the region
- ✓ To promote national development by imparting education and culture to the people of the areas coming under the jurisdiction of the University
- ✓ To develop itself into an institution with the highest standards of excellence without losing sight of the importance of social equity

6.2 Does the Institution have a Management Information System

No, the University does not have Management Information System. However, the University shall be implementing the Management Information System through the e-governance project of the Government of Kerala.

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

Admission process, Library management, Examination- Tabulation and preparation of grades are fully automated. University is trying to strengthen the interdisciplinary programmes offered in the realm of Political Science, International Relations and Human Rights keeping in perspective the emerging concerns and frontier areas of social science. The Schools also updates curriculum in line with the developments that have been taking place in the global political, economic, cultural and strategic landscape for innovation in curricular design. The academic programmes were reviewed and redesigned under the Credit and Semester System (CSS). Board of studies in various subjects in association with Faculty council regularly update the syllabus and curriculum. Projects are given to students for the improvement of methodology and training. Discussions are conducted in various Faculty Councils and in IQAC on curriculum development and syllabus revision according to international standards, new trends and developments in the field of knowledge. Yearly Expert committee meetings held for the assessment and review of curriculum. Feedbacks from various sources are utilised for the purpose. Periodic revision of curriculum Faculty attended various curriculum faculty attended various curriculum development programmes.

6.3.2 Teaching and Learning

The University proposes to provide the best learning and teaching environment through a learner friendly, need- based instructional system. It uses latest pedagogical tools for developing cognitive-analytical skills and self-reflexivity in students and researchers. Through the use of instructional devices like Smart Class Rooms, ICT enabled teaching, Computer aided technology, LCD/OHP projected and non- projected aids, Erudite programmes, INFLIBNET etc., attempts are made to enhance teaching and learning abilities. Different methods for the acquiring and dissemination of knowledge like group discussions, field trips, case studies, seminars, symposiums, course-wise assignments, dissertations, visits to various teaching institutions for comparative purposes and individualised instructional strategies are used. Effective, transparent, rigorous internal mechanisms are utilised to assess and monitor the cognitive ability of students, as well as to ascertain the level of knowledge, intelligence and skills of articulation that the students have acquired over time. The gaps in learning are checked and remedial measures proposed. Information based, theory oriented, and experimental learning and teaching methods are employed. Attempts are made for the empowerment of disadvantaged/ differently- abled sections in the learning process. A rigorous, transparent examination system based both on the Credit Based Semester System with mid- semester tests, end semester examinations, and the Annual system are employed.

6.3.3 Examination and Evaluation

- Internal continuous assessment involving seminars, assignments, tests and end semester exams.
- Continuous evaluation in the mode of question and answers , Spot test and regular internals supported with model exams
- Follows Credit Based Semester System/ Semester/ Annual system for various programmes.
- The Departments follow systems with internal and external evaluation methods and Examinations.
- The continuous Internal evaluation is based on assignments, seminars, debates, spot tests, model exams, discussions, quiz competitions etc.
- Special coaching programs to students for UGC and NET examinations.
- Facility to write Examinations in Malayalam.
- Time-bound valuation and publication of results.
- Double valuation for Answer-scripts and Dissertations.

6.3.4 Research and Development

Both experimental and research programs are going on in different areas in collaboration leading research institutions within India and abroad. Development of Research in various thrust areas of knowledge. Research work undertaken in frontier areas in various fields towards product development. Up-gradation of infrastructure, research tools, methods for Data Analysis. The University insist on contribution of research papers and articles to various books and journals. Ability project to address needs of physically challenged students and researchers for research in disability. Special lectures in Research methodology and introduction to course work. Research Collaborations and sharing of research students/ Exchange programmes with various leading Research Institutions. Community based and problem based learning approaches. Edited/ authored books and Research journals on various subjects are being published regularly. To imbibe research culture into the minds of the students, the School regularly organizes Conferences/ Workshops/ Seminars on cutting edge technologies. Encourage students to conduct original research work leading to publications and patents.

6.3.5 Library, ICT and physical infrastructure / instrumentation

The wi-fi connection installed in some Schools/Departments is quite useful in giving the students an opportunity to access the online library facility of the library and internet resources to them even at intervals in the school to search the research progress in the concerned areas. The University and Departmental Libraries have big collections of Reference books. New books/ journals/ facilities are added to the Library periodically. The activities and services of the University Library are automated using the Open Source Library Management Software KOHA. Earlier the library had used the Library Management software SOUL developed and supplied by the INFLIBNET Centre. As the software had certain limitations and difficulty experienced by the Library to switch over to its latest version, library started using KOHA since 2012. With regard to the facilities and user friendliness both library staff and users are satisfied with the new system. For the effective implementation of KOHA system, library has conducted two in-house training programs, a four day in – house training programme for staff of University Library and Department Libraries from 24-09-2012 to 27-09-2012 and one week training programme for staff of University Library from 25-07-2013 to 01-08-2013. A KOHA server is maintained and updated by the library. In addition to the University Library, most of the department libraries are also using KOHA software for Library Management. The library is also keen in providing technical assistance to librarians working in the departments for effective implementation of KOHA.

6.3.6 Human Resource Management

Human Resources are managed in various courses, Schools and Research activities in the best possible way. Classes related to Personality Development, Internship and Training in Government Institutions/ NGO's/ Industry. Periodic meetings of Faculty Council, student representatives and interfaces between faculty and students are being conducted to guide students for the best use of Human Resources. Training in the use of various equipments, life skills are being given. Active coordination between Faculty and Students is ensured in all the Departments/Schools/ Centres. A Decentralized system is prevailing in the academic Departments/Schools/Centres allocating responsibilities to individual faculty members for effective management. Decentralized system deciphering responsibilities to individual faculty members for effective management have been implemented in the University. Human resource is well managed for societal benefits. Students were oriented to academic activities. Students were given training to operate various instruments in the Centre.

6.3.7 Faculty and Staff recruitment

The recruitment is done in accordance with the University Statutes and Government rules and regulations. Services of Guest, Ad-hoc and Temporary Faculties are utilised till the formal sanction is obtained from the Government in respect of new programmes/Centres. Faculty recruitments are done as and when vacancies arise.

6.3.8 Industry Interaction / Collaboration

- ✓ The faculty members of the Schools have sustained interaction with the FICCI in promoting internationalisation of higher education
- ✓ Interactions with Industry are undertaken at various levels.
- ✓ Faculties are involved in various projects with Industrial collaboration. Proposals to this effect are submitted for consideration at various levels.
- ✓ Interaction between Faculty and FICCI (Federation of Indian Chambers of Commerce and Industry) in promoting Internationalization of higher education.
- ✓ Field visits to Industries, institutions like DIETS, SERT, special schools, adoption centres, early childhood institutions and others.
- ✓ Collaboration with Department of Forests and Wildlife, Government of Kerala.
- ✓ Research collaborations with industry. Linkages with National Law Universities. Internship programmes.
- ✓ Industry evaluation of student internees in the form of Internship evaluation forms. Interactions with experts/ persons from Industry and sharing of experiences, classes etc.

6.3.9 Admission of Students

- ✓ Centralised Allotment Process (CAP) has been effectively implemented for UG and PG programmes in the affiliated colleges.
- ✓ Admissions to PG and MPhil courses are through entrance tests and interviews held on a yearly basis.
- ✓ Ph.D Admissions are through entrance tests, screening by Doctoral Committees, counselling, and tests using methods like AAPHER, Game Proficiency test, group discussion etc., as per UGC, AICTE norms. Reservation policy is strictly adhered to.

6.4 Welfare schemes for

Teaching	Health card, PAI, Residential quarters, crèche, recreation facility, Medical reimbursement, LTC, Weightage to children for admission in Professional colleges managed by the University.
Non-Teaching	Same as above.
Students	Hostel facility, Insurance scheme, financial support, fees concession, health care, CUTE- Cultural organization, scholarships/Fellowships, Alumni meets, grievance cell for the solution of complaints, Guidance and Counselling.

6.5 Total corpus fund generated

6.6 Whether annual financial audit has been Yes No

6.7 Whether Academic and Administrative Audit (AAA) have been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	External Examiners	Yes	Faculty Council
Administrative	Yes	Local Fund Audit	Yes	Audit Sections

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes Yes No

For PG Programmes Yes No

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

- ✓ Credit Based Semester system/ Choice Based Credit Semester System has been introduced for various courses with elaborate systems for Internal and external evaluations.
- ✓ Continuous internal evaluation is undertaken on the basis of assignments, seminars, debates, discussions, journal club, quiz competitions, model exams etc..
- ✓ Double/ single valuation of Answer scripts and Dissertations (SPS). In particular cases, there is the facility to write the Examinations in Malayalam.
- ✓ The Academic calendar/ time table for internal and external examinations are adhered to. Measures are taken for the time-bound valuation and publication of results.
- ✓ The genuine modernisation of the University System, especially the examination related activities are being carried out in a big way with the help of ICT. Three server facilities are used simultaneously by the University. Establishment of the state Govt supported Rs 2.0 Crore Data Centre is progressing.
- ✓ University introduced on-line generated Hall Tickets for the CBCSS programmes.
- ✓ Bar Coded Stitched Answer Books containing 24 pages have been introduced for the CBCSS examinations
- ✓ Online transmission of valued data (Grades) has been introduced for the transfer of data from the Centralized Valuation Camps to the Computer Wing of the University.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent

Mahatma Gandhi was the first University in state to frame regulations for granting autonomy status to its affiliated colleges. But the Government level selection of colleges towards autonomy did not take place as a state level policy could not be taken for want of such regulations in other Universities. School of Technology and Applied Science and School of Medical Education were renamed as University Colleges of Nursing, Pharmacy and these centres enjoy academic autonomy. All Departments/Schools of the University have been established with a vision to provide academic autonomy to them for the development and conduct of various programmes according to the current trends.

6.11 Activities and support from the Alumni Association

Annual alumni meets are held in various departments and communications with them are maintained. The alumni meets help the student's to secure placements in various organisations. The alumni participates in seminars and workshops as resource persons and delegates. The alumni has instituted various Scholarships and Awards for the students. The alumni also helps in guiding the students in academic activities, giving suggestions, technical and financial assistance, projects and job placements. Many of the alumni who have passed out from various departments are working in places all over the world in various positions, or as researchers etc. The alumni meet also felicitates outstanding students of the School.

6.12 Activities and support from the Parent – Teacher Association

Annual meetings are conducted. Information sharing sessions and grievance redressal forms are organised according to need. Monitors student performances and the facilities provided to them in the campus.

6.13 Development programmes for support staff

Compulsory computer training for the employees of the University is facilitated through the Centre for High Performance Computing of the University. Uninterrupted internet facility of 10 GBps bandwidth is available throughout the campus and advanced instrumentation training has been given to all the technical staff at the Inter University Instrumentation Centre. Similarly induction training is given to all the nonteaching staff of the University who are newly inducted to service.

6.14 Initiatives taken by the institution to make the campus eco-friendly.

- ✓ Initiative is taken to make the campus plastic free.
- ✓ Eco-friendly approach is promoted through the planting and preservation of various trees and vegetation.
- ✓ Club of Environmental Students (CLENS) conduct programmes on environmental awareness in and outside the campus.
- ✓ Maintains gardens/ vegetation with medicinal plants etc. Observes environmental day. Reactions are preferably carried out using green synthetic methodologies.
- ✓ An area is devoted as habitat conservation model (JEEVAKA) within the University campus. In this area systematic and periodic ecological observations were conducted to understand micro ecological dynamics. All the species were identified and documented and published a monograph book.
- ✓ Watershed conservation activities were done on the campus to conserve natural water balance of the area.
- ✓ Potential and accessible area for systematic and periodic studies on vegetation and other specific dynamics. Ideal habitats for learning and experimenting ecology, field biology aspects and techniques within the campus. Potential area for practicing taxonomic studies, biodiversity, inventories, studies on phyto sociology, insect-plant association, soil chemistry, water quality, micro flora and fauna were also done. Butterfly garden in the campus. Awareness programmes, planting of saplings.
- ✓ Proper waste management system.
- ✓ Rain water harvesting activities were done.
- ✓ Proper disposal of chemical waste.
- ✓ Help local people to conserve sacred grooves.

6.2 Does the Institution has a Management Information System

No, the University does not have Management Information System. However, the University shall be implementing the Management Information System through the e-governance project of the Government of Kerala.

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum development

Our institution periodically updates the curriculum and syllabus in a systematic line of attack. The curricula of all the courses were revised and updated in order to meet the demands of the time. In the case of Schools, the faculty council revises curriculum and syllabus. The revision in the curriculum/syllabus mainly based on the class room experience with course content and scientific advancements in the similar field. The module of electives and dissertation project are designed in such a way to address the current/future requirements. Most Schools used ICT integrated teaching methods as well as new audio-visual methods for curricular transactions.

6.3.2 Teaching and learning

The University has developed a very effective, transparent and rigorous internal mechanism to assess the cognitive ability of students and research scholars as well as to ascertain the level of knowledge, intelligence and articulation they have acquired over time. Teaching and learning practices were done in a student centric manner. The faculties always incorporating updated research findings in the curriculum, to make the students enable to address research problems. The learning experience of the student also enhanced by the aid of field works, interaction with eminent personalities in their field of knowledge, visiting other institutions of premier importance. Students are accessible to e-journals and digital resources in 24X7 manner.

6.3.3 Examination and Evaluation

The academic programmes were reviewed and redesigned under the Credit and Semester System (CSS). University conducts all internal and external examinations as per the time table frame for each semester. The evaluation and publication of the result are also being done on a time bound manner without fail. The students are evaluated through their performance in internal and external examinations, assignments and seminars. The pattern of questions was modified in order to assess the different level of understanding of the subject matter by the students. Continuous internal assessment was made more effective in a time bound manner.

6.3.4 Research and Development

Research programs are going on in different areas in collaboration with leading research institutions within India and abroad. These collaborations made possible the University to send their research students to different research labs of international repute. Some of the schools were conducting research programs specially focusing the community development. School of Tourism conducts projects on real time tourism management issues with social relevance using a problem based. They identified and grouped the tourism resources of Kerala and published a book titled 'Tourism products of Kerala'. ABILITY project of School of Social Science being conceived to address the needs of physically challenged students and researchers and to conduct research in disability studies.

6.3.5 Library, ICT and physical infrastructure / instrumentation

MGU Library and Information System consist of University Central Library and more than 30 libraries of the departments, schools and study centers existing in different campuses. The most important achievement of the MG University Library is the endorsement related to the PhD Theses Archives developed by the University Library. The Mahatma Gandhi University is one of the first fifty Universities to come under the UGC-Infonet Programme. Through UGC-Infonet E-journals Consortium, the University library provides access to more than 4000 journals and databases. The University Library is a fully automated system using the library software package SOUL developed by the INFLIBNET Centre. The Library is also a member of the DELNET (Developing Library Network). Being a member of these networks, the library is able to share the resources of a number of other libraries and has been able to make inter library loan of books. INTUTE Open Access Online Service provides access to the very best web resources for education and research. The software packages used and all content included is evaluated and selected by a network of experts to create the INTUTE System. With millions of resources available on the Internet, it is difficult for researchers to find relevant and appropriate material even with good search skills and use of advanced search engines. Issues of trust, quality, and search skills are very real and significant concerns - particularly in a research context. The INTUTE database makes it possible to discover the best and most relevant resources in one easily accessible place. Researchers can explore and discover trusted information, and be assured that it has been evaluated by specialists for its quality and relevance. MGU is the only university from India, which could host such an official digital archive of PhD theses in the web using multilingual software and search Mechanism (for Malayalam, Hindi and English). With selection of MGU PhD Theses archive by INTUTE the citations for dissertations from MGU will has increased tremendously in research in European countries and our research will get international exposure.

6.3.6 Human resource management

University has adequate number of administrative staff and satisfactory number of academic staff including contract faculties. Faculty student ratio at Schools is 1:2. The academic staffs were undergone refresher programs, conferences, seminars and academic exchange to enrich their knowledge and teaching and research experience. Faculty members have opportunity for their carrier growth along with the institutional development. Newly appointed faculties got a preparatory amount to start their lab and research activities. Administrative staffs were also exposed to internal and external training programs for quality improvement. Newly appointed faculties got a preparatory amount to start their lab and research activities. The achievements of the staffs and students are recognized with appreciation and by honouring them. Various cultural and social clusters were formed by students and staffs, organizing recreational events, social mobility programs, environmental campaigns etc.

6.3.7 Faculty and staff recruitment

The recruitment of the faculties was done according to the UGC Regulation. Advertisement regarding the vacancy, details regarding qualification etc will be given in the leading newspapers and university website. The expert committees including external subject experts will short list the application. The selection committee comprising the eminent scholars in each area will evaluate the research and teaching talent of the candidate. If the candidate is getting through in the process he/she will be recruited. Non-teaching staff also had done according to the UGC, State government and University statutory procedures.

6.3.8 Industry interaction/Collaboration

Most of the schools of the university have industrial relationship in their discipline. In School of Environmental Science, School of Chemical Sciences, School of Bio Sciences etc persons from Industries such as Agilent, Shimadzu, Perkin Elmer, Thermo were conducting classes and workshop on the advancement in their respective field, new instrumental technologies etc. In School of Tourism studies, SMBS like departments expert from hospitality industry takes classes. They also provide Internship opportunities are provided by known institutions. Active industry involvement in the form of internship opportunities and placement to these departments. School of Environmental Science like departments has collaboration with Department of Forests and Wildlife, Government of Kerala, Periyar Tiger Reserve, Thekkady etc.

6.3.9 Admission of the students

Centralized Allotment Process for admission to UG&PG Programmes under merit/reservation seats. Through CAP an applicant can access several colleges/Programmes by putting in a single application online. It saves time, money and effort of the candidates seeking admission to courses/Programmes in affiliated colleges of MG University. The placement of the candidates in various programmes and institutions will be according to their choice, merit and socially determined norms.

Criterion – VII

7. Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

The various University Departments undertook innovative strategies to streamline their academic activities during the year, some of them are as follows,

- Periodic presentations by Research Scholars, debates and discussions etc., meant for developing the analytical and cognitive skills and enhancing the self-confidence of research students.
- Research methodology included in syllabi of PG students to make research aptitude in students.
- Development of research in various thrust and frontier areas of knowledge through the establishment of four Inter-university/Inter School Centres - Inter-University Instrumentation Centre, Advanced Molecular Materials Research Centre (AMMRC), Centre for Communicable Diseases Control and Prevention (CCDCP) and Centre for Indian Sign Language.
- Admissions are conducted online (Centralized Allotment Process for affiliated colleges & Common Admission Process for the Schools and Departments of the University).
- Effective, transparent, rigorous internal mechanisms are used to assess level of knowledge, intelligence and articulation acquired over time by the students.
- Group-wise and individual review sessions are conducted periodically to monitor gaps in learning.
- Instructional methods that are learner friendly, theoretically informed and self- reflexive.
- Students were given incentives for attending conference/seminars.
- Bar coding of books in the Library, digitalization of catalogue, computerisation of offices.
- UGC-INFLIBNET services and online repository of academic theses.
- Programmes initiated to create better environmental awareness helped in waste management and cleanness in the campus.
- University have enhanced the insurance coverage of Rs 1.0 lakhs on death due to accident and upto Rs 5000/- towards reimbursement of hospital expenses for injuries due to accidents for students

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

Action planned	Action Taken
To strengthen the Inter University Centres already started and to start new centres for enhancing interdisciplinary studies	<p>Infrastructural facilities were added to the Inter-University Centres like Environmental Science and sustainable development, social science research, biomedical research, disability studies, advanced instrumentation centre etc and Ph.D programmes started.</p> <p>New centres started are - Inter-University Instrumentation Centre, Advanced Molecular Materials Research Centre (AMMRC), Centre for Communicable Diseases Control and Prevention (CCDCP) and Centre for Indian Sign Language.</p>
Hosting Erudite Scholar in Residence Programme	<p>Several leading scholars like Prof. Detlef Behnemann, Prof. Ajay K Sood, Dr. Baldev Raj, Prof. Rameshwar Adhikari, Dr. Abderrahim Boudenne, Prof. Manfred Stamm, Prof. B A Wolf, Prof. Srecko Valic, Prof. Romila Thapar, Prof. Christopher SINTUREL, Dr. Nabulsi Ahmad R, Prof. Oliwafemi, Prof. Suresh Valiyaveettil, Prof. R Dhamodharan, Prof. Jane Knight and Dr Ashish K Lele during current year.</p>
To start an integrated MS PhD Programme in Nanoscience and Nanotechnology	<p>Started the programme in International and Inter University Centre for Nanoscience and Nanotechnology</p>
To conduct IT Festival	<p>IT Festival 'INTERFACE' was conducted by School of Computer Science.</p>
To organise a national seminars on various topics	<p>Organised various national seminars and workshops in various Schools/Departments under the supervision of IQAC</p>
To start a journal in the area of Computer Science	<p>Started the journal "Mahatma Gandhi University International Journal on Computing and Communication (MGUIJCC2012) Vol - I" by the School of Computer Sciences (SCS)</p>
To start MA Economics programme in KN Raj Study Centre for Planning and Centre State Relations	<p>The MA programme in Economics was commenced in the academic year 2012-13 in the KN Raj Study Centre for Planning and Centre State Relations</p>
Address the needs of the Physically Disabled	<p>School of Social Sciences has introduced a programme - 'ABILITY' a project that engages with the needs of the physically challenged students and researchers after getting a financial assistance of Rs 55.6 lakhs from the Govt of Kerala</p>

7.3 Give two Best Practices of the institution

Credit Based/ Choice Based Credit and Semester System.

The semester system practiced in the University Departments is Credit Based and has resulted in many qualitative changes in teaching and evaluation. It has been instrumental in our attempts to develop an internationally reputed curriculum catering to students needs and relevant to a fast changing world. The system to ensure academic excellence and adequate flexibility of choices for students is prevailing. Conducts courses in emerging areas that are in global demand like Bio- Chemistry, Microbiology, Biotechnology, Bio-physics, Nanoscience etc.

Details in annexure I & II

7.4 Contribution to environmental awareness / protection

Initiative is taken to make the campus plastic free. The National Service Scheme of Mahatma Gandhi University launched a training programme for making Eco-friendly articles as a remedy for the plastic menace. A district level co-ordination committee was authorized to initiate training programmes and activities. As part of the programme, BK College, Amalagiri organised training a training programme in Paper Carry Bag making on 6th August, 2012. The college NSS units took up a unique programme for paddy cultivation. Wormy compost pits were made. The programme imparted the message of the importance of Agriculture to the students at large. Eco-friendly approach is promoted through the planting and preservation of various trees and vegetation. Club of Environmental Students (CLENS) conduct programmes on environmental awareness in and outside the campus. The club maintains gardens/ vegetation with medicinal plants etc. The University observes environmental day and envisages special environmental initiatives. The chemical reactions in the laboratory are preferably carried out using green synthetic methodologies. An area for habitat conservation model is maintained within the University campus. Jeevika -the live laboratory has been established for the conservation of indigenous plants , conservation of watershed, micro- habitats and related biodiversity within the campus. The area has been developed as a potential and accessible area for systematic and periodic studies on vegetation and other specific dynamics. The area has been developed as ideal habitats for learning and experimenting ecology, field biology aspects and techniques within the campus. Furthermore, potential area for practicing taxonomic studies, biodiversity, inventories, studies on phyto sociology, insect-plant association, soil chemistry, water quality, micro flora and fauna, etc. along with a butterfly garden have been developed in the campus. The Department of Life Long Learning and Extension and the Department of Environmental Sciences have been organising environmental awareness programmes, such as planting of saplings rare tree species. The Advanced Centre for Environment and Sustainable Development and the School of Environmental Sciences Proper for harvesting the rain water from the roof tops of the University buildings to a quarry that has been lying underexploited for many years. The University have facilitated a proper disposal system for the disposal of chemical waste from the various laboratories of the University. The Department of Life Long Learning and Extension is organising various programmes for the promotion of bioorganic farming throughout the state.

7.5 Whether environmental audit was conducted? Yes No

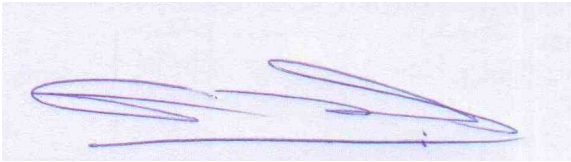
7.6 Any other relevant information the institution wishes to add.

- ✓ Greater advanced level instrumental support to be provided.
- ✓ Necessary permanent teaching faculties to be recruited for specialised areas. Inter-disciplinary Centres to be strengthened.
- ✓ Vocational rehabilitation centre for adults, counselling cum- psychological testing clinic for the public.
- ✓ 12 faculties with specialization in various applied life science areas.
- ✓ The number of research projects and funding has to be increased. Infrastructural / class room facilities to be increased.
- ✓ Seminars/ workshops at National/ international levels to be organized. Measures taken to develop innovative curriculum.
- ✓ Continuous evaluation of academic elements and tracking of student's academic growth.

8. Plans of institution for next year

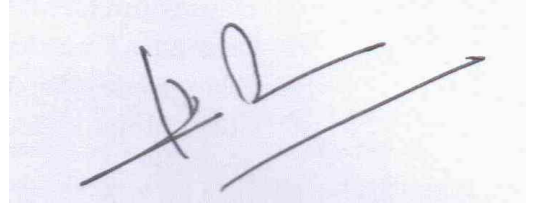
- ✓ Construction of Convergence Academia Complex
- ✓ Excellence in academic and Research activities. Attracting more research funds for sustainability and development.
- ✓ Vidyarthi Samparka Paripadi: to launch Student's Grievance Redress Mechanism 'Vidyarthi Samparka Paripadi' modeled on Chief Minister's 'Jana Samparka Pripadi' and a mobile application (M-App), to speed up dissemination of University related information
- ✓ To introduce Graduate Membership Programme through which any graduate residing in Kerala irrespective of age can become a member of the University Library
- ✓ To launch E-learning and E-book projects
- ✓ To conduct Akshara Jyothy Rally
- ✓ To conduct MOOC programmes and Start up programmes
- ✓ To develop collaborations at various levels between the Departments and various international, national Institutions.
- ✓ Extending counselling programs for students. Proposed enhancement of infrastructural facilities like class rooms, seminar halls and modern amenities.
- ✓ To make necessary recruitments of Faculty.
- ✓ To procure necessary educational aids. Introducing remedial coaching for weaker students. Wi-fi connectivity for online learning.
- ✓ Plans to introduce lesson plan system for effective course management. Plans for bringing experts from foreign universities to augment efforts for internationalisation. To publish books on research outputs of research centres of the University. Starting of new programmes.
- ✓ Time bound assessment and declaration of results. Take measures for career guidance. To conduct programmes giving stress in inclusive education.
- ✓ To make the campus more eco-friendly with further measures for waste management, water harvesting and conservation of biodiversity.
- ✓ To improve the existing feedback system.
- ✓ To organise national/international seminars in all the schools/departments.

