



MAHATMA GANDHI UNIVERSITY

**INTERNAL QUALITY ASSURANCE CELL
PRIYA DARSINI HILLS PO, KOTTAYAM, KERALA**

Annual Quality Assurance Report

[2015-16]

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:

Dr.Babu Sebastian

Tel. No. with STD Code:

+914812731001

Mobile:

+91 9447128373

Name of the IQAC Co-ordinator:

Dr. Sabu Thomas

Mobile:

+91 9447223452

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:

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*)

2015-2016

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC

- AQAR 2014-15 submitted to NAAC on 10-08-2016
- AQAR 2010-11 submitted to NAAC on 08-08-2016

- AQAR 2011-12 submitted to NAAC on 14-01-2016
- AQAR 2012-13 submitted to NAAC on 10-02-2016
- AQAR 2014-15 submitted to NAAC on 03-03-2016

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 Management

PEI (Phys Edu) TEI (Edu) Engineering Health Science

Others (Specify)

Engineering & Technology, Technology &

Applied Sciences, Environmental and Applied Sciences, Behavioural Sciences, Paramedical Sciences.

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/School Centres established in 2015-16:

- Centre for Yoga and Naturopathy was started in School of Gandhian Thought and Development Studies.
- Inter University Centre for Organic Farming & Sustainable Agriculture.
- Business Incubation and Innovation Centre.

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="5"/>
2.3 No. of students	<input type="text" value="1"/>
2.4 No. of Management representatives	<input type="text" value="1"/>
2.5 No. of Alumni	<input type="text" value="1"/>
2.6 No. of any other stakeholder and community representatives	<input type="text" value="2"/>
2.7 No. of Employers/ Industrialists	<input type="text" value="2"/>
2.8 No. of other External Experts	<input type="text" value="NIL"/>
2.9 Total No. of members	<input type="text" value="21"/>
2.10 No. of IQAC meetings held	<input type="text" value="04"/>
2.11 No. of meetings with various stakeholders:	No. <input type="text"/> Faculty <input type="text" value="01"/>
	Non-Teaching Staff /Students <input type="text" value="01"/> Alumni <input type="text"/> Others <input type="text"/>
2.12 Has IQAC received any funding from UGC during the year?	
Yes	<input type="text"/>
No	<input checked="" type="text" value="v"/>

If yes, mention the amount

N.A

2.13 Seminars and Conferences (only quality related)

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total Nos. International National State
 Institution Level

(ii) Themes

- **NAADAM- International Ensemble on Music** from 22nd to 28th December 2015 was conducted by Inter University Centre for Studies in Science of Music (IUCSSM).
- Conducted **National Conference on Research in Emerging Areas** (NACORE 2016) 28.01.2016 to 30.01.2016.
- Organized **National Level Competition - India's First Cloud Computing Championship** – IFC3 INDIA from 9.02.16 to 10.02.16 in collaboration with Neuromancers, IIT Bhubaneswar and Inero, Scitech Council IIT Hyderabad.
- Organized a three day **National Level Workshop** on “**Data Analytics and Machine Learning Using R**” June 15-18, 2016 as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School, in collaboration with Scientific Computing Solutions, Chennai.

- **International Conference on Macromolecules:** Synthesis, Morphology, Processing, Structure, Properties and Application (ICM 2016): 13-15, May 2016 .
- **First International Conference on Advanced Materials for Power Engineering** (ICAMPE 2015): 11-13 December, 2015 .
- **International Conference on Nanostructured Polymeric Materials** (ICNPM 2015) : 13-15 November, 2015.
- **World Congress on Microscopy** (WCM 2015): 9-11 October, 2015.
- **Fourth International Conference on Natural Polymers** (ICNP 2015): 10-12 April 2015.

- **International Conference on 'Understanding Contemporary India'** was organized by Rajiv Gandhi Chair for Public Policy Studies, School of International Relations and Politics, Institute for Contemporary Chinese Studies, Mahatma Gandhi University during 14-15 January 2016.

- **User Awareness Programme on Plagiarism** for Faculty, Researchers and Students, organized by University Library, was convened in the University Library on 03. 06. 2015, which included a technical session by Mr. Manoj Kumar K (Scientist D (CS) of Information and Library Network (UGC-INFLIBNET) Centre, Gujarat on the use of **Anti-Plagiarism Software for Research Integrity and Ethics.**

- **National Conference on Models of best practices in the Rehabilitation and Empowerment** for persons with disabilities in collaboration with National Institute for Empowerment of People with Multiple Disabilities and IUCDS was conducted on 16th and 17th October 2015.

- **125th Birth Anniversary** of Dr BR Ambedkar was organized on 26th November 2015 by conducting seminar on *Constitutional Dharma and Preamble of Constitution* in School of Indian Legal Thought(SILT)
- **Seminar on Piezo Electric thin films-Influence of film texture for MEMS** -18th June 2015, School of Pure and Applied Physics. Also hosted talk on Radio Astronomy by Jagadheep Pandiyan, Indian Institute of Space Science and Technology, Thiruvananthapuram on 20th Nov 2015, hosted KSHEC ERUDITE PROGRAMME- Dr Dilip S Karanth- University of Wisconsin.
- Hosted Third **International Conference on Membranes (ICM 2015)** August 21-24, 2015, Kochi by Advance Centre of Environmental Studies and Sustainable Development (ACCESSD).
- Hosted **Second International Conference** on Frontiers of Mass Spectrometry (ICMS 2015) Dec 11-14, 2015, Kottayam by Inter University Instrumentation Centre (IUIC).

2.14 Significant activities and contributions made by IQAC

- ✓ A faculty Development Programme (Inter Disciplinary) of two weeks duration from 30th August to 12th September 2015 for faculty of the affiliated colleges.
- ✓ Honouring PhD scholars- The IQAC conducted a programme on 28.05.16 honour all those who had been awarded PhD degree during 2015.
- ✓ Workshop on NAAC accreditation process on 12th April 2016—A two day training on NAAC accreditation process for teachers and the University staff by Dr Nirmala ,Principal, Ethiraj College Chennai was conducted .

- ✓ One day familiarization programme for Research Scholars of the departments on 07 .01.2016.
- ✓ On the job training programmes for Section Officers during April-May 2016.

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
Introduction of Massive Online Open Course (MOOC).	<ul style="list-style-type: none"> • The School of Environmental Sciences has introduced an online diploma course in Environmental Science. The School also offers Edusat based online outreach courses on Geospatial tools and applications in collaboration with IIRS mainly through the A-VIEW internet online platform in MOOC mode. • The School of Bio Sciences has initiated the introduction of MOOC on ‘Microbes and Human Society’. • The IIUCNN has introduced a MOOC on ‘Global Understanding’ as a credit open course in collaboration with North Carolina State A & T University. The Centre is also developing MOOC on Introduction to

	<p>Nanoscience and Nanotechnology and on Analytical Instrumentation Technique.</p> <ul style="list-style-type: none"> • The School of Pure and Applied Physics has developed the conceptual outline of a MOOC based on Astronomy. • The School of Gandhian Thought & Development Studies has developed an online certificate programme in ‘Gandhian & Peace Studies’. • The School of Tourism Studies has started a Diploma Course of 6 months duration on ‘Tourism Destination Services Management. • The School of Management & Business Studies has initiated action for starting MOOC course on General Management & Functional areas. • The Department of Life Long Learning has started an online certificate course in Management of Learning Disabilities.
Improvement of quality education in self financing institutions.	CCTVs have been installed in most examination centres to ensure transparency in the conduct of examination.
Skill up-gradation of students and enhancement of employability.	<p>Introduction of add-on programmes under Acquired Skill Acquisition Programme (ASAP) in various Schools/Centres:</p> <ul style="list-style-type: none"> • The School of Environmental Sciences has

	<p>started add – on courses in – a) Environment & Sustainable Development b) Health, Sanitation and Environment, to all Post Graduate students in the University Campus.</p> <ul style="list-style-type: none"> • The School of Social Sciences has introduced field experience programme in Archaeology to students especially at the Pattanam archaeological site. • The School of Computer Sciences has prepared a proposal for a Software Development Centre for students to acquire work experience. The School has also introduced add-on course as part of Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, and Government of India).
<p>Improvement in the performance of the University on the Research & Extension front.</p>	<p>Considerable advance has been made by the University in the execution of MOUs with research institutions of international standing. During the 12th Plan period tremendous progress has been made in securing extension projects under the auspices of institutions like UGC, FIST,DST, DRS,ISRO,COSIT,CSIR,DARD, STEC, ICMR, BARC etc. MoUs have been entered into with Max Planck Institute of Technology, Germany; CALTEC, USA; University of Toronto, Canada; Institute for Political Science, Rennes , France</p>

	among several others during the period providing a boost to the performance of the University on the Research and Extension front.
E- learning Initiatives	<ul style="list-style-type: none"> • The University has won the award for the Best Institution for E-Learning Facility instituted by the Government of Kerala. • The Department of Printing and Publishing forays into Knowledge Book Publishing during the period.
International Collaborations and Linkages	<ul style="list-style-type: none"> • The School of Environmental Sciences (SES) has initiated a new linkage with Bournemouth University, UK. • SES has ongoing linkage with: <ul style="list-style-type: none"> a) National Centre for Antarctic and Ocean Research (NCAOR, Goa) b) California Institute of Technology, USA on Sustainable Sanitation. • The School of Computer Sciences has established linkage with: <ul style="list-style-type: none"> a) IIT, Hyderabad b) VM Ware, Bangalore; CDAC c) Department of Computational Biology, University of Kerala d) Centre for Artificial Intelligence and Robotics (CAIR), Bangalore.

<p>Infrastructure development – tapping RUSA funds</p>	<p>An amount of Rs.20 cr has been sanctioned under RUSA to the University as infrastructure grant to carry out a spate of activities spread over infrastructure, renovation and purchase of equipment, computer and books.</p> <ul style="list-style-type: none"> • On the infrastructure front the RUSA funds to the tune of Rs.7cr have been sanctioned for a Student Amenity & Incubation Centre, setting up wi-fi enabled campus, campus beautification including construction of ramp for the differently abled. • RUSA funds to the tune of Rs.7cr have been sanctioned for renovation activities including setting up of a Solar Power Plant System and enabling digital facility in the library. • RUSA funds to the tune of Rs.6 cr have been sanctioned for purchase of equipment, computer and books; setting up of a Digital Content Creation Lab & Music Research Centre.
<p>Establishment of Inter University Centres</p>	<p>New Centres established during the period 2015-16:</p> <ul style="list-style-type: none"> • Centre for Yoga and Naturopathy • Inter University Centre for Organic Farming & Sustainable Agriculture (IUCOFSA) • Business Incubation & Innovation Centre

2.16 Whether the AQAR was placed in statutory body: Yes

Management Syndicate Any other body

Provide the details of the action taken.

**Approved by Hon'ble Vice Chancellor , exercising power u/s 3.10(17) of MGU Act, 1985
dated on 10.11.2016**

Part – B (2015-16)

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	56	8	1	-
PG	54	3	21	-
UG	2	-	25	-
PG Diploma	-	-	-	-
MPhil	20	-	1	-
Advanced Diploma	-	-	-	-
Diploma	2	-	-	-
Certificate	3	-	-	-
Others	5	-	-	-
Total	142	11	48	-

Interdisciplinary	22			
Innovative	7			

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

(ii) Pattern of programmes:

Pattern	Number of programmes
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Semester	179
Trimester	1
Annual	13

1.3 Feedback from stakeholders*

Alumni Yes Parents Yes Employers Yes Students Yes

Mode of feedback : Online Yes Manual yes Co-operating schools (for PEI) Yes

Feedback from students was collected informally through discussion. Information from Parents and Alumni was collected through telephone, informal discussions were held with teachers and directors, etc. Feedback was also collected manually at the end of the Semester through a Feedback Proforma. The responses were analysed and discussed by Faculty. The Schools regularly collect feedback during Alumni meets and PTA meetings. Major remarks pointed out the fact that curriculum provides a broad coverage of the subject area providing in depth knowledge in the subject. Feedbacks from the various stakeholders are used in the regular updation of syllabi and up to date choice of electives, meeting the demands of the industry.

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

The syllabi of programmes offered by the University is revised periodically incorporating inputs from academic experts in each field of study, industry, alumni etc. Students are given the option to choose elective subjects in tune with their

talents and preferences. Open course is also offered which enables students to select courses by different departments .

- Revised the nomenclature and syllabus of the PG Programme-Master of Tourism and Travel Management (MTTM) as per the UGC guidelines in the School of Tourism Studies.

As per the new NCTE Regulations 2014, the duration of the M.Ed. course is 2 years with 80 credits. Revision of syllabus for M.Ed. course of School of Pedagogical Sciences has been undertaken in this context. The following are the salient features of the revised M.Ed. Syllabus:

- The communication skills and expository writing skills for enhancing the ability of the students to listen, converse, speak, present, explain and exposit ideas in groups and before an audience – as this is one of the essential expectations from all professionals in education.
- Training in ICT and educational technology.
- E-content development.
- Linkages between the self and one's professional practice.
- Themes such as gender, society and education, disability, psycho-social dimensions of exclusive and inclusive education.
- Professional attitudes, values and interests needed to function as a teacher educator.
- Mental and Physical well-being through modality such as Yoga.
- Field internships in Primary, Secondary and Senior Secondary Schools, Primary and Secondary Teacher Education Institutions.
- A workshop on “MSc and MTech Syllabus Revision” of the School Of Chemical Science was organized on 9/6/2015. The School organized a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” at School of Computer Sciences on 08.09.2015.

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

- Centre for Yoga and Naturopathy with budget support by the University was started in School of Gandhian Thought and Development Studies.
- Inter University Centre for Organic Farming & Sustainable Agriculture.
- Business Incubation and Innovation Centre

Criterion – II

2. Teaching, Learning and Evaluation

Total No. of permanent faculty:

Total	Assistant Professors	Associate Professors	Professors	Others
98	46	30	22	365

2.2 No. of permanent faculty with Ph.D: 95

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
26	28	9	10	4	8	40	5	79	51

2.4 No. of Guest and Visiting faculty and Temporary faculty

232

75

80

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended Seminars / Workshops	87	156	49
Presented papers	94	132	41
Resource Persons	37	74	43

Please see the 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 sessions are put in place, group-wise and individual wise, to understand 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, apart 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 Schools. This is supplemented by Assignments, Seminars, Tutorials and E-learning. The Schools have also introduced a variety of audio-visual information systems such for lectures and seminars. Through Seminars, Group Discussions, Individual Assessment etc, self learning activity is encouraged. Case study, live projects and assignments are a regular tool in teaching subjects like Management Studies. Remedial coaching is also arranged for students, who are weak to improve their academic standards. Modern technologies like computers, internet, LCD projectors etc are used in the class rooms and these enrich the learning experience of students. The Erudite Scholar in Residence Programme introduced by the Kerala State Higher Education Council has enabled student interaction with Nobel laureates and outstanding academics and has proved to be a unique learning experience for the students which have also been of much inspiration to them.

2.7 Total No. of actual teaching days during this academic year 216

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 through EDMODO, Open Book Examination, etc have been introduced during the period. Machine interface exam has also been introduced 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

135	61	55
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Please see the annexure 2.9

2.10 Average percentage of attendance of students 95

2.11 Course / Programme wise distribution of pass percentage:

Title of the Programme	Total no of students appeared	CGPA 8	CGPA 6	CGPA 5	Pass %
PG (M.Sc & M.Tech only)	149	19	90	7	77.85
PhD Course Work	138 (Registered)				
UG	912				

	*Result awaited				
MPhil	95	18	72	0	94.73
Others	200	-	-	-	-

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

The IQAC conducts periodic meetings to monitor the academic programmes of various 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. Continuous Evaluation of students through internal tests, assignments and seminars, direct question answer sessions are made. 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, 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. Orientation programmes and counselling are made strict in the learner friendly atmosphere. 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. As directed by IQAC team IUCCN introduced Surprise test, flipped classroom concept, a workshop conducted by IQAC in February 2016 as a part of faculty improvement programme. The Quality Cell at the departmental level prepares the roadmap of qualitative teaching and research.

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	20
UGC – Faculty Improvement Programme	10
HRD programmes	06
Orientation programmes	23
Faculty exchange programme	02
Staff training conducted by the university	45
Staff training conducted by other institutions	26
Summer / Winter schools, Workshops, etc.	39
Others	05

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	1057	130	12	113

Staff				
Technical Staff	421	39	11	2

Criterion – III

Research, Consultancy and Extension

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

- The IQAC has decided to institute three Best Researcher Awards in Science, Social Science, Language & Literature year wise in the University.
- It has been decided to set up a patent cell and technology transfer unit for ushering in a patent culture in the University.
- The IQAC has decided to formulate norms and criteria for the Best School/Centre award implemented in the University.
- Gives importance to Research and dissemination of research findings by encouraging faculty and research scholars to contribute articles in different journals and through presenting papers in the National and International Seminars, Conferences.etc.
- It has been decided that each School would initiate consultancy programmes.

- The importance of technology transfer to industry has been appreciated by the IQAC and it has been decided to explore participation with industry on this front.