Name: Prof (Dr) Sabu Thomas



Signature of the Director, IQAC

Name: Dr. Babu Sebastian, Vice Chancellor



Signature of the Chairperson, IQAC

PD Hills

18/12/2015

Best Practices of the institution

Best practice I

Title of the Practice

Campus Watershed Development Programme

Objectives of the practice

- ✓ To augment ground water resource of the area through increased recharge of rain water and construction of surface storage and percolation structures
- ✓ To increase the level of water table during summer months
- ✓ To bring down the concentration of iron content of the surface water to safe limits by maintaining required water level in the ponds especially during summer months
- ✓ To reduce surface runoff and soil loss from the surrounding areas through suitable biological and engineering soil and water conservation measures
- ✓ To reduce sedimentation rate of the storage structures
- ✓ To rejuvenate the plant and animal biodiversity of the area
- ✓ To mitigate the drinking water scarcity problem of the Campus during summer months
- ✓ To undertake research studies on soil water behaviour in a watershed consequent to adoption of various management techniques
- ✓ To establish a Model Watershed with demonstrative management technologies for creating awareness among students, public, administrators and elected representatives of people
- ✓ To conduct monitoring and evaluation studies relating to watershed management practices
- ✓ To evolve and suggest appropriate watershed management strategies for underground recharge of rain water for the different agro ecological zones of Kerala, by scaling up the experiences and observations made in the Model watershed.

Need addressed and the context

Acute water scarcity during the summer months is a serious problem in the university campus. Available rain water harvesting facilities are meagre and insufficient to meet the demands. The campus has a green belt area of about 20Ha which is almost undisturbed and is identified as the Live Laboratory of the School of Environmental Science. This area along with the adjacent areas constitutes a natural watershed region. The area comprises of very steep to steep slopes and moderately sloping narrow valleys. Construction activities are going on the ridge line of this watershed area which causes added problems of soil disturbance and consequent surface water flow. The underground recharge has been tampered with and the ponds at the lower portion of the watershed quite frequently dry up during summer causing severe iron toxicity problem and drinking water scarcity in the entire campus

area. The water requirement of the university is then to be met through water transported through tankers from outside the campus, at a very high cost. It is in this context that the ACESSD has decided to develop the **Priyadarshini Hills Watershed (Nalpathimala Watershed)** adopting the scientific watershed management technologies for augmenting groundwater recharge of rain water and mitigating the problem of water scarcity in the University campus. The project involves restoration and rejuvenation of the natural resources of the watershed, research studies, awareness creation, increasing the storage capacity of the ponds, enhancement of ground water recharge, and providing safe drinking water to the campus all the year round.

The practice

The activities proposed mainly focus on ground water recharge through various location specific technological interventions for Artificial Recharge (AR). AR is the process by which the Ground Water reserve is augmented at a rate exceeding that under natural conditions of replenishment

a. Rejuvenation of existing Lower Pond cum Bund

The existing pond at the lower portion of the watershed is now poorly maintained and its capacity has been greatly reduced as a result of large scale sedimentation and from the upper parts of the watershed. The protective bund at the out let side of the pond has been damaged and water flows is not regulated.

The proposed activity involves increasing the capacity of the pond for water storage, by silt removal, deepening, and expanding the total dimensions on all sides. The masonry structure on the western side will be re built to maintain higher water level within the pond. Provision for out flow will also be provided to safeguard the stream flow below the pond and to preserve the ecosystem downstream (Annexure 13).

The silt and clay dug out and removed from the pond will be utilised for stabilizing the bunds on the Northern and Southern boundaries of the pond. It is proposed to plant vegetative species like Bamboo, Reeds, Vetiver and other grasses on the bunds for its stabilization.

b. Rejuvenation of existing Middle Pond and Construction of Side wall

The work is similar to that of the Pond No.I at the lower portion. Activities like Deepening, Broadening, desilting and utilising the dugout silt and clay for stabilization of the northern and southern bunds , stabilization of the bunds with vegetative species like Bamboo, Reeds, Vetiver and other grasses are same as those in the case of the Pond No I. Here an additional pond will be dug out at the eastern side adjacent to the existing Pond and both the ponds will be merged to act as a single structure.

On the Western side, at present water flow is controlled to some extent by the road bund. But because of high seepage through the highly permeable road water is not impounded for long periods. There is no effective structure to check the flow of water which in quick downward flow of the collected water. This problem is proposed to be solved by constructing a stone masonry and concrete structure by the side of the road on the western side of the pond with provision for regulated water flow to the downstream.

c. Water Collection Pits across Water way, Water Percolation Ponds and & Pond Net working

This activity is proposed at the higher contours of the watershed. Water Collections Pits (WCP) of various dimensions will be constructed at suitable locations and all the WCPs will be networked. In addition, five Water Percolation Ponds (WCP) will be constructed on the upper ridge portion where the runoff water and the excess from the WHT will be collected for recharging the underground water. The excess water from the Rain Harvesting Tanks (RWT) will flow also in to the WCP and also in to the Continuous Contour Trenches (CCT) constructed as part of the project.

d. Percolation Pits, Staggered Trenches, Continuous Contour Trenches, Earthen Bunds, Vegetative Hedges(VH)

Percolation Pits (PP), Staggered Trenches (ST), Continuous Contour Trenches (CCT), and Earthen Bunds (EB) will be constructed and Vegetative Hedges (VH) will be established on the upper slopes and the side slopes of the watershed taking into account the soil and land suitability parameters. The objective is to conserve the maximum quantity of rain water that will recharge the underground water resource. The sides of the PP, STs, CCTs and the top of the EBs will be stabilized with Vetiver/ Grass system. Planting of indigenous tree species along the contour will also be taken up wherever plant density is low.

e. Tree planting

Indigenous species of trees will be planted on contour in about 2.5 ha of area which is now under inappropriate land use. The proposed species include Jack, Mango, Anjily, Teak, Neem, Asoka, Nux Vomica, Bamboo and medicinal trees.

f. Loose Boulder Check Bund and Brush Wood Check Bunds

One Loose Boulder Check Bund (LBCB) and five Brush Wood Check Bunds (BWCB) are proposed to be constructed across the stream at different locations for arresting the flow of water and to reduce the flow velocity as well to allow more water percolation in to the underground hydrological system.

g. Roof Top Rain Water Harvesting

A total of 10 Roof Water Harvesting Tanks (RWHT) each with a capacity of 50000 litres are proposed to be constructed on Ferro Cement Technology by the side of the newly constructed buildings on the ridge portion of the watershed to collect the water from the roof tops and to store it for drinking water needs. A total of 5 lakh litres will be stored in this manner at a time. The excess water flowing into the RWHTs will be diverted to the Percolation pits and Ponds for underground recharge. Water in excess of this recharge capacity will be diverted to the Rock Quarry modified as Rain Water Harvesting Structure near the Health centre through a series of delivery pipes from the RWHTs to the Rock Quarry. This will cater to the water requirement of the University and the inhabitants and visitors.

h. Well Recharging System

The roof water from the existing buildings and the buildings under construction will be collected and directed in to adjacent 22 wells. The well recharging system will consist of PVC pipe networks having provision for filtration of the water before its discharge in to the wells. This will replenish the underground water level especially during summer months when about 10% of the total rain fall is received as summer showers.

i. Automatic Weather Station

An Automatic Weather Station is proposed to be established under the project to monitor the daily weather parameters and to correlate the data with watershed behaviour. This will serve as a long term facility for watershed management related studies and training programmes. (Justification: All the studies relating to NRM require to be supported with local weather data for their meaningful interpretations to evolve replicable models. Since the University is at present not having a meteorological observatory, the data from other places have to be depended up on. The nearest station is about 10 km away. The data from these sources will not give a true picture of the ground situation and may therefore affect the data interpretations of the watershed based studies.)

j. Model Watershed

With the implementation of the various activities on scientific principles the watershed area is planned to be developed as a National Model for Watershed Management.

k. Documentation

Study Reports, research papers, success stories, and case studies will be published in national and international journals as part of the project. Books on watershed management, booklets and pamphlets for various stake holders will be prepared and published.

Evidence of success

The entire University campus is benefitted by the watershed development programme. University has been completely utilising the

Resources

Kerala State Jananidhi and School of Environmental Sciences

Best practice II

Title of the Practice

Promotion of Interdisciplinary Research through establishment of Inter University Centres

Objective of the practice

- ✓ Inter-disciplinary Academic Centre of independent status for the specific purpose of imparting education and training and promoting research and extension programmes.
- ✓ The Centres shall support cutting edge research, learning and academic pursuits and dissemination of scientific knowledge through various means and networking with other Universities, Colleges and R&D institutions across the country as well as outside.
- ✓ Inter University Centre shall be comprised of the willing/volunteer faculty of the University Departments of Teaching and Research, who shall serve as the adjunct faculty of the Centres.
- ✓ To provide common advanced centralized facilities/services for universities which are not able to invest heavily in infrastructure and other inputs.
- ✓ To play a vital role in offering the best expertise in each field to teachers and researchers across the country.
- ✓ To provide access for research and teaching community to the state-of-the-art equipment and excellent library facilities which are comparable to international standards.

Need addressed and the context

Inter-University Centres are established within the Universities in Kerala for centrally providing state of the-art facilities for researchers working in different Universities within the State. The Inter University Centres are interdisciplinary centres for cutting edge research across disciplines. The participating departments could carry out common research programmes synergizing available academic expertise in the Universities and research Institutes within Kerala. Post Graduate and PhD Programmes, Short term programmes for high-achieving students, Visiting Faculty Programme are some of the major programmes envisaged in these Centres. Twelve Inter University Centres have been established in the Universities in Kerala in niche areas and Mahatma Gandhi University has six such Centres.

The practice

The Centres will focus on inter disciplinary studies through scholarly inquiry. The Centres will be centrally provided with state-of-the-art facilities accessible for the researchers and other interested groups working in different Universities. The Centres shall offer innovative educational, consultative, and other support programs to foster research, teaching, and to guide curricular decisions. The Centres shall provide space and facilities to develop applications of research. The Centre could also be a coordinating institution to promote such research Programmes in the Universities. _ Special scholarships may be provided for students interested in research. The Centre shall support research collaborations between faculty and students. The Centre could design Special credit courses in UG and PG levels for the students in any discipline and encourage such students to take up the credits. The Centre shall establish and maintain relations with similar research and teaching centers at other academic institutions.

Evidence of successes

All the Inter University Centres established so far in the University have been performing very well and have produced publications with high impact factor.

Resources

Grants from Kerala State Government and various funding agencies and the Government of India.

8. Plans of institution for next year

- Start the course in Indian sign language, conduct seminars, conferences & short term orientation programmes for caregivers of persons with severe disability, Establish clinical linkages with institutions working for the rehabilitation of disabled. Expand the activities of vocational rehabilitation centre, set up special laboratories for assessment and rehabilitation of people with visual and hearing impairment
- Upgradation of existing Inter University Centres as International Inter University Centre for tapping in more funds
- Implementation of a new grievance redressal mechanism

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

Criterion - I

1.1 Details about Academic Programmes

Sl.No.	Department	Level of the Programme	Subject		
1	School of Behavioural Sciences	PG Diploma	Indian Sign Language		
		PG	M.Sc. Disability Studies and Rehabilitation Sciences		
			M.Sc. Psychology		
		M.Phil	Behavioural medicine & Rehabilitation (Full Time, Part Time)		
			Rehabilitation Psychology		
			Special Education & Rehabilitation Sciences		
			Behavioural Sciences and Rehabilitation Nursing		
		Ph D	Special Education		
			Rehabilitation Psychology		
			Behavioural Medicine		
			Rehabilitation Nursing		
		2	School of Biosciences	PG	M.Sc. Microbiology
					M.Sc. Biochemistry
M.Sc. Biotechnology					
M.Sc. Biophysics					
M.Phil	Biosciences				
Ph D	Microbiology				
	Biochemistry				
	Biotechnology				
	Biophysics				
	Physiology				
3	School of Chemical Sciences	PG	M.Sc. Organic Chemistry		
			M.Sc. Inorganic Chemistry		
			M.Sc. Physical Chemistry		
			M.Sc. Polymer Science		
		M.Phil	Inorganic Chemistry		
			Organic Chemistry		
			Physical Chemistry		

			Polymer Chemistry
		M. Tech	Polymer Science & Technology
		M.Sc. PhD (Integrated)	Chemistry
			Chemical Physics
		Ph D	Inorganic Chemistry
			Organic Chemistry
			Physical Chemistry
			Polymer Science & Technology
4	School of Computer Sciences	PG	M.Sc. Computer Science
		M. Tech	Computer Science & Technology
		Ph D	Computer Science
5	School of Environmental Sciences	Certificate Course	Geo-information Science & Technology
		PG	M.Sc. Environment Science & Management
			M.Sc. Environment Science & Disaster Management
		M. Phil	Environment Management
		Ph D	Environmental Chemistry
			Biotechnology
			Geosciences
			Toxicology
			Wetland
			Biodiversity
			Waste Management
			Climate change
			Forestry
Disaster Management			
6	School of Gandhian Thought and Development Studies	PG	MA Gandhian Studies
			MA Development Studies
		M.Phil	Development Studies
			Gandhian Studies
			Social Work
		Ph D	Development Studies
			Gandhian Studies
Social Work			

7	School of Indian Legal Thought	UG	3 Year LLB (4 pm-9 pm)
			5 Year BBA LLB (Hons)
		PG	LLM
		Ph D	Law
8	School of International Relations & Politics	PG	MA Politics & International Relations
			MA Politics & Human Rights
			MA Politics (Public Policy & Governance)
		M. Phil	Politics and International Relations
		Ph D	Politics
Economics			
9	School of Letters	PG	MA English
			MA Malayalam
		M.Phil	Malayalam
			English
			Theatre Arts
		Ph D	English
			Malayalam
			Theatre Arts
			Fine Arts
		10	School of Management and Business Studies
M.Phil	Business Studies		
Ph D	Management		
11	School of Pedagogical Sciences	PG	M.Ed
		M. Phil	Education
		Ph D	Education
12	School of Physical Education & Sports Sciences	PG	M.PEd
13	School of Pure and Applied Physics	PG	M.Sc. Physics
		M. Phil	Physics
		Ph D	Physics

14	School of Social Sciences	PG	MA History
			MA Anthropology
		M.Phil	Social Sciences
			Social Transformation and Empowerment
			Human Ecology & Natural History
Ph D	All subjects under the Faculty of Social Sciences		
15	School of Tourism Studies	PG	Master of Tourism Management
16	Dr.K.N.Raj Study Centre for Planning and Centre-State Financial Relations	PG	MA Economics
17	International and Inter University Centre for Nanoscience and Nanotechnology	PG Diploma	Nanoscience and Nanotechnology
		PG	MS (Nanoscience and Nanotechnology)
		M Phil	Nanoscience and Nanotechnology
		PhD	Nanoscience and Nanotechnology
		Integrated PhD	Nanoscience and Nanotechnology
18	Advanced Centre of Environmental Studies and Sustainable Development	Ph D	Environmental Science
			Chemistry
			Forestry
			Climate Change
19	Inter University Centre for Disability Studies	Short Term Certificate Programme	Disability Rehabilitation
			Early Assessment and Management Services
			Speech Therapy
			Physiotherapy
			Psychological Assessments

			Counselling Services
			Disability Assessments
		M Phil	Disability Studies
20	Inter University Centre for Social Science Research and Extension	PhD	Human Geography
			Human Ecology
			Social Transformation Studies
			Gender Studies
			Tribal Studies
			Sustainable Development Studies
21	Institute for Intensive Research in Basic Sciences	PG	Five year integrated Inter Disciplinary M Sc Programme in Chemistry, Physics and Biology
22	Centre for English Language and Communication Skills	Certificate Programmes	Post Graduate Certificate in English Communication
		PG Diploma	Post Graduate Diploma in English Communication
		Short Term Courses	English Language and Communication
23	Institute for Contemporary Chinese Studies	M Phil	Chinese Studies
		PhD	Chinese Studies
24	Department of Life Long Learning and Extension	Certificate Programmes	Counselling
			Management of Learning Disabilities
			Yogic Science
			Organic Farming
		Diploma programmes	Yogic Science
			Organic Farming
25	Department of Library & Information Science	UG	B L I Sc
		PG	M L I Sc

26	Department of communication & Journalism	PG	MCJ
27	School of Medical Education	UG	B Sc Nursing
			B Pharm
			B Sc Medical Radiological Technology
			B Sc Medical Laboratory Technician
			B Sc Physiotherapy
			B Sc Medical Microbiology
		PG	M Pharm (A) Pharmaceutics
			M Pharm (B) Pharmacognosy
			M Pharm (C) Pharmacology
			M Pharm (D) Pharmaceutical Chemistry
			Master of Hospital Administration
			Master of Public Health
			Master of Physiotherapy
			M Sc Medical Anatomy
M Sc Medical Microbiology			
M Sc Medical Biochemistry			
Master of Applied Science Medical documentation			
Master of applied Biomedical Documentation			
Ph D	Pharmacy		
28	School of Technology and Applied Sciences	UG	B Sc Computer Science
			B Sc Electronics
			B Tech Polymer Engineering

			MCA
		PG	MSc Computer Engineering and Network Technology
			M Sc Applied electronics
			M Sc Computer Science
			M Sc Space Science And Technology
29	University College of Engineering	UG	B Tech (Computer Science & Engineering)
			B Tech (Electrical & Electronics)
			B Tech (Polymer Engineering)
			B Tech (IT)
			B Tech (Electronics & Communication Engineering)
		PG	M Tech (Applied Electronics)
30	School of Applied Life Sciences	PG	M Sc Fishery Biology & Aquaculture
		M Phil	Fishery Biology & Aquaculture
31	University College of Teacher education	UG	B Ed
		PG	M Ed

2.5 Faculty participation in Conferences and Symposia:

The detailed information of the faculty participation in conferences and symposia are listed as each school and then faculty wise as follows,

SCHOOL OF BIOSCIENCES

Dr.LinuMathew

- 1) Molecular charecterisation of three species of Clarias (pisces:siluriformes:claridae) using RAPD markers, Aneesha Devassy, Linu Mathew, Padmakumar K.G ,Gopalakrishnan. A, Basheer,V.s,raj Kumar, Second Indian Biodiversity congress(IBC2012 December)
- 2) Biodiversity of endophytic fungi in Ppteris confusa and Pteris longifolia (pteridaceae)through nuclear rDNA ITS analysis. Thushara Susan Sabu, Reshma John, Linu Mathew. 2012. National Biodiversity Congress.Thiruvananthapuram
- 3) Molecular phylogenetic relationship among endemic balsms of WesternGhats using chloroplast atpb-rbcl spacer sequences. Shajitha P.P, Dhanesh N. R, Aneesha Devassy, Jomy Augustine, Linu Mathew. 2012. National Biodiversity Congress. Thiruvananthapuram
- 4) Evaluation of endophytic fungal diversity n in Achyranthes aspera based on rDNA ITS analysis.Reshma John, Rashmi P A, Linu Mathew. 2012. National Biodiversity Congress.Thiruvanthapuram
- 5) Callus induction and in vitro propagation of Achyranthes aspera Linn.Reshma John, Rashmi P A, Linu Mathew.2013.International conference on Plant Biosystematics ICPB2013.St. Berchmans College. Kottayam. Kerala
- 6) Indirect organogenesis and histological analysis of organogenic and nonorganogenic calli obtained from in vitro cultures of Justicia adhathoda L. Rashmi P A, Linu Mathew. 2013. International conference on Plant Biosystematics.ICPB2013.St.Berchmans College.Kottayam.Kerala
- 7) Endophytic fungal diversity and colonization in Achyranthes aspera Linn. Reshma John, Siji Raju, Jyothis Mathew, Liinu Mathew 24th Kerala Science Congress, KSCSTE, Thiruvanthapuram (Jan 20127)
- 8) Molecular charecterisation of three species of Clarias (pisces:siluriformes:claridae) using RAPD markers, Aneesha Devassy, Linu Mathew, Padmakumar K.G ,Gopalakrishnan. A, Basheer,V.s,raj Kumar, Second Indian Biodiversity congress(IBC2012 December)

Dr.Jayachandran.K

- 9) Jayachandran.K.Attended and presented a paper in a national symposium on emerging trends in Biotechnology, organised by Department of Biotechnology, Cochin university of science and technology from 12-13 December 2012
- 10) Jayachandran.K.Attended and presented a paper in Second international conference on advanced oxidation processes (AOP-2012 organised by School of Environmental sciences, SECAS and IUIC, Mahatma Gandhi University kottayam on 5th -8th October,2012

Dr.Jyothis Mathew

- 11) UGC sponsored National Seminar on Nanaotechnology: Applications of Nanomaterials in Agriculture, Food and Medicine B.K.College for Women Amalagiri, Kottayam 25-26 July, 2012
- 12) Microwave assisted synthesis of starch stabilized nonoparticles and its catalytic and antibacterial activity studies Siby Joseph, Prasad M, Jyothis Mathew & Beena Mathew The India – Israel Meeting on Material Science and Nanoscience (IIMMN -2013) Organized by Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam & Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru at Kottayam 31 Jan-1 Feb, 2013

Dr.Harikumaran Nair

- 13) Sougand MV and R.harikumaran Nair, Monosodium glutamate (food flavour enhancer) impairs cardiac antioxidant system and cytoarchitecture, 25th Kerala Science Congress, 29th Jan-1 Feb 2013, Technopark, thiruvananthapuram, Kerala (National)
- 14) Mathews V Varghese, Abhilash S, Harikumaran Nair, R. Protective effect of omega-3 fatty acid against anti-leukaemia drug arsenic trioxide induced electrocardiographic alterations. Amrita Bioquest 2013, International conference on Biotechnology for innovative applications, August 10-14, 2013, Amritapuri, Kerala, India. Elsevier Publications. 2013, pp 94-95 ISBN 978-93-5107-103-7. (International)
- 15) Mathews V Varghese, Abhilash S, Harikumaran Nair, R. Prospective investigation of omega-3 fatty acid against arsenic trioxide- acute promyelocytic leukaemia induced myocardial toxicity” 25th Kerala Science Congress, Jan-Feb 2013 at Technopark, Trivandrum Kerala India, pp. 183-85 ISBN 81-86366-83-0. (National)
- 16) Abhilash S, Vineetha R C, Mathews VV, Harikumaran Nair R. Cancer drug toxicity- An in vitro model for the cytotoxicity screening”. International conference on research methodology and scientific writing, December 2013 at School of Behavioural Sciences, Mahatma Gandhi University, Kottayam, Kerala, India. (International)
- 17) Vineetha R C, Abhilash S, Harikumaran Nair R. Protective role of ascorbic acid (Vitamin C) in arsenic induced cardiotoxicity”. International conference on research methodology and scientific writing, December 2013 at School of Behavioural Sciences, Mahatma Gandhi University, Kottayam, Kerala, India. (International)

Resmi.S.S

- 18) Resmi.S. Attended the national workshop organised at Instrumentation centre, DST -PURSE ,workshop on , 10-11th september 2012
- 19) Resmi.S. Attended the workshop on Molecular Phylogenetics in Microbiology, School of Biosciences, Mahatma Gandhi University, 6-8th september 2012, state level
- 20) Attended at Inter University Instrumentation centre, DST -PURSE ,workshop on Frontier of Spectroscopy & Microscopy, 10-11th september 2012

Dr.Radhakrishnan..E K

- 21) Participated the UGC refresher course on Jan 1 to 28th, 2013 organised by UGC Academic Staff College, Trivandrum

Dr.Jisha M.S

- 22) Biocontrol of bacterial blight of Anthurium caused by Xanthomonas axopoids International seminar Sustainable utilization of tropical biomass through biotechnology, 'SUPBT 2012' December 2012
- 23) Biocontrol of Rhizoctonia rot of Vanilla (Vanilla planifolia) using combined inoculation of Trichoderma sp. and Pseudomonas sp. Innovative approaches and modern technology for Crop productivity, Food safety and environmental sustainability November 2012.
- 24) Isolation and characterization of kerosene degrading bacteria from contaminated water. 3rd World Congress on Biotechnology September 2012.
- 25) Exploring endophytic diazotrophic bacteria as potential plant growth promoters and biocontrol agents of rice sheath blight disease. 3rd World Congress on Biotechnology September 2012.
- 26) Invitro screening of Pseudomonas sp. for their biocontrol potential against phytopathogens of vanilla. 3rd World Congress on Biotechnology September 2012.
- 27) Biocontrol of Fusarium wilt of Vanilla (Vanilla planifolia) using Trichoderma harzianum. (Presented in the 2nd International seminar and workshop on "Sustainable utilization of tropical plant biomass" held at Kerala University campus, Kariavattom, Thiruvananthapuram).
- 28) Frontiers of Spectroscopy and Microscopy. DST-PURSE sponsored workshop. Mahatma Gandhi University, Inter university Instrumentation Centre (IUIIC). 10th -12th September 2012 Characterization of plant growth promoting endophytic bacteria from rice. International seminar Sustainable utilization of tropical biomass through biotechnology, 'SUPBT 2012' December 2012.
- 29) Bioactive metabolite from Aphyllophorales sp. an endophytic fungus isolated from Breguiera cylindrical. International seminar Sustainable utilization of tropical biomass through biotechnology, 'SUPBT 2012' December 2012
- 30) Biocontrol of bacterial blight of Anthurium caused by Xanthomonas axopoids International seminar Sustainable utilization of tropical biomass through biotechnology, 'SUPBT 2012' December 2012
- 31) Biocontrol of Rhizoctonia rot of Vanilla (Vanilla planifolia) using combined inoculation of Trichoderma sp. and Pseudomonas sp. Innovative approaches and modern technology for Crop productivity, Food safety and environmental sustainability November 2012.
- 32) Isolation and characterization of kerosene degrading bacteria from contaminated water. 3rd World Congress on Biotechnology September 2012.