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	19	41	2	16
Outlay in Rs. Lakhs	308.00	594.63	419.19	431.07

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	Nil	1	6	Nil
Outlay in Rs. Lakhs	Nil	5	1.2	Nil

3.4 Details on research publications

	International	National	Others
Peer Review Journals	350	113	39
Non-Peer Review Journals	3	10	Nil
e-Journals	Nil	Nil	Nil

Conference proceedings	99	74	39
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Please see annexure 3.4

3.5 Details on Impact factor of publications:

Average h-index 14 Average Citations 2371

Please see annexure 3.5

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 in Lakhs	Total grant Received in Lakhs
Major Projects		DST, UGC, DBT	--	--
Major Projects	2012-16	1) BRNS, Govt. Of India, 2) KSCSTE, Govt. Of Kerala, 3) DST, Govt. Of India, 4) UGC.	958.50	409.00
Major Projects	2015-16	ICCR	20.00	8.00
Major Projects	2012-14	State institute of Rural development govt of Kerala,pta dist,ekm dist,kollam dist,Indira gandhi National centre	--	--

		for the Arts,GoK,UGC SAP		
Major Projects	1 year	GoK	55.60	44.48
Major Projects	5 years	UGC SAP	103.00	
Major Projects		UGC	2.565	2.42
Interdisciplinary Projects	3 years	UGC, GoK ,ICSSR		
Industry sponsored				
Projects sponsored by the University/ College			150.00	112.00
Students research projects (other than compulsory by the University)				
Any other(Specify)				
Total			1289.665	575.90

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

CPE

DBT Star Scheme

INSPIRE

CE

Any Other (specify)

3.10 Revenue generated through consultancy: Rs .20,11, 337/-**3.11 No. of conferences organized by the Institution:**

Level	International	State	University	College
Number	09	10	18	24
Sponsoring agencies	DST, BRNS, ISRO, Kerala State Higher Education Council, , KSCSTE	ISRO	University	DDF

Please see annexure 3.11

3.12 No. of faculty served as experts, chairpersons or resource persons: 99

Please see annexure 3.12

3.13 No. of collaborations:

International

National

Any other

Please see annexure 3.13

3.14 No. of linkages created during this year: 23

Please see annexure 3.14

3.15 Total budget for research for current year in lakhs:

From funding agency	85	From Management of University/College	127.50
Total	212.50		

3.16 No. of patents received this year: 05

Please see annexure 3.16

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

Total	International	National	State	University	Di st	College
28	13	10	1	4	--	--

Please see annexure 3.17

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

Ph. D. Guides	95	Students	406
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3.19 No. of Ph.D. awarded by faculty from the Institution 78

Please see annexure 3.19

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.

- The School of Tourism Studies, 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 have organized extension activities envisaged to

benefit the rural population of the state with special importance to the areas under the jurisdiction of the University.

- Students of the School of Tourism undertook projects on wood based souvenirs of Kerala, safety and security in tourist destinations of Kerala, women entrepreneurship in tourism and traditional farming practices of Kottayam district and its linkage with tourism. The School is a Technical support partner of 'Discover Kottayam' project of Department of Tourism, Government of Kerala and District Tourism Promotion Council, Kottayam.
- The ABILITY Project launched by the School of Social Sciences is in progress. The objective of the project is 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.
- The School of Pure and Applied Physics conducted INCULCATE programs in association with the Government of Kerala for school children.
- The Inter University Centre for Organic Farming and Sustainable Agriculture conducted a week long (18 – 25 May 2016) awareness programme on organic farming for school students.
- The Advanced Centre of Environmental Studies & Sustainable Development organised activities through which Community empowerment through people's participation was achieved to meet the livelihood needs of the people. Community awareness programme on Food Adulteration in Soft Drinks was conducted. A Stakeholder interaction on Western Ghats Conservation – Sustainable Practices was also proposed by the Centre.
- The Faculty and research scholars of IUCNN visited Old Age Home and Santwanam Charitable Trust at Kottayam. The Director, Joint Director and the research scholars from IUCNN generated funds for their daily expenses.
- Regional Centres of STAS at Pathanamthitta and Pullarikkunu conducted computer awareness programmes for senior citizens as well as school children.

- The students of UCME conducted health awareness programmes, medical camps, a TB awareness programme and organized various programmes on World Health Day and conducted an awareness programme on cancer. The students of the UCME, Gandhinagar conducted a School Health Education and Check Up camp & an AIDS awareness programme in Kottayam town.
- The School of Environmental Sciences has launched a major 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 1 community rainwater harvesting structure with a capacity of 1.1 lakh litres and 12 ten thousand litre and 6 eighteen thousand litre capacity harvesting tanks at Achinakom village in Vechoor Grama Panchayath in Kuttanad region. A total of 82 families are getting drinking water through these tanks. Among the 18 tanks, 5 tanks were constructed with the aid of Obama-Singh 21st Century Knowledge Initiative.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund
Campus area	158.3281 acres		
Class rooms	161	15	University Fund,GoK Plan fund
Laboratories	123	5	DBT, Plan fund, GoK,University Fund

Seminar Halls	29	1	
No. of important equipments purchased (\geq 1-0 lakh) during the current year.	52	13	UGC XI PLAN, STATE, UNTY FUND,,KSCSTE, ICMR,DST,GoK
Value of the equipment purchased during the year (Rs. in Lakhs)	15.71941		
Others	-	-	-

4.2 Computerization of administration and Library

- **Computerization of University Administration:** The University administration is set to introduce e-governance in administration and necessary infrastructure is being put in place .The attempt is to make the University office paperless.Necessary training in computerization is being given to the administrative personnel prior to the introduction of e - governance.
- **Computerization of University Library:** The inhouse management of the University library services are computerized using Open Source Library Management Software KOHA.There are many desktop computers in the library, which can be utilized by the students for preparing dissertations and for study purposes.Internet facility is also available.
 - ✓ Accessibility of new e- journals –The library provides access to resources including e journal and databases under the UGC_INFONET digital library consortium (E-Sodhsindhu) e-journal archives and e-books procured on perpetual access basis, annual subscription basis and digital archives of University PhD Thesis. All the faculty members of

the centre suggest essential books and periodicals to be procured regularly.

- ✓ According to the latest report, the University is ranked 29th among 250 universities under the UGC_INFONET digital library consortium.
- ✓ E-books from Oxford scholarship online, TTaylor and Francis group, Malayalam e-book collection from DC Books.
- ✓ E- Journal archives from Camebridge University Press, Sage publications and Springer LLink Publications.
- ✓ Database like PROQUEST, LISA, 22000 ejournal from j GATE Port.
- ✓ Library has web enabled OPAC (online public access catalogue) <http://mgucat.mgu.ac.in>).
- ✓ E resources available in the university are extended to outside departments and study centres through VPN (virtual private network) technology.
- ✓ Library is managing its website(www.library.mgu.ac.in)and webserver in the university library

The library follows the following methods for purchasing new titles or journals:

- ✓ Library procures the books which are duly recommended by teachers' research scholars and students.
- ✓ Library procures books on approval from various publishers and vendors considering the courses available in our colleges. The teachers are invited to approve the books by filling up the Requisition Form .Thus the approved books are procured.
- ✓ Teachers visit Book Exhibitions to select the required books
- ✓ **Steps to improve the functioning of Library:** The faculty members of various schools and centres meet to discuss various issues related to improvement of Library and advice suitable solutions for better functioning. They also meet regularly to discuss and finalize proposed policies, budget, specific issues and suggestions to the departmental library.

✓ **Open Access Availability of Theses** : Open Access Availability of Theses of doctoral degrees awarded by the University has been established.

(www.mgutheses.org). Digital storage of theses and research publications is available in the University Library .

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	176481	64261195	4138	4,52,70,093	1,80,619	109531288
Reference Books	16874	8462842	652	611818	17526	9074660
e-Books	4453	66549	--	--	1031	66549
Journals	1097	18210446	--	--	1097	18210446
e-Journals	2109	2728050	--	--	2109	2728050
Digital Database	55	--	--	--	55	4528089
CD & Video	1658	443567	--	--	16658	443567
Others (specify)	15542	1389225	--	--	15542	1389225

Newspapers						
------------	--	--	--	--	--	--

- ✓ **Every school in the University has a computerized library and Infonet lab for students and research scholarss**

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	927	55	Internet Connection of 100 Mbps bandwidth is available throughout the campus	24	21	55	50	34
Added	148	27		--	--	6	2	12
Total	1075	82		24	21	61	52	46

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

Computer and Internet facility has already been made available in all Schools/Centres of the University. High speed internet facility of 100mbps bandwidth is available in the University Campus. The University conducts training and orientation programmes in advanced computer and software management by experts for the benefit of students and teachers.

- The departments have corporate license software with the Micro soft. All the software loaded has been licensed with different agencies.

Name of the software	Licensed by
Microsoft Windows	Microsoft Corporation - Corporate version
Microsoft Office	Microsoft Corporation – Corporate Version
LINUX	Open source software
Anti - virus software	Purchased

- Scanner, print facility and Xerox facilities are available to the students and the faculty.
- The departmental libraries are equipped to enable access to e-resources.
- **Upgradation of IT infrastructure:** The University undertakes upgradation of computer systems on a periodic basis and also when the necessity so arises. The softwares, printers, scanners are upgraded frequently especially when newer versions are released.
- **ICT enabled teaching- learning process:** All departments are equipped with projector and desktops with internet facility .The ICT facility is used by students for seminar presentation, assignments, project work. An independent learning environment is ensured through access to various open e-resources and the assignments given to students make it necessary for them to tap these e-resources to complete their assignments. The computer aided teaching learning process is constantly improved upon based on inputs and feed back from students.
- **Training Programmes to teachers and students** – The University Library conducts orientation programmes at regular intervals for new batches of students, research scholars

and faculty members for using UGC – Inlibnet services and digital consortium encompassing thesis in digital format. The library also provides personalised information services to the students, faculties and research scholars.

4.6 Amount spent on maintenance in lakhs:

i) ICT	15.63581
ii) Campus Infrastructure and facilities	7749.653
iii) Equipments	50.07136
iv) Others	44.37232
(v) Corpus Fund	4715.23363
(vi) Total	5741.00072

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- The IQAC monitors the activities of the Students Grievance Redressal Cell.
- Personal Accident Insurance Scheme and Financial Aid for serious illness are provided to students by the Department of Student Services on the recommendations of the IQAC.
- Grace Marks are awarded to students for their outstanding performance in sports and in cultural activities.
- The Department of Students Services conducts youth festivals every year and the University also ensures the participation of students in National and Inter University competitions.
- Research fellowships are provided to students for pursuing doctoral studies in various research centres of the University.
- The Career Guidance Bureau provides training to students for GATE/NET/SET examinations.
- The students are encouraged to participate in seminars, conferences, symposia, workshops etc. to improve their exposure and for overall development of their intellectual abilities.
- **Students Mentoring** : The mentors counsel the students during the periodic reviews and they are encouraged to develop and channelize their skills by participating in conferences, seminars, workshops etc. Online mentoring is also facilitated by creating group mails and every issue that needs attention is addressed by conducting meetings of staff and students. The mentors also arranged 'Erudite' lectures during the period.

5.2 Efforts made by the institution for tracking the progression

- Written and oral examinations are conducted to evaluate student progression to assess their qualitative improvement. Process-Monitoring through Seminars, assignments and minor projects, internal assessment, test papers, Assignment presentation and seminars, RTVW (Read, Think, Visualise, Write) Workshops and continuous feedbacks (*Direct Feedback and delayed feedback from students and faculty*).

- The faculty advisor assigned to each batch of students collects and files all personal and academic details of the entire batch. This enables the faculty member to maintain the previous academic record, personal background, current details, semester wise academic and co-curricular achievements of each student in a batch and helps to counsel and guide the student in a more effective and fruitful manner. This has produced a positive impact in the student teacher relationship which was reflected in the selection of electives, projects and in the overall performance of the students.
- Slow and advanced learners are identified through the internal evaluation. In addition to the regular working hours, extra time has been given to the students to use the laboratory facilities to enhance their knowledge in the subjects not included in the curriculum.
- Remedial courses are being conducted for the improvement of weaker students. For every batch during the 1st semester a 2-week programming session is given for improving the programming competency of the students.
- The status of the students is monitored by the alumni forum which is very active in updating career progress of the students who pass out. Alumni meetings & PTA meetings are organised. Social media was utilized to promote student and alumni gatherings and information sharing. WhatsApp groups created for students and alumni.
- Students who pass PG courses are motivated to enrol for Ph.D .Several students do part of their Ph.D programme abroad.Collaborations with foreign Universities enable students of this University to join collaborative programmes.Post Graduate students are encouraged to apply for several distinguished fellowships offered by Government of India and other foreign countries for joining doctoral programmes abroad.The University invites industries for campus recruitment for placement of its students.

Available support services to overseas students -

- International Hostel with international menu and dining facilities.
- Transport facilities for official visits to local area etc
- Special medical care is provided
- Registration of Visa at the time of arrival
- Visa extension if required for academic purpose
- No Objection Certificate at the time of leaving India after completion of course.

5.3 (a) Total Number of students: 7167

UG	PG	Ph.D.	Oth-ers
5190	1474	315	188

(b) No. of students outside the state

1

(c) No. of international students

8

Men:	<table border="1"> <thead> <tr> <th>No.</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>1996</td> <td>27.85</td> </tr> </tbody> </table>		No.	%	1996	27.85	Women:	<table border="1"> <thead> <tr> <th>No.</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>5171</td> <td>72.15</td> </tr> </tbody> </table>		No.	%	5171	72.15
	No.	%											
1996	27.85												
No.	%												
5171	72.15												

Demand ratio: 1:17 (Statutory Departments only)

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

- The University has a career guidance cell which provides general awareness and coaching for UGC Net exam / PSC exam NET examination especially for SC, ST, OBC and other minorities. A faculty member is in charge of the Career Guidance Cell.
- The Carrer Guidance Cell conducts personality development classes and spoken English classes for the benefit of students.
- Introduced remedial coaching, competitive exam helpdesk like coaching for KTET and SET examinations and Language training, personality development.
- The University Library has sufficient books which serve as good reference material for students preparing for various competitive tests.
- The faculty members have provided guidance to students to take up IELTS, TOEFL, GRE and GMAT examinations.

No. of student beneficiaries:

5.5 No. of students qualified in these examinations

NET SET/SLET GATE CAT

IAS/IPS etc State PSC UPSC Others

5.6 Details of student counselling and career guidance

- The University has a career guidance cell which provides general awareness and coaching for UGC Net exam / PSC exam NET examination especially for SC, ST, OBC and other minorities. A faculty member is in charge of the Career Guidance Cell.
- The Career Guidance Cell conducts personality development classes and spoken English classes for the benefit of students.
- The University Library has sufficient books which serve as good reference material for students preparing for various competitive tests.

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
23	231	84	441

5.8 Details of gender sensitization programmes

- There is an active Women's Forum in the Campus.
- The International Women's Day was celebrated in the University by organizing seminars.
- There are more women students than men at the PG/Ph.D level in the University.
- Women students have secured most ranks in University Examinations than men.
- There is a functional Anti Harrassment Cell in the University.

- There are Anti Ragging Cells as also counseling centres in the departments

5.9 Students Activities

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

State/ University level National level International level

No. of students participated in cultural events

State/ University level National level International level

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 in Lakhs
Financial support from institution	52	Rs.275.01702
Financial support from government	651	Rs. 217.74145/-
Financial support from other sources	74	Rs 91.27800/-

Number of students who received International / National recognitions	05	Rs 2/-
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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:

- Renovation of the University hostels has been undertaken.
- Adequate conveyance facilities have been provided to students.

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision

Mahatma Gandhi University envisions excelling in the field of higher education and catering 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

Yes. Introduced student information database and semester progress card (SIC – Student Information Card)

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 way. The curricula of all the courses were revised and updated. In the case of Schools, the faculty council revises curriculum and syllabus. The revision in the curriculum/syllabus is 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 in integrated teaching methods as well as new audio-visual methods for curricular transactions. Subsequent syllabus revision and updating in order to meet the changing requirements of the industry is successfully done every year.

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 incorporate updated research findings in the curriculum, to make the students enable to address research problems. The learning experience of the student is also enhanced by the aid of field works, interaction with eminent personalities in their field of knowledge, visiting other institutions of premier importance. 24X7 access to e-journals and digital resources is provided to students.

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. Continuous evaluation in the mode of questions and answers, spot test at regular intervals, supported with model exams are done.

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 have made possible for the University to send their research students to different research labs of international repute. Some of the schools are conducting research programs

focusing on community development. The University insists on contribution of research papers by the faculty to various books and journals. University has collaborations with several leading research institutions which enable the sharing /exchange of research students and undertaking exchange programmes. There are special lectures on research methodology and course work upgradation of infrastructure for research, research tools and methods of data analysis is also a continuing process in the University. ABILITY - a project of School of Social Science is 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 consists of the 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 are 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).

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. During the period the academic staff had 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 were provided a preparatory amount to start their lab and research activities. Administrative staff was also exposed to internal and external training programs for quality improvement. The achievements of the staff and the 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. Notifications are published in detail in the leading newspapers and university website. External subject experts are included in the expert committee. The selection committee comprising the eminent scholars in each area evaluates the

research and teaching talent of the candidate. The recruitment of non-teaching staff is done as per the State Government and University statutory procedures.

6.3.8 Industry interaction/Collaboration

- There are several collaborative endeavours between the Schools of the University and industry.
- Faculty members are involved in various projects with industrial collaboration.
- Field visits to industries; institutions like DIET, SERT etc are undertaken by teachers, students and research scholars.
- In the School of Environmental Science, School of Chemical Sciences, School of Bio Sciences etc. persons from industries such as Agilent, Shimadzu, Perkin Elmer, Thermo etc. engage classes and workshop on the advancement in their respective fields, new instrumental technologies etc.
- In the School of Tourism Studies, experts from hospitality industry take classes.
- School of Environmental Science, like other academic departments has collaboration with Department of Forests and Wildlife, Government of Kerala, Periyar Tiger Reserve Thekkady etc.
- There is active industry involvement in the form of internship opportunities and placement to these departments.

6.3.9 Admission of students

Students are admitted to courses in the University Departments through an entrance test followed by a Centralized Allotment Process (CAP) by the University involving written test which analyses their compatibility and service attitude. 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.

6.4 Welfare schemes

Teaching	Health Card, PAI , Quarters, Creche, Med Reimbursement, Recreation Facility , Weightage to wards for admission to Professional colleges run by the University
Non teaching	Same as above.
Students	Hostel Facility, Insurance, Financial support through different scholarships, fee concessions, Alumni meet, grievance cell, guidance and counselling, CUTE – Cultural organization etc.

6.5 Total corpus fund generated

47,15, 23, 363

6.6 Whether annual financial audit has been done 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	STS & University
Administrative	Yes	Local Audit	Yes	University

		Fund		
--	--	------	--	--

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

For UG Programme

 Y

No

For PG Programmes

 Y

No

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

- Regular meetings of CSS are held to consider necessary examination reforms among other things.
- Credit Based Semester System has been implemented with elaborate systems for internal and external valuations.
- Examination activities are carried out with the help of ICT. A Data Centre for which Rs.2 cr has been sanctioned by the Government is coming up in the University.
- Online generation of hall tickets has been introduced for several examinations conducted by the University.

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

The Government of Kerala has introduced necessary legislation for establishing autonomous colleges in the State. Necessary changes have been made in the University Act in this regard and autonomous colleges have come into being in the jurisdiction of the University.

6.11 Activities and support from the Alumni Association

Annual alumni meets are held in various departments. The alumni meets help the students to secure placements in various organisations. The alumni participate in seminars and workshops as resource persons and delegates. The alumni have instituted various Scholarships and Awards for the students. The alumni also help 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. Interaction with present students, sharing of knowledge, experience, suggestions, and placement initiatives are materialized. Activities with social commitment, charitable activities, loyalty to the institution for the development are being done. Felize - An Annual meet of Alumni was held on 19th June 2015. The alumni support the department for adequate placement of the outgoing batches.

6.12 Activities and support from the Parent – Teacher Association

PTA meetings are organised by the departments.

The PTA also ensures that a cordial relationship exists among the department, students, parents and teachers.

6.13 Development programmes to support staff

- i) A Computer training Programme is in place for University staff.
- ii) The University campus has a Health Centre, Fitness Centre in the University Campus. Yoga Classes are arranged by the University Women's Forum for Women employees
- iii) A Cancer awareness class was held by Dr V P Gangadharan, Oncologist, and Regional Cancer Centre Thiruvananthapuram.
- iv) An awareness class on Heart Diseases by Dr.T K Jayakumar, Superintendent Medical College, Kottayam.
- v) On the job training programme for Section Officers and Assistant Section Officers.

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

- The University Campus is plastic free.
- Students lead a campaign 'no flex and no plastics' campus and took initiative to plant trees and make the campus green.
- Planted medical plants, ornamental plants fruit trees and perennial plants as a part of green campus programme.
- The University insists on performing research activities in a green manner avoiding toxic synthesis routes and chemicals.
- An efficient rain water harvesting system exists in the campus.
- Celebrated World Wet Lands Day 2016 through conducting awareness class on wetlands.

- Celebrated Environment Day to create an awareness highlighting environmental issues and planted saplings in the premises to enhance the greenery.
- Celebrated Earth Day 2016.
- The School of Environment Sciences maintains the Jeevaka Live Laboratory named after the disciple of Sree Budha, where there is a rich diversity of flora and fauna, including 12 varieties of migratory birds from the Himalayas.
- Auditing the status of solid waste generation and management in the campus
- Conducting regularly, environmental awareness programmes among public and school children

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

Some of the important innovations during the academic year are:

- CLENS (Club of Environmental Students) conducted programmes on environmental awareness in the campus as well as outside. The Thursday Club of this forum conducts weekly activities for its student members aiming to improve their communicative skills.
- A School level digital repository of workshops, seminars, PhD open defences and other e-learning contents was generated for future use as a research resource in the School of Computer Sciences. The PG Students were insisted to take up research papers for presentation in seminars for exposure to various research resources, facilities and tools of intensive research at the PG stage itself.

- With a view to train the students and improve their professional qualities and to ensure maximum intake of students to Bench, special training was organized in the School of Indian Legal Thought with the assistance of alumni and PTA. Former students of the School who are now serving in judicial service and in other respectable legal fields were roped in for the purpose.
- In the School of International Relations & Politics the faculty and research scholars collaborated in various impact assessment studies having a direct bearing on social policies and programmes. The three districts level outreach studies on the MGNREGS undertaken in collaboration with the State Institute of Rural Development (SIRD) provided opportunities to have first hand experience at the micro level. A team of students and teachers also visited Attappady region during the year, in the background of the increasing incidents of child mortality and women abuses, to study the transformation which has occurred in the region over the years. Thus, the researchers and faculties involved in these studies have benefitted from their field experience.
- The Inter University Centre for Disability Studies initiated the setting up of a unit to provide legal support service to the persons with disabilities.
- The BEd trainees were given maximum opportunities to develop their potentials through life skill training, to be technologically competent, and to know the 'nature' and measures for environmental sustainability.

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

- The University has been successful in introducing Massive Online Open Course (MOOC). Several of its schools have taken an initiative in this regard.
- Add on courses under ASAP has been started in several Schools of the University.

- Linkages and Collaborations have been established with several national and international agencies and these have bolstered the University's research profile.
- The University has executed MoUs with research institutions of national and international repute like FIST, DST, ISRO, BARC, UGC etc. during the period.
- The Syllabi of various programmes have been updated and revisions have been made.
- Student interaction with eminent scientists and Nobel Laureats was facilitated by the erudite programme.
- Student centric teaching learning process has been strengthened.
- The infrastructure especially on the IT front has been toned up during the period.

7.3 Give two Best Practices of the institution

1. Solar Powered Campus

Aim

The University aims to harness non conventional energy sources to meet its increasing energy requirements. Tapping solar energy and optimal use of the same is expected to reduce the reliance on conventional energy and is sure to be an economically prudent as well as viable option.

System Description

The whole system comprises of Solar PV Modules, Solar Inverter, Module Mounting Structures (MMS), Lightning and Over Voltage Protection system, Earthing Protection amongst other vital components. The individual components descriptions are explained later in the next section. Solar PV Modules generates DC electricity in proportion to the amount of sunlight

available, generating the most power on a clear day when the sun is at a normal to the Solar PV Modules; and these Solar PV Modules are connected in series and parallel to form a Solar Array, The Solar PV Array is mounted on the Module Mounting Structure (MMS) which are oriented towards the south and tilted at an angle which is determined by the latitude of the location. The DC power produced from Solar Array is fed to a Solar grid connect inverter. The Grid Interactive Solar Inverter will export the power to the Utility Grid. The cables cross sections are selected in such a way that the voltages drop and losses are kept at a minimum. It is essential to protect the system from various concerns and in this regard we have incorporated Earthing Protection, Lightning and Over Voltage Protection. The MMS material is hot dip galvanized to protect the material from corrosion

Features:

- Optical, mechanical and electrical testing during and post production
- Solar safety glass front, Cells embedded in EV, Weather and waterproof foil back
- Automated production level ensures consistently high level of product quality
- Aluminum Frame – For fixing the module on to a module mounting structure. The hallow chamber aluminum frame is extremely resistant to torsion and corrosion
- Junction Box along with pre-assembled cables – For taking out power from solar module and interconnecting the solar modules using male and female plugs for easy interconnection with modules
- Additional stability is offered by the tempered front glass.

2. Business Incubation and Innovation Centre

Objectives

- Technology/Business Incubation is an institutional mechanism to develop an atmosphere for innovation and entrepreneurship; for active interaction

between academics and industries; for sharing ideas, knowledge, experience and facilities; and for the development of new technologies and its rapid transfer to industries through the setting up of start-up companies in the emerging areas of technology. Business incubators are increasingly being adopted in order to overcome some of the weaknesses in institutional environments, to maximize the chances of success.

- University Business incubation centre will make provisions for the clients with workspace, high-speed Internet connection, legal and intellectual property services and access to high profile investors. Companies can also apply for the Start up Village Angel Fund that has been approved by SEBI. The Centre also provides access to all the workshops and networking events.
- The incubation centre will hold mega events and gatherings where would-be entrepreneurs can connect with investors, technology innovators and famous businesspersons.

7.4 Contribution to environmental awareness / protection

- Celebrating environment day to create an awareness highlighting environmental issues and needs of protection.
- Students are practising a campaign 'no flex and no plastics' and planted trees.
- To protect and safeguard the destination we kept aloof from the usage of plastics and throwaway plastic bottles and other materials.
- Efforts were made to protect the virginity and the pristine nature of the terrain.

7.5 Whether environmental audit was conducted? Yes

Criterion 7.6 Any other relevant information the institution wishes to add

- All Under Graduate and Post Graduate Prorammes offered by the University have been brought under the purview of the Centralised Admission Process.
- Construction of two additional storeys to the Pareeksha Bhavan so as to augment the infrastructural facilities available to conduct examinations efficiently.
- Tapping of RUSA funds and initiating steps to utilise the same efficiently.
- Steps have been taken through the IUCOFSA to spread awareness about various aspects regarding organic farming among students and the general public.

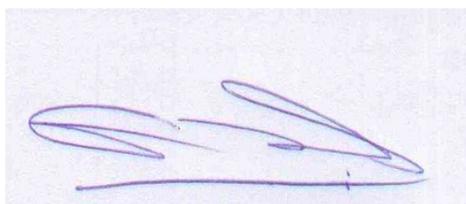
Criterion VIII.

Plans of institution for next year

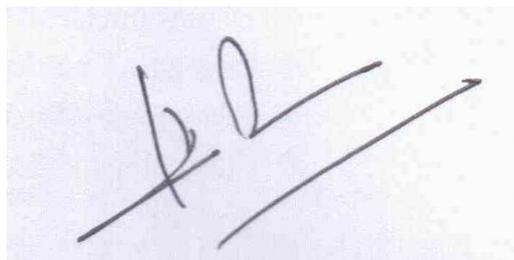
- Introduce e-payment for all services.
- Revision of regulations and Syllabi of UG Programmes to be undertaken during the ensuing year.
- The Ph D. Registration process and the entire Ph D. Cycle from registration to submission of thesis to be made online.
- Provident Fund Accounts to made online.
- University Budget to be made available online.
- To facilitate transparency in the planning process separate software on the lines of the 'Planspace' software of the Planning Board to be introduced.
- A data base on projects undertaken/submitted by the University to be set up.
- Backlog in the issuance of Degree/ PG certificates to candidates to be completely eliminated.

Name: Prof (Dr) Sabu Thomas

Name: Dr. Babu Sebastian, Vice Chancellor



Signature of the Director, IQAC



Signature of the Chairperson, IQAC

PD Hills

10/11/2016

ANNEXURE - I

Abbreviations:

CAS	-	Career Advancement 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 in Engineering
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

ANNEXURE - II

Criterion - I

1.1 Details about Academic Programmes

SI No	School	Level	Programme
1	School of Behavioural Sciences	Diploma	Indian Sign Language
		PG	M.Sc. Disability Studies and Rehabilitation Sciences
			M.Sc. Psychology
		MPhil	Behavioural medicine & Rehabilitation (Full Time, Part Time)
			Rehabilitation Psychology
			Special Education & Rehabilitation Sciences
			Behavioural Sciences and Rehabilitation Nursing
		PhD	Special Education
			Rehabilitation Psychology
			Behavioural Medicine
Rehabilitation Nursing			
2	School of Bio Sciences	PG	M.Sc. Microbiology
			M.Sc. Biochemistry
			M.Sc. Biotechnology
			M.Sc. Biophysics
		MPhil	Biosciences
		PhD	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
		MPhil	Inorganic Chemistry
			Organic Chemistry
			Physical Chemistry

			Polymer Chemistry
		MTech	Polymer Science & Technology
			Chemistry
			Chemical Physics
			Inorganic Chemistry
			Organic Chemistry
			Physical Chemistry
			Polymer Science & Technology
4	School of Computer Science	PG	M.Sc. Computer Science
		MTech	Computer Science & Technology
		PhD	Computer Science
5	School of Environmental Sciences	Short term	Geo-information Science & Technology
		PG	M.Sc. Environment Science & Management
			M.Sc. Environment Science & Disaster Management
		MPhil	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	PG	MA Gandhian Studies
			MA Development Studies

	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 R 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	PG	MBA
		M.Phil	Business Studies
		Ph D	Management
11		PG	M.Ed

	School of Pedagogical Sciences	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
	Department of Life Long	Certificate Programmes	Counselling

24	Learning and Extension		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	Inter University Instrumentation Centre	Short Term Courses	Analytical Instrumentation
		PhD	
28	Advanced Molecular Materials Research Centre	Short Term Courses	Material Sciences
		PhD	Nano Materials Chemistry
			Energetic Materials
			Metal Organic Frame works
			Solid State Kinetics
			Bio Materials
			Theoretical Modelling
			Nano Photo Catalysis
Ferro Fluids			
29	National Institute of Plant Science Technology	M.Sc PhD (Integrated)	
30	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
31	School of Technology and Applied Sciences	UG	B Sc Computer Science
			B Sc Electronics
			B Tech Polymer Engineering
		PG	MCA
			MSc Computer Engineering and Network Technology
			M Sc Applied electronics
			M Sc Computer Science

			M Sc Space Science And Technology
32	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)
33	School of Applied Life Sciences	PG	M Sc Fishery Biology & Aquaculture
		M Phil	Fishery Biology & Aquaculture
34	University College of Teacher education	UG	B Ed
		PG	M Ed

Criterion 2.5

Faculty participation in conferences and symposia:

School of Letters

Refresher/orientation programmes attended

- ✓ Two weeks Faculty Development Programme organized by DCDC, Mahatma Gandhi University from 30.07.2015 to 12.08.2015

Dr.Saji Mathew, Assistant Professor

Paper presentations

- 1) Newman College, Thodupuzha t the national seminar on “The Postmodern Pedagogy of Multiple Literacies” (11-12 August 2015 as Resource person)

- 2) National Seminar on Diasporic Reflections at SNGS College, Pattambi (29-30 October 2015 as Resource Person)
- 3) National Seminar on Negotiating Marginalities at Marthoma College, Thiruvalla (28-29 January 2016 as Resource Person)
- 4) National Seminar on Cultural Studies at University of Kerala (19-21 January 2016 as Resource Person)
- 5) National Seminar on “When the Empire Writes Back” at Panampilly Memorial Govt.College, Chalakkudy (18-20 November 2015 as Resource Person)
- 6) National Seminar on World Literature at University of Kerala (13-15 October 2015 as Resource Person)
- 7) National Seminar on Myth and Fairy Tales at T M Jacob Memorial Govt.College, Manimalakunnu (26-27 November 2015 as Resource Person)
- 8) National Seminar on Tracing India mapped in its Literatures at Govt.College, Kottayam (9-10 March 2016 as Resource Person)

Department of Life Long Learning

Dr.K.Sabukuttan :Attended and presented a paper at the Intenational Seminar with the theme-“Extension: The Third Dimension of Education” conducted jointly by the Department of Life Long Learning and Extension and the National Service Scheme of Marian College,Kuttikkanam date and Venue:-FEB 26-28 2016,at Marian College,Kuttikkanam

- I. Title of the Paper Presented-Education Beyond time and Setting Limit:importance of Non-Formal Education to Enhance Social inclusion of Rural Women by **Dr.K.Sabukuttan** and **Reta Melakavu Fayisa**.
- II. Attended a National Level Seminar: Relevance of Yoga in Modern Life On 18th and 19th March on the Trends and Developments in the Education of

Children with Learning Disabilities 2016 conducted by the Centre for Yoga & Naturopathy, School of Gandhian Thought and Development Studies in Association with Department of Lifelong Learning and Extension And Kottayam District Yoga Sports Association.

- III. Attended a Two Day National Seminar on Microscopists of History: New Perspectives in Local History Research from 18 to 19 January 2016 organized by the Department of History, Govt. College, Attingal at the EDUSAT Conference hall, Govt. College, Attingal sponsored by the Directorate of Collegiate Education Kerala
- IV. Attended National Seminar conducted by the Department of Life Long Learning and Extension and Institute of Research in Learning Disabilities School of Behavioural Sciences at the Seminar Hall, School of Behavioural Sciences on 7 th May 2016.
- V 3.11-International Seminar on the theme "Extension-The Third Dimension of Education" on Feb 26-28, 2016 at Marian College, Kuttikkanam
- VI. National Level Seminar: Relevance of Yoga in Modern Life On 18th and 19th March 2016 conducted by the Centre for Yoga & Naturopathy, School of Gandhian Thought and Development Studies In Association with Department of Lifelong Learning and Extension And Kottayam District Yoga Sports Association
- VII. National Seminar on the Trends and Developments in the Education of Children with Learning Disabilities conducted by the Department of Life Long Learning and Extension and Institute of Research in Learning Disabilities School of

Behavioural Sciences at the Seminar Hall, School of Behavioural Sciences
on 7 th May 2016

VIII. 3.12-Dr.K.Sabukuttan chaired a session at the two Day National Seminar on
Microscopists

of History: New Perspectives in Local Research.

School of Behavioural Science

Dr. P.S. Sukumaran

1. VHSE Curriculum Workshop. Organized by SCERT, Thiruvananthapuram. 01.01.2015.
2. VHSE Curriculum Workshop. Organized by SCERT, Thiruvananthapuram. 14.01.2015.
3. Symposium on Issues of Mentally Challenged. Organized by State Institute for the Mentally Challenged, Thiruvananthapuram. 22.01.2015.
4. Orientation programme for principals and teachers of special education colleges of M.G. University on New Regulations of Rehabilitation Council of India and NCTE on B. Ed. Special Education. Organized by School of Behavioural Sciences. 05.02.2015.
5. Presented Paper on 'Education of Children with Intellectual Disability – Trends and Issues'. Seminar on Education of Differently Abled Children – Redefining the Role of Teacher Educators. Organized by St. Mary's College of Teacher Education, Thiruvalla. 13.03.2015.