- 33) In vitro screening of *Pseudomonas* sp. for their biocontrol potential against phytopathogens of vanilla. 3rd World Congress on Biotechnology September 2012.
- 34) Biocontrol of *Fusarium* wilt of Vanilla (*Vanilla planifolia*) using *Trichoderma harzianum*. (Presented in the 2nd International seminar and workshop on “Sustainable utilization of tropical plant biomass” held at Kerala University campus, Kariavattom, Thiruvananthapuram).
- 35) In-vitro screening of *Trichoderma* spp. For their biocontrol potential against phytopathogens of vanilla. ICABS 2012. International Conference on advances in Biological Sciences. March 15-17, 2012 Kannur.
- 36) 35.Characterisation of endophytic diazotrophic bacteria from rice (*Oryza sativa*). ICABS 2012. International Conference on advances in Biological Sciences. March 15-17, 2012 Kannur.
- 37) 36.Anjali Anne Jacob and Keerthi T. R. (2012). “Characterization of *Enterococcus faecium* infant gut flora for application in functional food”. International Biotechnology Symposium, “IBS 2012”, September 16–21, 2012, Daegu, Korea. Oral presentation.
- 38) Savitha K. Koilery and Keerthi T. R. (2012). “Anticancer effects of mannans from a marine yeast *Meyerozyma guilliermondii* (JN128648) in MCF7 Human breast cancer cells”. International Biotechnology Symposium, “IBS 2012”, September 16 – 21, 2012, Daegu, Korea. Oral presentation.
- 39) Anu. P. Sebastian and Keerthi T. R. (2012). “In vitro Adhesion and in vivo colonization are desired probiotic characters of MBTU_PBBM1 *Bacillus subtilis* isolated from milk”. 3rd World Congress on Biotechnology, September 13-15, 2012, HICC, Hyderabad, India. Oral Presentation.
- 40) T.R.Keerthi,Aparna Balakrishna & Sariga Jayadevan (2012 “Biocontrol Activity of different cellular components of four potential aquaculture probiotics against selected known fish pathogens”.SAB second National Symposium on Innovative Approaches and Modern Technologies for Crop Productivity,Food Safety and Environmental Sustainability, 19-20 November,2012,Trissur,Kerala.Oral Presentation
- 41) Savitha K. Koilery and Keerthi T. R. (2012). “Hydrolytic enzyme production by marine yeasts isolated from Arabian Sea”. 3rd World Congress on Biotechnology, September 13-15, 2012, HICC, Hyderabad, India. Poster Presentation.
- 42) Savitha K. Koilery and Keerthi T. R. (2012). “Anticancer effects of mannans from a marine yeast *Meyerozyma guilliermondii* (JN128648) in MCF7 Human breast cancer cells”. International Biotechnology Symposium, “IBS 2012”, September 16 – 21, 2012, Daegu, Korea. Oral presentation.

Dr.Prakashkumar

- 43) Frontiers of Spectroscopy and Microscopy. DST-PURSE sponsored workshop. Mahatma Gandhi University, Inter university Instrumentation Centre (IUIIC). 10th -12th September 2012

Dr. Anie Y

- 44) Hyperglycemia and/or hyperinsulinemia conditions affect neutrophil functions indirectly .
Neethi Raj P, Haritha V H, Anie Y. at 22nd Swadeshi Science Congress held at Central Plantation Crop Research Institute, Kasargode, Kerala from November 6-9, 2012 .
- 45) Participated 'Short term course for Research Guides in Sciences', from 05-11-2012 to 09-11-2012 at UGC-Academic Staff College, University of Kerala.
- 46) Participated in three state level workshop on "molecular phylogenetics in microbiology" held on 26th to 28th September 2012 at School of Biosciences, M G University.
- 47) Participated in National Seminar on "Nanotechnology: Applications of nanomaterials in Agriculture, food and medicine, 25th to 26th July, 2012 at B K College, Amalagiri Kottayam
- 48) National Colloquium on translational health sciences organised by Kerala Biotechnology Commission and Srinivasa Ramanujan Institute for Basic Sciences from 18th-19th March 2013, at Thiruvananthapuram.
- 49) Oral presentation: Neethi Raj P, Haritha V H, Anie Y. Hyperglycemia and/or hyperinsulinemia conditions affect neutrophil functions indirectly at 22nd Swadeshi Science Congress held at Central Plantation Crop Research Institute, Kasargode, Kerala from November 6-9, 2012 .

SCHOOL OF CHEMICAL SCIENCES

Dr. R. Vijayakumar

1. Attended a national level technical talk on "NP Complete Problems and High Performance Computing" as part of Interface2012 in Dec, 2012.
2. Skill enhancement workshop on " Open source software "organized by the School during 2012, inaugurated by Dr. Iqbal , former Vice-chancellor of Kerala University
3. Muhamed Ilyas, R. Vijayakumar, "Distributed Privacy Framework for Location Privacy in Location Based Services", Proceedings of International Conference and Workshop on Emerging Trends in Technology, 2012
4. Muhammed Illyas , Dr.R.Vijayakumar, "A Generic Framework for Location Privacy in Location Based Services (LBS).", in Digital publication on "Advances in Computer Science, Engineering and Applications, Edited by David C Wyld, Jan Zizka, Dhinaharan Nagamalai, Springer, ISSN: 1867-5662-Chapter: ELRM: A Generic Framework for Location Privacy in LBS. (Impact factor 2)

Ms. Bindu V.R.

1. Attended a national level technical talk on "NP Complete Problems and High Performance Computing" as part of Interface2012 in Dec, 2012
2. Skill enhancement workshop on " Open source software "organized by the School during 2012 , inaugurated by Dr. Iqbal , former Vice-chancellor of Kerala University.

Ms. Pushpalatha K.P.

1. Attended a national level technical talk on “NP Complete Problems and High Performance Computing” as part of Interface2012 in Dec, 2012.
2. Skill enhancement workshop on “ Open source software “organized by the School during 2012 , inaugurated by Dr. Iqbal , former Vice-chancellor of Kerala University.

Ms. Anuj Mohamed

1. Attended a Seminar on “Recent Trends in Sound Recording” by Dr. Pradeep Somasundaram, organized by Inter University Centre for Sound and Music, Mahatma Gandhi University, Kottayam, Kerala.
2. Attended a national level technical talk on “NP Complete Problems and High Performance Computing” as part of Interface2012 in Dec, 2012.
3. Skill enhancement workshop on “ Open source software “organized by the School during 2012 , inaugurated by Dr. Iqbal , former Vice-chancellor of Kerala University.

SCHOOL OF ENVIRONMENTAL SCIENCES

- 1) “National Conference on Conservation and Management of Wetland Ecosystems - LAKE-2012” conducted at School of Environmental Sciences, MG University, Kottayam

SCHOOL OF INDIAN LEGAL THOUGHT

- 1) **Dr George Joseph**, Assistant Professor, School of Indian Legal Thought, attended the UGC sponsored National Seminar on Human Rights & Corporate Responsibility organized by Dr. B.R. Ambedkar College of Law, Andhra University, Visakhapatnam, held during 19-20th March 2013 and presented the paper under the title ‘**Challenges of Corporate Social Responsibility and Human Rights in India**’.
- 2) Participated in the International Law Conference on Contemporary Issues in International Commercial Arbitrations 22- 24th February 2013 and presented the paper **Role of Judiciary in Arbitration Proceedings in a Globalised World**, organized by CMR Law School, Bangalore.
- 3) Participated in the International Symposium on “Faith: Emerging Challenges and Family” organized by John Paul II Pontifical Institute for Studies on Marriage and Family, CANA, Thuruthy, Kerala, 25-26th January 2013 and presented the paper **Family and State Policies**.
- 4) Attended the UGC sponsored Refresher Course in Human Rights conducted by the UGC Academic Staff College, Calicut from 28.09.2012 to 18.10.2012.
- 5) Attended Three Day ICRC South Indian Regional Teacher’s Training Programme on International Humanitarian Law organised jointly by the Dept. of Studies in Law, University of Mysore and the International Committee of the Red Cross, Regional Delegation for South Asia New Delhi. 28-30th, May 2012 at Mysore, Karnataka

- 6) Also acted as resource person Acted as Resource Person for the International Law Conference on **Contemporary issues in International Commercial Arbitration organized by CMR Law School Bangalore**, 22-24th Feb.2013.

SCHOOL OF LETTERS

Dr. K M Krishnan

- 1) Gave a lecture at the inaugural session of National Seminar on Literature and Theatre at B K College, Amalagiri, on 2 August 2012
- 2) Camp Director DSS Workshop on Poetry 25, 26 September 2012.
- 3) Camp Director DSS Workshop on Drama 27, 28, 29 September 2012.
- 4) Coordinated the activities of School of Letters as Director till 31 August 2012.

Dr. P P Raveendran

- 1) Inaugural Lecture on “The Indian Renaissance and the Politics of Language” at the Seminar on Language and the Renaissance, Centre for Renaissance Studies, Sree Sankaracharya University of Sanskrit, Kalady, 16 June 2011
- 2) UGC Seminar on Cultural Studies, Department of Malayalam, University of Kerala, Thiruvananthapuram, 7-9 November 2012. (Paper: “New Trends in Cultural Studies”)
- 3) Invited lecture at the Department of English, Presidency University, Kolkata, 4 Dec. 2012 (Topic: Indian Writing in English)
- 4) UGC Refresher Course on Twentieth Century Literature, Calcutta University, Kolkata, Keynote lecture at the inaugural session, 3 December 2012.
- 5) UGC National Workshop on “Literary Theories: East and West,” Sanskrit University Regional Centre, Thiruvananthapuram, 18-21 December 2012 (Topic: “Language, Literature and Culture: New Approaches”).
- 6) UGC National Seminar on “Language and Literature in the e-Era,” Department of English, Payyannur College, 4-5 January 2013 (Keynote lecture: ‘Technology and Literature’).
- 7) UGC National Seminar on “Narratives,” Department of English, SS University of Sanskrit, Kalady, 26-28 February 2013 (Lecture: “Verbal Narratives”)
- 8) National Symposium on Post-Theory Perspectives on Art, Technology and Multiculturalism, Department of English, University College, Thiruvananthapuram, 6-7 March 2013 (Inaugural/Keynote lecture on ‘Theory and After in Art and Technology’)

- 9) National Symposium on Everyday Life, Department of Comparative Literature, Central University of Kerala, Kasaragod, 27-28 March 2013 (Paper: 'Modernity and the Everyday')
- 10) UGC Seminar on the Affiliating System, UGC Southern Regional Office, Bangalore, 19 October 2012.
- 11) IQAC University Coordinators' Workshop, NAAC, Bangalore, 4-5 July 2012.

Dr. P S Radhakrishnan

- 1) Presented paper on Inter disciplinary in National Workshop on Research methodology Organized by UGC, Academic Staff College, University of Kerala
- 2) Azhikode Memorial Lecture organised by Abu Dhabi Sakthi Theatres
- 3) Paleli Narayanan Lecture (04.03.2013) organised by UC College, Aluva
- 4) Presented paper on Masquerades of masculinity in National Seminar (Oct 2013) Organized by Dept. of Malayalam, University of Kerala
- 5) Presented paper on Influence of Indian aesthetics on Malayalam Criticism in National Seminar (August 2013) Organized by Dept. of Sanskrit, University of Kerala
- 6) Presented paper on Literary Historiography in Malayalam in National Seminar (Nov. 2013) organised by Malayalam Sarvakalasala
- 7) Presented paper on Mahabharata: Text and Context at National Seminar (March 2013) organised by Dept. of Malayalam, University of Kerala
- 8) Resource person: Lecture on Theory in Translation at UGC, Academic Staff College, University of Kerala
- 9) Resource person: lecture on Cinema and Society, Resource person: lecture on Cinema and Society

SCHOOL OF MANAGEMENT AND BUSINESS STUDIES

- 1) Radhika.P.C & Johny Johnson(2013)," An investigation of Differences in Resident's perceptions on the Kumbalangi Village in Ernakulam,Kerala: Tourism Impacts and Demographic Variables",Trends and Challenges in Global Business organized by Department of Management Studies, Sree Narayana Gurukulam College of Engineering, Kolencherry,(22-23 Nov 2013)
- 2) Radhika.P.C & Johny Johnson(2013), Examination of Factors influencing resident support for Tourism- A Study with Special Reference to Kumbalangi Village in Ernakulam district,Kerala, COSMAR 2013 organized by Indian Institute of Science, Bangalore,(15-16 Nov 2013)
- 3) Radhika.P.C & Johny Johnson(2013), "FDI in Tourism Industry-Problems and Prospects", FDI-The Indian Scenario organized by Department of Commerce, University of Kerala,Thiruvananthapuram,(22-23 March 2013)
- 4) Sonia katherin Mathew & Johny Johnson(2013), "An empirical study on the influence of family background on the Entrepreneurial Attitude Orientation of business students in Kerala".Emerging trends in business 2013 organized by Department of management studies. Christ University, Bangalore, (12th and 13th December 2013).

- 5) Sonia katherin Mathew & Johney Johnson(2013), "Challenges and Opportunities faced by Entrepreneurs in Kerala state". Conducted by AIMS-IIMB ,(January 6-9,2013)
- 6) Sonia katherin Mathew & Johney Johnson(2013), "A study on the entrepreneurial attitude orientation of MBA Students in Kerala state" COSMAR 2013,organized by
- 7) Indian Institute of Science, Bangalore ,(15-16 November, 2013).
- 8) Ushus Mathew and Johney Johnson(2013), "Performance Appraisal System of Nurses in India: A review",Trends and Challenges in Global Business organized by Department of Management Studies, Sree Narayana Gurukulam College of Engineering, Kolencherry (22-23 Nov 2013).
- 9) Radhika.P.C & Johney Johnson(2013), Role of Women Entrepreneurs in tourism- The Case of Kumarakom in Kerala Entrepreneurship development through Educational Institutions (UGC & KSIDC sponsored) organized by Department of commerce and Tourism,Mar Ivanios college, Thiruvnanthapuram,25-26 Oct 2013.
- 10)Radhika.P.C & Johney Johnson(2013), The E-commerce application in Travel Agency Business- A study with Special reference to Ernakulam District, Shifting Paradigm in Business and Finance(UGC sponsored), organized by Department of Commerce,Baselious College,Kottayam, 3-4 Oct 2013.
- 11)Radhika.P.C & Johney Johnson(2013), Role of Micro Enterprises in Responsible tourism Development-Evidence from the Case study of Kudumbhasree Units in Kumarakom The impact of Globalistaion on The MSME Sector(UGC sponsored), organized by Department of Commerce, CMS College, Kottayam 18-19 April 2013.
- 12)Sonia Katherin Mathew & Johney Johnson(2013),"An Attitude Approach to the prediction of Entrepreneurial Orientation of business students in Kerala state" "Shifting paradigms in commerce"(ICAI Sponsored), organized by Department of Commerce, Bishop Speechly College, 5th -6th December, 2013.
- 13)Sonia Katherin Mathew & Johney Johnson(2013) ,"An empirical study on the influence of age and gender on the EAO of engineering students in Kerala state". Entrepreneurship development through Educational Institutions .(UGC & KSIDC Sponsored),organized by Research and Post-Graduate Department of Commerce and Tourism, Mar Ivanios College, Thiruvnanthapuram 25-26 October, 2013.
- 14)Sonia Katherin Mathew & Johney Johnson(2013), "Social Entrepreneurship in Indian Health care: A case study on Life Spring Hospitals",Shifting Paradigm in Business and Finance. .(UGC sponsored), organized by Department of Commerce, Baselius College , Kottayam 3 & 4 October, 2013
- 15)Sonia Katherin Mathew & Johney Johnson(2013), "Survival Measures Adopted by MSMES to withstand the challenges of Globalization" The impact of Globalization on the MSME sector .(UGC sponsored), organized by Department of Commerce, CMS College , Kottayam 18-19 April 2013.
- 16)Ushus Mathew and Johney Johnson(2013), "Hospital Information System in Kerala: An Overview",Shifting Paradigm in Business and Finance. .(UGC sponsored), organized by Department of Commerce, Baselius College , Kottayam 3 & 4 October, 2013
- 17)"Effect of Sales Promotion on Consumer based Brand Equity", *Tenth AIMS Conference on Management*, IIM Bangalore 06-08 January 2013

- 18) "The Effect of Sales Promotion on Gender among the sources of Consumer Based Brand Equity" 5th IIMA conference on *Marketing in Emerging Economies*, January 9-11, 2013, IIM Ahmedabad
- 19) "A Study on Role of Communication in Organisational Change Management", BIC- 12 International conference "Management Facets: Quest and Fortuity" January 10-11, 2013, BIMS- St. Berchman's College, Changanacherry
- 20) "Do Gender Affect Sales Promotions and Consumer Based Brand Equity? A study of the Effect of Two Types of Sales Promotion on Consumer Based Brand Equity by Gender" *Rajagiri National Conference on Traditional Concepts of Marketing in Today's Context*, 24th January 2013, Rajagiri School of Management, Kochi
- 21) "An Analysis on Disruptive Change through Innovation in Diverse Industries" *National conference on Entrepreneurship: Kalpatha*, March 22-23, 2013, College of Engineering, Trivandrum
- 22) "Mobility Mining Techniques for Big Data Analysis in Supply Chain Traffic" co-authored with Prof. Sajimon Abraham, *3rd IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence* April 13-14, 2013, IIM Ahmedabad
- 23) "An Analysis on Human Resources Management practices on MSME Enterprises in Kerala", UGC sponsored *National Seminar on "The Impact of Globalization on the MSME Sector in Kerala"* April 18-19, 2013, C.M.S College, Kottayam
- 24) Corporate Social Responsibility Practices- A Case Study Analysis of Aditya Birla Group" *National Seminar on Shifting Paradigms in Business and Finance*, Baseliious College, Kottayam
- 25) "Currency Fluctuations in India- Recent Trends", *National Seminar on 'Rupee depreciation causes and consequences'*, 28th September 2013 M.E.S-AIMAT, Maramapally, Aluva.
- 26) "Public Private Partnership Model for Corporate Social Responsibility", 2nd International Conference Trends and Challenges in Global Business Management- PLACITUM 2013, November 22-23, SNGC, Kolenchery, Kerala
- 27) Sales Promotions and Consumer Based Brand Equity Of Brands", International Conference on Research in Marketing (ICRM 2013) 21 – 22, December 2013 New Delhi, India Convened by IIT Delhi, Curtin University & XLRI Jameshpur
- 28) "The Effect of Sales Promotion on the Sources of Consumer based Brand Equity among Brands, 3rd South Asian Management Research and Case Conference 2013, 'Celebrating South Asia: Explorations of the Contributions to Global Economy' in association with Indian Institute Of Management Bangalore & Lahore University Of Management Sciences, December 27-29, 2013, Indian Institute of Management Bangalore
- 29) Sajimon Abraham, Siby Zacharias, "Moving Object Data bases for Tourist Transactions", published in the International Journal of Tourism and Hospitality Management", 2013.
- 30) "Paradigm Shift in the Philosophy of Education for Sustainable Development" (Paper in Absentia), *Proceedings of International Conference on Computational & Social Sciences*, Abdul Wali Khan University Mardan, Pakistan, 2013, pp 43-47, Available online in the International Journals: VFAST Transactions on Education and Social Sciences (ISSN: 2309-3951).
- 31) Retailing: Recent Trends, National Seminar on "Impact of Corporate Retailing in India", Govt. College, Chavara, Kollam, 22nd November 2013.

SCHOOL OF TOURISM STUDIES

- 1) Dr. Robinet Jacob, Keynote address in the national Seminar on “the prospects of Responsible Tourism in developing rural areas, Organised by Dept of Tourism, S.N College, Kumarakom 9-10 April, 2013.
- 2) Abin K.I, Presented A paper on ‘Bharathapuzha as a Special Interest Tourism product- Potentials and Problems, in the national Seminar on “the prospects of Responsible Tourism in developing rural areas, Organised by Dept of Tourism, S.N College, Kumarakom 9-10 April, 2013.
- 3) Cyril Mathew, Presented A paper on ‘Problems in translating French to Malayalam’ in he national seminar on Translation Studies held at Govt. College, Nattakom, Kottayam on 18-19 March 2013.

Institute for Contemporary Chinese Studies

- 1) The ICCS organized a major International on China (CoC 2012) during 1-3 November 2012 on the theme **The Rise of China: Policy Parameters and Prospects** jointly with the Indian Council of World Affairs (ICWA), New Delhi, Association of Asian Scholars (AAS), New Delhi and Institute of Chinese Studies (ICS), New Delhi.
- 2) The ICCS organized an International Symposium on the theme **Political Transition in China and the United States - Implications for India** on 28 February 2013 jointly with the KPS Menon Chair.

INTER UNIVERSITY CENTRE FOR DISABILITY STUDIES (IUCDS)

Dr. SUNISH T.V

- 1) Presented a paper entitled Effect of Role Play on Developing Communication Skills of Children with Moderate Mental Retardation in the International Seminar on Applied Psychology in Transforming Educational and Management Science in the Context of Globalization organised at Toc H Institute of Science and Technology, Ernakulam, Kerala, India during 15 -17th June, 2012
- 2) Presented a paper entitled Relevance of Gandhian Principles in Inclusive Education in the International Seminar on Gandhian Principles and Practices in the Emerging Global Scenario in the Dr. N.P. Pillai Centennial Celebration Committee and Dr. K. Sivadasan Pillai Foundation, Thiruvananthapuram, Kerala, India during 25-27th July, 2012
- 3) Presented a paper entitled Analysis of Teaching Learning Materials Available in Anganvadi Centres to Carry Early Intervention Programme for Children with Hearing Impairment in the International seminar on Emerging Trends in Disability Studies and Management conducted at Inter University Centre for Disability Studies, Mahatma Gandhi University, Kottayam dated 8th January 2013
- 4) Presented a paper entitled Problem Faced by Children with Sensory and Motor Disabilities in Inclusive Classroom in the International seminar on Innovations, Quality and Excellence in Education organised at Council for Teacher Education- Kerala State Centre and Fathima Memorial Training College, Kollam, Kerala during 11-12th January 2013
- 5) Presented a paper entitled Parents Attitude Towards the Inclusion of Their Children with Autism in mainstream Classrooms in the National Conference on Autism Spectrum

Disorder: Blooming Beyond Horizon organised at National Institute for Empowerment of Person with Multiple Disabilities (NIEPMD), Chennai during 14-16th March 2013

Ms HENA N N

- 1) Seminar on Learning disabilities- School of Behavioral Science, Mahatma Gandhi University, Kottayam , 23rd January 2013.
- 2) Refresher course in Research methodology: Application of research methods and statistics, Inter University Centre for Disability Studies (IUCDS), Mahatma Gandhi University, Kottayam, 28th January to 1st February 2013.

SCHOOL OF PURE AND APPLIED PHYSICS

Dr C Sudarsanakumar

1. Refresher course, Academic staff college, University of Kerala,, November 2013.
2. National Seminar on spectroscopic techniques and its applications for material characterization , October 3-4, 2013, University of Kerala.
3. Seminar on Physics Association 2013, CMS college, Kottayam,
4. National conference on scientific computing, 20-21 June, 2013, IIITM, Kerala
5. Emerging Trends in Growth and Characterization of Single Crystals and Nanomaterials March 11-12, 2013 Sacred Heart College, Chalakudy, Kerala.
6. National Colloquium on 100 years of crystallography, Feb 7-9, 2013
7. SreenivasaRamanujan Institute of Basic Sciences, KSCSTE, Govt. of Kerala.
8. Refresher Course, Academic Staff college, University of Kerala, Jan 2013
9. International Seminar Biochemistry, 2013, TVPM

Dr N V Unnikrishnan

10. National conference on Advances in Chemical Sciences March 1-2, 2013 MaharshiDayanand University, Rohtak. Haryana.
11. National Conference on Advanced Materials and Applications. NIT, Thiruchirappalli. April 4-5, 2013.
12. Emerging Trends in Growth and Characterization of Single Crystals and Nanomaterials March 11-12, 2013 Sacred Heart College, Chalakudy, Kerala.
13. PrathibhaVasudevan, Sunil Thomas, Arunkumar K V, Karthika S, Unnikrishnan N V, Synthesis and dielectric studies of Poly (vinyl pyrrolidone)/ Titanium dioxide nanocomposites, International conference on Materials Science and Technology, ICMST 2012, Kottayam, June 2012.
14. S Karthika, Sunil Thomas, VijiVidyadharan, P R Biju& N V Unnikrishnan, Structural and spectroscopic studies of Sm³⁺ / CdSenanocrystallites in TiO₂ -ZrO₂ matrices, Second

International Conference on Nanomaterials – Synthesis, Characterization & Applications (ICN 2012) 12-15 January 2012, Kottayam, Kerala, India

15. K A Ann Mary, E J Sonia Mary, VijiVidyadharan, Reji Philip, N.V Unnikrishnan, “Thermo-optic nonlinearity of the laser dye LDS 867 under low power CW laser excitation”, ICMST 2012, Pala, Kottayam.
16. Arun Kumar K V, Ann Mary K A, Biju P R and N V Unnikrishnan “Luminence enhancement in Ag nanoparticles/Eu³⁺ : SiO₂-TiO₂ matrices”, National Laser Symposium (NLS-20), 2012, Anna University, Chennai.
17. Xavier Joseph, T K Mathew, Sunil Thomas & N V Unnikrishnan, Microwave Dielectric Properties Of C30doped PMMA Matrix In The X-Band, National Seminar on Current trends in Materials Science, March 2012, NSS college Changanacherry, Kerala.

Dr P R Biju

18. Second International Conference on Nanomaterials – Synthesis, Characterization & Applications (ICN 2012) 12-15 January 2012, Kottayam, Kerala, India
19. National Laser Symposium (NLS-20), 2012, Anna University, Chennai.

Dr K Nandakumar

20. Invited lecture on the topic “Nanomaterials with multifunctional properties for Tailored Applications” in the Workshop on Recent Development in Functional Materials, Department of Applied sciences and Department of Materials & metallurgical Engineering, PEC University of Technology, Chandigarh. 26th April, 2013.
21. Delivered a Keynote address, in the National seminar on “Nanotechnology : Applications of Nanomaterials in Agriculture, Food and Medicine”. Organized by B.K. College for women, Amalagiri, July 25- 26, 2012
22. Invited lecture on Futuristic Applications of Nanomaterials, NanoSciTech-2012, Panjab University, Chandigarh, February 16-18, 2012.
23. Magnetic and magneto electric coupling properties of geometrically frustrated multiferroic ErMnO₃ nanoparticles. B. Raneesh, A. Saha, D. Das and Nandakumar Kalarikkal International Conference on Frontiers of Nanoscience, Nanotechnology and Their Applications-NanoSciTech-2012 to be held at Panjab University, Chandigarh, February 15-18 (2012).
24. International conference on Tissue Engineering and Regenerative medicine (ICAPM_2013), Organised by centre for excellence in tissue engineering, National

Institute of Technology, Rourkela, Odisha, November 15-17 (2013) Obtained Best Oral award.