6. Presented Paper on 'Education of Children with Intellectual Disability'. Seminar organized by National College for Teacher Education, Vengola, Perumbavoor. 25.03.2015.
7. Convened Core Committee Meeting on Curriculum Revision of B. Ed. Special Education (Intellectual Disability). M. G. University. 23.04.2015.
8. Presented Paper on 'Ensuring Quality of Life of Individuals with Intellectual Disability'. Down Syndrome Day Organized by ALAN Foundation, Changanassery. 06.06.2015.
9. Convened Core Committee Meeting on Curriculum Revision of M. Ed. Special Education (Intellectual Disability). M. G. University. 24.06.2015.
10. Convened Symposium on Enhancing Quality of Research. School of Behavioural Sciences. 25.06.2015.
11. Resource Person, Curriculum Workshop on M. Ed. Special Education (Intellectual Disability). University of Kerala, Thiruvananthapuram. 30.06.2015.
12. Inaugural Address, Workshop on 'Novum Scientia on Creating a New Culture of Teaching and Learning'. Government College of Nursing, Kottayam. 25.07.2015.
13. Presented Paper on 'Education of Children with Special Needs'. Seminar organized by Government Teacher Training Institute, Chalakudy. 05.08.2015.
14. Resource Person, Workshop on Research Methodology and Statistics. Organized by K.V.M. College of Special Education, Cherthala. 07.09.2015.

15. Resource Person, Workshop on Restructured Curriculum of B. Ed. Special Education (Intellectual Disability). School of Behavioural Sciences, M.G. University. 10.09.2015.
16. Presented Paper on 'Basic Concepts of Inferential Statistics'. Workshop on Research Methodology and Statistics'. Organized by IUCDS, M.G. University. 16.09.2015.
17. Key note Address, Felicitation to Winners of Paralympics and the Coordinator. Organized by Holy Cross Special School, Mannacknad. 19.09.2015.
18. Resource Person, Expert Committee Meeting on Research Project on Intellectual Disability. Convened by Chief Minister, Kerala, Secretariat, Thiruvananthapuram. 21.10.2015.
19. Presented Paper on 'Character Development of the Differently Abled'. Seminar on Rehabilitation of Differently Abled, organized by Mispah Pariseelana Kendram, Kayamkulam. 20.11. 2015.
20. Presented paper on 'Adult Independent Living Skills'. Silver Jubilee Seminar Organized by Marion Play Home – Special School for the Mentally Challenged, Thiruvananthapuram. 28.11.2015.
21. Presented Paper on 'Inclusion and Accessibility'. In service Training and Sensitisation of Key Functionaries of Central and State Government, Local Bodies and Other Service Providers. Organized by State Institute for the Mentally Challenged, Thiruvananthapuram. 02.12.2015.
22. Participated in the Academic Council Meeting, M.G. University. 19.12.2015.

National Level

1. Presented Paper on 'Education of Children with Intellectual Disabilities – Problems and Prospects' National Seminar Organized by N. S. S. Training College, Ottapalam. 06.02.2015.
2. Presented Paper on 'Perspectives in Inclusive Education of Students with Intellectual Disability – A Reappraisal'. National Seminar on New Perspectives on Inclusive Education of Children with Special Needs, organized by DIET, Wayanad, Sulthan Bathery. 27.03.2015.
3. Presented Paper on 'Barriers in the Education of Children with Intellectual Disability' National Conference on Vision 2020 – Total Mainstreaming of the Intellectually Challenged. Organized by the State Institute for the Mentally Challenged, Thiruvananthapuram. 22.04.2015.
4. Attended National Seminar of International Researchers of Indian Origin. St. Josephs Training College, Mannanam. 04.12.2015.
5. Presented Paper on 'Education of Children with Intellectual Disabilities – Problems and Prospects' National Seminar Organized by N. S. S. Training College, Ottapalam. 06.02.2015.
6. Presented Paper on 'Perspectives in Inclusive Education of Students with Intellectual Disability – A Reappraisal'. National Seminar on New Perspectives on Inclusive Education of Children with Special Needs, organized by DIET, Wayanad, Sulthan Bathery. 27.03.2015.
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8. Attended National Seminar of International Researchers of Indian Origin. St. Josephs Training College, Mannanam. 04.12.2015.

State Level

1. VHSE Curriculum Workshop. Organized by SCERT, Thiruvananthapuram. 01.01.2015.
2. VHSE Curriculum Workshop. Organized by SCERT, Thiruvananthapuram. 14.01.2015.
3. Symposium on Issues of Mentally Challenged. Organized by State Institute for the Mentally Challenged, Thiruvananthapuram. 22.01.2015.
4. Orientation programme for principals and teachers of special education colleges of M.G. University on New Regulations of Rehabilitation Council of India and NCTE on B. Ed. Special Education. Organized by School of Behavioural Sciences. 05.02.2015.
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7. Convened Core Committee Meeting on Curriculum Revision of B. Ed. Special Education (Intellectual Disability). M. G. University. 23.04.2015.
8. Presented Paper on 'Ensuring Quality of Life of Individuals with Intellectual Disability'. Down Syndrome Day Organized by ALAN Foundation, Changanassery. 06.06.2015.
9. Convened Core Committee Meeting on Curriculum Revision of M. Ed. Special

Education (Intellectual Disability). M. G. University. 24.06.2015.

10. Convened Symposium on Enhancing Quality of Research. School of Behavioural Sciences. 25.06.2015.
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12. Inaugural Address, Workshop on 'Novum Scientia on Creating a New Culture of Teaching and Learning'. Government College of Nursing, Kottayam. 25.07.2015.
13. Presented Paper on 'Education of Children with Special Needs'. Seminar organized by Government Teacher Training Institute, Chalakudy. 05.08.2015.
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15. Resource Person, Workshop on Restructured Curriculum of B. Ed. Special Education (Intellectual Disability). School of Behavioural Sciences, M.G. University. 10.09.2015.
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19. Presented Paper on 'Character Development of the Differently Abled'. Seminar on Rehabilitation of Differently Abled, organized by Mispah Pariseelana Kendram, Kayamkulam. 20.11. 2015.
20. Presented paper on 'Adult Independent Living Skills'. Silver Jubilee Seminar Organized by Marion Play Home – Special School for the Mentally Challenged,

Thiruvananthapuram. 28.11.2015.

21. Presented Paper on 'Inclusion and Accessibility'. Inservice Training and Sensitisation of Key Functionaries of Central and State Government, Local Bodies and Other Service Providers. Organized by State Institute for the Mentally Challenged, Thiruvananthapuram. 02.12.2015.
22. Participated in the Academic Council Meeting, M.G. University. 19.12.2015.

National Level

1. Presented Paper on 'Education of Children with Intellectual Disabilities – Problems and Prospects' National Seminar Organized by N. S. S. Training College, Ottapalam.
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2. Presented Paper on 'Perspectives in Inclusive Education of Students with Intellectual Disability – A Reappraisal'. National Seminar on New Perspectives on Inclusive Education of Children with Special Needs, organized by DIET, Wayanad, Sulthan Bathery. 27.03.2015.
3. Presented Paper on 'Barriers in the Education of Children with Intellectual Disability'.
National Conference on Vision 2020 – Total Mainstreaming of the Intellectually Challenged. Organized by the State Institute for the Mentally Challenged, Thiruvananthapuram. 22.04.2015.

4. Attended National Seminar of International Researchers of Indian Origin. St. Josephs

Training College, Mannanam. 04.12.2015.

- Organized a curriculum revision workshop of M Ed. Special Education(Intellectual Disability) and the restructured Syllabus, scheme and regulations was submitted to the M.G University on 20.10.2015.
- Attended an expert committee meeting on a Research Project on Mental Retardation, convened by Hon'ble Chief Minister of Kerala at the Secretariat, Thiruvananthapuram on 21.10.2015.
- Presented a paper on 'Character development of differently abled' in a One day Seminar on 'Rehabilitation of differently abled', organized by Mispah pariseelana Kendra, Kayamkulam on 20.11.2015.
- Delivered keynote address in the inaugural function of B Ed. Special Education(Learning Disability), at Nirmala Sadan Training College for Special Education, Muvattupuzha on 23.11.2015.
- Presented a paper on 'Adult Independent Living Skills' in the Silver Jubilee Seminar of Marion Play Home for the Mentally Challenged Children, Thiruvananthapuram on 28.11.2015.
- Presented a paper on 'Inclusion and accessibility' in the Inservice Training and Sensitization of Key Functionaries of Central and State Governments, Local Bodies and Other service providers, organized by State Institute for the Mentally Challenged, Thiruvananthapuram on 2.12.2015.

- Attended Two day National Seminar organized by International Researcher's of Indian Origin, at St. Joseph's Training College, Mannanam on 4.12.2015.
- Participated in the Academic Council meeting of M.G University on 19.12.2015.
- Synopsis of the Ph.D thesis of Soya Sadanandan submitted on 19.12.2015.
- Functioned as External Expert for the Doctoral Committee in the Dept. of Special Education, Avinashilingam University for Women, Coimboatore on 21.12.2015.
- Functioned as External Subject Expert in the pre submission seminar of Ph.D. thesis in the Dept. of Education, University of Kerala, Thiruvananthapuram on 30.12.2015.

Dr. Rajeevkumar N

Presented the following papers in the two day National Conference on Models of Best Practices in Rehabilitation for the empowerment of persons with Disabilities on 16-17, October 2015.

- Ameer Hassan, Rajeevkumar N, Roshan Anie Alex – Creative thinking and imaginary thinking of Learning Disabled and slow Learners.
- Divya Rose Peter and Dr.Rajeevkumar N – Disability and Rehabilitation.

Dr. P.T. Baburaj

1. Organized Two day National Conference on ‘Models of Best Practices in Rehabilitation for the empowerment of persons with Disabilities on 16-17, October 2015.
2. Organized One day Seminar on ‘Access and Empowerment of People with all Disabilities’ on World Disability Day (3.12.2015).
3. Attended Seminar on ‘Persons with Disabilities’ organized by Institute for Person Centred Approach, St. Joseph’s College, Moolamattom on 25-26, November 2015.
4. Presented the following papers in the two day National Conference on Models of Best Practices in Rehabilitation for the empowerment of persons with Disabilities on 16-17, October 2015.
 - Daisy Philip and Dr. P.T Baburaj - Knowledge of Hearing Impaired Adolescent Girls on Sex Education.
 - Chothisha K.S and Dr. P.T. Baburaj - Advancement of Assistive Devices for Physically challenged.
 - Nisha T.S and Dr. P.T. Baburaj – Evolution of Hearing Aid.
 - Dr. P.T. Baburaj and Priyachandra K.- A study on Expectations and academic achievement of children with hearing impairment.
 - Priyachandra K and Dr. P.T Baburaj – Cochlear Implantation.
 - International conference on “current Trends in Public Health and Hospital administration ‘Medilian 2015’ organized by Division Health Management, School of Medical Education, Mahatma Gandhi University, Kottayam on 26th o- 27th March 2015.
 - Resource Person: One day parents Training at Santhi Niketan Special School for mentally challenged, Anthinad, Pala on 10.02.2015
 - International ‘Ear Care Day’ observed on 03.03.2015 at School of Behavioural Sciences, organized Dr. P.T. Baburaj .

Dr. Muhamad Mustaffa

1. Co ordinated Two Weeks Continuing Rehabilitation Education Refresher Course on Braille from 26.09.2015 – 10.10.2015.
2. Presented a Project on Exclusive tendency in Inclusive Education, at Sarva Siksha Abhiyan(SSA), Govt. of Kerala on 07.10.2015.
3. Presented theme paper in the observation of World Deaf Day on 11.10.2015.
4. Delivered Extension Lecture at University of Calicut, organized by Dept. of Life Long Learning and Extension on 17.10.2015.
5. Presented paper on Models of best practices in the National Conference organized by National Institute of Empowerment of Persons with Disabilities, IUCDS and School of Behavioural Sciences on 16-17, September 2015.
6. Paper presented on Trends and Development in Sign Language Interpretation, at the Seminar held on 10.11.2015 in the School of Behavioural Sciences.
7. Presented Three papers in the International Conference on Standards and Benchmarks for excellence in learning, teaching and research, organized by All India Association for Educational Research, Dept. of Education, University of Kerala, Thiruvananthapuram, 26-28, November, 2015.
 - Dr. Arya Mohan and Dr. Muhamad Mustaffa. – An analytical study on the effect of Homoeopathic Medicines in the management of conduct disorders.
 - Gayathri Devi M.S and Dr. Muhamad Mustaffa – Awareness and attitude of students of M.G University towards the persons with Disabilities and their special needs.

- Jibin George and Dr. Muhamad Mustaffa – A study on attitude of psychiatrists, clinical psychologists and special educators towards specific learning disabilities.
- Dr. Remya R and Dr. Muhamad Mustaffa - An analytical study on the effect of Homoeopathic Medicines in the Academic achievement of students with specific learning disorders.

Sri. Rajesh.E,

Seminars organised

State Level

1. Darshanika seminar held at Elavanthitta on 15-6-2015
2. Shilpasala on Family Integrity in Gurudeva's vision on 3-7-2015
3. Shilpasala on Leadership for children & youth held on 1-8-2015
4. Seminar on Gurudeva's vision on Religion held at Press Club Hall, Trivandrum on 16-10-2015
5. Shilpasala on Creativity for children & youth held on 31-10-2015

Smt. Rincymol Mathew.

1. Took a class on 'Challenges of Adolescence' for the students of Model Residential School, Ettumanoor on 20.12.2015.
2. Acted as Resource Person and took a class on 'Personality Development' for the student police cadets , AJ John Memorial Govt. High School, Thalayolaparambu on 21.12.2015.
3. Took a class on 'Graceful Aging' to the senior citizens, organized Y's Men's Club, Kottayam on 09.10.2015.

4. Received the 'Best Poster Award in the two day National Conference on Models of Best Practices in Rehabilitation for the empowerment of persons with Disabilities on 16-17, October 2015.
5. Organized seminar on 'Indian Classical dance, its effect on mind and body' on 7.10.2015.
6. Organized a seminar on 'Rights of the disadvantaged' on 10.12.2015.

School of Environmental Sciences

Dr.C.T. Aravindakumar, Professor & Director

1. International Conference on Frontiers of Mass Spectrometry, Dec.11-14, 2015, Kottayam, Kerala
2. Third International Conference On Advances in Applied Science and Environmental Technology - ASET 2015, 28-29 December, 2015 , Bangkok, Thailand
3. VIII EPOA-Meeting of Environmental Applications of Advanced Oxidation Processes: II CIPOA- Iberoamerican Congress of Advanced Oxidation Processes, Nov.3-6, 2015, Belo Horizonte, Brazil

Dr. Mahesh Mohan, Assistant Professor

- (i) Frontiers in MS Technology and Emerging Applications, IICMS, November 30, 2015, Chennai.
- (ii) International Conference on MS, December 11-14, 2015. Kottayam
- (iii) Participated in the Training on "Biological Diversity Act" 17-19 February 2016 , Organised by IFGTB, Coimbatore

- (iv) OSI workshop on “Membrane technology” in collaboration with Duke University, August 2015

Dr. Syllas V.P., Assistant Professor

- (i) International Conference on MS, December 11-14, 2015. Kottayam
(iii) OSI workshop on “Membrane technology” in collaboration with Duke University , August 2015.

School of Pure & Applied Physics

1. Workshop on Crystal and Molecular Structure Determination from X-ray Diffraction Measurements, Periyar University, Salem. 28-29 March, 2016.
2. National Seminar on Photonics and its Applications, Department of Optoelectronics, University of Kerala, December 9-11, 2015
3. Refresher course, Academic staff college, University of Kerala, December 2015.
4. National Seminar on Characterization methods, Govt. College Kattappana, 25-26 Nov.2015.
5. National Workshop on Rietveld Refinement, September 11-13, 2015, Srinivasa Ramanujan Institute for Basic Sciences (KSCSTE, Govt. of Kerala).
6. National Seminar on Material Science with special emphasis on Crystallography, September 9-11, 2015 Government College, Kottayam.
7. National seminar on advanced materials and characterization techniques 2015 March 27-28, University of Kerala.

8. National Symposium on X-ray diffraction and Recent Advances in Crystallography February 27 – 28, 2015, Periar University, Salem, Tamil Nadu.
9. UGC sponsored seminar “Material characterization tools and techniques “, CUSAT, March 19 - 21, 2015, Kerala
10. Workshop on Electron Microscopy – Theory, Applications and Sample preparation Techniques, CUSAT March 4-7, 2015, Kerala.
11. National Science Day Celebration, Inaugural Lecture, Centre for Materials for Electronic Technology (CMET) Trichur, February 27, 2015, Kerala.
12. National Conference on Advances in Crystal Growth and Nanotechnology, CMS college, Kottayam, 15-16, January 2015.
13. 'Density Dependent Local Variations in the IMF' Poster at Symposium on Star Formation: Universal Processes? IAU Symposium 315 Honolulu 4 August 2015
14. International Seminar on Science of Music Conference Director September 25 -27 2015 Inter University Center for Science of Music and KSHEC Kottayam
15. Attended SKA Science Workshop NCRA Pune 6 April 2016
16. Poster presentation by Dr K Indulekha on 'Implications of star cluster formation scenarios for the IMF' XXXIV th Meeting of the ASI Srinagar 10 - 13 May 2016 ASI
17. Chaired (Dr K Indulekha) Workshop on high resolution optical spectroscopy, 9 th May ASI-2016, Srinagar
18. Convenor (Dr K Indulekha) for Parallel Session 4 on A&A 19th National Space Science Symposium 2016 SPL VSSC Thiruvananthapuram 9 -12 February
19. Talk by Dr K Indulekha on New Generation Telescopes and Open Clusters - NSS Hindu College Changanassery Dec 16 10 am

20. General Theory of Relativity & Cosmology IRC Workshop AELI Hills
Alwaye August 24 & 25

21. 'Star Formation Time Domain Astronomy & Cosmology' Advanced Workshop
on Time Domain Astronomy & Cosmology July 9 CMS College

22. TMT & TMT+ IIST Trivandrum TMT Science & Technology Meeting 11 -13
June

23. General Theory of Relativity & Gravitational Waves Invited Talk at VTM
NSS College Dhanuvachapuram 29 Feb 2016

24. Facets of Physics @ Seminar on Current Developments & Challenges in
Multidisciplinary Science Research sponsored by KSCSTE @ Assumption
College Changanassery 23 Feb

25. Invited talk on Tensors & General Theory of Relativity National Seminar
Maharajahs college Ernakulam 21 Jan

26. Oral presentation on The influence of human habitation on the structural
health of soil and its impact Swadeshi Science Congress Session on
Environmental Science Sree Shankara University of Sanskrit Kalady Dec 16

27. Deakin India Research Initiative- Symposium-2015 during December 6-9, at
The Energy and Resources Institute, Delhi.

28. Three day lecture in 'Key Parameters in Science Park Management' held in
Iran from December 18-20, 2015

29. First International Conference on Advanced Materials for Power Engineering ,
11-13 December 2015 (Convenor Dr K Nandakumar)

30. International Conference on Nanostructured Polymeric Materials and Polymer Nanocomposites (ICNPM 2015) on 13, 14 and 15 November 2015 (Convenor) Dr K Nandakumar)

31. World Congress on Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Materials Sciences (Co-Convenor Dr K Nandakumar)

32. Fourth International Conference on Natural Polymers (ICNP 2015) : 10-12 April 2015 (Co-Convenor Dr K Nandakumar)

33. International conference on Macromolecules: Synthesis, Morphology, Processing, Structure, Properties and Applications (ICM-2016) to be held on 13, 14 and 15 May 2016 (Co Convenor Dr K Nandakumar)

34. National workshop on Rietveld Refinement Kerala State Council for Science, Technology and Environment 11-13 September 2015

35. ICOPMA-2015, Sastra University, Thanjavur Subash Gopi, Praveena R, Remya Mohan P, Sreeja E, Saritha K Jose, Cyriac Joseph, P R Biju, Luminescence characterization of Eu^{3+} ions doped alkali fluoroborate glasses. 2015

36. International conference on Energy Harvesting Storage and Conversion, Department of Physics, Cochin University of Science and Technology, IC-EEE 2015 Sreeja E, Remya Mohan P, Subash Gopi, Cyriac Joseph, N.V Unnikrishnan, P B Biju, Structural and luminescent Properties of Eu^{3+} doped Ba_2CaWO_6 Nanophosphor, 2015.

37. 7th National symposium for Materials Research Scholars, IIT, Bombay Remya Mohan P, Sreeja E, Subash Gopi, Saritha K Jose, Viji Vidyadharan, P R Biju, White light emission from LaNbO_4 : Dy^{3+} phosphor synthesized by sol-gel route 2015

38.7th National symposium for Materials Research Scholars, IIT, Bombay Saritha K Jose, Subash Gopi, Sreeja E, Remya Mohan P, N.V Unnikrishnan, P.R Biju, Luminescence & Energy transfer of Sm³⁺ doped polymer Zirconia composites.2015

39.7th National symposium for Materials Research Scholars, IIT, Bombay Subash Gopi, Saritha K Jose, Sreeja E, Remya Mohan P, Cyriac Joseph, P R Biju, Optical Characterization of Eu³⁺ doped alkalifluoroborate glasses.2015

40.National Laser Symposium (NLS-24), 2-5 December 2015, RRCAT, Indore.Remya Mohan P, Viji Vidyadharan, Sreeja E, Subash Gopi, Saritha K Jose, Cyriac Joseph, P. R Biju, Structural and Photoluminescence studies of CaB₂O₄:Er³⁺, Li⁺ phosphor.2015

41.National Seminar on Nanoscale Science and Technology, 10-11 December 2015, DevaMatha College, Kuravilangad, Kottayam.Remya Mohan P, Viji Vidyadharan, Sreeja E, Subash Gopi, Saritha K Jose, Cyriac Joseph, P. R Biju, Synthesis and Photoluminescence characteristics of green-red emitting CaB₂O₄:Er³⁺, Li⁺ phosphor.2015

School of Bio Sciences

1. Smitha Vijayan and Jisha M.S. Extracellular synthesis of silver nanoparticles by endophytic *Fusarium solani* from *Withania somnifera* and its antibacterial and cytotoxicity studies Proceedings of 4th International Conference on Nanotechnology and Basic Science (**ICN2016**), **4-5 February 2016, Dubai. Emirates**
2. Divya K., Liya C. Kurian, Smitha Vijayan, Jisha M.S*. Green Synthesis of Silver Nanoparticles by *Escherichia coli* and its Antibacterial Activity.

Proceedings of 4th **International Conference on Nanotechnology and Basic Science (ICN2016)**, 4-5 February 2016, Dubai, United Arab Emirates

3. Smitha Vijayan, Jisha M.S. Biogenic Synthesis of Silver Nanoparticles Using Endophytic Fungi *Fusarium* Sps Isolated From *Withania Somnifera*, its Antibacterial and Cytotoxic Activity **Fourth international conference on natural polymers and biopolymers (ICNP 2015) at Kottayam during April 11-13**
4. Dhanya D.R, Dhanya S and Jisha M.S. Fluorescent *Pseudomonas* mediated control of bacterial blight of anthurium. National Seminar on Plant science Technology for sustainable world at National Institute of Plant Science Technology (NIPST), M.G. University, Kottayam on February 25th - 26th 2016.
5. Divya K., Dhanya D.R., Dhanya S. and Jisha M.S. biocontrol activity of *pseudomonas fluorescens* against bacterial blight of anthurium caused by *xanthomonas axonopodis pv diffenbachiae*. National Institute of Plant Science Technology (NIPST), M.G. University, Kottayam on February 25th - 26th 2016.
6. Divya R and Jisha M.S. preliminary studies on isolation and characterization of microbial endophytes from selected medicinal plants in Kerala. National Institute of Plant Science Technology (NIPST), M.G. University, Kottayam on February 25th -26th 2016.
7. Linu MS and Jisha MS. Phytohormone production and plant growth promoting potentials of phosphate solubilizing *Pseudomonas aeruginosa* isolated from chilli rhizosphere. National Institute of Plant Science Technology (NIPST), M.G. University, Kottayam on February 25th -26th 2016.

International Conference

8. Glindya Bhagya Lakshmi, Keerthi T.R. "Standardized method for maintaining viability and feed stability in probiotic based fish feed formulation" International conference on Towards a Sustainable Blue Economy: Production, Strategies and Policies" organized by KUFOS, Panangad, Kochi & Nansen Environmental Research Centre, India during 4-6 February 2016

National

- 9 Anjali Ann Jacob, Mathews Varkey and Keerthi.T.R.(2016) "Agarase producing organisms from rhizoplane- A plant microbe interaction" Proceedings of National Seminar on Plant Science Technology for Sustainable World: National Institute of Plant Science Technology(NIPST) & Mahatma Gandhi University, Kottayam. ISBN:978-81-930000-8-3:19-20.
- 10 Jasni C.J., Honey Chandran.Cand Keerthi.T.R.(2016) "Extraction & Characterization of exopolysaccharide from lactic acid bacteria" Proceedings of National Seminar on Plant Science Technology for Sustainable World: National Institute of Plant Science Technology(NIPST) & Mahatma Gandhi University, Kottayam. ISBN:978-81-930000-8-3:64-66

State

11. Bincy Jacob, K.A. Athira Krishnan, T.R. Keerthi, K.Jaychandaran(2015). Antagonistic and cytotoxic effect of different cellular components of a marine symbiont MBTU-SOB1 from a marine sponge, *Spongia officinalis* var. *ceylonensis* Proceedings of the 27th Kerala Science Congress, Alappuzha. January 27-24, 2015.p.162 Abstract only.
12. Sumayya Jauhara, Honey Chandran C., Keerthi T.R. (2015). Comparative evaluation of probiotic potency of *Bacillus coagulans*, MBTU-P1F2 from infant faeces with a known probiotic *Bacillus clausii* from Enterogermina. 27th Kerala Science Congress, Alappuzha. January 27-24, 2015. p.164. Abstract only

13. Proteinase inhibition and antioxidant activity of the aqueous acetone extract of the root bark of *Clerodendron infortunatum* Linn. - Helen Raisa Lal, Jyothilakshmi M and Latha M S. Venue: Bharat Mata College, Thrikkakara; June 2015 Jayachanran.K
- 14 ICMS 2015. Second International Conference on Frontiers of Mass Spectrometry (ICMS 2015) at Inter University Instrumentation Centre & School of Environmental Sciences, Mahatma Gandhi University, Kottayam on 11-14 Dec 2015
15. Nadam 2015 - An International Ensemble on the Science of Music organized from 23rd - 27th Sept 2015. At Kottayam by IUCSSM, M.G University.
16. Indu M Nair, Felicia Periera, Aswathy Jayakumar, Jayachandran K. **Squalenecyclase activity in *Scopariadulcis* and in its endophyte *Pantoeastewarti* subsp. *indologenes*** International Conference on **New Horizons in Biotechnology (NHBT-2015)** jointly organized by the Biotech Research Society, India and CSIR-National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram (22nd to 25th Nov 2015).
17. Haritha V.H, Seena P, Anie Y, Role of monocytes in the clearance of NET (Neutrophil extracellular trap) and apoptotic bodies, pp. 1447-1458. The proceedings of 28th Kerala Science Congress held at University of Calicut, Malappuram, 28- 30
18. Hazeena V.N., Soumiya C. K., Anie Y., , Comparative analysis of butanol: acetonitrile and acetonitrile fractions of *Vernonia anthelmintica* for possible aldose reductase inhibitory constituents, pp. 1680-1691. The proceedings of 28th Kerala Science Congress held at University of Calicut, Malappuram, 28- 30

19. Hazeena V.N., Haritha V. H. , Jayachandran K., Anie Y, Ethyl acetate fraction of Vernonia anthelmintica (L.) Willd contains Aldose reductase inhibitory molecules, pp 55-59. the proceedings of National Seminar on Plant Science Technology for Sustainable World, 25th and 26 th February, 2016.

School of Letters

Dr. Harikumar S, Assistant Professor

Refresher/Orientation programmes attended

2 weeks Faculty Development Programme organized by DCDC, Mahatma Gandhi University from 30.07.2015 to 12.08.2015

Dr.Saji Mathew, Assistant Professor

Paper presentations

- 9) Newman College, Thodupuzha t the national seminar on “The Postmodern Pedagogy of Multiple Literacies” (11-12 August 2015 as Resource person)
- 10) National Seminar on Diasporic Reflections at SNGS College, Pattambi (29-30 October 2015 as Resource Person)
- 11) National Seminar on Negotiating Marginalities at Marthoma College, Thiruvalla (28-29 January 2016 as Resource Person)
- 12) National Seminar on Cultural Studies at University of Kerala (19-21 January 2016 as Resource Person)
- 13) National Seminar on “When the Empire Writes Back” at Panampilly Memorial Govt.College, Chalakkudy (18-20 November 2015 as Resource Person)
- 14) National Seminar on World Literature at University of Kerala (13-15 October 2015 as Resource Person)
- 15) National Seminar on Myth and Fairy Tales at T M Jacob Memorial Govt.College, Manimalakunnu (26-27 November 2015 as Resource Person)

- 16) National Seminar on Tracing India mapped in its Literatures at Govt.College, Kottayam (9-10 March 2016 as Resource Person)

Dr. KM Krishnan, Associate Professor

Publications

“Death of the Author” (Revised) *Pashchatyasahityasidhanthangal* Ed. Noushad and Anil Kumar, Kerala Bhasha Institute, 2015

School of Chemical Sciences & IUCCN

Dr Sabu Thomas

LIMATB, France	March 2-13 2015	Visiting Professor
ICMAT2015 & IUMRS-ICA2015, 8th International Conference on Materials for Advanced Technologies of the Materials Society of Singapore and 16th IUMRS - International Conference in Asia together with 4th Photonics Conference 2015	28 June 2015 to 03 July 2015	Invited Talk and Visiting Professor
Institute of Chemistry, University of Graz, Austria	29 August 2015 To 5 September 2015	Visiting Professor in the frame work of Austrian/Indian cooperation at Institute of Chemistry, University of

		GRAZ in Austria
9th National Affinity Techniques Symposium” (AFFTECH 2015); “4th Nanomedicine World Congress (NANOMED 2015)” and “2nd International NanoBioTechnology Symposium” focusing also Nanomedicine (NANOBIOTECH 2015), Dalaman, Turkey.	6 September 2015 To 10 September 2015	For having a good network and collaboration between India and other countries as delegates from different countries are parts of the AFFTECH 2015.
Visiting Professor at University of Armenia.	28 September 2015 To 2 nd October 2015	For having a good network and collaboration between Mahatma Gandhi University, Kottayam and University of Armenia.
Visiting Professor for Plenary Talk on my research work titled “Recent Advances in Polymer nanocomposites” at Durban University of Technology in Durban, South Africa, ICCBN 2015.	27 October 2015 To 02 November 2015	Plenary Session at ICCBN 2015
Visiting professor for department research seminars at Qilu University of Technology	2 nd December	For having a good

(QLUT), Jinan, China.	To 5 th December 2015	network and collaboration between Mahatma Gandhi University, Kottayam and Qilu University of Technology, China.
Technical instructor for the course titled “Key parameters in Science Park Management” organized by Inter-Islamic Network on Science and Technology parks (INSTP) at Guilan, Iran.	17 December 2015 To 21 December 2015	For having a good network and collaboration between Mahatma Gandhi University, Kottayam and Science and Technology Managers, Experts and Professionals, Researchers and Academics from the OIC member countries.
“XXI IUPAC CHEMRAWN - Solid Urban Waste Management, Rome, Italy	6 th April 2016 to 8 th April 2016.	Plenary Speaker at XXI IUPAC CHEMRAWN - Solid Urban Waste Management.
Invited speaker for (The World Academy of Sciences) TWAS Research Grants Conference - Shaping Careers in Science, Trieste, Italy	19 th to 22 nd April , 2016	Plenary Speaker at TWAS Research Grants Conference

Waste Eng2016, Conference , Albi, France	23 rd to 26 May, Albi France.	Plenary speaker at WasteEng2016, Conference , Albi, France
“Progress in Composite Technology for KingMongkut’s University of Technology, Bangkok, Thailand.	2 nd to 3 rd June, 2016	Invited speaker for the seminar entitled “Progress in Composite Technology for KingMongkut’s University of Technology, Bangkok, Thailand.

- 2015 March **Visiting Professor, LIMATB, France**
- 2015, March, Invited Speaker, LIMATB, University of South Brittany, France
- 2015, March, Invited Speaker, , University of Strasborg , France
- 2015 March Institute for Polymer Research Dresden (IPF), Dresden, Germany
- 2015 June, ICMAT2015 & IUMRS-ICA2015, 8th International Conference on Materials for Advanced Technologies of the Materials Society of Singapore and 16th IUMRS - International Conference in Asia together with 4th Photonics Conference 2015
- 2015, May, 2015 Visiting Professor in the frame work of Austrian/Indian cooperation at Institute of Chemistry, University of GRAZ in Austria
- 2015, August 9th National Affinity Techniques Symposium” (AFFTECH 2015); “4th Nanomedicine World Congress (NANOMED 2015)” and “2nd International NanoBioTechnology Symposium” focusing also Nanomedicine (NANOBIOTECH 2015), Dalaman, Turkey.& AFFTECH 2015.

- 2015, Invited Speaker, Durban University of Tehcnology, Durban, South Africa
- 2015 September, Visiting Professor at University of Armenia. For having a good network and collaboration between Mahatma Gandhi University, Kottayam and University of Armenia.
- 2015 October ,Visiting Professor for Plenary Talk on my research work titled “Recent Advances in Polymer nanocomposites” at Durban University of Technology in Durban, South Africa, ICCBN 2015.Plenary Session at ICCBN 2015
- 2015 December, Visiting professor for department research seminars at Qilu University of Technology (QLUT), Jinan, China.
- 2015 December, Technical instructor for the course titled “Key parameters in Science Park Management” organized by Inter-Islamic Network on Science and Technology parks (INSTP) at Guilan, Iran.
- 2016 April, Plenary speaker for “XXI IUPAC CHEMRAWN - Solid Urban Waste Management, Rome, Italy.