25. Microstructure and physical properties of multiferroic hexagonal ErMnO₃ thin films. The second international conference on Optoelectronic materials and Thin films for Advanced Technology (OMTAT 2013), Cochin University of Science and Technology, Cochin, January 3-5, (2013). Obtained Second position in poster presentation.
26. Effect of Zinc oxide nanoparticles on the fiber diameter and fiber morphology of electrospun polycaprolactone, Second International Conference on Nanomaterials: Synthesis, Characterization and Application. Organised by Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam. January 12-15 (2012). Obtained Second prize in poster presentation.
27. The 28th National Symposium on Plasma Science & Technology (PLASMA – 2013) held during

Dr K Indulekha

28. 3rd December to 6th December 2013, at KIIT University, Bhubaneswar.
29. 2013 State Lecture on Physics Astronomy & Astrophysics Govt College, Manimalakkunnu
30. 2013 National Lecture at Meeting of Astronomers of Kerala Origin, MACFAST Tiruvalla 'Formation of Open Clusters'
31. 2013 State Lecture "Skywatching" Amrita University
32. 2013 National Rapporteur talk on 'Stars & Galaxies' XXXth Meeting of ASI 22nd Feb Thiruvananthapuram
33. 2013 State All India Radio Talk Large Hadron Collider-um nammalum
34. 2013 State Lecture Higgs Boson and Us National Seminar on Recent Trends in Physics KKTU Govt College, Pullut
35. 2013 State Lecture on Large Hadron Collider -M. A. College, Kothamangalam
36. 2013 State Lecture on on Large Hadron Collider National Seminar on Recent Developments in Particle Physics and the Large hadron Collider Experiments TMJM Govt College Manimalakkunnu
37. 2012 State Lecture on "The Physics of Stars" in Seminar on Challenges in Astronomy at SB College Changanasseri
38. 2012 State Lecture on "The Diamond Planet" St. Teresa's College, EKM
39. 2012 State Lecture on "An Astronomical Mixture" NSS College Pandalam,

40. 2012 State lecture on 'Spinor Condensate Cosmology' National Seminar on Recent Trends in Astrophysics, Catholicate College Pathanamthitta
41. 2012 State Kinematics of Open Clusters -IRC Kochi
42. 2012 State Lecture on 'Mathematical Foundations of Quantum Mechanics' Govt College Kottayam
43. 2012 State Lecture on 'Spectral Lines' IUCAA sponsored Workshop on Projects with IRAF Newman College, Thodupuzha
44. 2012 International Poster "Ultraviolet -optical colours of BCD galaxies of the Local Volume" at the COSPAR Meeting Mysore

Invited talk and Seminars attended by Dr ChanduVenugopal

45. Dispersion characteristics of kinetic Alfven waves in a multi-ion cometary plasma, R Jaypal, E Savithri Devi, J Blesson, Antony S, C P Anilkumar & C Venugopal, 39th Scientific Assembly of the Committee on Space Research, (2012), July 14 – 22, Mysore, India, p 68.

Invited talk and Seminars attended by Dr S Antony

46. Workshop on "Free Software for Better Geospatial Intelligence", Department of Geology, University of Kerala, 11.04.2012
47. Effect of Kinetic Pressure in Rayleigh Tailor Instability in Coronal Plasmas Presented in 30th Astronomical Society Meeting, 19-22, February 2013, IISER, Thiruvananthapuram Blesson Jose, Antony S
48. Dispersion Characteristics of Kinetic Alfven Waves in multi ion Cometary plasma. COSPAR-2012, ISRO, Bangalore. Jayapal.R, SavithriDevi.E, Blesson Jose, S. Antony, C P Anilkumar* and ChanduVenugopal.
49. Stability analysis of Coronal Plasmas with Skewed Electron Phase velocity distribution, , PS3-207, NSSS- 2012, Sri Venkateshwara University, Tripati. Blesson Jose, Antony S.
50. Magnetosonic Wave Instability in an Anti-loss cone plasma, PS3-15, NSSS- 2012, Sri Venkateshwara University, Tripati, Samuel George, Anju Sreekumar, Neethu Theresa Willington, S. Antony and ChanduVenugopal
51. Electrostatic Modes in a Current driven, Collisional negative ion plasma, PS3-17, NSSS- 2012, SriVenkateshwara University, Tripati, Rajeev V, Jayapal. R, Antony S and ChanduVenugopal

52. Dispersion Characteristics of kinetic Alfvén waves in a multi ion plasma, PS4-1NSSS-2012, SriVenkateshwara University, Tripati., Jayapal.R, SavithriDevi. E, Blesson Jose, S. Antony and ChanduVenugop

Invited talk and Seminars attended by Dr. Cyriac Joseph

53. International Conference on Material Science and Technology, June 10-14, 2012 St. Thomas College Pala Growth and characterization of samarium oxalate single crystal Vimal G, Kamal P Mani, Santhosh Kumar A, Biju P R, Cyriac Joseph and N V Unnikrishnan

54. Twenty First DAE-BRNS National Laser Symposium , February 6-9, 2013 BARC, Mumbai Nonlinear Optical Characterization of Samarium Doped Zinc Oxide Nanoparticles Keerthi G Nair, Kamal P Mani, Vimal G, Pradeep Chandran, Cyriac Joseph and V.P.N Nampoori.

55. IUSWNM-2013 Indo-Us Workshop On Nanostructured Electronic Materials: Challenges & Relevance To Electronics & Energy Research March 8-11, 2013 C-MET, Thrissur *One Dimensional Samarium Molybdate nanofibers Derived from Electrospinning Process* Kamal P Mani, Vimal G, Biju P R, Cyriac Joseph and N V Unnikrishnan

56. IUSWNM-2013 Indo-Us Workshop On Nanostructured Electronic Materials: Challenges & Relevance To Electronics & Energy Research March 8-11, 2013 C-MET, *Microwave assisted synthesis of Ammonium Rare Earth Oxalate Nanoplates* Vimal G, Kamal P Mani, Biju P R, Cyriac Joseph and N V Unnikrishnan

57. Indo- German Conference on Laser Applications and Nanoscience December 5-7, 2013 KSCSTE, Thiruvananthapuram *Effect of Sm³⁺ on the luminescence properties of ZnO nanocrystals.* Vimal G, Kamal P Mani, Sisira S, Biju P R, Cyriac Joseph* and N V Unnikrishnan

58. Indo- German Conference on Laser Applications and Nanoscience December 5-7, 2013 KSCSTE, Thiruvananthapuram *Synthesis and Photoluminescence studies of Cerium phosphate and Terbium doped Cerium phosphate nanocrystals* Sisira S, Vimal G, Kamal P Mani, Biju P R, Cyriac Joseph* and N V Unnikrishnan

DEPARTMENT OF LIFE LONG LEARNING AND EXTENSION

1. 2012-13- Dr.K.Sabukuttan, HOD, Department of Life Long Learning and Extension, participated in the Three Day National Workshop-cum-Seminar on The Emerging Facets of Life Long Education as a Resource Person. Venue-University of Kerala, 10-12 April 2012.

2. 2012-13- Dr.K.Sabukuttan, HOD, Department of Life Long Learning and Extension, attended and chaired a session in the Southern Regional Workshop on Vision and Action Plan For Universities-NLMA Collaboration, Sponsored by NLMA, MHRD, Govt.of India.

SCHOOL OF BEHAVIOURAL SCIENCES

Dr. Razeena Padmam

Micro Skills in Counseling – Trissur Engineering College, August 10th 2012, Faculty Improvement Programme.

Dr. P.S Sukumaran

Seminar/conferences attended

1. One day Seminar and Panel Discussion on 'Challenges of Adolescents'. School of Behavioural Sciences, Annual Day Seminar of HEBSA. 3.4.2012.
2. Convened M. Ed Special Education(Mental Retardation) Curriculum Restructuring Workshop, M.G University. 11.04.2012.
3. One day seminar on 'Enhancing the Skills of Special Teachers to handle the needs of CWMR'. SH. Generallate, Kottayam. 09.05.2012
4. One day seminar on 'Management of Mental Retardation and Learning Disability' for Homeopathic Doctors of Kottayam District held at Athurasramam, Homoeo Medical College, Kurichi. 23.07.2012.
5. One day conference on 'Identification of Job opportunities for Adults with Intellectual Disability', organized by State Commissioner on PWD Act, Thiruvananthapuram. 07.09. 2012
6. Observation Mental Health Day, School of Behavioural Sciences on 10.10.2012.
7. On day Seminar on 'Empowerment of the Mentally Challenged and their Families, organized by State Institute for the Mentally Challenged, at Calicut on 28.10.2012.
8. Seminar on Learning Disability, Organized by Inter University Centre for Disability Studies, M.G University on 30.10.2012.
9. One day Conference on 'Rehabilitation of Persons With Mental Retardation –Trends and Issues' as a part of the hearing of M.K Jayaraj Commission, organized by State Institute for the Mentally Challenged, at Kottayam on 27.11.2012.
10. One day seminar on 'Learning Problems: Identification, Assessment and Management', for Homoeopathic Doctors of Idukki District, at Thodupuzha on 12.12.2012.
11. Workshop on 'Management of Mental Retardation'. Organized by State Resource Centre, MHRD, Government of India, Thiruvananthapuram. 19.01.2013.
12. One day seminar on 'Management of Learning Disability'. School of Behavioural Sciences in collaboration with Y's Men's Club, Kottayam for Trainees of Teachers Training Institute on 23.01.2013.
13. 'Continuing Rehabilitation Education Programme'. organized by State Institute for the Mentally Challenged, at Thiruvananthapuram, 30.01.2013.
14. One day Seminar on 'Psycho social and Legal Aspects of Women Harassment'. School of Behavioural Sciences. 31.01.2013
15. One day seminar on 'Learning Disability' at Porukkara College of Education, Champakulam on 08.02.2013.

16. Workshop on ' Research Methodology and Statistics'. Organized by TMA Counselling Centre, Ammencherry on 09.02.2013.
17. M. Ed Special Education (Mental Retardation) Curriculum Workshop, Kerala University, Thiruvananthapuram on 07.03.2013.
18. National Seminar on 'Inclusive Education Challenges'. School of Behavioural Sciences on 26.03.2013.
19. M Ed Special Education (Mental Retardation) Curriculum Workshop, Kerala University, Thiruvananthapuram on 27.03.2013.
20. 'Need and importance and pattern of restructuring the M. Ed Special Education (M.R) curriculum'. M. Ed Special Education (Mental Retardation) Curriculum Restructuring Workshop, M.G University. 11.04.2012.

Seminars attended and Presented Paper

21. 'Enhancing the Skills of Special Teachers to handle the needs of CWMR'. One day seminar organized by SH. Generallate, Kottayam. 09.05.2012
22. 'Identification, Assessment and Management of learning problems of school children'. One day seminar on 'Management of Mental Retardation and Learning Disability' for Homeopathic Doctors of Kottayam District held at Athurasramam, Homoeo Medical College, Kurichi. 23.07.2012.
23. 'Trends and Issues in the Education and Training of Children with Mental Retardation'. One day Seminar on 'Empowerment of the Mentally Challenged and their Families, organized by State Institute for the Mentally Challenged, at Calicut on 28.10.2012.
24. 'Introduction to Learning Disability'. Workshop on Learning Disability, Organized by Inter University Centre for Disability Studies, M.G University on 30.10.2012.
25. 'Trends and Issues in the Rehabilitation of Persons with Mental Retardation'. One day Conference on 'Rehabilitation of Persons With Mental Retardation –Trends and Issues' as a part of the hearing of M.K Jayaraj Commission, organized by State Institute for the Mentally Challenged, at Kottayam on 27.11.2012.
26. 'Identification, Assessment and Management of Learning problems of school children'. One day seminar on 'Learning Problems: Identification, Assessment and Management', for Homoeopathic Doctors of Idukki District, at Thodupuzha on 12.12.2012.
27. 'Curriculum and teaching of students with Intellectual Disability'. Workshop on 'Management of Mental Retardation'. Organized by State Resource Centre, MHRD, Government of India, Thiruvananthapuram. 19.01.2013.
28. 'Role of Special Teachers in Special Education'. 'Continuing Rehabilitation Education Programme'. Organized by State Institute for the Mentally Challenged, at Thiruvananthapuram, 30.01.2013.
29. 'Education of Children with Learning Disability'. One day seminar on 'Learning Disability' at Porukkara College of Education, Champakulam on 08.02.2013.
30. 'Applications of Statistics in Social Research'. Workshop on 'Research Methodology and Statistics'. Organized by TMA Counselling Centre, Ammencherry on 09.02.2013.
31. 'Ways and Means of Restructuring the M. Ed Special Education (MR) Curriculum'. M. Ed Special Education (Mental Retardation) Curriculum Workshop, Kerala University, Thiruvananthapuram on 07.03.2013.
32. 'Trends and Issues in Inclusive Education'. National Seminar on 'Inclusive Education Challenges'. School of Behavioural Sciences on 26.03.2013.

Baburaj P.T

1. Poster Presentation : UGC sponsored International Educational Meet on Education for Global Excellence. Mar Theorphilas Training College, Thiruvananthapuram on 5th -7th January 2012.
2. Paper Presented on Emotional Social and Educational Adjustment of students with hearing impairment in Higher Secondary Level with Ms.Priyachandra K, School of Behavioural Sciences , UGC sponsored National Seminar on Education for National and Emotional Integration, at St.Thomas College of Teacher Education on 5th -6th June 2012
3. Emotional maturity and marital adjustment of persons with hearing impairment with Ms.Chothisha K.S, SBeS. UGC sponsored National Seminar on Education for National and Emotional Integration, at St.Thomas College of Teacher Education on 5th -6th June 2012
4. Stress among the mothers of hearing impaired children attending Special Schools with Ms.Vidyamol, School of Behavioural Sciences. UGC sponsored National Seminar on Education for National and Emotional Integration, at St.Thomas College of Teacher Education on 5th -6th June 2012
5. Mental Health of Hearing Impaired Secondary School students with Ms.Jyothi P, SBeS. UGC sponsored National Seminar on Education for National and Emotional Integration, at St.Thomas College of Teacher Education on 5th -6th June 2012
6. Job stress among the teachers of children with hearing impairment with Ms.Meenu School of Behavioural Sciences. UGC sponsored National Seminar on Education for National and Emotional Integration, at St.Thomas College of Teacher Education on 5th -6th June 2012

Dr. Rajeev Kumar N

1. Paper presented on “Psychosocial problems of school children- A pilot” study in the National Seminar on Psychological Counselling conducted by Department of Psychology, Govt. College for women, Thiruvananthapuram on 6th& 7th January 2012.
2. Paper presented on “Emotional and Behavioural problem among juvenile children” in the Two day UGC sponsored National Seminar on “stress and well being in adolescents - Role of Psychology” held on 30th and 31st March 2012 organized by Department of Psychology, S.V. University, Tirupati.
3. Presented paper on “Frustration tolerance and Adjustment Among Dyslexic students in the International Conference held on 15th to 17th June 2012 organized by TOC H Institute of Sciences &Technology, Ernakulam, in association with the Indian Academy of Applied Psychology.
4. Presented a paper on “Verbal fluency and design fluency of children with dyslexia” in the three day National Conference of Indian School Psychology Association held on 22nd to 24th November 2012 at University of Calicut.

Workshop/seminars organized

1. Two day workshop on “Rorschach: Administration, Scoring and Interpretation” on 26th and 27th September 2012 at School of Behavioural Sciences, Mahatma Gandhi University.
2. Observed the World Mental Health Day at School of Behavioural Sciences, Mahatma Gandhi University on 10th October 2012.
3. Dr. N. Rajeevkumar - Organized National Workshop on Cognitive Behaviour Therapy (22- 24 March 2013)

Mr. Rajesh E

Seminar's Conducted

1. Convenor of International level Special lecture on 2nd January 2012 by Pavan J Antony, Assistant Professor, Adalphi University, U.S.A on the theme (1) International issue, laws and policies in Special Education.(2) Transition issues and children with disabilities.
2. Convenor of International level special lecture on 9th January 2012 by Anne M Mungai, Associate Professor, Adalphi University, U.S.A on the theme Multi- cultural Education and comparative education.

Academic Achievements

1. Professional Membership in Rehabilitation Council of India.
2. Managing Editor of International Journal "Asian Journal of Special Education and Rehabilitation.

Smt. Rincymol Mathew

1. UGC sponsored national seminar on Aging and Society: A multidisciplinary Approach, 4-5 October 2012 at St. Teresas College, Ernakulam
2. State Workshop on capacity building for education organized by Govt.College of Nursing, Kottayam on 17.08.2012.
3. National Workshop on science information literary and scholarly writing organized by Mahatma Gandhi University Library 17-19 January 2012.
4. Attended two day international seminar on dementia care training organized by ARDSI at Kottayam, Oct 2012.
5. 2 day seminar on learning disability organized by IUCDS, Mahatma Gandhi University.
6. Organized a seminar on 'suicide' at M.G University.
7. Attended National Workshop on research in education held in M.G University College of Teacher Education for women, Kottayam. Identification and Management of Dyslexia Seminar on Learning Disabilities. School of Behavioural Sciences in Collaboration with Y's Men's Club, Kottayam. 23.1.2013.

Resource Person

1. Paper presented in state level workshop on Issues and Challenges in Evidence based Nursing organized by SME, Gandhinagar as resource person.
2. Paper presented in State level workshop on capacity building for nurse educators organized by SME, Gandhinagar as resource person.
3. Poster presentation on caregiver: a population at high risk in UGC sponsored national workshop at Ernakulam.
4. Took class on personality development for NSS Volunteers M.G University Campus.

Awards Won

Best Poster presentation award in UGC sponsored National Workshop on aging.

Resource Person

1. Poster presentation on caregiver: a population at high risk in UGC sponsored national workshop at Ernakulam, on Aging and Society: A multidisciplinary Approach, 4-5 Oct 2012.
2. Oral presentation: Medical students' attitude towards older adults by year of study, in UGC sponsored national workshop at Ernakulam, Oct 2012.
3. Class on 'Aging' at Y's men and Y's menettes meeting of the Kottayam region

Awards Won

Best Poster Award for Relevance in the UGC sponsored National Workshop on Aging and Society: A multidisciplinary Approach

Seminar organized

'Dementia and Aging' at M.G University in connection with World Alzheimer's Day.

Abstract accepted for international conference:

Elsheba Mathew, Jayadevan Sreedharan, Jayakumary M, Teena Thomas, Merlin Thomas, Awareness of healthcare providers regarding third hand smoke. DYUTI 2013- International conference on 'Global public health and Social work to be held at Kochi, 3-5, 2013.

Exhibition on Disabilities and Rehabilitation

Seminar on Psychosocial and Legal Aspects of Women Harassment, School of Behavioural Sciences (31.1.2013).

Resource Person

1. Poster presentation on caregiver: a population at high risk in UGC sponsored national workshop at Ernakulam, on Aging and Society: A multidisciplinary Approach, 4-5 Oct 2012.
2. Oral presentation: Medical students' attitude towards older adults by year of study, in UGC sponsored national workshop at Ernakulam, Oct 2012.
3. Class on 'Aging' at Y's men and Y's menettes meeting of the Kottayam region

Awards Won

Best Poster Award for Relevance in the UGC sponsored National Workshop on Aging and Society: A multidisciplinary Approach

Seminar organized

'Dementia and Aging' at M.G University in connection with World Alzheimer's Day.

Abstract accepted for international conference:

Dr. Elsheba Mathew, Jayadevan Sreedharan, Jayakumary M, Teena Thomas, Merlin Thomas, Awareness of healthcare providers regarding third hand smoke. DYUTI 2013-International conference on 'Global public health and Social work to be held at Kochi, 3-5, 2013.

Conferences attended.

1. UGC sponsored national seminar on Aging and Society: A multidisciplinary Approach, 4-5 October 2012 at St. Teresa's College, Ernakulam.
2. Attended two day international seminar on dementia care training organized by ARDSI at Kottayam, Oct 2012.
- 2 day seminar on learning disability organized by IUCDS, Mahatma Gandhi University

University College of Pharmaceutical Science, Cheruvandoor

Mr.Sajan Jose

1. Sowmya S, Juna Brigit Chacko, A. J. Chacko, Sajan Jose. Surface modified plga nanoparticles of bacoside-a for the effective treatment of alzheimer's disease. India-Israel Meeting on Material Science and Nanoscience, Mahatma Gandhi University, Kottayam, India from January 31- February 1, (2013)
2. Anju SS, James Mathew Kuriakose, A. J. Chacko, Sajan Jose. Formulation and evaluation of brain targetted resveratrol loaded solid lipid nanoparticles. India-Israel Meeting on Material Science and Nanoscience, Mahatma Gandhi University, Kottayam, India from January 31- February 1, (2013)

Dr. Cinu Thomas A.

1. Rational Drug design based synthesis of novel diphenyl ether derivatives as Antitubercular agents-2nd international conference on computational methods in engineering and health sciences, University Putra Malaysia, Malaysia- Dec 19th to 20th 2015.
2. Design, Synthesis and Evaluations of Novel Diphenyl ethers as antitubercular agents- Duphat-10th to 12th March 2014-International conference at Dubai, UAE.
3. Novel Diphenyl ether Derivatives as antitubercular agents; PHARMATRENDZ-2013(AICTE sponsored National Seminar)28th to 30th November 2013;Academy of Pharmaceutical Sciences, Pariyaram Medical College, Kannur, Kerala-Best Poster Award.

2.6. Innovative processes adopted by the institution in Teaching and Learning:

1. School of Behavioural Science

Interviews with scholars working in the field, administrators of center's working for persons with disability are arranged as a part of teaching and learning in addition to the regular Teaching and learning activities.

2. School of Bio-Science

The school organizes invited talks, conducts student seminars, workshops besides regular activities under Credit and Semester systems.

3. School of Chemical Science

Open courses are offered to students from other departments of the University. Such courses are not content – driven and strive to achieve all – round capacity building. Here the emphasis is not an creation or dissemination of knowledge but rather on equipping students to utilise the information available from various sources more effectively.

4. School of Computer Sciences

Smart class Facility, video conferencing facility.

5. School of Environmental Science

A program of learning through field work was conducted. Organized several lectures from international scholars under erudite program.

6. School of Gandhian Thought and Development Studies

Use of Computer aided Technology

7. School of Indian Legal Thought

Assignment and Seminar presentation, Moot courts and Mock Trails

8. School of International Relation & Politics

The School has sustained innovative transparent and rigorous internal tools to weigh up the cognitive faculty of students and research scholars as well as to determine the depth of knowledge, intelligence and articulation they have gained over time. Periodic review sections are put in place, group-wise and individual-wise, to keep an eye on the levels of disparity, if any, and to recommend remedial means thereof. The School has developed a learner- friendly, need- based instructional/learning system to endow the students and research scholars. Adequate skills and capacity to meet the emerging challenges. The instructional pattern, a part from its information- based mode, inculcates values of theory-embeddedness, self-reflexivity and policy- alternative thinking. The learner-friendly instructional system seeks to foster cognitive-analytical skill of students and, wherever necessary, provides space for the empowerment of the disadvantaged in the learning process through informal counselling and tutorial interface. While classroom lectures continue to be an essential prerequisite for the imparting of knowledge, periodic seminars, book/article review sections and group interface provide the necessary intellectual climate for the learning and research in the school. The School has introduced a variety of audio-visual information systems such for lectures and seminars.

9. School of Letters

Use of smart classroom with audio visual equipments in an interdisciplinary and inter-cultural manner

10. School of Pedagogical Sciences

Use of Technological devices for Teaching-Learning Process and development of Instructional packages, Models & Strategies

11. School of Physical Education & Sports Science

Commencement of Sports Academy, Proposal given for starting PG Programmes in Physical Education.

12. School of Pure and applied physics

Matlab Programme has been introduced for M Sc. Students and M Phil. Students. Advanced practical has been given for M Sc courses.

13. School of Management & Business Studies

Case study, live project, Assignment, Participative Learning

14. School of Social Science

Innovative processes in School of Social Sciences begin with conception of teaching programme. SSS is the only institution in Kerala that offers M.Phil programmes in Human Ecology and Natural History, and Social Transformation and Empowerment. Besides SSS has conceived all its teaching and research programmes with interdisciplinary orientation. SSS has two smart class rooms equipped with new audio-visual technologies.

15. School of Tourism Studies

- ✓ Use of Audio Visual Aids like LCD Projectors, Speakers, portable mikes etc- Smart Class rooms with white boards
- ✓ Assignments- Seminars- Tutorial- e learning- role plays in language classes (English and French), Group Discussion- Mock interviews
- ✓ Semester Plan for overall academic planning and timely execution
- ✓ Destination Visits
- ✓ Student Newsletters titled Eco voice and Hue
- ✓ Use of ODLL Language learning Software in Language Lab to enhance Communication skills
- ✓ SPSS Software for tourism research purpose used in the SPSS Lab
- ✓ Two months internship training in collaboration with the industry:- constant validity check using DPR (Daily Progress Report), IEF (Internship Evaluation Form) and Internship certificate
- ✓ WIFI connectivity in the School to enhance e- learning
- ✓ Introduced Lesson Plan system for timely and effective execution of each course
- ✓ Procured tourism educational aids and DVDs from INSIGHT MEDIA, New York
- ✓ Procured online reservation systems (GALILEO & AMADEUS) and software systems like VIRTUAL HOTEL, VIRTUAL TRAVEL AGENCY & VIRTUAL FOOD & BEVERAGE from Mundus Education Corporation, USA to improvise the technical skills of the student's.
- ✓ Introduced Remedial class for the weak lings.

16. Department of Life-Long Learning & Extension

Education was imported through non formal media

17. International & Inter University Centre for Nanoscience & Nanotechnology

International seminars and conferences are organized frequently to provide an opportunity for students to interact with researchers working in frontier areas. Power point presentations have also been used by the faculty members along with black board teaching. Smart class room facility is also being utilized for the teaching learning process.

18. Advanced Centre for Environmental and Sustainable Development

- ✓ Participatory learning programme
- ✓ Supported e-learning

19. Inter University Centre for Disability Studies

Multimedia teaching, practical sessions, school visits, internship

20. Inter University Centre for Social Science Research & Extension

Reading group discussions organised by faculty and students

21. Institute for Intensive Research in Basic Sciences

Learning through class room instruction, virtual and original research work

2.13 Initiatives undertaken towards faculty development

For faculty development, University encourages faculty to participate in various faculty exchange programs, refresher courses, workshops etc. The measures taken by various Schools as follows

SCHOOL OF BEHAVIOURAL SCIENCES

SCHOOL OF BIOSCIENCES

- 25 Persons from the School participated in the hands on workshop on “Molecular Phylogenetics in Microbiology” 26.9.2012-28.9.2012

SCHOOL OF COMPUTER SCIENCES

Prof. (Dr.) R. Vijayakumar

- **Organized Interface 2012**, a National level IT Fest organized by the School in association with Computer Science Students’ Association of the School. The national level seminar, one component of the event, included technical talk on “NP Complete Problems and High Performance Computing”.

Ms. Bindu V.R

- **Co-ordinated Interface 2012**, a National level IT Fest organized by the School in association with Computer Science Students’ Association of the School. The national level seminar, one component of the event, included technical talk on “NP Complete Problems and High Performance Computing”.

Ms. Pushpalatha K.P

- Was under UGC's Faculty Improvement Programme till July 2012.

Ms. Anuj Mohamed

- Attended UGC Sponsored SAM Workshop on "Capacity Building of Women Managers in Higher Education", CMS College, Kottayam, April 2013.

3.2 Details regarding major projects

The comprehensive information on the research projects, funding agency, amount sanctioned etc., are listed as each school and then faculty wise as follows,

School of Behavioural Science

Faculty	Title	Funding agency	Amount (Lakhs)
	Global fund project on HIV/AIDS counselling		

School of Bio-Science

Faculty	Title	Funding agency	Amount (Lakhs)
Dr Linu Mathew (PI) Dr K G Padmakumar (Co-PI)	Barcoding and genetic diversity analysis of <i>Clarias spp</i> of Kerala	KSCSTE	14.7
Dr.Jayachandran.K	Safety Evaluation of the process of Chlorination in drinking water system with specific reference to Chlorination derived By-products	UGC	9.6
Dr.Radhakrishnan EK (PI) Prof.(Dr.)Jyothis Mathew (Co-PI)	Molecular Exploration of Spice Associated Bacteria for Bioactive metabolites and PKS-NRPS genes	DBT-RGYI Scheme	15.0
Dr.Radhakrishnan EK (PI) Prof.(Dr.)Jyothis Mathew (Co-PI) Dr.Sheela Sugathan (Co-PI)	Molecular Studies on Biofilm formation in Coagulase Negative Staphylococci	ICMR	22.0
Dr.R.Harikumaran Nair	Evaluation of the protective effect of omega-3 fatty acid against arsenic trioxide induced cardiac toxicity in cancer therapy	UGC	9.48
Dr. Jisha M.S	Molecular Basis of Sodium Dodecyl Sulphate (SDS) Bioremediation & Bioreactor Designing	KSCSTE	13.5

	Characterization of endophytic diazotrophic bacteria from rice (<i>Oryza sativa</i>) and assessment of their potential biocontrol of rice sheath blight disease	UGC	13.93
Dr. Keerthi T R	Production, Purification and Characterization of antagonistic principles of Potential Aquaculture probiotics	UGC	10.78
	Protective effect of <i>Elephantopus scaber</i> Linn. A traditional medicinal plant on hepatic fibrosis and hepatocellular carcinoma	KSCSTE	
Dr Prakash Kumar	In vitro studies on inhibition of eicosanoid metabolism for control of arthritis by extracts of stem of <i>Tinospora cordifolia</i>	Department of Biotechnology	21.17
	Evaluation of methanolic extracts <i>Elephantopus scaber</i> for inhibitors of 5-lipoxygenase (5-LOX) and cyclooxygenase-2 (COX-2)	KSCSTE	15.72
Dr JG Ray (PI) Dr N Valsalakumar (Co-PI)	Endomycorrhizal Studies in <i>Musa</i> Sp of South India		13.5
Dr. Anie Y & Dr. Jayachandran K	Nattokinase- fibrinolytic and antihypertensive enzymes from novel bacterial isolates	KSCSTE, YIPB Project	4.73

School of Chemical Science

Faculty	Title	Funding agency	Amount (Lakhs)
Prof. (Dr) Sabu Thomas	Development of biodegradable dual porous polymer nanocomposite	DBT	58.59
Prof. (Dr) Sabu Thomas	Carbon nanotube filled natural rubber nanocomposites	UGC-DAE Council of Scientific Research-Kalpakkam Centre	4.00
Prof. (Dr) Sabu Thomas	Development of high performance rubber modified epoxy resin/clay nanocomposites	UGC	8.898
Dr. Raju Francis	Acetic Anhydride Mediated Cyclodehydration of Various N-Substituted Maleamic Acids to	UGC	25.00

	Form Maleimido Derivatives – A Computational Study”		
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School of Environmental Science

Faculty	Title	Funding agency	Amount (Lakhs)
Dr C T Aravinda kumar	Radiation and photochemical studies chitosan modified polycyclic hydrocarbons	BRNS	15.00
Dr C T Aravinda kumar	Radiation induced modification of some pyrimidine nucleosides and nucleotides	DAE – IUC	4.00
Dr C T Aravinda kumar	Sonochemical degradation of organic water pollutants	KSCSTE	14.5
Dr Mahesh Mohan	DST-SERB Fast Track Project : Mercury geochemistry in agricultural wetland ecosystem	DST-SERB	25.50
Dr Mahesh Mohan	Accumulation of mercury and cadmium in benthic food web of Cochin estuary- a stable isotope approach	KSCSTE	10.85
Dr Mahesh Mohan	Mercury pollution in the sediments of Vembanad Wetland: a chronological approach	UGC	2.85
Dr Sylas VP	An investigation on the potential microalgal species for the production of biodiesel from Kuttanad wetland ecosystem, Kerala	UGC	8.50

Projects submitted

- Major Research proposal titled ‘Biomarker based genotoxicity assessment of PAH and a few heavy metals on selected benthic organisms of Cochin Estuary’ –submitted to MoES – by Dr.E.V.Ramasamy
- Major Research proposal titled Assessment of Green House Gas (GHG) Emission from Municipal Solid Waste Management Systems, submitted to Department of Environment and Climate Change (DoECC) Govt. of Kerala – by Dr.E.V.Ramasamy
- A proposal for the purchase of research equipment for the enhancement of research at this school to DoECC, Govt of Kerala – by Dr.E.V.Ramasamy, Director, SES.

School of International Relation & Politics

Faculty	Title	Funding agency
K.M. Seethi	Health, Environment and Human Security: Impact of Pesticide Use in Kerala	UGC
	Statelessness, Citizenship and Human	ICSSR

	Security: A Study on the Repatriated Tamils in Kerala	
Raju K. Thadikkaran	Global Intellectual Property Rights Regime and India: Challenges and Opportunities in the Protection of Intellectual Property Related to Biodiversity and Traditional Knowledge	UGC
	Internationalisation of the Realm of Higher Education: A study on the Experience of University Teaching and Research Departments, Professional colleges and Research Institutions in Kerala	Kerala State Higher Education Council (KSHEC)
C.Vinodan	Energy Security for the Emerging India: A study on the problems and Prospects of expanding the nuclear option	UGC

SCHOOL OF LETTERS

Faculty	Title	Funding agency	Amount (Lakhs)
Dr. Jose K Manuel	"The Politics of Power Engendered by the New Generation Media in the Language and Culture of Kerala"	UGC	7.896
Dr. Harikumar S.	"Creation of a Web Portal About Changampuzha Krishna Pillai,	UGC	9.446

International and Inter University Centre for Nanoscience and Nanotechnology

Faculty	Title	Funding agency	Amount (Lakhs)
Prof (Dr) Sabu Thomas	Nanofillers in Polymeric Systems	General Cables, USA	16.50
Prof (Dr) Sabu Thomas	Development of high performance butyl rubber and chloro-butyl rubber nanocomposites for barrier application	DST	37.65
Prof (Dr) Sabu Thomas	Nanostructured self assembled polymer blend systems from epoxy resin/block copolymer systems for super toughness	DST	95.42
Prof (Dr) Sabu Thomas	Nano materials: Synthesis and characterization and applications	DST	65.45
Prof (Dr) Sabu Thomas	Design and development of butyl and chlorobutyl nanocomposite membranes for barrier	UGC-DAE Council of	35.00

	applications	Scientific Research-Kolkata Centre	
Prof (Dr) Sabu Thomas	Development of engineered nano-structured materials for high performance applications	DST	366.996
Prof (Dr) Sabu Thomas	Design and development of butyl and chlorobutyl nanocomposite membranes for barrier applications	UGC-DAE Council of Scientific Research-Kolkata Centre	35.00
Prof (Dr) Sabu Thomas	Carbon nanotube filled natural rubber nanocomposites	UGC-DAE Council of Scientific Research-Kolkata Centre	4.00
Prof (Dr) Sabu Thomas	Development of nanocomposites for aerospace, defence and automotive applications	CSTE	30.00
Prof (Dr) Sabu Thomas	Development of high performance nanocomposites for tyre engineering	DST	69.60

School of Pure and applied physics

Faculty	Title	Funding agency	Amount (Lakhs)
Prof. N V Unnikrishnan	Preparation of novel planar optical waveguides via ion-exchange/sol-gel route and their characterization	KSCSTE	11.98
Dr. K Nandakumar	Dynamics of Plasma plume evolution during laser ablation of metal targets in stationary and flowing liquid media	DST	40.00
Prof. N V Unnikrishnan	Sol-Gel Synthesis and characterization of tellurite based device materials	CSIR	15.42
	UGC SAP :DRS Department Research Scheme	UGC	65.65
	DST FIST Department Project	DST	40.00

SCHOOL PEDAGOGICAL SCIENCES

Faculty	Title	Funding agency	Amount (Lakhs)
Dr. Sajna Jaleel	Teaching Mathematical Thinking through e-contents in Mathematics among secondary School Students	UGC	2.565

3.3 Minor Projects

School of Environmental Sciences

Faculty	Title	Funding agency	Amount (Lakhs)
Dr Mahesh Mohan	Geochemistry of selected heavy metals in Kuttanad agricultural wetland ecosystem	UGC	0.48
Dr. E V Ramasamy	Recovery of Energy and Manure from solid waste : a step towards mitigation of Climate Change	DoECC, Govt. of Kerala	0.60
Dr. E V Ramasamy	Phytoremediation of Wastewater Contaminated With Heavy Metals using Constructed Wetlands and Nutrient Film Technique (NFT)	DoECC), Govt. of Kerala	0.60
Dr. E V Ramasamy	Greenhouse Gas Emission from septic tanks : a preliminary assessment	DoECC), Govt. of Kerala	0.60
Dr. Mahesh Mohan	Geochemistry of selected heavy metals in Kuttanad agricultural wetland ecosystem	DoECC), Govt. of Kerala	0.48
Dr. E V Ramasamy	Recovery of Energy and Manure from solid waste : a step towards mitigation of Climate Change	DoECC), Govt. of Kerala	0.60
Dr. E V Ramasamy	Phytoremediation of Wastewater Contaminated With Heavy Metals using Constructed Wetlands and Nutrient Film Technique (NFT)	DoECC), Govt. of Kerala	0.50
Dr. E V Ramasamy	Household consumption pattern of selected resources in Ernakulam and Kottayam districts - A comparative assessment	DoECC), Govt. of Kerala	0.35
Dr Sylas VP	Rhizosphere remediation of agro-pollutants: A case study from Kuttanad wetland ecosystem, Kerala	DoECC), Govt. of Kerala	0.40
Dr Sylas VP	Enzymatic saccharification of water hyacinth for the production of bioethanol : control by utilization approach	DoECC), Govt. of Kerala	0.40
Dr. K M Seethi	"Health, Environment and Human Security: Impact of Pesticide Use in Kerala "(2009-2012)	University Grants Commission (UGC)	
Dr. K M Seethi	"Statelessness, Citizenship and Human Security: A Study on the Repatriated Tamils in Kerala" (2011-13):	ICSSR	

3.4 Details of Research Publications

SCHOOL OF BIO-SCIENCE

A. Peer Review Journals

1. Linu Mathew, Rashmi P A.2012.Development of salinity resistant somaclones of *Justicia adhatoda*- an important medicinal plant with bronchodilatory effect. *Research journal of pharmaceutical, biological and chemical sciences*. 3 (3):132. ISSN: 0975-8585(impact factor 0.17)
2. Rashmi P A Linu Mathew, 2012 .The effect of elicitors on the production of vasicine from *Justicia adhatoda* L cell suspension cultures. 3, (10).October, 2012.The international journal of pharmaceutical science and research (Impact factor.0.14)
3. Linu Mathew, Sankar Sashidhar, Chemopreventive potential of methanol extract of stem bark of *Cassia fistula* in mice, *Journal of Pharmacognosy and herbal formulations*,vol2 , (ISSN2229-6840)(2012)
4. Reshma John, Siji Raju, Jyothis Mathew, Linu Mathew, Endophytic associations in *Achyranthes aspera* L. *Journal of Science, Technology And Management*, Vol 04 ,No2,9-13(2012)
5. Rashmi PA, Reshma John and Linu Mathew.2012. Isolation and characterisation of vasicine from in vitro Cultures of *Justicia adhatoda*, *international journal of Pharma and Bio Sciences*3(3)/B58-64.ISSN.0975-6299(impact factor 0.47)
6. 6) Rashmi P A, Linu Mathew.2012. Antimicrobial activity of leaf extract of *Justicia adhatoda* in comparison with vasicine . *Asian Pacific journal of Tropical Biomedicine*. 2012.S1556-S1560 (impact factor 0.34)
7. Mathew Linu, Shashidhar Shankar In vitro cytotoxic activity of methanolic extract of stem bark of *Cassia fistula* L. . 2012. *Research journal of Biotechnology*.7 (4) 141- 148 (impact factor 0.143)
8. Jacob L, Latha MS. Anticancer activity of *Clitoria ternatea* linn. against Dalton's lymphoma. *International Journal of Pharmacognosy and Phytochemical Research*. 2012, 4(4):207-212.
9. Jacob L, Latha MS. Antitumour and antioxidant activities of *Clitoria ternatea* against Ehrlich ascites carcinoma. *International Journal of Drug formulation and Research*. 2012,3:81-92.
10. Sheeba KO, Wills PJ, Latha B, Rajalekshmy R, Latha MS. Antioxidant and antihepatotoxic efficacy of methanolic extract of *Elephantopus scaber* Linn in Wistar rats. *Asian Pacific Journal of Tropical Disease*.2012,1-5.

11. SP Prabha, PN Ansil, A Nitha, PJ Wills, MS Latha, Preventive and curative effect of methanolic extract of *Gardenia gummifera* Linn .f. on thioacetamide induced oxidative stress in rats, *Asian Pacific Journal of Tropical Disease* 2012,90-98.
12. Sheeba KO, Wills PJ, Latha B, Rajalekshmy R, Latha MS. Antioxidant and antihepatotoxic efficacy of methanolic extract of *Elephantopus scaber* Linn in Wistar rats. *Asian Pacific Journal of Tropical Disease*.2012,1-5.
13. SP Prabha, PN Ansil, A Nitha, PJ Wills, MS Latha, Preventive and curative effect of methanolic extract of *Gardenia gummifera* Linn .f. on thioacetamide induced oxidative stress in rats, *Asian Pacific Journal of Tropical Disease* 2012,90-98.
14. V.V. Mathews, M.V.S. Paul, M. Abhilash, A. Manju, S. Abhilash, R.H. Nair. Myocardial toxicity of acute promyelocytic leukaemia drug-arsenic trioxide. *European Review for Medical and Pharmacological Sciences*. 2013; 17(Suppl 1): 34-38. Impact Factor: 1.093.
15. M. Abhilash, M.V. Sauganth Paul, Mathews V. Varghese, and R. Harikumar Nair. Long term consumption of aspartame and brain antioxidant defense status. *Drug and Chemical Toxicology*. 2013 Apr;36(2):135-40. doi: 10.3109/01480545.2012.658403. Impact Factor: 1.293
16. Manju Alex, Mathews V Varghese, M Abhilash, M V Sauganth Paul, R Harikumar Nair. Effect of astaxanthin on ethylene glycol induced nephrolithiasis. *IOSR Journal of Pharmacy and Biological Sciences*, 2013; 1(7):42-47.
17. Mathews V. Varghese, M. V. Sauganth Paul, M. Abhilash, Alex Manju, S. Abhilash, R. Harikumar Nair. Oxidative stress induced by the chemotherapeutic agent arsenic trioxide. *3 Biotech*. Published online 13th Sept 2013. DOI 10.1007/s13205-013-0170-0.
18. Inhibition of Violacein Synthesis In *Chromobacterium Violaceum* Dsts-1 Mutant. by Merlin Antony, Mohammed Ashiq, Sania Salim, Sajudeen P.A, Indu C. Nair and K. Jayachandran* (2013). *International Journal of Advanced Biotechnology And Research*, 4, 1, 1014-102.
19. Biodegradation of toluene hydrocarbon by a *Pseudomonas* sp isolated from gasoline contaminated soil. Pratheesh P.T. and Jayachandran.K (2012). *International Journal of Plant, Animal and Environmental Sciences*, 2(3), 210-216.
20. Analysis of the pathway of phenol biodegradation by *Alcaligenes* sp d2. Merlin Antony, Indu C. Nair and Jayachandran.K. *Collected Research Works entitled "Prospects in Bioscience: addressing the issues"* published by Springer. (2013).DOI 10.1007/978-81-322-0810-5-25. 209-220
21. Production and Characterization of Rhamnolipid Biosurfactant from Waste Frying Coconut Oil using a novel *Pseudomonas aeruginosa* D *Journal of Applied Microbiology*, Seba George and Jayachandran K (2012).. Impact factor 2.5. DOI 10. 1111/jam-12069.

22. In silico characterization of a novel β -1, 3-glucanase gene from a *Bacillus amyloliquefaciens*, a bacterial endophyte of *Hevea brasiliensis* antagonistic to *Phytophthora meadii*. Amith Abraham, Sunilkumar P. N.b, Shaji Philip, Divya G. Nair, Aparna C.a and Jayachandran Ka* (2012). *Journal of Molecular Modeling* (Springer). Impact factor 2. DOI10.1007/s00894-012-1645-3 Impact Factor-2.2
23. Keratinophilic fungal diversity of soil from Ernakulam and Thrissur districts – Kerala Mini K.D*, Jyothis Mathew, Sampath kumar. S Mini and K. Paul *European Journal of Experimental Biology*, 2012, 2 (4):1261-1264
24. ANTIBIOTIC RESISTANT ENTEROCOCCI FROM DRINKING WATER SOURCES ASHA PETER*, JYOTHIS MATHEW, SHINI ZACHARIA, *Asian Journal of Pharmaceutical and Clinical Research*, 2012, Vol 5, Suppl 3, pp 158-160 IF 0.52
25. PERIPLANATA AMERICANA - A CARRIER OF MULTI RESISTANT LISTERIA SPECIES SHINI ZACHARIA, ASHA PETER, JYOTHIS MATHEW, P.C RAVINDRAN *Asian Journal of Pharmaceutical and Clinical Research* 2012, Vol 5, Issue 4 pp 24-27 IF 0.52
26. Characterization of vancomycin resistant *Enterococcus faecium* from clinical and chicken sources Asha Peter, Radhakrishnan E.K, Jyothis Mathew, Shini Zacharia *Asian Pacific Journal of Tropical Biomedicine* (2012)1-6 Impact per paper 1.171
27. Screening of fungi isolated from poultry farm soil for keratinolytic activity Mini K. D*, Mini. K. Paul and Jyothis Mathew *Advances in Applied Science Research*, 2012, 3 (4):2073-2077 IF 0.356
28. Endophytic associations in *Achyranthes aspera* Reshma John, Siji Raju, Jyothis Mathew, Linu Mathew L. *Journal of Science, Technology And Management*, Vol 04, No2,9-13 (2012)
29. PS Ambily, MS Jisha (2012). Biodegradation of the anionic surfactant, sodium dodecyl sulphate by *Pseudomonas aeruginosa* MTCC 10311. *Journal of Environmental Biology*. 33: 717-720. Impact factor 0.68
30. AK Asok, MS Jisha (2012). Assessment of soil microbial toxicity on acute exposure of the anionic surfactant linear alkylbenzene sulphonate. *Journal of Environmental Science and Technology* pp 1-10. ISSN 1994-7887. DOI: 10.3923/jest.2012.
31. AK Asok, KK Ratheesh, PM Sherief, MS Jisha (2012). Oxidative Stress and Changes in Gill Morphology of Grass Carp (*Ctenopharyngodon idella*) Exposed to Sublethal Concentrations of the Anionic Surfactant Linear Alkylbenzene Sulphonate (LAS). *Global Journal of Applied Environmental Sciences*. ISSN 2248-9932 Volume 2, Number 1 (2012), pp. 1-11.
32. AR Sandheep, AK Asok and Jisha M.S. (2012). Biocontrol of fusarium wilt of vanilla (*vanilla planifolia*) Using combined inoculation of *Trichoderma* sp. And *Pseudomonas*

- sp. International Journal of Pharma and Bio Sciences. July; 3(3): (B) 706 – 716. Impact factor.0.5
33. Extracellular synthesis of silver nanoparticles by endophytic *Bordetella* sp. isolated from *Piper nigrum* and its antibacterial activity analysis. Roshmi Thomas, Jasim B , Jyothis Mathew and Radhakrishnan EK, Nano Biomed. Eng.(2012), 4(4),183-187 IF 4.2 (unofficial)
 34. Aswathy, Agnes Joseph; Jasim, B.; Jyothis, Mathew; Radhakrishnan, E. K."Identification of two strains of *Paenibacillus* sp. as indole 3 acetic acid-producing rhizome-associated endophytic bacteria from *Curcuma longa*" 3 Biotech (2012): 1-6
 35. Extracellular Lipolytic Enzyme Production by a Novel Extremely Halophilic Bacterium. Anisha C1, Jyothis Mathew and Radhakrishnan E K (2012) Universal Journal of Environmental Research and Technology Volume 2, Issue 3: 143-148
 36. Endophytic associations in *Achyranthes aspera* Reshma John, Siji Raju, Jyothis Mathew, Linu Mathew L. Journal of Science, Technology And Management, Vol 04 ,No2,9-13 (2012)
 37. Paul S, Mohanan A, Varghese MV, Alex M, Nair H. Ameliorative effect of α -tocopherol on monosodium glutamate-induced cardiac histological alterations and oxidative stress. J Sci Food Agric. 2012 Dec;92(15):3002-6. doi:10.1002/jsfa.5714.Impact Factor: 1.759
 38. Varghese V. Mathews, P. Binu, M.V. Sauganth Paul, M. Abhilash, Alex Manju, R. Harikumar Nair. Hepatoprotective efficacy of curcumin against arsenic trioxide toxicity. Asian Pacific Journal of Tropical Biomedicine. (2012) S706-S711. ([http://dx.doi.org/10.1016/S2221-1691\(12\)60300-1](http://dx.doi.org/10.1016/S2221-1691(12)60300-1))
 39. Paul MV, Abhilash M, Varghese MV, Alex M, Harikumar Nair R. Protective effects of α -tocopherol against oxidative stress related to nephrotoxicity by monosodium glutamate in rats. Toxicol Mech Methods. 2012 Oct;22(8):625-30. Impact Factor: 1.367.
 40. Varghese V. Mathews, M. V. Sauganth Paul, M. Abhilash, Alex Manju, S. Abhilash, R. Harikumar Nair. Mitigation of hepatotoxic effects of arsenic trioxide through omega-3 fatty acid in rats. Toxicology & Industrial Health. (2012 Oct 18; DOI: 10.1177/0748233712463778). Impact factor: 1.555
 41. Abhilash M, Sauganth Paul MV, Mathews V Varghese, Harikumar Nair R. Effect of long term intake of aspartame on antioxidant defense status in liver. Food Chem Toxicol. 2011 Jun;49(6):1203-7. Epub 2011 Mar 3. Impact Factor: 3.215
 42. Name of the Journal: Universal Journal of Environmental Research and Technology, Title of the Paper: Extracellular Lipolytic Enzyme Production by a Novel Extremely Halophilic Bacterium, Author : Anisha C, Jyothis Mathew and Radhakrishnan EK ,Pages: 2012, 2(3): 143-148.

43. Name of the Journal: 3 Biotech, Title of the Paper: Identification of two strains of *Paenibacillus* sp. as indole 3 acetic acid-producing rhizome-associated endophytic bacteria from *Curcuma longa*, Author: Aswathy Agnes Joseph, Jasim B, Jyothis, Mathew, Radhakrishnan EK, Pages: 2012, 3:219–224. Name of the Journal: Nano Biomedicine and Engineering
44. Title of the Paper: Evaluation of Antibacterial Activity of Silver Nanoparticles Synthesized by a Novel Strain of Marine *Pseudomonas* Sp, Author: Roshmi Thomas, Aswathy Viswan, Jyothis Mathew, Radhakrishnan EK. Pages: 2012, 3(3): 163 - 172. Unofficial impact factor: 4.2
45. Name of the Journal: Asian Journal of Pharmaceutical and Clinical Research, Title of the Paper: Antimicrobial Susceptibility and Plasmid Pattern Analysis of Coagulase Negative Staphylococci Isolated from Different Sources, Author: Suja Philip, Radhakrishnan EK, Jyothis Mathew, Pages: 2012, 5(4): 207-210., Impact Factor: 0.52
46. Name of the Journal: International Journal of Pharma and Bio Sciences, Title of the Paper: Antimicrobial resistance trends with special reference to vancomycin resistance among different species of Enterococci, Author: Asha Peter, Shini Zacharia, Radhakrishnan EK and Jyothis Mathew, Pages: 2013, 4(1): 356 - 363. Impact Factor = 2.958
47. Name of the Journal: Plant Growth Regulation, Title of the Paper: Plant growth promoting potential of endophytic bacteria isolated from *Piper nigrum*, Author: Jasim B, Jimtha Joseph, Jyothis Mathew and Radhakrishnan EK, Pages: 2013, 71:1–11. Impact Factor: 1.625
48. Name of the Journal: Journal of Pure and Applied Microbiology, Title of the Paper: Antifungal and Plant Growth Promoting Properties of Endophytic *Pseudomonas aeruginosa* from *Zingiber officinale*, Author: Jasim B, Rohini Sabu, Anisha C, Jimtha John C, Jyothis Mathew and Radhakrishnan EK, Pages: 2013, 7(2): 1003-1009. Impact Factor: 0.073
49. Name of the Journal: Material Science Poland, Title of the Paper: Biosynthesis of silver nanoparticles by a *Bacillus* sp. of marine origin, Author: Anju Janardhanan, Roshmi Thomas, Rintu T Varghese, Sonia E V, Jyothis Mathew and Radhakrishnan EK, Pages: 2013, 31(2):173-179. Impact Factor: 0.327
50. Name of the Journal: International Journal of Biology, Pharmacy and Allied Sciences, Title of the Paper: Plant Growth promoting properties of endophytic *Klebsiella* sp. isolated from *Curcuma longa* Author: Anisha C, Jyothis Mathew, Radhakrishnan EK, Pages: 2013, 2(3): 593-601.
51. Name of the Journal: World Journal of Pharmaceutical research, Title of the Paper: Detection of *icaAB* and *mecA* Genes in *Staphylococcus epidermidis* by Combined

- Polymerase Chain Reaction and Analysis. Author: Suja Philip, Radhakrishnan EK and Jyothis Mathew .Pages: 2013, 2(4):1008-1017. Impact Factor: 5.045
52. Name of the Journal: International Journal of Pharmacy and Integrated Life Sciences, Title of the Paper: Adherence of Staphylococcus epidermidis to different smooth surfaces and efficacy of rifampicin to prevent surface colonization, Author: Suja Philip, Radhakrishnan EK and Jyothis Mathew , Pages: 2013, 1(16): 62-72. Impact Factor: 1.0147
53. Name of the Journal: International Journal of Current Microbiology and Applied Sciences, Title of the Paper: Antibiotic susceptibility and multiplex PCR analysis of Coagulase Negative Staphylococci isolated from laboratory workers, Author: K.R.Soumya, Santhi Anna Thomas, Sheela Sugathan, Jyothis Mathew and Radhakrishnan EK ,Pages: 2013, 2(11): 266-272.
54. Name of the Journal: Asian Journal of Pharmaceutical and Clinical Research, Title of the Paper: P. Americana as an Intestinal Carrier of Nosocomial and Food Borne Bacterial Pathogens, Author: Shini Zacharia, Asha Peter, Jyothis Mathew, Radhakrishnan EK ,Pages: 2013, 6(4): 38-41. Impact Factor: 0.51
55. Name of the Journal: The journal of Food Technology, Photon, Title of the journal: Probiotic and health promoting capabilities of Enterococcus faecium from infant gut flora for the application in nutraceuticals. Author: Keerthi Thalakkattil Raghavan, Anjali Ann Jacob, Honey Chandran, Pages: Photon 115, 125-134, ISJN:3852-1875. Impact index: 3.14.
56. Name of the Journal: International Journal of Pharma and Biosciences. Title of the journal: A study of isolation and biodiversity of marine yeast in Arabian Sea. Author: Savitha K. Koilery and T. R. Keerthi, impact factor: 2.98,
57. Name of the Journal: Res. J. Pharm. Biol. Chem. Sci. 4. Title of journal: A study of morphological alterations of Meyerozyma guilliermondii (JN128648) cells during mannan synthesis, Author: Savitha K. Koilery and T. R. Keerthi, Impact factor: 0.35
58. Name of the Journal: J Biotechnol Biomater, Title of the journal: Hydrolytic enzyme production by marine yeasts isolated from Arabian Sea, Author: Savitha K. Koilery and T.R. Keerthi, Pages: : 2:6 <http://dx.doi.org/10.4172/2155-952X.S1.020>,
59. Name of the Journal: J Biotechnol Biomater, Title of the journal: Invitro adhesion and invivo colonization are desired probiotic characters of MBTU PBBM1 Bacillus subtilis isolated from milk, Author: T.R. Keerthi and Anu.p. Sebastian, Pages: 2:6 <http://dx.doi.org/10.4172/2155-952X.S1.012>
60. Article in "The Global Voice of Probiotics", International Probiotics Association. Internationalprobiotics.org/news/upload/pdf/33.pdf. Title of article: Probiotic

potential of bacterial species from natural sources. Author: Anu P. Sebastian, Jacob Anjali Anne and T. R. Keerthi,