- **Scientific Meetings**

- Industry- University Interface meeting (National Level)
- Industry- University Interface meeting (International Level)
- Honoring Bharat Ratna Prof. C N R Rao (ICNP 2015)
- Honouring Prof. S. K. De (Retired Professor IIT Kharagpur)with chair professorship on hybrid materials
- Lecture series by Prof Kim,New Castle University, Australia February-June 2015)

Invited Lectures

- Prof .Vijaya Mohanan Pillai, CECRI, Karaikudi (April 2015)
- Prof. Mohamed Mehdi CHEHIMI (Research Director at

French CNRS, Leader of the Surface & Interface research team, Université Paris, France)(March 2015)

- Dr. Praveen G. L (University of Kerala) (April 2015)
- Prof .Volker Ribitsch (University of Graz. Austria) (April 2015)

Lectures Given By the Faculty: Dr Sabu Thomas

- Given lectures for the seminar organized by Saint Gits Engineering College, Kanjirappally.(May 2015)
- Given project presentation IPR
- Given presentation for UGC Kaushal Scheme (June 2015)
- Done discussion meeting at CIPPET, Chennai (July 2015)
- Given project presentation for Visheshwaraya Fellowship.(July 2015)
- Supervised the student from University of Lorraine, Nancy, Materials Science, Optics, Acoustics, and Mr.Lorenz Hochwallner under student exchange programme and have done Cinternational skype meeting. (June 2015)
- Conducted discussion meeting at Gandhigram University(July 2015)
- **Dr.Suresh Mathew**, Department of Physics and Medical Engineering, Rzeszow University of Technology, Rzeszow, Nov 26, 2015, Poland
- **Dr.Suresh Mathew**, Department of Chemistry, New York University, Abu Dhabi, May 17, 2015, UAE
- **Dr.Suresh Mathew**, National Workshop on Renewable Energy Technologies (RET) – 2016, 7th April, 2016, organized by the Department of Vocational Studies, St. Alberts College, Ernakulam
- **Dr.Suresh Mathew**, International Seminar on Materials Chemistry, Prof A.J. Benjamin Lecture on “Recent Trends in Material Chemistry”, 26th February, 2016, organized by St. Alberts College, Ernakulam

- **Dr.Suresh Mathew**, Chaired the Technical Session IV in the National Conference on Analytical Science and Technology 2015, September 24-26, 2015, (ANASAT-2015), Munnar, organized by Indian Society of Analytical Scientists, Kerala Chapter (ISASK)
- **Dr.Suresh Mathew**, Dr. A.M. Chacko Endowment Lecture, 17th January, 2015, Union Christian College, Aluva.
- **Dr.S.Anas**. “*Exploring the versatility of pentafulvenes*”, Invited lecture at the national conference on recent advances in spectroscopy: chemical and biological perspective-II organized by Newman College, Thodupuzha, September, 2015, Abs-14.
- **Dr.S. Anas**, Delivered a general talk on 4th February 2016 at St.Michaels College, Cherthala as part of inauguration of UGC sponsored national seminar on “*New trends in material science*”.
- **Dr.S. Anas**, Delivered a general talk on “*Teacher education and society*” on 13th January 2016 at Sobha College of Teacher Education, Mararikulam, Alappuzha as part of inauguration of various subject association activities of the college.
- **Dr.S. Anas**, Invited talk on “*Applications of Palladium catalysis in Organic synthesis*” at Devamatha College, Kuruvilangad, in a national seminar on “Recent trends in catalysis-2016” on 7th January 2016
- **Dr.S. Anas**, Conducted a motivation class on “Emerging Youth” for National Service Scheme (NSS) Volunteers of Govt. Devi vilasom HSS, Kudavechoor, Vaikom in connection with the training camp held at Gov. H.S.S. T.V. Puram, Vaikom on 22nd December 2015
- **Dr.S. Anas**, Invited talk on “*Metals in Organic synthesis*” at Govt. Brennen College, Thalassery, Kerala in a National Seminar on “Recent Advances in Chemistry (RAC-2015) on 15th December 2015.

- **Dr.S. Anas** ,Invited talk on “*Developments in Organic synthesis*” at Alphonsa College, Pala, Kerala in connection with the college chemistry association inauguration on 11th August 2015
- **Dr.S. Anas** ,Invited talk on “*Organic synthesis: History and developments*” at KE College, Mannanam, Kerala in connection with the college chemistry association inauguration on 28th July 2015
- **G. Anilkumar**, “Transition metal catalyzed C-C and C-heteroatom bond formations” **Invited oral presentation** at the UGC sponsored National Seminar on Recent Trends in Catalysis on 7th January 2016 at Deva Matha College, Kuravilangad, Kottayam, India
- **G. Anilkumar**, “Catalytic Asymmetric Epoxidation and related Chemistry” **Invited oral presentation** at the KSCSTE sponsored National Seminar on Current Trends in Organic and Medicinal Chemistry on 27th January 2016 at Catholicate College, Pathanamthitta, India
- **G. Anilkumar**, “Asymmetric Synthesis: Challenges and Strategies” **Invited oral presentation** at the UGC sponsored National Seminar on Organic Synthesis on 28th January 2016 at St. Joseph’s College, Irinjalakuda, Trissur, India
- **G. Anilkumar**, “Asymmetric Synthesis: Strategies and Challenges” **Invited oral presentation** at the UGC sponsored National Seminar on Recent Trends in Chemistry on 15th March 2016 at St. Paul’s College, Kalamassery, Cochin, India
- **G. Anilkumar** “Workshop on Quantum Mechanics” for M Sc Chemistry students and faculty on 20-21 June 2015 at Kottayam (Organized)
- **G. Anilkumar** “Workshop on Group Theory” for M Sc Chemistry students and faculty on 30 Oct-1 Nov 2015 at Kottayam (Organized)

- **G. Anilkumar** “Workshop on Stereochemistry “for M Sc Chemistry students and faculty on 8-10 January 2016 at Kottayam (Organized)
- **Dr.I.Ibnusaud** Invited talk on “ Pharmaceutical Industry and Chirality ”
- **Dr.S. Anas** ,Academic Co-ordinator of National work shop on ”Fundamentals and applications Material science” organized in association with SRIBS(KSCSTE) on march 4-6 held at Kottayam.
- **Dr.I.Ibnusaud** ,National Level Young Scientists Meeting under DST - Fast Track, 16th – 17th January 2015
- **Dr.I.Ibnusaud** “ International symposium on Concurrent Methodologies in organic Synthesis.organized by IIRBS,
MGU,Kottayam & Department of Chemistry St.Thomas College ,Pala.

Conference organized

1. Fourth International Conference on Nanomedicine and Tissue Engineering (ICNT 2016) : 12-14 August 2016 (**UPCOMING**)
2. Second International Conference on Advanced Materials for Power Engineering (ICAMPE 2016) : 11-13, December 2016 (**UPCOMING**)
3. First International Conference on Advanced Materials for Power Engineering (ICAMPE 2015) : 11-13 December, 2015
4. International Conference on Nanostructured Polymeric Materials (ICNPM 2015) : 13-15 November, 2015
5. World Congress on Microscopy (WCM 2015): 9-11 October,2015
6. Fourth International Conference on Natural Polymers (ICNP 2015) : 10-12 April 2015.

School of Computer Sciences

Dr. R. Vijayakumr

a) **Conferences/Symposia/Seminars/Workshops Attended**

SL.N o.	Title with page Nos.	Details of Conference Publication	ISSN / ISBN No.	No. of Co- autho rs	Whether you are the main author
1	Enhancement of Parallel K-Means Algorithm	IEEE Sponsored 2nd International Conference on Innovations in Information, Embedded and Communication systems (ICJJECS)2015		2	2nd
2.	Multitarget tracking in Wireless Senser networks based on Polygon Tracking method – An analysis on throughput and energy efficiency	National Conference on Research in Emerging Area – nat Amaljyothi College of Engineering , Kanjirappally 28-30 January 2016		2	2nd

(b) **Papers Presented**

SL.N o.	Title with page Nos.	Journal	ISSN / ISBN No.	Whether peer reviewed.
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				Impact Factor, if any
1	Enhancement of Parallel K-Means Algorithm	IEEE Sponsored 2nd International Conference on Innovations in Information, Embedded and Communication systems (ICJJECS)2015 ,		
2	A Survey On Multi-Target Detection And Tracking In Wireless Sensor Networks	Innovative Thoughts International Research Journal http://itirj.naspublications.com ,	pISSN 2321-5143 eISSN 2347-5722	0.405
3	An Energy efficient Multitarget Tracking in Wireless Sensor Networks Based on Polygon Tracking Method : Vol: 2, Issue: 08, pp 3023 – 3028	International Journal of Emerging Trends in Science and Technology ;	, ISSN 2348-9480 / August 2015.	
4	A Review of automatic Raga Recognition Approaches in	International Seminar on Science of Music, September 2015,	ID: NNMR-2014-0051	

	Carnatic Music	Journal of New Music Research , ID: NNMR-2014-0051		
5	Ontology Based Data Integration of NoSQL Datastores: Ontology & NoSQL Integration	International Journal on Semantic Web and Information Systems (IJSWIS). / IEEE Explore Digital Library/ IEEE Spectrum 2015	IEEE Explore Digital Library	
6	Distributed weighted fuzzy c-means clustering method with encoding based search structure for large multidimensional dynamic indexes	(MEJSR) Middle east Journal of Scientific Research	ISSN : 1990-9233- 2015 (Selected)	
7	An effective Clustering method with search structure for large Multidimensional Dynamic indexes	Journal of Advances in National and Applied Sciences	ISSN : 1990-0772-2015(Selected)	Anna UTY Annexure - 2
8	Parallel Neural Fuzzy-Based Joint Classifier Model for	Proceedings of the 6th International Workshop On Soft Computing	ISSN 2194-5357 ISSN 2194-5365 (electronic) ISBN	

	Grading Autistic Disorder. Advances in Intelligent Systems and Computing Volume 356	Applications (SOFA 2014), Volume 1		
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Conference Proceedings

Sl. No .	Title with page Nos.	Details of Conference Publication	ISSN / ISBN No.
1	Enhancement of Parallel K-Means Algorithm	IEEE Sponsored 2nd International Conference on Innovations in Information, Embedded and Communication systems (ICJJECS)2015 ,	
2.	Multitarget tracking in Wireless Sensor networks based on Polygon Tracking method – An analysis on throughput and energy efficiency	National Conference on Research in Emerging Area – nat Amaljyothi College of Engineering , Kanjirappally 28-30 January 2016	
3	A Review of automatic Raga Recognition Approaches in	International Seminar on Science of Music, September 2015,	

	Carnatic Music		
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Inter University Centre for Social Science Research and Extension

1. February 2 2015 Fellow, Social Sciences Research Council New York in the Programme of New Directions in the Study of Prayers.
2. Associate Visiting Faculty at Eupen.
3. Post Doc visiting Fellow from August 1 to November 30 in Germany.
4. Paper Presentation at IAHR in September 2015
5. Workshop in Maxweber Kolleg Erfurt, November 13, 2015. Seminar at Maxplanck, November 23, 2015

Criterion 2.9

Faculty participation in Curriculum construction/Board of Studies...etc

School of Behavioural Sciences

Dr. P.S. Sukumaran, Director

1. Conveenor, Core Committee, B.Ed Special Education (MR)
2. Member, BOS, SBeS, M.G. University
3. Chairman, Greivence Redressal Committe for Colleges affiliated to M.G. University.
4. Convenor, Core Committee, M.Ed Special Education (MR)
5. Member, Academic Council, M.G University.

6. Chairman. B.Ed Special Education, Board of Examiners, M.G University.
7. Chairman. M.Ed Special Education, Board of Examiners, M.G University.
8. Special Invitee, M.Ed Special Education, Curriculum Committee, Kerala University.
9. Director of Research, M.G University.

Dr. Rajeev Kumar, Associate Professor

1. Member, BOS, St. Theresa's Autonomous College of Arts and Science, Ernakulam.
2. Member, BOS, SBeS, M.G University
3. Member, BOS, SPS, M.G University
4. Member, BOS, University of Kerala, Thiruvananthapuram

Dr. Muhamad Mustaffa, Assistant Professor.

1. Member, BOS, SBeS, M.G. University
2. Member, BOS, SPS, M.G University
3. Member, BOS, Psychology, Kannur, University.
4. Member, BOS, Education, Kannur, University.
5. Special Officer, Rehabilitation Centre, Calicut University.
6. Chairman, BOS, Life Long Learning and Extension, Calicut University.

Dr. P.T Baburaj, Assistant Professor.

1. Member, BOS, SBeS, M.G University
2. Member, BOS, SBeS, Calicut University

Sri. Rajesh E. Assistant Professor

1. Member, BOS, SBeS, M.G University
2. Member, BOS, SBeS, Calicut University
3. Member, BOS, SPS, M.G University

Smt. Rincymol Mathew, Assistant Professor.

1. Member, BOS, School of Behavioural Sciences, M.G University
2. Programme Officer, M.G University.
3. Chairperson, Womens' Gymnasium, M.G. University.

Criterion 2.13

Initiatives taken towards faculty development

School of Behavioural Sciences

The faculty members serve as the staff advisor/convenor of various department level committees. Organisation and participation in various seminars/conferences in and out of the university is encouraged abiding with university regulations. **Smt. Rincymol Mathew**, Assistant Professor of the Department attended a 2 weeks faculty development programme organised by the M.G. University .

School of Computer Sciences

Prof. (Dr.) R. Vijayakumar

Organized a Faculty development programme for Teachers from 30th July 2015 to 12 th August 2015 as Director, College Development council (DCDC)

Dr. Bindu V.R.

Attended the **User Awareness Programme on Plagiarism** on 3/6/2015 for Faculty, Researchers and Students, organized by University Library, Mahatma Gandhi University, Kottayam convened at University Library, which included a technical session by Mr. Manoj Kumar K (Scientist D(CS) of Information and Library Network (UGC-INFLIBNET) Centre, Gujarat on the use of **Anti-Plagiarism Software for Research Integrity and Ethics**.

- Organized a workshop on “M Sc and M Tech Syllabus Revision” as Chair Person, BOS, School of Computer Sciences on 9/6/2015. A major revision of the syllabi of M Sc and M Tech programmes of the School was done, introducing new theory and practical core courses.
- Participated in the Consultative Meeting with “Committee on Gender Justices in Campuses” organized by the Kerala State Higher Education Council on 29.07.2015.
- Co-ordinated a workshop/training session on Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt. of India) as the chief-coordinator of the University on 12.08.2015 organized as part of the Faculty Development Programme conducted by the University. Mr. Swapnil More, Training Coordinator, Spoken Tutorial (MHRD, NMEICT) IIT Bombay was the resource person. Teachers from about 30 affiliated institutions participated.
- Organized a one-day workshop on “Skill Enhancement” for students of the School in remembrance of Dr. A.P.J. Abdul Kalam, on 19th August 2015. Two of our alumni, who are well experienced, have handled the sessions on “Principles and Practices for a Good Professional and Personal Life” and “How to Face an Interview”.
- Organized a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” as Chair Person, BOS, and School of Computer Sciences on 08.09.2015. The scheme and syllabi for the new M Phil programme to be commenced in the School in the current academic year was framed.
- Attended the “International Seminar on Science of Music” organized by Inter University Centre for Studies in Science of Music and Mahatma Gandhi University during 25-27 September 2015
- Participated in the conference to streamline the admission and academic excellence on MCA 2016-17 representing the University. The meeting was

convened by “Admission Supervisory Committee and Fee Regulatory Committee for Professional Colleges of Kerala” chaired by Justice J S James at Thiruvananthapuram on 27.10.2015.

- Organized a 3 day workshop on “Network Simulator 2” (19.11.15 to 21.11.15) as part of Capacity Building and Knowledge Upgradation faculty members and M Sc/M Tech and Research students of the School.
- Attended an Orientation Programme on “NAAC Accreditation” organized by the University on 26.11.2015.
- Organized and Attended a seminar on “**Image Processing Technologies for Defence Applications**” by Dr. Lekshmi S, Scientist, NPOL (also an alumnus of the School), on 4.12.2015.
- Organized Interface, the 20th annual technical meet of Computer Science students, on **December 4th and 5th 2015**. The meet was organized by the members of C\$SA (Computer Science Students' Association) of School of Computer Sciences, MG University under the guidance of the faculty members and with the support of the Alumni of the School. Students from 30 institutions participated. The technical events included Paper Presentation, Trouble shooting and Cyber Skills, Software Coding, Web Designing and Technical Quiz.
- Organized a special **meeting of the Alumni of the School on 6.12.2015**, as part of the **Silver Jubilee celebrations of the School**. During the occasion, the first five batches (1993-1997) of the alumni were honoured by the School.
- As professional member of ACM, attended the ACM-India Annual Event 2016 held on 22.01.2016 at Thiruvananthapuram.
- Organized and attended a **National level 3-day E-conference** using the virtual class room and video-conferencing facility set up in the School. The School participated as a Nodal Centre in the **National Conference on Research in Emerging Areas (NACORE 2016)**, a National e-conference organized by

Amal Jyothi College of Engineering and Technology from **28.01.2016 to 30.01.2016**. The event was sponsored by KSCSTE in association with ISTE Kerala Section.

- Organized and attended a two-day National Workshop on **“India’s First Cloud Computing Championship – IFC3 INDIA”** in collaboration with **Neuromancers, IIT Bhubaneswar and Infero, Scitech Council IIT Hyderabad** from 9.02.16 to 10.02.16. Our School served as a zonal centre. Students from affiliated institutions also participated.
- Attended the **National Workshop on Cyber Crimes and Cyber laws** organized by School of Indian Legal Thought, MGU during **27th and 28th February 2016**.
- Chaired the programme in connection with the commemoration of **World Zero Discrimination Day on 1st March 2016**, conducted by Inter University Centre for Disability Studies (IUCDS), School of Behavioral Sciences in association with NSS and DSU, M G University.
- Attended the workshop on **“NAAC Accreditation”** organized by the University on 12.04.2016.
- Organized and attended a three day **National level workshop on “Data Analytics and Machine Learning Using R”** **June 15-18, 2016** as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School.
- Organized and attended a workshop on **“Cloud Solutions and Implementation”** for faculty and technical staff of the School on 28.06.2016. Mr. Saneesh Kaniyath, Sr. Technical Consultant, Smartsoft, Cochin was the resource person.

Ms. Pushpalatha K.P.

- Attended a one day Workshop on Syllabus Revision of MSc and MTech of the School on 9.06.2015. A major revision of the syllabi of M Sc and M Tech programmes of the School was done, introducing new theory and practical core courses.
- Attended a workshop/training session on Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, and Govt. of India) on 12.08.2015 organized as part of the Faculty Development Programme conducted by the University. Mr. Swapnil More, Training Coordinator, Spoken Tutorial (MHRD, NMEICT) IIT Bombay was the resource person.
- Attended a one-day workshop on “Skill Enhancement” organized for students of the School on 19.08.2015. The event was organized in remembrance of Dr. A.P.J. Abdul Kalam. Two of our alumni, who are well experienced, have handled the sessions on “Principles and Practices for a Good Professional and Personal Life” and “How to Face an Interview”.
- Attended a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” at School of Computer Sciences on 08.09.2015. The scheme and syllabi for the new M Phil programme to be commenced in the School in the current academic year was framed.
- Attended a 3 day workshop on “Network Simulator 2” (19.11.15 to 21.11.15) organized as part of Capacity Building and Knowledge Upgradation of Faculty
- Attended a seminar on “**Image Processing Technologies for Defence Applications**” by Dr. Lekshmi S, Scientist, NPOL (also an alumnus of the School), on 4.12.2015. This seminar was organized as part of Interface 2015, the 20th annual technical meet of Computer Science students, organized by the members of C\$\$A(Computer Science Students' Association) of School of Computer Sciences.