61. Name of the Journal: The journal of Food Technology, Photon, Title of the Paper: : Honey bee Gut flora as a source of LAB (Lactic Acid Bacteria) with probiotic capabilities, Author : Keerthi Thalakkattil Raghavan, Anjali Ann Jacob, Honey Chandran. Pages: Photon 105, 126-134, ISJN: 3852-1875, Impact index: 3.14
62. Conference proceedings, National Symposium on Emerging Trends in Biotechnology 2012 Department of Biotechnology, Cochin University of Science and Technology, Cochin-22, Title of paper: Comparative study of probiotic potential of Lactic Acid Bacteria from Honey bee gut", Pages: ISBN-978-93-80095-39-4
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SCHOOL OF GANDHIAN THOUGHT AND DEVELOPMENT STUDIES

A. Peer Review Journals

1. Information Technology Sector, Women Professionals and Pregnancy Related Issues: A Study With Particular Reference to Kerala” Man and Development, Volume 34, No,4 December 2012.With Ufo Okeke Uzhodike”Towards Deepening Conflict Tranformation and Peace building” (editorial introduction for the inaugural issue) in Ubuntu: Journal of Conflict Transformation, Published by Adonis & Abbey, London (2012).
2. “Gandhi and Contemporary Non – Violent Action” (Memorial Lecture) in Siby K Joseph and Bharat Mahodaya(Eds.) Contextualizing Gandhian Thought: Essays in Honor of and by Ravindra Varma, Wardha: Institute of Gandhian Sudies (2012).
3. “Primacy of State – Building in Congo?” Peace Review (Special on Congo), Taylor and Francis, VVol.23,2,2011,pp,154-60
4. Published a paper on “Deprivation and Disempowerment’ A matter of Conscience and Concern” with T.S.Sudheeran, Indian Journal of Gerontology, Vol.27, no.2, 2013. (Ranked 17th among Gerontology Journals Worldwide).
5. “Green Thoughts within Gandhian Discourses” In the book “Understanding the Environmental History of India” (ISBN 978-81-924182-0-9), Chapter 17, p.143- 149,Published by Post Graduate Department of History and Research Centre, S.N.College,Chempzhanthy, TVM, Kerala June, 2012.
6. “Tribal women Empowerment throught Kudumbasree Units: A Study on the Ulladan Tribe of North Parqavur Taluk of Ernakulam District in Kerala” in the Zenith International Journal of

7. Presented a paper entitled “Lights and Shadows of Tribal Development in Kerala: A study on the Muthuvan tribe of Edamalakkudy Tribal Settlement of Idukki District” In the 17th International Conference of Association of Third World Studies, XCHR, Goa, in April 2012.
8. Presented a paper entitled as “Non – Violent Struggle for Self Rule: a Study on the Bamboo Revolution of the Tribals of Mendha Lekha District in Maharashtra” in the UGC SAP National Revolution of the Tribals of Mendha Lekha District in Maharashtra” in the UGC SAP National Seminar on Contemporary Nonviolent Movements in India and Abroad” held at School of Gandhian Thought and Development Studies, M.G.University, Kottayam on 23rd and 24th August. 2012
9. Presented a paper entitled “Early Naxalite Movement in Kerala (1968 – 1976) : A study on the issues, Challenges and Alternate Approaches” in 72nd Indian History Congress, University of Mumbai, from 28th to 30th December, 2012.
10. Presented a paper entitled “Social Transformation through Education: A study on the problems in imparting Elementary Education to the Tribals in Kerala” in the 33rd Annual session of South Indian History Congress, University of Kerala,TVM, February 2013.

SCHOOL OF INTERNATIONAL RELATIONS AND POLITICS

A. Peer Review Journals

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2. A.M. Thomas (2012): Diaspora: Theory and History,” *South Asian Journal of Diplomacy*, 1(1).
3. C.Vinodan (co-author) (2012): “The EU-India Relations: Towards A New Partnership in the Asian Century,” *Journal of Asian Politics*, Vol. 11, No. 2.
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5. K.M. Seethi (2013): “Problematising South Asian Security: Internal-external dynamics,” in R. Sreekantan Nair (ed.), *Reexamining Human Rights: Global Postures and Local Realities*, London: Research Syndicate.
6. M.V. Bijulal (co-author) (2013): “Dalits and Rights to Water: Limitations of the Conflict Resolution Approach: Experiences from Chakwara, Rajasthan, India,” in Teresa Joseph and Suryanarayan (eds.) *Conflict Resolution in South Asia*, New Delhi: New Century Publications.
7. C.Vinodan (co-author) (2013) Regionalism and Regional Cooperation in International Relations: A Conceptual Analysis, *Online International Interdisciplinary Research Journal*, Volume-III, Issue-VI, Nov-December.

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2. Studies on electrical properties of nanoclay filled thermoplastic polyurethane/polypropylene blend M Kannan, SS Bhagawan, S Thomas, K Joseph, *Polymer Composites, (2013) 35, 1671-1682*.
3. Mechanical and dynamic mechanical properties of polyolefin blends: effect of blend ratio and copolymer monomer fraction on the compatibilisation efficiency of random copolymers S Jose, S Thomas, PK Biju, J Karger-Kocsis, *Journal of Polymer Research (2013) 20 (12), 1-13*.
4. Green nanocomposites of natural rubber/nanocellulose: Membrane transport, rheological and thermal degradation characterisations E Abraham, MS Thomas, C John, LA Pothen, O Shoseyov, S Thomas, *Industrial Crops and Products (2013) 51, 415-424*
5. Relaxations and chain dynamics of sequential full interpenetrating polymer networks based on natural rubber and poly (methyl methacrylate) Jacob John, Damir Klepac, Mirna Petković Didović, KVSN Raju, Anitha Pius, Mladen Andreis, Srećko Valić, Sabu Thomas *Polymer International (2013), 63, 1427-1438*
6. Faujasites Incorporated Tissue Engineering Scaffolds for Wound Healing: In Vitro and In Vivo Analysis N Ninan, M Muthiah, IK Park, A Elain, TW Wong, S Thomas, Y Grohens, *ACS applied materials & interfaces 5 (21), 11194-1120*
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8. Shibin N. B., Sreekanth R., Usha .K. Aravind, Sarkar S.K. and C.T. Aravindakumar. Oxidation reactions of glucosamine naphthalene acetic acid and naphthalene acetic acid: A pulse radiolysis study, Proc:-National Symposium on Radiation and Photochemistry (NSRP-2013), North Eastern Hill University, Shillong, March 20-22, 2013.

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SCHOOL OF PEDAGOGICAL SCIENCES

Dr Celine Pereira

1. Emotional Intelligence Enhancement package: A Powerful tool for Enriching Emotional Intelligence of Primary School Students, CTE National Journal Jan to June 2012, Vol.X, No.1, 31-35, ISSN 09734457
2. Effectiveness of Improvisation Based Strategy in Achievement in Biology at Secondary Level, Miracle of Teaching, May – August, 2012, Vol. XII, No.2, 35-41
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6. Assessment Practices in the Constructivist Paradigm at the Higher Secondary Level in Kerala, Journal of Indian Education Feb. 2013
7. Redesigning the Fabric of Educational System through Value Education: Methods and Approach, Journal Gurujyothi Research and Reflections. Vol.7y, No.1 Jan. 2013, ISSN 09760865
8. Total Quality management for Excellence in Educational Process, Journal of School Planning and Management – Timonier, Vol. 3, No. 03 March 2013

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3. Augmenting Visual Literacy in English using Multimedia integrated Anchored Instruction, PP. 28-32, ACADEMIA Vol.1,No.2, May 2013, ISSN: 2250-2696

Dr. Minikutty A

1. Influence of Metacognitive Awareness on Attitude towards Teaching of Student Teachers at Secondary level in the Journal 'Journal of Studies in Teacher Education', Vol.5, Issue 2, June 2012.
2. "Virtual Globes: An Effective Tool for Enhancing Achievement in Geography" in the journal "Gurujyothi Research and Reflections" Vol.VI, No. 2, June 2012 ISSN 0976-0865, RNI No. KERENG/2007/21945
3. Constructivism Applied Teaching and Scientific Interest of Students: Perception o Primary School Teachers in the Journal 'Innovations and Researches in Education', Vol. 2, Issue 1, January 2012 (ISSN.2231-4148)
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5. "Influence of Home Environment on Wisdom Development among Higher Secondary School Students" in the Journal "Quest for Excellence in Teacher Education: The CTE National Journal" Vol. XI No.1 Jan-June 2013, ISSN 0973-4457.
6. "Reading Habits as a Correlate of Achievement Motivation: A Study among Higher Secondary School Students" in the Journal "International Journal of Educational Research, Development and Extension (IJERDE)." Vol. 4, No. 1 Jan-Dec. 2013 ISSN 0974-889X

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1. Feasibility of introducing Green Chemistry Topics of Secondary Sch0ol Curriculum in the Journal *Acadmia* Volume 2 (1)Page No. 59 - 62. January, 2013. ISSN 2250 – 2696.
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3. Globalization and Education: need for culturally Responsive teaching in the edited book Global Education : Methodologies and Practice. Almighty book publishing Company, Chennai. January 2013. ISBN 978 – 81-920-309-68
4. Quality improvement programme for Tribal Children in India challenges and Possibilities in the book education for transformation in India. Concept Publication Company, New Delhi January 2013. ISBN: 978-9351-2510-71
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Dr.Sajna Jaleel

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1. Relationship between Economic Reasoning and Emotional Intelligence of Students at Higher Secondary Level. Seminar Proceedings of the UGC Sponsored National Seminar on Educational Renaissance for New Generation organized by St.Thomas College of Teacher Education, Pala, Kerala In Collaboration with All Kerala Traininig College Teachers Association and co- Sponsored by Mahatma Gandhi University, Kottayam, Kerala, 28th &29th November 2012
2. Extent of Environmental Ethics: A Study among Secondary School Students. Seminar Proceedings of the UGC Sponsored National Seminar on Educational Renaissance for New Generation organized by St.Thomas College of Teacher Education, Pala, Kerala In Collaboration with All Kerala Traininig College Teachers Association and co- Sponsored by Mahatma Gandhi University, Kottayam, Kerala, 28th &29th November 2012
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4. Mathematical Creativity of Secondary School Students of Mithraniketan. Compendium of Papers Presented at the International Seminar organized in connection with the 100 Birth Anniversary of the celebrated Teacher Educator of Kerala-Dr.N.P.Pillai at Gandhi Smarak Nidhi, Thiruvananthapuram 25th-27th July 2012. ISBN 978-81-923093-2-3 along with Ms. Bincy Titus
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7. Naturalistic Intelligence among Students at Secondary Level at Kottayam District. Seminar Proceedings of the UGC Sponsored National Seminar on Naturalistic Intelligence-Harmonizing Scientific Inquiry and Eco-Friendliness in Learners organized by N.S.S Training College Changnacherry on 12th and 13th July 2012. ISBN 978-81-924450-0-7.along with Ms. Bincy Titus
8. Synectics Model of Teaching in the Present Scenario. Proceedings of the U.G.C Sponsored National Seminar on Models of Teaching: an Enquiry into the Pedagogical Discourses of Teaching in Humanities, Social Sciences and Technology. Organized by Dept of English, M.E.S College Marampally North Vazhakkulum in association with School of Pedagogical Sciences, Mahatma Gandhi University on 19th and 20th Jan 2012.ISBN:978-81-923985-0-1
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Dr. P. Jayasree

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1. Social intelligence of students at higher secondary level in the international education meet 2012 in the educastion for global execlence organized by CTE and Mar theophilus Training College on 5th to 7th Jan 2012

2. Eco spirituality in Gandhian Thoughts in the international seminar on Gandhian Educational principles and practices for the emerging global Scenario organized by Kerala Gandhi smarak Nidhi on 25th 26th 27th July 2012
3. *Influence of socio cultural factors on educational development of tribal students* . Paper presented in UGC Sponsored National Seminar on 'Educational Renaissance for a new generation', organized by St. Thomas College of Teacher Education, Pala on 28th and 29th November, 2012.
4. Eco friendliness among student teacher educators at M. Ed Level. Paper presented in National Seminar on Naturalistic Intelligence- harmonizing Scientific Inquiry and ecofriendliness in learners organized by NSS training College Changanacherry. on 12th and 13 th July 2012
5. Human rights and the marginalised groups in the national seminar on human rights education. organized by St. Josephs Training college, Mannanam.on 12th and 13 th jan 2012

International

1. *The Techno Savvy Generation and higher education quality*. Paper presented in the 11th State Convention of Council for Teacher Education (CTE), Kerala State Center and International Seminar on 'Innovations, Quality, and Excellence in Education (IQEE 2013)', Organized by Fathima Memorial Training College, Kollam on 11th and 12th January, 2013.
2. A study on certain ingredients of Swami Vivekanantas Man making Education among secondary school Students in the international seminar organized by Kerala Gandhi smarak Nidhi and Dr. Sivadhasan Pillai Foudation for Educational Research and development from 5th to 7th septmber 2013

National

1. Popularisation of Co Education, Student exchange programme and environmental education: A case study based on Pallikkoodam at Kottayam organised by Govt.Brennen college of Teacher Education on April 10th 11th 2013

SCHOOL OF LETTERS
Dr. P P Raveendran

SI No.	Title of Article	Date of publication	Journal in which published	Other relevant details
1	Thirakkazchayude Ruthubhedangal	31 May 2013	Samakalika Malayalam vaarika	Vol.17,No.1, P:7-41
2	Aanathathinte Aalmarattangal	3 June 2013	Madhyamam weekly	Vol.797,No.16 P:38-44
3	Varanasi:Aanandavanavum Mahasmasanavum	June-July,2013	Sahityalokam	Vol 41 N0.1-3 P:12-16
4	Cinema:Desam kalam Samooham	July 2013	Janapadham Monthly	Vol.2,No.5 P:14-19
5	Drisyaharshangalude Samayarekhakal: Malayala Cinemayude Thiranottam (Part I)	25 October 2013	Samakalika Malayalam vaarika	Vol.17,No.22 P:38-45
6	Janapriyasahityathinte samakarrika vivakshakal	October 2013	Grandhalokam	Vol.63,No.10 P:19-25
7	Drisyaharshangalude Samayarekhakal :Malayala Cinemayude Thiranottam (Part II)	1 November 2013	Samakalika Malayalam vaarika	Vol.17,No.23 P:66-73
8	Malayala Cinema: Yadhartyathinte Kazchantharangal	December 2013	Oruma monthly	Vol.7,No. 2 P:22-30
9	Malayala cinemayudae Janapriyasahityan	December 2013	Sahityalokam	Vol 41 N0.6 P:31-38
10	Aanathangalum Malayalacinemayum		Samakalika Malayalam vaarika	Vol 17 N0.4 P:80-82

National Seminars/ Conferences with paper/lecture (9)

1. Inaugural Lecture on “The Indian Renaissance and the Politics of Language” at the Seminar on Language and the Renaissance, Centre for Renaissance Studies, Sree Sankaracharya University of Sanskrit, Kalady, 16 June 2011
2. UGC Seminar on Cultural Studies, Department of Malayalam, University of Kerala, Thiruvananthapuram, 7-9 November 2012. (Paper: “New Trends in Cultural Studies”)
3. Invited lecture at the Department of English, Presidency University, Kolkata, 4 Dec. 2012 (Topic: Indian Writing in English)
4. UGC Refresher Course on Twentieth Century Literature, Calcutta University, Kolkata, Keynote lecture at the inaugural session, 3 December 2012.
5. UGC National Workshop on “Literary Theories: East and West,” Sanskrit University Regional Centre, Thiruvananthapuram, 18-21 December 2012 (Topic: “Language, Literature and Culture: New Approaches”).
6. UGC National Seminar on “Language and Literature in the e-Era,” Department of English, Payyannur College, 4-5 January 2013 (Keynote lecture: ‘Technology and Literature’).
7. UGC National Seminar on “Narratives,” Department of English, SS University of Sanskrit, Kalady, 26-28 February 2013 (Lecture: “Verbal Narratives”)
8. National Symposium on Post-Theory Perspectives on Art, Technology and Multiculturalism, Department of English, University College, Thiruvananthapuram, 6-7 March 2013 (Inaugural/Keynote lecture on ‘Theory and After in Art and Technology’)
9. National Symposium on Everyday Life, Department of Comparative Literature, Central University of Kerala, Kasaragod, 27-28 March 2013 (Paper: ‘Modernity and the Everyday’)

SCHOOL OF ENVIRONMENTAL SCIENCES

1. Solid waste leachates impacting land and water in a suburb of Chennai, Tasneem Abbasi, E.V.Ramasamy and S.A.Abbasi, *Eco.Env.& Cons.* , 18 (4), 2012. pp 1-5.

IN SEMINARS / CONFERENCES

1. Heavy metal removal efficiency of a weed *Axonopus compressus* in a hydroponic system, Ignatius Antony, Arun Babu V., Neethu Joy and **E.V.Ramaasmy**. LAKE 2012: National conference on Conservation and Management of Wetland Ecosystems, 06-08 November 2012. Organised by School of Environmental Sciences, Mahatma Gandhi University, Kottayam. 142-143pp.
2. Phytoremediation of Leachate from Municipal Dump Yard in a Constructed Wetland Planted with *Colocasia Esculenta*, Shamili, V.K., Sajithkumar, K.J. Arun Babu V. and **E.V.Ramaasmy**. LAKE 2012: National conference on Conservation and Management of Wetland Ecosystems, 06-08 November 2012. Organised by School of Environmental Sciences, Mahatma Gandhi University, Kottayam. 112pp.
3. Decontamination of cadmium polluted water with two weeds: A phytoremediation approach, Ignatius Antony, Arun Babu V. Jayasooryan K.K. and **E.V.Ramaasmy**. First National Biodiversity Congress (NBC-2012). 27-30 December 2012., Organised by Kerala State Biodiversity Board , Thiruvananthapuram 95pp.

4. Hydrocotyle asiatica - A potential bioremediant of cadmium: A concern for ayurvedic preparations, Arun Babu V., Ignatius Antony, Jithin, M.K. and **E.V.Ramasamy**. 25th Kerala Science Congress. Proceedings volume 2, 39-41pp. 29th January to 1st February 2013. ISBN 81-86366-83-0.
5. An economic analysis of food consumption pattern in India and Kerala -- P. Padma, **E.V Ramasamy**, Muralivallabhan T V and A.P Thomas, LAKE 2012: Conservation and Management of Wetland Ecosystems,06-09, November 2012. School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala
6. Rural household consumption pattern in Pathanamthitta and Alapuzha districts – A Comparative Assessment -- **P. Padma**, E.V Ramasamy, Muralivallabhan T V and A.P Thomas, LAKE 2012: Conservation and Management of Wetland Ecosystems,06-09, November 2012. School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala
7. Consumption pattern of tobacco and its health inference in India -- P. Padma, **E.V Ramasamy**, Muralivallabhan T V and A.P Thomas, International Conference on Anthropogenic Impact on The Environment And Bioremediation ICAIEB-2012, November 26-28 , 2012, epartment of Zoology, Sri Venkateswara University, Tirupati, A.P, India

Dr.C.T.Aravindakumar

(In refereed International Journals)

1. T. V. Divyalakshmi, S. Sreedhanya^a, G. Akhil, C. T. Aravindakumar and Usha K. Aravind, *Subpicomolar sensing of hydrogen peroxide with ovalbumin embedded CHI/PSS multilayer membrane*, **Analytical Biochemistry**, **2013**, *440*, 49-55
2. K. P. Prasanthkumar, C. H. Suresh, C. T. Aravindakumar, *Dimer Radical Cation of 4-thiouracil: A pulse radiolysis and theoretical study*, **J. Phys. Org. Chem.**, **2013**, *26*, 510-516
3. S. Venu, D.B. Naik, S.K. Sarkar, Usha K. Aravind A.Nijamudheen, C.T.Aravindakumar, *Oxidation Reactions of Thymol: A Pulse Radiolysis and Theoretical Study*, **J. Phys. Chem. A.**, **2013**, *117*, 291–299
4. M.M. Sunil Paul, Usha K. Aravind, G. Pramod, C.T. Aravindakumar, *Oxidative Degradation of Fensulfothion by Hydroxyl Radical in Aqueous Medium*, **Chemosphere**, **2013**, *91*, 295–301
5. K. P. Prasanthkumar, C. H. Suresh and C. T. Aravindakumar, *Oxidation Reactions of 2-thiouracil: A Theoretical and Pulse Radiolysis Study*, **J. Phys. Chem. A.** **2012** *116* , 10712–10720
6. V.J. Disha, C.T. Aravindakumar, Usha K.Aravind, *Phosphate recovery by high flux low pressure multilayer membranes*, **Langmuir**, **2012**, *28*, 12744–12752

(In conference proceedings)

1. Sunil Paul M. M., Aravind U. K., Saha A., Pramod G., Aravindakumar C. T.; Oxidation of Theophylline by Hydroxyl Radical in Aqueous Medium, *Proceedings of the National Symposium on Radiation and Photochemistry (NSRP-2013)(March 20-22,2013), Shillong*
2. Shibin N. B., Sreekanth R., Usha .K. Aravind, Sarkar S.K. and C.T. Aravindakumar. Oxidation reactions of glucosamine naphthalene acetic acid and naphthalene acetic acid: A pulse

- radiolysis study, Proc:-*National Symposium on Radiation and Photochemistry (NSRP-2013)*, North Eastern Hill University, Shillong, March 20-22, 2013.
3. Sunil Paul M. M., Aravind U. K., Saha A., Pramod G., Aravindakumar C. T.; Oxidative transformation of theophylline by hydroxyl radical in aqueous medium, *Proceedings of the Second International Conference on Advanced Oxidation Processes (October 5-8, 2012)* Kottayam, p 84-86.
 4. M. M. Sunil Paul, K. Usha, G. Pramod and C. T. Aravindakumar; Oxidative degradation of fensulfotion by hydroxyl radical in aqueous medium. *Proceedings of the second international conference on advanced oxidation processes – AOP 2012 (October 5-8, 2012)*, Kottayam, p 62-63
 5. R. Varghese, K. Usha and C. T. Aravindakumar; Direct photolysis of phenol: A comparison with its photolytic degradation using ferric perchlorate. *Proceedings of the second international conference on advanced oxidation processes – AOP 2012 (October 5-8, 2012)*, Kottayam, p 107
 6. R. Sreekanth and C. T. Aravindakumar; Oxidation of carbaryl using $\text{SO}_4^{\cdot-}$: A pulse radiolysis study. *Proceedings of the second international conference on advanced oxidation processes – AOP 2012 (October 5-8, 2012)*, Kottayam, p 116-118
 7. V. A Sijumon, C.T. Aravindakumar, Usha K Aravind, Photochemical and Fenton treatment of paper mill and Textile effluents for the removal of organic water pollutants, *Proc-International Conference on Advanced Oxidation Processes*, Oct.5-8, 2012, Kottayam, p-243
 8. S. Thomas, R. Sreekanth, K. Usha and C. T. Aravindakumar; Oxidative degradation of acid red 1 by hydroxyl radicals. *Proceedings of the second international conference on advanced oxidation processes – AOP 2012 (October 5-8, 2012)*, Kottayam, p 118-120
 9. P. R. Manoj, K. Usha and C. T. Aravindakumar; Sonochemical degradation of commassie brilliant blue. *Proceedings of the second international conference on advanced oxidation processes – AOP 2012 (October 5-8, 2012)*, Kottayam, p 124-127
 10. S. Thomas, K. Usha and C. T. Aravindakumar; Combined effect of zero valent iron nano particles with sonolysis on decolorisation and mineralisation of acid red 1. *Proceedings of the second international conference on advanced oxidation processes – AOP 2012 (October 5-8, 2012)*, Kottayam, p 238-240

Dr. Mahesh Mohan

1. M.S. Shylesh Chandran, Sujatha S., **Mahesh Mohan**, J.M. Julka and E.V. Ramasamy. Earthworm diversity at Nilgiri Biosphere Reserve, Western Ghats, India. *Biodiversity and Conservation-Springer* (2012) (IF : 2.365)
2. Rahul Ramesh, Shylesh Chandran M.S., Sreedharan K., **Mahesh Mohan**. 2012. Mercury contamination in the artisanal gold mining regions of Nilambur, Kerala, South India. *Journal of Environment*, Vol. 01, Issue 01, pp. 16-22 Scientific Journals, UK. (IF : Nil)
3. Shylesh Chandran M.S., Sudheesh S., E.V. Ramasamy, **Mahesh Mohan**. 2012. Sulphur fractionation in the sediments of Cochin estuary. *Journal of Environment*, Vol. 01, Issue 01, pp. 10-15, Scientific Journals, UK. (IF : Nil)
4. Ajaykumar B., Sreedharan K., **Mahesh Mohan**., Joby Paul., A.P. Thomas., Nair P. K. K. Evaluation of the Holocene environmental changes of the Southwest coast, India: a palaeo-palynological approach, *Journal of Earth System Science (Springer)* (2012). (IF : 1.040)
5. Rogimon P. Thomas, Manuel Thomas, Joby Paul, and **Mahesh Mohan**, Antifungal activity of Verbinaceae, *Biosciences Biotechnology Research Asia*, 10(1), 355-360. [2013] (IF : Nil)

6. Fractionation of selected metals in the sediments of Cochin estuary and Periyar river , southwest coast of India , with Mahesh,M , Toms Augustine, K. K. Jayasooryan, Shylesh Chandran, M.S., Environmentalist (Springer), DOI 0.1007/s10669- 012-9399-0. (2012).

KN RAJ STUDY CENTRE FOR PLANNING AND CENTRE STATE FINANCIAL RELATIONS

1. K.M. Seethi (2012): "India and the Shanghai Cooperation Organisation," *South Asian Journal of Diplomacy*, 1(1)
2. K.M. Seethi (2013): "Problematising South Asian Security: Internal-external dynamics," in R. Sreekantan Nair (ed.), *Reexamining Human Rights: Global Postures and Local Realities*, London: Research Syndicate

3.7 (a) No of Books Published

Author/Editor	Title	Discipline	Publisher	ISBN No.
Dr. P S Radhakrishnan, School of Letters	<i>Drisyaharshathinte Samayarekhakal : Indian Cinemayude Nooru Varshangal</i>	Arts	December 2013 Sahitya Pravathaka Co-operative Society Ltd.(SPCS) Kottayam Dist., Kerala State	ISBN-978-93-3498-96-3
Dr. Jose K Manuel	<i>New Generation Cinema</i>	IT	D C Books, Kottayam	
Nirmala Devi	Concept of Nature in Indian Thought		Jawahar Pusthakalaya	
Dr. Robinet Jacob	Places of Touristic Interest In India	Tourism Studies	Abhijeet Publishers, New Delhi	ISBN: 978-93-5074-083-5
	Buddhist Tourism In India	Tourism Studies	Abhijeet Publishers, New Delhi	(ISBN: 978-93-5074-084-2)
Mr Cyril Mathew	Le Francais Pour Tous, text book on French	French	Dept. of Printing and Publishing, Mahatma Gandhi University.	
	Confidence Pour Confidence	French book by Paule	DC Books, Kottayam	ISBN 978812643556

		Constant translated to Malayalam		
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3.7 (b) Chapters in edited books

International and Inter University Centre for Nanoscience and Nanotechnology

1. Polymer Composites, Nanocomposites (Volume 2). Sabu Thomas (India); Kuruvilla Joseph (India); S.K. Malhotra (India); Koichi Goda (Japan) and M.S. Sreekala (India), Wiley, USA, 2013
2. Natural Rubber Materials: Volume 1: Blends and IPNs (RSC Polymer Chemistry Series) by Sabu Thomas, Chin Han Chan, Laly Pothen and Rajisha K.R. RSC, 2013
3. Natural Rubber Materials: Volume 2: Composites and Nanocomposites. Thomas, S., Chan, C. H., Pothen, L. A., Joy, J., & Maria, H. (Eds.). RSC, 2013
4. Biopolymer Nanocomposites: Processing, Properties, and Applications Editors: Alain Dufresne, Sabu Thomas, Laly A. Pothen, John Wiley & Sons, 2013
5. Advances in Elastomers II: Composites and Nanocomposites Editors: S Thomas, PM Visakh, AP Mathew, AK Chandra, Springer, 2013.
6. Handbook of Biopolymer-Based Materials: From Blends and Composites to Gels 16 and Complex Networks Editors: S Thomas, D Durand, C Chassenieux, P Jyotishkumar, Wiley-VCH, 2013.
7. Polymer Composites: Volume 1: Macro- and Microcomposites Editors: Sabu Thomas (India); Kuruvilla Joseph (India); S.K. Malhotra (India); Koichi Goda (Japan) and M.S. Sreekala (India), Wiley, USA, 2012 20. Advances in Nanoscience and Nanotechnology: Volume 1: "Nanomedicine and Drug Delivery" Series Editors-in-Chief: Sabu Thomas, PhD, Mathew Sebastian, MD, Anne George, MD and Yang Weimin, PhD: Volume Editors: Mathew Sebastian, MD, A.K. Haghi, PhD and Neethu Ninan. Apple Academic Press, USA, CRC Press, Taylor Francis Group, USA, 2013
8. Polyoxymethylene Handbook: Structure, Properties, Applications and Their Nanocomposites Sigrid Loftl, Sabu Thomas, Visakh P M, Sarathchandran C. Wiley-Scrivener 2013.

9. Advances in Materials Science: Volume1: “Polymer Processing and Characterization” Series Editors-in-Chief:Sabu Thomas, PhD, Mathew Sebastian, MD, Anne George, MD and Yang Weimin, PhD: Volume Editors: Sabu Thomas, PhD, Deepaleskmi Ponnamma and Ajesh K. Zachariah. Apple Academic Press, USA, CRC Press, Taylor Francis Group, USA, 2013
10. Advances in Materials Science: Volume 2: “Natural Polymers, Biopolymers, Biomaterials, and Their Composites, Blends and IPNs” Series Editors-in-Chief: Sabu Thomas, PhD, Mathew Sebastian, MD, Anne George, MD and Yang Weimin, PhD: Volume Editors: Sabu Thomas, PhD, Neethu Ninan, Sneha Mohan, Elizabeth Francis, Apple Academic Press, USA, CRC Press, Taylor Francis Group, USA, 2013
11. Advances in Nanoscience and Nanotechnology: Volume 2:”Nanomedicine and Cancer Therapies”: Series Editors-in-Chief: Sabu Thomas, PhD, Mathew Sebastian, MD, Anne George, MD and Yang Weimin, PhD: Volume Editors: Mathew Sebastian, MD, Neethu Ninan and Eldho Elias. Apple Academic Press, USA, CRC Press, Taylor Francis Group, USA, 2013
12. Handbook of Engineering and Specialty Thermoplastics: Volume 3: Polyethers and Polyesters Editors: Sabu Thomas , India and Visakh P.M, India, Wiley/Scrivenerpublishing2012 See Web site: <http://www.scrivenerpublishing.com/cart/title.php?id=116>
13. Handbook of Engineering and Speciality Thermoplastics: Volume 4: Nylons Editors: Sabu Thomas , India and Visakh P.M, India, Wiley/Scrivenerpublishing,2012 See Web site: <http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0470639253.html>
14. Advances in Natural Polymers: Composites and Nanocomposites Editors: Thomas, Sabu (India); Mathew, Aji. P. (India); Visakh, P. M (India) , Springer,2012 Website: <http://www.springer.com/materials/characterization+%26+evaluation/book/978-3-642-20939-0>
15. Advances in Elastomers I: Blends and Interpenetrating Networks Editors: Thomas, Sabu (India); A.P.; Chandra (India); Visakh, P. M (India), Springer, 2012 Website: <http://www.springer.com/materials/characterization+%26+evaluation/book/978-3-642-20924-6>

16. Advances in Elastomers II: Blends and Interpenetrating Networks Editors: Thomas, Sabu (India); A.P.; Chandra (India); Visakh, P. M (India) , Springer,2012 Website: <http://www.springer.com/materials/characterization+%26+evaluation/book/9783642209277>

17. Advances in Food Sciences and Nutrition: v. 1 [Gebundene Ausgabe] Authors: Thomas, Sabu (India); Visakh, P. M (India) , Springer,2012 17 See Web site: http://www.amazon.de/Advances-Food-Sciences-Nutritionv/dp/1118121023/ref=sr_1?s=books-intl-de&ie=UTF8&qid=1313335739&sr=1-9

18. Advances in Food Sciences and Nutrition: v. 2 [Gebundene Ausgabe] Authors: Sabu Thomas, Laura B. Iturriaga, Pablo Ribotta, Visakh (India), P. M, 2012

SCHOOL OF LETTERS

Dr. K M Krishnan

1. "And then VT Came Introduction" to V T Bhattathiripad, *My Tears, My Dreams*, Oxford University Press, March, 2013
2. Preface to *Kazhchayude Pakarnattangal* (Kottayam: Papyrus Books, 2012), 10-14.

Dr. P P Raveendran

3. "Literature as Supermarket: Mapping World Literature Today," *Interdisciplinary Alternatives in Comparative Literature*, ed. E V Ramakrishnan, Harish Trivedi and Chandra Mohan (New Delhi: Sage, 2013). 51-62.
4. "P Balachandran, the First, the Second, the Third," *Kazhchayude Pakarnattangal* (Kottayam: Papyrus Books, 2012), 10-14.
5. "The Story of Phulmoni: Translations of Modernity," Introduction to *Phulmoniyudeyum Korunayudeyum Katha*, Thiruvananthapuram: Chinta, 2013.

Dr. Saji Mathew

6. Contributed translations to *The Oxford India Anthology of Malayalam Dalit Writing* edited by M. Dasan, V. Prathiba, Pradeepan Pampirikunnu, and C. S. Chandrika (2012).

3.8 No. of University Departments receiving funds from

UGC-SAP	<input type="text" value="5"/>	CAS	<input type="text" value="NA"/>	DST-FIST	<input type="text" value="2"/>
DPE	<input type="text" value="NA"/>			DBT Scheme/funds	<input type="text" value="1"/>

3.9 For colleges

Autonomy	<input type="text"/>	CPE	<input type="text"/>	DBT Star Scheme	<input type="text"/>
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INSPIRE CE Any Other (specify)

3.10 Revenue generated through consultancy

Rs. 3, 41,035/-

3.11 No. of conferences organized by the Institution

Convener	Title	Level
Dr AP Thomas	International conference on membranes (ICM-2013), October 3-6, 2013, Kottayam	International Conference
Dr AP Thomas	Seminar on conservation of Western Ghats, School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala, 16 th December 2013	National Seminar
School of Pure and Applied Physics	National Seminar On Advanced Materials , School of Pure and Applied Physics, Mahatma Gandhi University, January 19-20, 2012	National Seminar
School of Pure and Applied Physics	National seminar on 100 years of crystallography, School of Pure and Applied Physics, Mahatma Gandhi University, Aug 2013	National Seminar
School of Behavioural Sciences	One day National Conference on inclusive education 26.03.2013	National Seminar
School of Behavioural Sciences	One day Seminar on classroom management of students with learning disabilities on 23.01.2013	State Level Conference
School of Behavioural Sciences	Two days national conference on cognitive behaviour therapy organised from 22 nd -24 th March 2013	National Seminar
Dr.E V Ramasamy	National Conference on Conservation and Management of Wetland Ecosystems - LAKE-2012" conducted at School of Environmental Sciences, MG University, Kottayam, November 06-09, 2012	National Conference
Dr CT Aravindakumar	International Conference on Advanced Oxidation Processes (AOP2012), October 5-8, 2012	International Conference
School of India Legal Thought	All India Human Rights Moot Court Competition from 14-16 February 2012	National Conference
School of India Legal Thought	National Seminar on Family as an Institution : Modern Realities and Trends in Law, 28 February –March 02 2013	National Conference
Dr CT Aravindakumar	Three day National Workshop on Frontiers of Spectroscopy and Microscopy 10-12 Sept 2012	National Conference
School of Computer	Interface 2012, a National level IT Meet organized by the	National

Sciences	School in association with Computer Science Students' Association of the School	Seminar
School of Computer Sciences	One skill enhancement workshop on " Open source software " was organized by the School during 2012 , inaugurated by Dr. Iqbal , former Vice-chancellor of Kerala University	National Seminar
Dr.T.V. Thulasidharan	Organized a Three day Course on Research methodology in Education on August 12th to 14th 2013 at School of Pedagogical Sciences, Mahatma Gandhi University, Kottayam	Workshop

SCHOOL OF INTERNATIONAL RELATIONS & POLITICS

1. **International Conference** on "The Rise of China: Policy Parameters and prospects," in collaboration with the Institute for Contemporary Chinese Studies, Mahatma Gandhi University, 1-3 November 2012.
2. **International Conference** on the "Arab World: March Towards Democracy" was on 4-5 February 2013 under the auspices of the KPS Menon Chair for Diplomatic Studies, organised in association with the Ministry of External Affairs, Government of India, the Indian Council of World Affairs, and Kerala State Higher Education Council. The Conference was inaugurated by India's Foreign Secretary Sri. Ranjan Mathai.
3. **International Symposium** on "The Political Transition in China and the United States: Implications for India organised in association with the Institute of Contemporary Chinese Studies, Mahatma Gandhi University "held on 28 February 2013. The speakers of the Symposium were Prof. Jia Haito, Jinan University, China, Prof. Steve Hook, Kent University, USA, Prof. Srikanth Kondappalli, JNU, Sri. Murali Nair, former Indian Consul in China, Sri./ Kim Jingwoog, South Korea, Ambassador K.P. Fabian et al.

3.12 No of faculty served as expert, chairpersons or resource persons

SCHOOL OF BIO-SCIENCE

Faculty

Programmes associated

Dr.J.G.Ray : Member American Agronomy Society (ASA), Crop Science Society of America (CSA) and Soil Science Society of America (SSA)

Full Member of the Ukrainian Academy of Ecological Science

Life Member Indian Society of Environmental Scientists

Life Member, Swadeshy Science Movement of India

Member of the Editorial Board of two international Journals:

1. Ecology and Noosphereology
2. Journal of Soil Science (Official journals of the Ukrainian Academy of Ecological Sciences)

Member, Executive Council, Institute of Intensive Research in Basic Sciences

- Dr. Anie Y : Internal Expert, Institutional Biosafety Committee, School of Biosciences, M G University
- Scientist-in -Charge, Animal House, Institutional Animal Ethics Committee School of Biosciences, M G University
- Member, Institutional Human Ethics Committee, School of Biosciences, M G University
- Name of Board Committee/ Whether member/Chariman/Convenor
- Member, Board of Examiners, IV semester M.Sc Biochemistry Examinations, 2012, MG University.
- Member, Board of Examiners, M.Tech Biotechnology Examinations, 2012, University of Kerala.
- Member, Board of Question paper setters, I, III and V semesters of B.Sc Biotechnology, 2012, University of Calicut.
- Member, Board of Question paper setters, II and IV semesters of B.Sc Career related CBCSS Exam, 2013, University of Calicut.
- Member, Board of Examiners, I semester M.Sc Biotechnology (CSS) Examinations, 2013, MG University.
- Member, Board of Question paper setters, B.Sc Biophysics Examinations, March 2013, University of Calicut.er
- Member, III semester M.Sc Biochemistry Examinations, 2012, MG University
- Dr. Keerthi T.R : Convener expert committee of both B.Sc., and M.Sc.,CSS Biotechnology Programme, Mahatma Gandhi University
- Member, Board of Studies, (Microbiology) Calicut University
- Member, Board of Studies, (Biosciences), Mahatma Gandhi University.
- Member Doctoral Committee of PhD program in Biosciences/Botany/Zoology and Pharmacy.
- Chairman IVth semester M.Sc., Microbiology Examination-Mahatma Gandhi University Chairman Board of question paper setters (UG & PG) Biotechnology - Calicut University
- Chairman Board of question paper setters, B.Sc., Biotechnology (Vocational/Restructured) programmes, Kerala University.
- Member question paper setters (UG&PG) Microbiology Calicut University
- Member question paper setters B.Sc., Biotechnology, Kannur

University.

Member question paper setters M.Sc., Biotechnology Cochin University.

External Examiner for M.Phil&M.Tech programmes in Calicut, Cochin & Kerala University

Warden, Ladies Hostel, Mahatma Gandhi University.

Member, Antiharrasment Cell Mahatma Gandhi University.

Member Institutional Ethical Committee, Mahatma Gandhi University.

Member, SC/ST monitoring cell Mahatma Gandhi University

Chair Scientific session: International Biotechnology Symposium, "IBS 2012", September 16 - 21, 2012, Daegu, Korea

Dr. Radhakrishnan E.K : Talk as part of the "Inculcating Research Acumen - Lecture Series" organized by Department of Biosciences, MES College, Marambally on September 27, 2012.

At the "Workshop on Tools and Techniques in Molecular Biology and Bioinformatics" organised by the SNGS College, Pattambi on 11 to 13 February, 2013.

Invited Lecture on Metagenomics at the "International Workshop on Molecular Markers and Genome Analysis in Plants" organized by Department of Botany, University of Kerala on March 12-16, 2013.

Dr Jayachandran K : Acted as an expert in the interview committee for the selection of the research fellows in the CMLRE-MOES Sponsored project at Department of Biotechnology, Cochin university of science and technology from 23 rd February 2013

Acted as a hD examiner of the thesis entitled " Micropropagation, anatomical and preliminary phytochemical analysis of a rare and endemic medicinal plant' of Manonmaniam Sundaranar University, Tamilnadu, April 2013

Delivered a invited lecture on Bioprocess Technology to Mtech Marine Biotechnology of National centre for aquatic animal health, at lakeside campus, Cochin university of science and technology on 14-02-2013

Acted as the Subject expert for the hD qualifying viva of Smt. Titu George in the subject of Life sciences at Kannur University on 29 th November 2012

Acted as subject expert for the Assessment committee of CSIR for the student Ms. Reghamol KR at Cochin university of science and technology on November 2012

Acted as chairman for the PhD viva voce of Sri Bindhumol L on the thesis "Studies on exopolysaccharide production by probiotic lactic acid bacteria" at Cochin University of science and technology on March 8th 2013

Dr Jyothis Mathew : Chairman, Institutional Human Ethics Committee, School of Biosciences, Mahatma Gandhi University, Kottayam

Chairman, Institutional Animal Ethics Committee, School of Biosciences, Mahatma Gandhi University, Kottayam

Member, Board of Studies in Biosciences, Mahatma Gandhi University, Kottayam

Convenor, Expert Committee in Microbiology (U.G.) Mahatma Gandhi University, Kottayam

Member, Academic Council, Mahatma Gandhi University, Kottayam

Member Board of Studies (UG) in Zoology, Mahatma Gandhi University, Kottayam

SCHOOL OF COMPUTER SCIENCES

Faculty

Prof. (Dr.) R.
Vijayakumar

Programmes associated

Technical talk on “Research opportunity in Computer Science “
: in the Inauguration of the ACM Chapter at MEASS College ,
Calicut.

Inaugurated and delivered Inaugural address

- in the UGC Sponsored seminar on “Bridging the Digital Divide : role of IT and Libraries” : 29/11/2012 at Newman College ,Thodupuzha.
- Inter-National conference on Advanced trends in Computer Networking”- FISAT , Angamaly.
- National conference “ “ at St.Thomas College, Trissur.
- National conference on Advanced trends in Computer Networking”- FISAT, Angamaly.

Nominated as the Adjunct Professor of State Inter University Centre of Excellence in Bio Informatics at University of Kerala. Took part in evaluation of M Phil, Ph D, and delivered talk on “ The Neurons : in research applications”.

Member of expert committee in IT for 12th Plan by the Government of Kerala.

Members of Research Committee of the University.

Expert member for surprise visits and evaluations of Engineering Colleges/Institutions as per the instruction of AICTE, New Delhi.

Ms. Bindu V.R. : Chair person, Board of Studies in Computer Science and Applications (PG), Mahatma Gandhi University, Kottayam, Kerala. Revised MSc IT syllabus of Affiliated Colleges/Institutions as per the PG Programme Regulations for Credit Semester System (MGU-CSS-PG 2011) .

Member, Board of Studies in Computer Science (PG) University of Kerala, Thiruvananthapuram.

Chair person, Board of Studies, School of Computer Sciences, Mahatma Gandhi University, Kottayam, Kerala.

Member of Selection Committee for appointment of Assistant Professor in colleges affiliated to MGU.

Question Paper setter for Kerala Public Service Commission.

External Examiner for MSc Project Evaluation and Viva-voce, M Sc Computer Science, University of Kerala, Thiruvananthapuram.

Member of Board of Question paper setters for B Sc Computer Science Examinations of Kerala University.

Member of Board of Question paper setters for M Sc Computer Science and M Sc IT Examinations of Calicut University.

Placement Co-ordinator, School of Computer Sciences, Mahatma Gandhi University, Kottayam, Kerala.

Expert member of the committee for affiliation of new courses to colleges of MGU.

Faculty co-ordinator of Interface 2012, a National level Technical event of seminars, IT related technical contests etc., organized by the School in association with Computer Science Students' Association of the School.

- Ms. Pushpalatha K.P. : Member of organising committee, Interface 2012, a National level Technical event of seminars, IT related technical contests etc., organized by the School in association with Computer Science Students' Association of the School.
- Member, Board of Studies, School Of Computer Sciences, Mahatma Gandhi University, Kottayam, Kerala.
- Member, permanent cell to combat sexual harassment in the University.
- Question paper setter for degree examination of University of Kerala.
- Question paper setter and Examiner for the Entrance examination for PG admission of M.Sc. Computer Science Programme.
- Ms. Anuj Mohamed : Member, Board of Studies in Computer Science and Applications (PG), Mahatma Gandhi University, Kottayam, Kerala.
- Member, Board of Studies in Computer Science (Pass) University of Kerala, Thiruvananthapuram.
- Member, Board of Studies in Computer Science, School of Computer Sciences, Mahatma Gandhi University, Kottayam, Kerala.
- MCA Project Evaluator, Indira Gandhi National Open University (IGNOU), Regional Centre, Cochin.
- Member of organising committee, Interface 2012 a National level IT Fest organized by the School in association with Computer Science Students' Association of the School

Dr.Robinet Jacob : Question Paper setter/ Examiner VI Sem. Career related B Com CBCSS exam. (Tourism), February 2013, Kerala University.
Question Paper setter/ Examiner II Sem. Career related B Com CBCSS exam. (Tourism), April 2013, Kerala University.
Conducted M Phil Viva Voce Examination at Christ University, Bangalore on 26 April 2013.
Question Paper setter/ Examiner II & IV Sem. MTA exam, May 2013, Kerala University.

OTHER ASSIGNMENTS

External Subject Expert in the Staff Selection Committee board meeting held at Avinashilingam University, Coimbatore on 19/11/2012.

Subject Expert & Member, inspection committee for assessing fresh/ renewal applications for new colleges/courses, M.G University, May 2013

SCHOOL OF BEHAVIOURAL SCIENCES

Dr. P.S. : Dean, Faculty of Behavioural Sciences.
Sukumaran : Member, Academic Council, M.G University.
Convenor, Core Committee, B Ed Special Education(MR) M.G University
Convenor, Core Committee, M Ed Special Education(MR) M.G University
Chairman, Board of Examiners, B. Ed Special Education (Hearing Impairment), University of Calicut.
Chairman, Board of Examiners, B. Ed Special Education, (MR), M.G University.
Chairman, Board of Examiners, M. Ed Special Education, (MR), M.G University

Smt. Rincymol : Member, Board of Studies, Nursing (UG and PG), M.G University
Mathew

Dr. K M Krishnan : Member of panel constituted by Government of Kerala to prepare Text Book for State Skill Development Programme SSDP for ASAP in July 2012.

Gave a lecture at the inaugural session of National Seminar on Literature and Theatre at B K College, Amalagiri, on 2 August 2012

Camp Director DSS Workshop on Poetry 25, 26 September 2012.

Camp Director DSS Workshop on Drama 27, 28, 29 September 2012

Member Board of Studies PG University of Calicut

Member Core team ASAP, of State Skill Development Project, Government of Kerala

Member governing Council CIFSS Piravom

Member Editorial Board *Dhimahi* Journal of CIFSS

Joint Director CELCS, Mahatma Gandhi University

Dr. P P Raveendran : Inaugural Lecture on “The Indian Renaissance and the Politics of Language” at the Seminar on Language and the Renaissance, Centre for Renaissance Studies, Sree Sankaracharya University of Sanskrit, Kalady, 16 June 2011

UGC Seminar on Cultural Studies, Department of Malayalam, University of Kerala, Thiruvananthapuram, 7-9 November 2012. (Paper: “New Trends in Cultural Studies”)

Invited lecture at the Department of English, Presidency University, Kolkata, 4 Dec. 2012 (Topic: Indian Writing in English)

UGC Refresher Course on Twentieth Century Literature, Calcutta University, Kolkata, Keynote lecture at the inaugural session, 3 December 2012.

UGC National Workshop on “Literary Theories: East and West,” Sanskrit University Regional Centre, Thiruvananthapuram, 18-21 December 2012 (Topic: “Language, Literature and Culture: New Approaches”).

UGC National Seminar on “Language and Literature in the e-Era,” Department of English, Payyannur College, 4-5 January 2013 (Keynote lecture: ‘Technology and Literature’).

UGC National Seminar on “Narratives,” Department of English, SS University of Sanskrit, Kalady, 26-28 February 2013 (Lecture: “Verbal Narratives”)

National Symposium on Post-Theory Perspectives on Art, Technology and Multiculturalism, Department of English, University College, Thiruvananthapuram, 6-7 March 2013 (Inaugural/Keynote lecture on ‘Theory and After in Art and Technology’)

National Symposium on Everyday Life, Department of Comparative Literature, Central University of Kerala, Kasaragod, 27-28 March 2013 (Paper: ‘Modernity and the Everyday’)

Academic Seminar Participation (2)

UGC Seminar on the Affiliating System, UGC Southern Regional Office, Bangalore, 19 October 2012.

IQAC University Coordinators’ Workshop, NAAC, Bangalore, 4-5 July 2012.

Dr. PS Radhakrishnan : Member, Board of Studies, Dept. of Comparative Studies, Sreesankaracharya University of Sanskrit, Kalady
Member, Board of Studies, Malayalam Sarvakalashala, Tirur
External expert for Doctoral Committee at Kerala University, , S.S. U.S, Kalady

Resource person for various workshops, Seminars etc

SCHOOL OF ENVIRONMENTAL SCIENCES

- Dr. Syllas VP : Resource Person of National Seminar on Conservation of Wetlands organised by St. Joseph College, Alappuzha (2012).
Resource Person of National Seminar on Water Resources organised by St. Johns College, Anchal, Kollam (2012).
Resource Person of National Seminar on Wetland resources organised by Sree Narayana College, Cherthala, Alappuzha (2012).
Resource Person of National Seminar on Wetlands organised by Assumption College, Changanachery, Kottayam (2012).
Co-ordinator of National Science Day Celebrations – 2012 at MGU. (Rs. 20000/- has been sanctioned by KSCSTE, Govt. Of Kerala).
- Dr E.V.Ramasamy : Resource person and delivered an invited lecture also chaired a session at the First National Biodiversity Conference (NBC)-2012 held at Thiruvananthapuram during December 27-30 2012 , Organised by the Kerala State Biodiversity Board.
- Dr CT Aravindakumar : 2nd International Conference on Environmental Pollution, Restoration and Management, Vietnam, March, 2013 (Invited talk)

SCHOOL OF PEDAGOGICAL SCIENCES

- Dr. Celine Pereira** : Resource Person in **the International Seminar** on Gandhian Educational Principles and Practices in the Emerging Global Scenario held on 25-27 July 2012 organized by Dr. N.P. Pillai Centennial Celebration Committee and SPFERD. **Paper:** Reflections on Development of ICT in Comparison with Value Enhancement
- * Resource Person in the **National Seminar** on Educational Renaissance for a new Generation held on 28-29 November 2012 organized by St. Thomas College of Teacher Education, Pala.
- * Resource Person paper in the **International Seminar** on Innovation, Quality and Excellence in Education held on 11-12 March 2013 organized by CTE in Fatima Memorial Training College, Kollam. **Paper:** Enhancing Quality of Education through Revitalizing Schools as Moral Enterprises.
- * Resource Person in the National Seminar on Inclusive Education held on 26 March 2013 in the School of Behavioural Sciences
- Dr. Minikkutty A** : Acted as a Resource Person in the two days UGC Sponsored National Seminar on “Naturalistic Intelligence-Harmonizing Scientific Inquiry and Eco-friendliness in Learners” organized by NSS Training College, Changanacherry on 12th & 13th July 2012
- Acted as Resource Person in the UGC Sponsored two days National Seminar on “Reflective Practice: A Tool for Professional Development of Teachers” organized by St. Joseph’s Training College, Mannanam on 16th & 17th August 2013

Dr. K.P. Suresh : Resource Person in the National Seminar on Innovative Approaches and strategies of Digital Pedagogy held on 7th and 8th March 2013 at Zainab Memorial College of Teacher Education, Cherkala, Kasargod.