- Attended a special **meeting of the Alumni of the School convened on 6.12.2015**, as part of the Silver Jubilee celebrations of the School. During the occasion, the first five batches (1993-1997) of the alumni were honoured by the School.
- Attended a **National level 3-day E-conference** using the virtual class room and video-conferencing facility set up in the School. The School participated as a Nodal Centre in the **National Conference on Research in Emerging Areas (NACORE 2016)**, a National e-conference organized by Amal Jyothi College of Engineering and Technology from **28.01.2016 to 30.01.2016**. The event was sponsored by KSCSTE in association with ISTE Kerala Section.
- Attended a two-day National Workshop on **“India’s First Cloud Computing Championship – IFC3 INDIA”** in collaboration with **Neuromancers, IIT Bhubaneswar and Infero, Scitech Council IIT Hyderabad** from 9.02.16 to 10.02.16. Our School served as a zonal centre. Students from affiliated institutions also participated.
- Attended the “NAAC Workshop on Documents to be Prepared” organized by the University on 12.04.2016.
- Attended a three day **National level workshop on “Data Analytics and Machine Learning Using R”** June 15-18, 2016 organized by the School as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School.
- Attended a workshop on **“Cloud Solutions and Implementation”** for faculty and technical staff of the School on 28.06.2016. Mr. Saneesh Kaniyath, Sr. Technical Consultant, Smartsoft, Cochin was the resource person.

Dr. Anuj Mohamed

- Attended a one day workshop on syllabus revision of MSc and MTech of the School on 9.06.2015. A major revision of the syllabi of M Sc and M

Tech programmes of the School was done, introducing new theory and practical core courses.

- Attended a workshop/training session on Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, and Govt. of India) on 12.08.2015 organized as part of the Faculty Development Programme conducted by the University. Mr. Swapnil More, Training Coordinator, Spoken Tutorial (MHRD, NMEICT) IIT Bombay was the resource person.
- Attended a one-day workshop on “Skill Enhancement” organized for students of the School on 19.08.2015. The event was organized in remembrance of Dr. A.P.J. Abdul Kalam. Two of our alumni, who are well experienced, have handled the sessions on “Principles and Practices for a Good Professional and Personal Life” and “How to Face an Interview”.
- Attended a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” at School of Computer Sciences on 08.09.2015. The scheme and syllabi for the new M Phil programme to be commenced in the School in the current academic year was framed.
- Attended the “International Seminar on Science of Music” organized by International Centre for Studies in Science of Music and Mahatma Gandhi University from 25.9.15 to 27.9.15
- Attended a 3 day workshop on “Network Simulator 2” (19.11.15 to 21.11.15) organized as part of Capacity Building and Knowledge Upgradation of Faculty members as well as M Sc/M Tech and Research students of the School.
- Attended an Orientation Programme on “NAAC Accreditation” organized by the University on 26.11.2015.

- Attended a seminar on “**Image Processing Technologies for Defence Applications**” by Dr. Lekshmi S, Scientist, NPOL (also an alumnus of the School), on 4.12.2015. This seminar was organized as part of Interface 2015, the 20th annual technical meet of Computer Science students, organized by the members of C\$\$A(Computer Science Students' Association) of School of Computer Sciences.
- Member organizing committee and attended a special **meeting of the Alumni of the School convened on 6.12.2015**, as part of the Silver Jubilee celebrations of the School. During the occasion, the first five batches (1993-1997) of the alumni were honoured by the School.
- As professional member of ACM, attended the ACM-India Annual Event 2016 held on 22.01.2016 at Thiruvananthapuram.
- Co-ordinated and attended a **National level 3-day E-conference** using the virtual class room and video-conferencing facility set up in the School. The School participated as a Nodal Centre in the **National Conference on Research in Emerging Areas (NACORE 2016)**, a National e-conference organized by Amal Jyothi College of Engineering and Technology from **28.01.2016 to 30.01.2016**. The event was sponsored by KSCSTE in association with ISTE Kerala Section.
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- Attended the “NAAC Workshop on Documents to be Prepared” organized by the University on 12.04.2016.
- Professional Member of ACM (Association of Computing Machinery).

- Attended a three day **National level workshop on “Data Analytics and Machine Learning Using R”** June 15-18, 2016 organized by the School as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School.
- Attended a workshop on **“Cloud Solutions and Implementation”** for faculty and technical staff of the School on 28.06.2016. Mr. Saneesh Kaniyath, Sr. Technical Consultant, Smartsoft, Cochin was the resource person.

School of Bio Sciences

- Institutional level two day seminar on **“Prevention & management of lifestyle diseases”** jointly organized with School of Biosciences & Department of student services (DSS) of M.G.University on 17th & 18th March, 2016.
- Seminar on **“Cyber Space & Social Responsibility”** jointly organized with School of Biosciences & PTA School of Biosciences on 28th December 2015
- Seminar on **“Social responsibility in animal birth control”** jointly organized with School of Biosciences & Indian Veterinary Association-Kerala in connection with World Spay Day on 18th February 2016
- One day Workshop for Teachers of affiliated Colleges in connection with PG Biotechnology Syllabus Revision -2016.

- .Training cum workshop on molecular docking and drug designing 23-25 March 2015 organized by school of Biosciences ,Mahatma Gandhi University and BioDiscovery Group Life Sciences.

School of Chemical Sciences

No. of conferences: 05

- International Conference on Macromolecules: Synthesis, Morphology, Processing, Structure, Properties and Application (ICM 2016): 13-15, May 2016
- First International Conference on Advanced Materials for Power Engineering (ICAMPE 2015) : 11-13 December, 2015
- International Conference on Nanostructured Polymeric Materials (ICNPM 2015) : 13-15 November, 2015
- World Congress on Microscopy (WCM 2015): 9-11 October,2015
- Fourth International Conference on Natural Polymers (ICNP 2015) : 10-12 April 2015

School of Behavioural Sciences

- Presently the counselling centre attached to the Department is providing services free of cost to all strata of the community. The strengthening of the centre expanding the services, staff strength and generation of income is under consideration as the services are in high demand.
- Orientation programme for principals and teachers of special education colleges of M.G. University on New Regulations of Rehabilitation Council of India and NCTE on B. Ed. Special Education. 05.02.2015.
- Observation of International Ear Care Day. 03.03.2015.

- Symposium on Physical Fitness. 10.03.2015.
- Demonstration and Role play on World Health Day. 07.04.2015.
- Symposium on World Environment Day. Jointly organized with the Campus Unit of NSS. 05.06.2015.
- Symposium on Enhancing Quality of Research. 25.06.2015.
- Observation of World Autism Day. 01.07.2015.
- Symposium on Behaviour Therapy for Children with Mental Retardation. 15.07.2015.
- Symposium on Transactional Analysis. 22.07.2015.
- Symposium on Stress Management. 29.07.2015.
- Seminar, Multimedia Exhibition and Book Display on ‘A P J Abdul Kalam, The

Legend. 6 -7, August, 2015.

- Symposium on Introduction to Indian Sign Language. 05.08.2015.
- Workshop on Restructured Curriculum of B. Ed. Special Education (Intellectual Disability). 10.09.2015.
- Orientation Workshop on Braille – English and Malayalam to General School Teachers. Organized in Collaboration with Regional Centre of the National Institute for Visually Handicapped,, Chennai. 25.09.2015 to 10.10.2015
- Workshop on Rorschach. 28 – 29, September, 2015.
- 16. Observation of International Deaf day. 29.09.2015.
- Symposium on Indian Classical Dance – Effect on Mind and Body. 07.10.2015.

- Poster Exhibition in connection with Observation of World Mental Health Day.(10.10.2015).
- Orientation on Indian Sign Language to Teachers. 12 – 14, November, 2015.
- 20. Alumni Meet. 18.11. 2015.
- 21. Observation of Indian Constitutional Day. 26.11.2015.
- 22. Observation of World Disability Day. Jointly organized with IUCDS. 03.12.2015.
- Identification and Assessment Camp of Learning Problems. Jointly organized with Department of Life Long Learning and Extension. 05.12.2015.
- Invited Lecture on Rights of the Disadvantaged, by Mrs. Jasmin Alex, Assistant Professor, School of Indian Legal Thought, in connection with Observation of World Human Rights Day. Jointly organized with Campus Unit of NSS.10.12.2015.

National Level

National Seminar on Models of Best Practices in Rehabilitation. Jointly organized with IUCDS, M.G. University. 16 -17, October, 2015

- Institutional level two day seminar on **“Prevention & management of lifestyle diseases”** jointly organized with School of Biosciences & Department of student services (DSS) of M.G.University on 17th & 18th March, 2016.
- Seminar on **“Cyber Space & Social Responsibility”** jointly organized with School of Biosciences & PTA School of Biosciences on 28th December 2015
- Seminar on **“Social responsibility in animal birth control”** jointly organized with School of Biosciences & Indian Veterinary Association-Kerala in connection with World Spay Day on 18th February 2016

- One day Workshop for Teachers of affiliated Colleges in connection with PG Biotechnology Syllabus Revision -2016.
- .Training cum workshop on molecular docking and drug designing 23-25 March 2015 organized by school of Biosciences ,Mahatma Gandhi University and BioDiscovery Group Life Sciences

No of conferences organised by the Department:

- Orientation programme for principals and teachers of special education colleges of M.G. University on New Regulations of Rehabilitation Council of India and NCTE on B. Ed. Special Education. 05.02.2015.
- Observation of International Ear Care Day. 03.03.2015.
- Symposium on Physical Fitness. 10.03.2015.
- Demonstration and Role play on World Health Day. 07.04.2015.
- Symposium on World Environment Day. Jointly organized with the Campus Unit of NSS. 05.06.2015.
- Symposium on Enhancing Quality of Research. 25.06.2015.
- Observation of World Autism Day. 01.07.2015.
- Symposium on Behaviour Therapy for Children with Mental Retardation. 15.07.2015.
- Symposium on Transactional Analysis. 22.07.2015.
- Symposium on Stress Management. 29.07.2015.
- Seminar, Multimedia Exhibition and Book Display on ‘A P J Abdul Kalam, The Legend’. 6 -7, August, 2015.
- Symposium on Introduction to Indian Sign Language. 05.08.2015.
- Workshop on Restructured Curriculum of B. Ed. Special Education (Intellectual Disability). 10.09.2015.

- Orientation Workshop on Braille – English and Malayalam to General School Teachers. Organized in Collaboration with Regional Centre of the National Institute
- For the Visually Handicapped, Chennai. 25.09.2015 to 10.10.2015.
- Workshop on Rorschach. 28 – 29, September, 2015.
- Observation of International Deaf day. 29.09.2015.
- Symposium on Indian Classical Dance – Effect on Mind and Body. 07.10.2015.
- Poster Exhibition in connection with Observation of World Mental Health Day. -10.10.2015.
- Orientation on Indian Sign Language to Teachers. 12 – 14, November, 2015.
- Alumni Meet. 18.11. 2015.
- Observation of Indian Constitutional Day. 26.11.2015.
- Observation of World Disability Day. Jointly organized with IUCDS. 03.12.2015.
- Identification and Assessment Camp of Learning Problems. Jointly organized with
- Department of Life Long Learning and Extension. 05.12.2015.
- Invited Lecture on Rights of the Disadvantaged, by Mrs. Jasmin Alex, Assistant
- Professor, School of Indian Legal Thought, in connection with Observation of World
- Human Rights Day. Jointly organized with Campus Unit of NSS.10.12.2015.

National Level

National Seminar on Models of Best Practices in Rehabilitation. Jointly organized with National Institute for the Empowerment of Persons with Multiple Disabilities, Chennai and IUCDS, M.G. University. 16 -17, October, 2015

The School also observed/organized the following Events.

- Human Rights Day on 10.12.2015
- World AIDS day on 01.12.2015
- Constitution Day on 26.11.2015
- National Integration Day on 19.11.2015
- World Deaf Day on 11.10.2015
- Two Weeks Continuing Rehabilitation Education Refresher Course on Braille Reading and Writing in Malayalam and English, in collaboration with the National Institute for the Visually Handicapped, Chennai from 26.09.2015 – 10.10.2015.
 - Seminar on Trends and Developments in Sign Language Interpretation on 10.11.2015.
 - First Orientation Course in Indian Sign Language on 12-14, November, 2015.
 - Alumni Meet on 18.11.2015.
 - Two day National Conference on ‘Models of Best Practices in Rehabilitation for the empowerment of persons with Disabilities, in collaboration with National Institute for the Empowerment of Persons with Multiple Disabilities, Chennai and IUCDS on 16-17, October 2015.

School of Environmental Studies

List of consultancy carried out

- Laboratory analysis

- External M.Sc., B.Tech, M.Tech projects

Conferences

- International Conference on Water: From Pollution to Purification, Jan.23-26, 2015, Kottayam
- Third International Conference on Membranes (ICM 2015), August 21-24, 2015, Kochi.
- National Workshop on Applications of Membranes in Energy and Water Purification. (NWM-2015), Aug.20-21, 2015, Mahatma Gandhi University, Kottayam.
- National workshop on Mass spectrometry and Raman Microscopy, March 27-28, 2015, Kottayam.
- National workshop on Mass spectrometry, December 10-11, 2015, Kottayam.
- International conference on Mass spectrometry, December 11-14, 2015, Kottayam.

International Conference on Mass Spectrometry, December 11-14, 2015. Kottayam:

The Second International Conference on Mass Spectrometry was organized during Dec. 11-14, 2015. The conference covered important applications of one of the powerful analytical tools, mass spectrometry. The technical session of the conference began with short inaugural ceremony. The Hon. Vice Chancellor of Mahatma Gandhi University, Dr. Babu Sebastian inaugurated the conference. The Executive Vice President of Kerala State Council for Science Environment and Technology, Dr. Suresh Das delivered the keynote address. There were nearly 150 participants out of which 10 were from outside India. There were six plenary lectures and 13 invited talks from experts in the field. The young investigators were also given ample opportunity to present their finding through short talks. There was an interactive and informative poster session, nearly 20 posters were exhibited. The notable speakers were **Michael W. Linscheid** (Humboldt-

Universitaetzu Berlin, Germany), **Laurent Debrauwer** (Université de Toulouse, France), **Marc J-F Suter** (Eawag, Switzerland), **R. Srinivas** (National Center for Mass Spectrometry, India), **Olivier Laprevote** (Paris Descartes University, France), **Evgeny Nikolaev** (The Institute for Energy Problems of Chemical Physics Russian Academy of Sciences, Russia), **Athula Attygalle** (Stevens Institute of Technology, USA), **Keshava Prasad**, (Institute of Bioinformatics, India), **M. Joseph** (Indira Gandhi Centre for Atomic Research, India), **Pierangela Palma** (Università di Urbino “Carlo Bo”, Italy), **AchilleCappiello** (Università di Urbino, Italy) and **Suman S. Thakur** (Centre for Cellular & Molecular Biology, Hyderabad).

University Centre for International Co operation

UCIC Associated with an International Conference on 'Understanding Contemporary India' organized by Rajiv Gandhi Chair for Public Policy Studies, School of International Relations and Politics, Institute for Contemporary Chinese Studies, Mahatma Gandhi University during 14-15 January 2016.

Inter University Centre for Social Science Research and Extension

- Three day Documentation workshop ‘Clean Kumily Green Kumily’ at Kondody Greenwoods resort, Kumily from 27 February 2015 See attached photo
- Action oriented programme for the selected Panchayaths in Kerala in association with Kerala Grama Panchayath Association from 16 February to 18 February 2016.

Criterion 3.2

Details regarding major projects (2015-16)

School of Environmental Sciences

1. Setting up of the Sophisticated Analytical Instrument Facility (SAIF): from **DST (Rs.6.5 lakhs) (ongoing)**
2. National Uranium Project (determination of uranium in drinking water in 5 central districts of Kerala , **BRNS, Mumbai , Rs. 24 lakhs) (ongoing)**
3. National Radiation Monitoring Project (Monitoring of natural radiation in Kerala, **BRNS Mumbai, Rs. 10 lakhs) (Ongoing)**
4. **KSCSTE- BTL Project** (as scientist mentor) Evolution of Karamana river basin and its implications on hydrogeology: A geomatics approach using morphometric analysis (**ongoing**)
5. **UGC Major Project:** Mercury pollution in the sediments of Vembanad Wetland: a chronological approach (Completed on January 2016)
6. **Arctic Expedition** : Long - Term Environmental Monitoring of Arctic Fjords, **till 2020**
7. An investigation on the potential microalgal species for the production of biodiesel from Kuttanad wetland ecosystem, Kerala. **Funded by UGC (Major Research Project) - 8.5 Lakhs (ongoing)**
8. **DoECC, Govt. Kerala:** Perchlorate contamination of drinking water resources in Kerala (22 Lakh) sanctioned in January 2016.
9. **Dr E.V. Ramasamy**, Associate Professor has submitted two major research projects:
10. One to The Ministry of Environment, Forests and Climate Change, New Delhi on '*Earthworm diversity and its influence on soil carbon dynamics in Silent Valley National Park*'.