Resource Person Globalization & Education: Need for culturally Responsive Teaching is the International Conference “Global Education: Methodologies & Strategies organized by Nazareth College of Education for Woman, Avadi, Chennai on 24th & 25th January 2013.

Resource Person Addressing Multicultural Education in the context of Globalization: Repositioning Culturally Responsive Teaching in the International conference “Teacher Education: Meeting the needs of the new generation organized by Dr.Sivanthi Aditanar College of Education, Thiruchendur on 24th and 25th January.

Resource Person in the International Conference - 22nd February 2013 states of Tibet in the contemporary world politics Government First Grade College Kushal Nagar.

Dr. T. V. Thulasidharan : Served as Resource Person for the UGC sponsored Two Day National level Seminar on Right to Education : Problems and Challenges organized by Dr. Ambedkar College of Education, Bangalore on 27th and 28th September 2013

3.13 Details of Collaborations

Faculty/Coordinator of the program	Collaborating Institution	Type of collaboration	Other details
School of International Relations and Politics	Institute of Political Studies (IEP) of Rennes, France	International	International
	Institute of Chindian Studies, Jinan University, China	International	International
	School of International relations and Politics and Earlham College (EC), a liberal arts college in Richmond, Indiana, U.S.A.	International	International
	Po Bordeaux (IEP), FRANCE	International	International
	Department of Strategic and Regional Studies, University of Jammu, Jammu	National	National
	Sahitya Akademi, New Delhi	National	National
Bucknell University, Lewisburg, Pennsylvania, USA	International	International	

<p>International and Inter University Centre for Nanoscience and MNanotechnology</p>	<p>Bhabha Atomic Research Centre, Mumbai, Raman Research Institute, Bangalore, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, UGC DAE CSR Kolkata Centre, Kolkata, Pushpagiri Research Centre Thiruvalla, Kerala, Saha Institute of Nuclear Physics, Kolkata, National Chemical Laboratory, Pune, Rubber Research Institute of India, Cochin University of Science and Technology, Cochin, Kerala, Centre for Materials for Electronics Technology Thrissur, Kerala, Central Electrochemical Research Institute (CECRI), Karaikudi, Indian Institute of Technology, Kharagpur, Banaras Hindu University, Indian Institute of Space science and Technology, Trivandrum, Indian Institute of Technology, Mumbai, Madras Indian Institute of Science , Bangalore</p>	<p>National</p>	<p>National</p>
	<p>International</p> <p>Walter Sisulu University, South Africa</p> <p>Almighty Institute of power Engineering and Telecommunication</p> <p>Deaken University, Australia</p> <p>University of Rouen</p> <p>Kansas State University, Manhattan, Kansas ,USA Siberian Federal University, Russian Freedom</p> <p>Laboratoire Des sciences Analytics, CNRS UMR, France</p> <p>University Lorraine, Nancy, France</p> <p>University of Pretoria, South Africa</p> <p>Changwon National University, Korea</p>		

	<p>Cape Peninsula Uni of Tech South Africa</p> <p>Beijing University of Chemical Technology China</p> <p>Technische Universität Chemnitz Germany</p> <p>Martin Luther Universität Halle Wittenberg Germany</p> <p>Institute of Polymer Research Germany</p> <p>CNRS Thiais France</p> <p>University of Paris 12, France</p> <p>University of Sud Brittany, France</p> <p>University of Free state South Africa</p> <p>University of Strassburg, France</p> <p>Jozef Stefan Institute Ljubljana Slovenic</p> <p>Université Paris- Sud XI France</p> <p>National . University of Singapore, Singapore</p> <p>Leibniz Institut für Katalyse e.V Rostock Germany</p> <p>LECAP. University of Rouen, France</p> <p>University of Lemans, France</p> <p>University of Rijeka, Croatia</p> <p>University of Orleans France</p> <p>MOUs signed with the following Industries:</p> <p>MRF</p> <p>Apollo Tyres</p>		
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	Surface Treat, Czech Republic General Cables, USA		
School of Pure and applied Physics	National Institute of Immunology, Chandigar Department of Optoelectronics, Univ. of Kerala School of Life Sciences, University of Kannur. Prof. Paolo Laporta, Dipartimento di Fisica, Politecnico di Milano, Italy: Dr. Gin Jose, Institute of Material Science, University of Leeds, UK Prof. V P N Nampoori, ISP, CUSAT. Dr. Reji Philip, Scientist, RRI, Bangalore. Dr. M R. Anantharaman, Dept of Physics, CUSAT DrMahadevan Pillai, professor, Kerala University,Trivandrum Dr. Toney Teddy Fernandez, Instituto de Physica, Madrid, Spain Dr.SujathaDevi,CGCRI,Kolkata G.Ajithkumar, University of Texas,Texas C.KJayasankar,S.VUniversity,Tirupathi Inter University Center for Astronomy & Astrophysics -Pune Raman Research Institute – Bangalore. Bhabha Atomic Research Centre, Mumbai, India Raman Research Institute, Bangalore, India Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India UGC-DAE Consortium for Scientific Research-Kolkata Centre, Kolkata, India Cochin University of Science & Technology, Kochi, India	National	National

	<p>Inter University Accelerator Centre, New Delhi, India</p> <p>Walter Sisulu University, South Africa</p> <p>Jožef Stefan Institute, Ljubjana, Slovenia</p> <p>Trent University, Canada</p>		
School of Computer Sciences	<p>Dr. Clif Kussmaul, Professor, Muhlenberg College, Allen Town, PA, USA: is also our expert committee member of the foreign Universities</p> <p>Dr. Roger B Dannenberg , Professor, SOCSAM, Carnegie Mellon University, England</p> <p>A.M. Al Harthy ,Vice chairman, Polyglot Institute, Muscat, Sultanate of Oman: : is also our expert committee member of the foreign Universities</p> <p>Dr. Aravindakshan , Director School of Management studies , Polyglot Institute, Muscat, Sultanate of Oman</p>	International	International
School of Computer Sciences	<p>State Inter University Centre of Excellence in Bio Informatics, University of Kerala</p> <p>CEDT , IISc Bangalore</p> <p>Computer Science Dept , IIT Mumbai</p> <p>Polus Software Pvt. Ltd., Technopark, Trivandrum</p> <p>SunTech Solutions, Technopark, Trivandrum</p>	National	National

3.16 Details of patents

- Patent name :
1. Biodegradable, Biocompatible Wound Healing Dressing Film and ointment from the Biocomposite of Marine Origin, 2012 M.Kurup and Sabu Thomas
 2. Highly gas impermeable elastomeric rubber- rubber blend nanocomposite, Indian Patent field, 2012 Sabu Thomas, Ajesh K. Zachariah, P.K. Mohammad, Arup Kumar Chandra

3.17 Details of research awards recognition received by the faculties and research fellows

Name	Designation	School	Details of awards/recognition
Prof Sabu Thomas	Professor	SCS	<ol style="list-style-type: none"> 1. Fellow of the Royal Society of Chemistry, London, FRSC, 2012 2. Awarded Bronze Medal of Chemical Research Society (CRSI) of India, 2013 3. Awarded Materials Research Society of India Award (MRSI), 2013
Dr.E.V.Ramasamy	Associate Professor	SES	<p>nominated as a member of the State Waste Management Policy Committee by the Local Self Government Department, Govt. of Kerala (November 14, 2012)</p> <p>member of the Special Board of Studies in Pollution Control and Environmental Engineering of Pondicherry University (October 26, 2012)</p>
Dr.C.T. Aravindakumar	Professor	SES	Visiting Professor (with full Professor status) at the University of Paris-East (Department of Geology and Environment)
Dr. Mahesh Mohan	Asst Professor	SES	DST-SERB Fast Track Project for Young scientist

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

Sl.no	Department	Details
1.	School of Behavioural Sciences	Life skill education for adolescents, Early identification & intervention for childhood disorders, Counselling services for parents and children, Mental health programmes, Sensitization and awareness programmes on Drug addiction & alcoholism
2.	School of Bio-sciences	<p>The extension activities of the school is being organised by BioScience Forum, the organisation of the students, teachers and staff of the school</p> <ul style="list-style-type: none"> * Environmental day was celebrated on June 5th 2012 * Celebrated green campus day by cleaning the school campus on November 3rd 2012 * Made a visit and spend one day at Navajeevan, the orphanage for mentally retarded people Arppookara Kottayam on 6th February 2013. And contributed an amount of rs.14,000/- * Organised Intercollegiate Quiz competition with 45 college participants on 21st March 2013. * Biofest 2013 was organised on 21st March 2013
3.	School of Computer Sciences	Interface 2014- an annual IT Meet (IT competitions) organized by the School provided a platform for students in Computer Science and Technology from various Universities and Colleges in South India to showcase their technical talents and also served as a forum for information interchange in the field.
4.	School of Environmental Sciences	<p>(i) Obama Singh 21st Century Knowledge Initiative Programme (OSI): the recent selection of School of Environmental Sciences (April 2012), M.G university by the UGC for the award of prestigious Obama Singh Knowledge Initiative Programme (OSI) is a milestone achievement of the school. Out of the 140 applicants only four institutions have been selected in the country for this award. M.G University boasts the unique position of the lone affiliating state university among the four while rest three are being IITs and central universities.</p> <p>(ii) Erudite Scholar-in-Residence</p>

		<p>programme where 5 Nobel Laureates have been visited the department. Another 10 scholars from different parts of the world have visited the department.</p> <p>(ii) Rainwater for Humanity</p> <p>The School has extension programme known as 'Rainwater for Humanity' in collaboration with Brown University (USA), local panchayath and self help groups. Through this extension programme, the School envisages to adopt small villages with an objective of providing basic amenities like drinking water and sanitation. As a part of this programme the School has installed 4 ten thousand litre capacity harvesting tanks at Achinakom village in Vechoor Grama Panchayath in Kuttanad region. Construction of additional rain water harvesting tanks are in progress.</p> <p>(iii) Days of National and international significance were observed : The school has observed days of national and international significance in grand manner with financial support from external funding agencies. The following days have been observed at this school during 2012: (The photographs of some of these activities are attached separately)</p> <p>(A) The National Science Day -2012</p> <p>The School of Environmental Sciences (SES) celebrated the national Science Day -2012 in collaboration with Kerala State Council for Science, Technology and Environment (KSCSTE) supported by department Science and Technology, Government of India, on February 27th, 2012 in a grand manner.</p> <p>The participants of Nsd 2012 include: Students and teachers from near by schools, M.Sc, M.Phil students, Ph.D scholars and faculty members from this school.</p> <p>The National Science Day -2012 was celebrated as two sessions, in the forenoon section an invited talk by Prof.P.N.Thankachan, associate Professor, Department of Electronics, Rajiv Gandhi Institute of Technology (RTI), Pampady on 'Clean energy options and nuclear safety' was organized. the afternoon session, was entirely allotted for the school children and</p>
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the following events were conducted for them: poster making competition, quiz competition and laboratory visit. The following schools participated in the event: Government High School, Arpookkara, SKV Govt high School, Kallara, HolyCross Vidya Sadan, Thelakom and St.Aloysius High school athirampuzha. The winners of the events were rewarded with prize and certificates

(B) World Environment Day (WED) 2012 : The school celebrated the World Environment Day (WED) on June 05, 2012 in a befitting manner. As the theme of the Years WED was '**Green economy: Does it include you ?**', the schools first day celebration was focused on one day seminar on the theme. In the seminar Dr.M.P.Parameshwaran,Dr.T.V.Muralivallabhan (Acosiate Professor , NSS College, Vazhoor) delivered talks on green economy and Dr.PC Abhilash (Asst.Prof.BHU, Varanasi) spoke on Green Technology.

On the second day (June 6th), the School organised a one day training programme for school teachers on biodiversity assessment. Training programme started with a lecture on "Challenges in biodiversity conservation in the Western Ghats" by Dr. E. Kunhikrishnan and followed by training on village biodiversity assessment methods by the Faculty of the School.

Conferences organised in 2012

1. International Conference on Advanced Oxidation Processes (AOP2012), October 5-8, 2012,

The second International Conference on Advanced Oxidation Processes, was conducted during October 5-8, 2012 by the School of Environmental Sciences in collaboration with the Society of Environmental Chemistry and Allied Sciences. This was a follow up programme of the first international conference on AOP in 2010 which was also conducted in the School of Environmental Sciences. Improper and uncontrolled disposal of chemicals from chemical, pharmaceutical and other industries, dyestuffs from textile industries, increased use of

		<p>pesticides in the agricultural fields <i>etc</i> have resulted in the contamination of both ground and surface water to a great extent. Contamination of drinking water is a major problem faced in different parts of the world. Research is being concentrated for the development of new technologies for the safe destruction of the pollutants. Advanced Oxidation Processes (AOP) refers to chemical oxidation treatment procedures based on the in-situ generation of highly reactive species that lead to the destruction of organic and inorganic materials in waste water by oxidation. This was the motivation of the conference</p> <p>The conference was attended by nearly 250 delegates from all over the world. About 18 invited speakers were from outside India, and nearly 20 from within India (IITs, IISERS, Central and State Universities, CSIR, DRDO and DAE research institutions). Nearly 100 posters were presented by participants from premier institutions in India and abroad. In addition, there was an Young Investigators' session where ten selected young scientists presented their papers. The concluding session of the conference decided to conduct one National conference in 2013 and the third international conference in 2014.</p> <p>2. Lake 2012 Conference</p> <p>The 8th Biennial Lake Conference focusing on "<i>Conservation and Management of Wetland Ecosystems</i>" LAKE 2012 was organized by School of Environmental Sciences, M.G.University at Kottayam in association with Indian Institute of Science (IISc), Bangalore and Advanced Centre of Environmental Studies and Sustainable Development (ACESSD)- an interuniversity centre , Mahatma Gandhi University, Kottayam, Kerala during November 06- 08, 2012.</p> <p>The conference was attended by 230 participants representing various parts of the country. There were 15 Technical Sessions during which 112 research papers were presented as oral presentations, 9 poster</p>
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		<p>presentations, 13 invited lectures and 2 plenary lectures were delivered with active deliberations.</p> <p>Out of these 15 technical sessions two require special mention, one was the boat session conducted on 7th November, this session with a theme of 'Vembanad Lake' was conducted in a big conference boat as 'Conference on Cruise' floating on the Vembanad lake itself. This session went on for two and half hours with a plenary lecture on "A Glimpse of Vembanad lake Environment" delivered by Dr.A.K.Varma, from Centre for Earth Science Studies (CESS), Thiruvananthapuram, and 10 research papers were presented. The next session require special mention was "My Village BioDiversity", session conducted on November 08, 2012. This session was conducted exclusively for the school students of class VII to IX standards. This group of students were presenting the findings of their study which they have conducted for about two months on surveying the flora and fauna of their village. There were 12 student paper presenters, a panel of judges selected best three papers and the students were rewarded.</p> <p>3. National Seminar on Sustainable Development (NSSD 2012)</p> <p>The National seminar NSSD 2012 was organised as a part of a mega event INBOFA – 2012 : International Book Fair, Theme Discussions & Seminars 2012' during January 13 – 23, 2012 organised by Mahatma Gandhi University. This two day seminar was conducted during January 20-21, 2012 with a financial support from Directorate of Environment and climate change (DoECC), Govt. of Kerala. The seminar was conducted as Four Sessions including the inaugural and valedictory sessions. There were Five invited lectures delivered by resource persons pooled from different parts of the country and 20 oral and 8 poster presentations by scholars from different parts of the state and country. Best poster and oral presentations were awarded on the valedictory ceremony of the seminar on January 22, 2012.</p>
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5.	School of Gandhian Thought & Development Studies	Extension activities take place every weekend as part of compulsory field work of MA curriculum with the students visiting NGOs, Panchayats, Medical College etc.
6.	School of Indian Legal Thought	Conducted two day National Seminar, Dr.Ambedkar Memorial Annual Lecture and also Legal Literacy Camps in different Kudumbasree units in Kumaranalloor Panchayath, Kottayam District.
7.	School of International Relations & Politics	The SIRP organised several academic programmes in the domains of IR,Human Rights, Public Policy and Governance. The teachers of the School led classes in and of the campus in the above areas. Some of the programmes were held in collaboration with colleges and non-governmental organisations.
8.	School of Letters	
9.	Department of Life Long Learning and Extension	Geriatric Health survey in collaboration with the UCME, CAP help desk, Dept facilitated UID Registration in collaboration with the Akshya Center, Vayala, Cancer Awareness Programmes, Seminar on Healthy Life Style
10.	School of Management and Business Studies	Blood Donation.Campus cleaning
11.	School of Physical education and sports sciences	Health check up for the University employees & Sports Academy for school students
12.	School of Pure & Applied Physics	The School has conducted INCULCATE programs in association with Government of Kerala for School children. The faculty members of the School also guiding students of M.Sc. and M. Tech from affiliated institutions of Mahatma Gandhi University in particular, and other institutions within Kerala as well as national institutions like IISER & NISER states. Faculty members also deliver invited talks on a regular basis in Colleges and Universities
13.	School of social sciences	To establish 'ABILITY', AN INTEGRAL ENABLING UNIT in the School of Social Sciences, Mahatma Gandhi University to address the differential academic requirements of physically challenged students and researchers (including hearing and visually impaired and persons with motor disabilities) of all teaching and research schools/departments of the Mahatma Gandhi University, and to the best extent possible, for students and teachers with disabilities of neighbouring colleges. To expand 'ABILITY' AS A RESOURCE-BUILDING, TRAINING AND

		DISSEMINATION INSTITUTION for physically challenged, especially visually impaired, students and researchers of humanities and social sciences across India, through training sessions, workshops, and camps, and by creating and sharing a substantive collection of audio-files of important texts of humanities and social sciences and by publishing ABILITY: AN AUDIO JOURNAL OF HUMANITIES AND SOCIAL SCIENCES RESEARCH. To develop the School of Social Sciences, Mahatma Gandhi University as a role-model institution of EQUAL ACCESS ACADEMIC ENVIRONMENT in higher education and research and as capable of assisting other institutions desirous of attaining this objective.
14.	School of Tourism Studies	Students in four groups undertook a project on “barrier free tourism in Kochi with special reference to Home Stays, Ayurvedic Resorts and Amusement Parks” in collaboration with the local tourism/leisure industry suppliers which enabled the students and department to analyse the imperative needs of the field concerned. This was a continuation of study conducted during the previous year. Faculty members engaged in dissemination of knowledge by handling regular columns in national newspapers and wrote 39 articles.
15.	International & Inter University Centre for Nanoscience & Nanotechnology	The centre organizes International meetings/conferences and workshops on a regular basis every year. MS and MPhil students were provided opportunity to work in international laboratories abroad during the course. The Centre has established strong collaborations with industry and other research and educational institutions in the country and abroad.
16.	Advanced Centre for Environmental and Sustainable Development	Rain water harvesting in a rural area, Afforestation & Eco-restoration activities with native plants in the campus & other areas
17.	Inter University Instrumentation Centre	Extensions of Analytical Services to education institution and industry
18.	The Department of Student Services	<ol style="list-style-type: none"> 1. Inauguration of the Music club on 26.07.2012 (Venue: University Assembly Hall) 2. Regional seminar on women counselling/ Empowerment on 30th July 2012. (Venue: St. Xaviers College, Aluva) 3. Inter Collegiate women counselling/ Empowerment on 3rd and 4th August 2012 (Venue: Nirmala College, Muvattupuzha) 4. Inter Collegiate women counselling/ Empowerment

		<p>on 7th and 8th august 2012(Venue:St. Joseph College of Teacher Education for Women, Ernakulam)</p> <p>5. women counselling/ Empowerment on 16th and 17th august 2012 (Venue: IUCSSR & E , Kottayam)</p> <p>6. Inter Collegiate women counselling/ Empowerment Seminar on 17th and 18th august 2012 (Venue: B. K College , Amalagiri)</p> <p>7. Inter Collegiate Music Semiar on 6th and 7th September 2012 (Venue: Maharajas College , Ernakulam)</p> <p>8. Regional women counselling/ Empowerment Seminar on 7th September 2012 (Venue: IMA Hall Kottayam)</p> <p>9. Inter Collegiate women counselling/ Empowerment Seminar on 10th and 11th September 2012 (Venue: Pavanatma college , Murickassery)</p> <p>10. Inter Collegiate women counselling/ Empowerment Seminar on 12th and 13th September 2012 (Venue: Assumption College , Changanassery)</p> <p>11. Inter Collegiate women counselling/ Empowerment Seminar on 13th and 14th September 2012 (Venue: M A College , Kothamangalam)</p> <p>12. Inter Collegiate women counselling/ Empowerment Seminar on 19th and 20th September 2012 (Venue: Catholocate College, Pathanamthitta)</p> <p>13. Inter Collegiate Literary Camp (Katha/ Kavitha) on 25th and 26th September (Venue:AMOS Centre Adichira, Kottayam)</p> <p>14. Inter Collegiate Literary Seminar on 25th and 26th September (Venue: Maharajas College , Seminar)</p> <p>15. Inter Collegiate Literary Camp (Screen play , Drama , Art , Criticism) on 27to 29th September (Venue: AMOS Centre , Adichira, Kottayam)</p> <p>16. Inter Collegiate Music Seminar on 28th September 2012. (Venue: SSV College , Valayanchirangara)</p> <p>17. Inter Collegiate women counselling/ Empowerment Seminar on 29th and 30th September 2012 (Venue: D B College , Pampa)</p> <p>18. Music Training Programme (August 2012 onwards)</p>
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5.4 Details of student support mechanism for coaching for competitive examinations (If any)

Sl.no	School/ Department	Activities done
1.	School of Behavioural Sciences	Done by the faculty on various subjects. Classes by experts are arranged as and when required. Help of University career guidance and information Centre is utilized for advanced

2.	School of Bio-sciences	The school regularly conducts orientation programme for the students to train them for UGC-CSIR examinations.
3.	School of Chemical Sciences	UGC-CSIR JRF/NET coaching
4.	School of Computer Sciences	The University provides a common facility, a career guidance and counselling centre. The students of the School can avail the facility as and when required.
5.	School of Environmental Sciences	Counselling and career guidance has been given to the students periodically by the faculty members.
6.	School of Gandhian Thought & Development Studies	It is organised at the University level. The School often provides physical space for holding such programmes
7.	School of Indian Legal Thought	Necessary guidance are periodically given to students for various competitive examinations
8.	School of International Relations & Politics	The students depend on the coaching classes conducted by the University. The School does not offer any special arrangements for that.
9.	School of Management and Business Studies	1.Aptitude Test Training. 2.Placement oriented training
10.	School of Pedagogical Sciences	Remedial coaching for SC/ST students, coaching for UGC – NET examinations
11.	School of Physical education and sports sciences	No. of student beneficiaries-nine
12.	School of Pure & Applied Physics	The School extends full support for the conduct of coaching classes for NET examination with Career guidance bureau. The faculty members also conduct examinations in the respective subjects in tune with the syllabi and examination pattern at the national level tests. These attempts have helped many students to qualify NET examination
13.	School of social sciences	Remedial coaching for SC/ST students, coaching for UGC – NET examinations
14.	School of Tourism Studies	Given general awareness and coaching for UGC Net exam

15.	International & Inter University Centre for Nanoscience & Nanotechnology	Coaching classes were given to students for UGC/CSIR and Gate examinations.
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5.6 Details of student counselling and career guidance

Sl.no	School/ Department	Activities done
1.	School of Behavioural Sciences	Done by individual teachers regularly as a part of teaching responsibility. The services of Swanthanam Clinic of the department also is utilized for the purpose.
2.	School of Bio-sciences	Separate committees have been working for student counselling and career guidance
3.	School of Chemical Sciences	Yes. Meeting of students are organized to address their vision and help them to achieve these.
4.	School of Environmental Sciences	Counselling and Career guidance has been given to the students periodically by the faculty members
5.	School of Gandhian Thought & Development Studies	Student counselling is provided by individual teachers during tutorial sessions
6.	School of Indian Legal Thought	Student counselling and carrier guidance provided to students by individual faculty
7.	School of International Relations & Politics	The School organised periodic academic counselling for the students on various aspects of the curriculum, assessment pattern and processes.. Counselling started at the beginning of each semester and continued throughout. The individual Faculty members involved themselves in providing students with necessary confidence and motivation to take up the challenges in the right earnest and good spirit. The weak and the disadvantaged among them got special attention.
8.	Department of Life Long Learning and Extension	The Dept operates a Development Centre for giving counselling service to the students, University staff and the public.
9.	School of Management and Business Studies	Strong placement cell for supporting placement and career guidance activities.
10.	School of Pedagogical Sciences	Provided by University Guidance Bureau which is headed by Dr. T.V. Thulasidharan, Professor of this School.
11.	School of Physical education and sports sciences	Counselling service provide to students, the opportunity for any student to discuss in private any concerns which may be impacting on performance or personal health and

		well-being
12.	School of Pure & Applied Physics	Faculty members as the mentor of each batch give proper guidance to all students for their placement. Most of the students are provided opportunities to work in national labs for their project. Through personal contacts students have been given opportunities for research work in India and abroad.
13.	School of social sciences	Individual faculty to individual students mode of student counselling and guidance.
14.	School of Tourism Studies	Classes commence with Induction Programmes giving an orientation to the students which enables them to tailor cut their aspirations to go along with the needs of the industry. Done adequate psychometric test to provide a self-evaluation to evaluate students. Career Orientation Seminar and keynote address by Mr.Krishnachandran, General Manager, Intersight Tours and Travels Pvt.Ltd, Industry familiarization-Career orientation programme by Shiju P.K , G.M, Tamarind tours , A lecture on hospitality by Mr.Motty Mathew, Owner ,Motty's Homestay , Alleppey . Special lecture given by Dr. Tony K Thomas, Deputy Dean ,Taylors university ,Malaysia. Special Lectures by the following experts :- Mr. K Unnikrishnan, Deputy Commercial Manager, Air India, Dr. Abey Kuruvilla, Associate Professor, University Of Wisconsin, USA, Dr. Sindhu R Babu and Dr. Deleep D .
15.	International & Inter University Centre for Nanoscience & Nanotechnology	We are conducting student counselling programs regularly and workshops for career guidance
16.	Advanced Centre for Environmental and Sustainable Development	Students participated in the counselling and career guidance programme of the University

5.10 Scholarships financial support details

Fellowship	Number of awardees	Amount Rs.
Post-Doc*	02	96000
Junior research fellowship*	05	8,68,441

Senior research fellowship*	03	6,42,474
Institutional fellowship	24	1,83,000
International/national recognitions (Aspire)	91	12,25,000
University JRF	150	5007979