11. The second project proposal on *Mitigation of river pollution with Constructed floating wetland and Bio-film Block systems* is being prepared, shortly to be submitted to Department of Biotechnology (DBT), Govt of India, New Delhi in response to DBT's Call for Proposals on '*River Cleaning*'.

12. Arctic Expedition :

- (i) Screening for the Cyanotoxins in the Arctic Environment
- (ii) Psychrophilic anaerobic degradation of human faecal matter.

School of Pure and Applied Physics

1. Sol-Gel Synthesis and characterization of tellurite based device materials UGC- CSIR- (P I Dr. N V Unnikishnan Emeritus Scientist): 15.42 lakhs, 2012-2015,
2. Dynamics of Plasma plume evolution during laser ablation of metal targets in stationary and flowing liquid media (P I Dr. K Nandakumar) 40 lakhs DST 2012-2015
3. Physics of Cavitation Bubbling and Hydrogen Generation during Liquid Phase Laser Ablation **34,96,576/-** Dr. Nandakumar Kalarikkal (PI) & Prof. Sabu Thomas (Co-PI)
4. Novel Thermoplastic Elastomer Composition for Neutron Shielding Applications **34,66,550/-** BRFST-BRNS Prof. Sabu Thomas (PI) & Dr. Nandakumar Kalarikkal (Co-PI)
5. **Development of one-dimensional multi-ferroic nanocomposites for device applications 10,00,000** BRFST-BRNS Dr. Nandakumar Kalarikkal (PI) Kerala State Council for Science, Technology and Environment

<i>Name of the Investigator</i>	<i>Title of the project</i>	<i>Amount Sanctioned (Rs)</i>	<i>Funding Agency</i>
Dr.Nandakumar Kalarikkal (PI)	Nanoparticle aggregation behavior in polymer nanocomposites	12,00,000/-	UGC-DAE-CSR Kolkata Centre
Prof.Sabu Thomas (PI) & Dr.Nandakumar Kalarikkal (Co-PI)	Development of super tough nanocomposites from epoxy resin, liquid rubber and nanoclay		KSCSTE under the SARD program)
Dr.Nandakumar Kalarikkal (PI) & Prof.Sabu Thomas (Co-PI)	Physics of Cavitation Bubbling and Hydrogen Generation during Liquid Phase Laser Ablation	34,96,576/-	BRFST-BRNS

Prof. Sabu Thomas (PI) & Dr. Nandakumar Kalarikkal (Co-PI)	Novel Thermoplastic Elastomer Composition for Neutron Shielding Applications	34,66,550/-	BRFST-BRNS
Dr.Nandakumar Kalarikkal (PI)	Development of one-dimensional multi-ferroic nanocomposites for device applications	10,00,000	Kerala State Council for Science, Technology and Environment
Dr.Nandakumar Kalarikkal (PI)	Design and applications of magnetically responsive self assembled polymer nanocomposites	2,00,00,000	DST- Nanomission

Sr. No	Title	Amount (INR)	Agency
1	Physics of Cavitation Bubbling and Hydrogen Generation during Liquid Phase Laser Ablation	34,96,576	BRFST-BRNS
2		34,66,550	BRFST-BRNS

	Novel Thermoplastic Elastomer Composition for Neutron Shielding Applications		
3	Development of one-dimensional multi-ferroic nanocomposites for device applications	10,00,000	Kerala State Council for Science, Technology and Environment 1.

1. A project proposal submitted to DeitY under Visvesvara ya PhD Scheme has been accepted. 3 PhD-JRFs were sanctioned to IIUCNN under Visvesvara ya PhD Scheme for Electronics &IT for the year 2015-2016 by Department of Electronics & IT (DeitY), New Delhi .
2. Higher Education Department, Govt. of Kerala has sanctioned Rupees One Crore (Rs.1, 00, 00,000/-) for the proposal submitted “Nanoscale materials for Water purification and for the fabrication of nano composites for biomedical applications” (G.O. (Rt.) No. 592/2015/H.Edn., dated; 25/03/2015.)
3. Novel thermoplastic elastomer compositions for neutrons shielding applications – BRFST, BRNS Govt. of India. (Rs. 35 lakhs).
4. Physics of cavitation bubbles and hydrogen generation during liquid phase laser ablation - BRFST, BRNS Govt. of India (Rs. 35 lakhs).

5. Sol-Gel Synthesis and characterization of tellurite based device materials UGC- CSIR- (P I Dr. N V Unnikishnan Emeritus Scientist): 15.42 lakhs, 2012-2015,
6. Dynamics of Plasma plume evolution during laser ablation of metal targets in stationary and flowing liquid media (P I Dr. K Nandakumar) 40 lakhs DST 2012-2015
7. Physics of Cavitation Bubbling and Hydrogen Generation during Liquid Phase Laser Ablation **34,96,576/-** Dr. Nandakumar Kalarikkal (PI) & Prof. Sabu Thomas (Co-PI)
8. Novel Thermoplastic Elastomer Composition for Neutron Shielding Applications **34,66,550/-** BRFST-BRNS Prof. Sabu Thomas (PI) & Dr. Nandakumar Kalarikkal (Co-PI)
9. **Development of one-dimensional multi-ferroic nanocomposites for device applications 10,00,000** BRFST-BRNS Dr. Nandakumar Kalarikkal (PI) Kerala State Council for Science, Technology and Environment

Submitted:

- Applied for **UGC DEEN DAYAL UPADHYAY KAUSHAL KENDRAS** for 2014-2017 for an amount of Five Crores (Rs. 5, 00, 00,000/-) and called for the proposal presentation before the expert committee at UGC, Delhi on June 2015.
- Project proposal entitled “Affordable integrated water purification by novel 3D printed biopolymeric nanocomposite” submitted to DST-CEFIPRA under worth Rs. 60,00,000/- (Coordinator: Prof Sabu Thomas)
- Project proposal entitled “Biorelevant plasma treatment of Chitosan nanoparticles” submitted to DBT under Bioengineering programme (Coordinator: Prof Sabu Thomas)
- Project proposal entitled “Gold nanoclusters- an efficient candidate for early

stage cancer diagnosis”submitted to DBT under Bioengineering programme (Coordinator: Dr. Raji V. & Prof Sabu Thomas)

- Project proposal entitled “Core Shell Nanoparticles, a novel multifunctional candidate for siRNA mediated combinatorial cancer therapy” submitted to DBT under Nanobiotechnology programme (Coordinator: Dr. Raji V. & Prof Sabu Thomas)
- Project proposal entitled “New generation of porous separator for Li-ion batteries” submitted to DST-DAAD under worth Rs. 8,00,000/- (Coordinator: Prof Sabu Thomas)
- Project proposal entitled “Gold nanoclusters-an efficient candidate for Bio-imaging ” submitted to DST-DAAD under worth Rs. 7,14000/- (Coordinator: Dr. Raji V, Co-PI: Prof Sabu Thomas)
- Project proposal entitled “Development of electrospun modified chitosan nanofiber for dye removal from industrial waste water ” submitted to DST-CEFIPRA under worth Rs. 2470000/- (Coordinator: Dr. Raji V Co-PI: Prof Sabu Thomas)

International Collaborative Projects

1. Indo - Brazil project

Project title: studies on cellulose nanocrystals and their Applications in nanocomposites with varying technological Applications.

Principal Investigator: Prof. Sabu Thomas

Co- Investigator: Dr. Laly Pothen Funding Agency, DST

Indo - Austria Project

Project title: Hierarchical biocomposites from Isora fibres and unsaturated polyester.

Principal Investigator: Prof. Sabu Thomas Co- Investigator: Dr. Lovely Mathew

Funding Agency: DST

Criterion 3.4

Details on Research Publications

School of Bio Sciences

1. K.S Rishad, Sharrel Rebello, Vinod Kumar Nathan, S Shabanamol and M.S Jisha,(2016) Biocontrol potential of halotolerant bacterial chitinase from high yielding novel *Bacillus pumilus* MCB-7 autochthonous to mangrove ecosystem.Pesticide biochemistry and physiology. **Impact factor 2.388**
2. Vinod Viswanath, Vincent Vineeth Leo, Sabna Prabha S, V P Potty and Jisha M.S (2016). Optimized production of tannase from cashew testa using *Aspergillus niger* MTCC 5898". Food Biotechnology. **Impact factor 0.814.**
3. Divya K, Kurian LC, Vijayan S, Jisha MS, Green synthesis of silver nanoparticles by *Escherichia coli* : Analysis of antibacterial activity. J. Water Environ. Nanotechnol., 2016; 1(1): 63-74, DOI: 10.7508/jwent.2016.01.008
4. Smitha Vijayan, Divya K, Tijith K. George, Jisha M.S. **Biogenic synthesis of silver nanoparticles using endophytic fungi *Fusarium oxysporum* isolated from *Withania Somnifera*, its antibacterial and cytotoxic Activity.** Accepted for publication in journal of bionanoscience.
5. Elizabeth Mary John and Jisha M.S (2016). Optimization of chlorpyrifos degradation by assembled bacterial consortium using response surface methodology. **Soil and sediment contamination** .Accepted the publishers, Taylor & Francis. **Impact factor 1.189.**
6. Sharrel rebello, Biljo Joseph, Sunil Joseph, Leny Jose, Sathish Mundayoor, Jisha M.S, and Bioconversion of sodium dodecyl sulfate to rhamnolipids by transformed *Escherichia coli* DH5 α cells – a novel strategy for rhamnolipid synthesis. **Journal of Applied Microbiology. Impact factor 2.49.**

7. K.S Rishad, Sharrel Rebello, Vinod Kumar Nathan, S Shabanamol and M.S Jisha, Optimised production of chitinase from a novel mangrove isolate, bacillus pumilus MCB-7 using response surface methodology, **Biocatalysis and Agricultural Biotechnology**, <http://dx.doi.org/10.1016/j.bcab.2016.01.009>.
8. Dhanya S., J Sreekumar, Jisha M.S (2016), Evaluation of antagonistic potential and Induction of flowering in Anthurium Andreanum L. by indigenous Pseudomonas taiwanensis. **International Journal of Agriculture Innovations and Research 4 (4), 760-766.**
9. Smitha vijayan and Jisha, M, S. Extracellular synthesis of silver nanoparticles by endophytic Fusarium solani from Withania somnifera and its antibacterial and cytotoxicity studies. Proceedings of 4th International Conference on Nanotechnology and Basic Science (ICN2016), 4-5 February 2016, Dubai. Emirates.
10. Divya K., Liya C. Kurian, Smitha Vijayan, Jisha M.S*.. Green Synthesis of Silver Nanoparticles by Escherichia coli and its Antibacterial Activity. Proceedings of 4th International Conference on Nanotechnology and Basic Science (ICN2016), 4-5 February 2016, Dubai. Emirates.
11. Aju K. Asok, P. A. Fathima, M. S. Jisha (2015), Biodegradation of Linear Alkylbenzene Sulfonate (LAS) by Immobilized Pseudomonas sp. Advances in Chemical Engineering and Science, **impact factor 0.8.**
12. Elizabeth Mary John and Jisha M.S (2015), Chlorpyrifos: pollution problems and remediation .**Environmental Chemistry Letters as review paper. Impact factor 2.9.**
13. Tijith K George, Aju K. Asok, S. Shabanamol, Sharrel Rebello and Jisha M.S (2015), "Endophytic mycotic diversity of Brugiera cylindrica and Rhizophora candelaria from Ayiramthengu mangrove ecosystem, Kerala" in Annals of biological research.
14. Vinod Viswanath, Vincent Vineeth Leo, Sabna Prabha S, Prabhakumari.C, V P Potty and Jisha M.S (2015). Biosynthesis of tannase from cashew testa using

Aspergillus Niger MTCC5889 by Solid State Fermentation" (DOI: 10.1007/s13197-015-1858-4) Journal of food science and technology. **Impact factor 2.203.**

15. Vinod Viswanath, Vincent Vineeth Leo, Sabna Prabha S, Prabhakumari.C, V P Potty and Jisha M.S (2015). Thermal properties of tannin extracted from *Anacardium occidentale L.* using TGA and FTIR Spectroscopy. Natural products research. The publishers, Taylor & Francis. **Impact factor 1.2.**
16. Joseph Stephen, S. Shabanamol, K. S. Rishad, M. S. Jisha (2015). Growth enhancement of rice (*Oryza sativa*) by phosphate solubilizing *Gluconacetobacter* sp. (MTCC 8368) and *Burkholderia* sp. (MTCC 8369) under greenhouse conditions. **3 Biotech** DOI 10.1007/s13205-015-0286-5. **Springer 0.992.**
17. Elizabeth Mary John; Sharrel Rebello; Aju K. Asok and Jisha M.S (2015). *Pseudomonas plecoglossicida* S5 a novel isolate for sodium dodecyl sulfate degradation. **Environmental Chemistry Letters**. Volume 13(1) pp 117-123. **Impact factor 2.573.**
18. Ambilli M. Nair; Sharrel Rebello; Rishad K.S; Aju K. Asok and Jisha M.S. (2015). Biosurfactant Facilitated Biodegradation of Quinalphos at High Concentrations by *Pseudomonas aeruginosa* Q10. Soil and sediment contamination Volume 24 (5)542-553. The publishers, Taylor & Francis. **Impact factor 1.02**
19. Roshmi Thomas, Jishma P and **Radhakrishnan EK** (2016) "Photocatalytic and antibacterial effects of Silver nanoparticles fabricated by *Bacillus subtilis* SJ15. (Submitted after revision).
20. Jimtha, **Radhakrishnan EK**, Multipotent plant probiotic rhizobacteria from Western Ghats, its effect on quantitative enhancement of medicinal natural product biosynthesis (submitted after revision).
21. Roshmi Thomas, Reshmi, **Radhakrishnan EK**, Enhanced antimicrobial efficacy of biosynthesized silver nanoparticles based antibiotic conjugates (submitted after revision).

22. Jasim B, Roshmi Thomas, Jyothis Mathew and **Radhakrishnan EK**. Plant growth and diosgenin enhancement effect of silver nanoparticles in Fenugreek (*Trigonella foenum-graecum* L.(**submitted after revision**)).
23. Jimtha John C, Jishma P, Arathy G B, Anisha C, **Radhakrishnan EK** (2016) “Identification of plant growth promoting rhizosphere *Bacillus* sp. WG4 antagonistic to *Pythium myriotylum* and its enhanced antifungal effect in association with *Trichoderma* sp.” - **Accepted in Journal of Soil science and plant nutrition**.
24. Ouseph Varghese, Neethu Sahadevan, **Radhakrishnan EK**, Jyothis Mathew (2016) Antifungal effect of *Zingiber zerumbet* extract and its compatibility with tobacco decoction-a biopesticide **International Journal of Advanced research** 4(2) 455-460.
25. Sunitha V.S.,Sunil M.A., **Radhakrishnan EK**, Jyothis Mathew, Immunomodulatory activity of *Vetiveria zizanioides* extract on peritoneal macrophages of albino mice (2015)**International Journal for Pharmaceutical Research** Scholars ISSN No: 2277 – 7873 V4 1-4.
26. Sunitha V S, Sunil M A, **Radhakrishnan EK**, Jyothis Mathew, Immunomodulatory Activity of *Caesalpinia sappan* L. Extracts on Peritoneal macrophage of Albino Mice,2015)**International Journal of Science and Research (IJSR)** ISSN: 2319-7064.
27. Jasim B, Jyothis Mathew, **Radhakrishnan EK**, “Identification of a Novel endophytic *Bacillus* sp. from *Capsicum annum* with highly efficient and broad spectrum plant probiotic effect” - **Accepted in Journal of Applied Microbiology**.
28. Jishma, Roshmi Thomas, Rakhie, **Radhakrishnan EK**, “Exploration of Photocatalytic Properties of Microbially Designed Silver Nanoparticles on Victoria

Blue B” **Bioprocess and Biosystem Engineering**, 2016, 10.1007/s00449-016-1581-1.

29. Jasim B, Rosemin Benny, Rohini Sabu, Jyothis Mathew, **Radhakrishnan EK** “Metabolite and mechanistic basis of antifungal property exhibited by endophytic *Bacillus amyloliquefaciens* BmB 1, **Appl Biochem Biotechnol**, 2016: 1-16.
30. Jasim B, Sreelekshmi, Jyothis Mathew, **Radhakrishnan EK** “Surfactin, Iturin and Fengycin biosynthesis by endophytic *Bacillus* sp from *Bacopa monnieri*” . **Microbial Ecology**, 2016, 10.1007/s00248-016-0753-5.
31. KR Soumya, Shiji Mathew, Sheela Sugathan, Jyothis Mathew and **Radhakrishnan EK**, “Studies on prevalence of biofilm associated genes and primary observation on sasX gene in clinical isolates of Coagulase negative staphylococci”. **Acta Pathologica Microbiologica Scandinavica**. 2016 Apr; 124(4):319-26.
32. Athira Krishnan K.A. & **Keerthi T.R. (2016)** Comparative Evaluation of Bioactivities of two Marine Sponges, *Zygomycete parishii* and *Callispongia diffusa* from Southwest Coast of India **British Journal of Pharmaceutical Research**11(1): 1-10, 2016, Article no.BJPR.24740 ISSN: 2231-2919, NLM ID: 101631759.
33. Honey Chandran C., Meenu Das M. and **Dr. Keerthi T. R.(2016)** “ Effect of prebiotics on synbiotic fermented milk” **World journal of pharmacy and pharmaceutical sciences. Volume 5, Issue 2, 1557-1566.**
34. Honey Chandran C.1, Summaya Jauhara2 and **Dr. Keerthi T. R.(2016)** “Probiotic effect of bacillus coagulans, mbtu-p1f2 from infantfaeces with a known probiotic” **European journal of biomedical and pharmaceutical sciences Volume 3, Issue 3, 298-304.**

35. Athira Krishnan K.A. & **Keerthi T.R. (2016)** “Analyses of methanol extracts of two marine sponges, *Spongia officinalis* var. *ceylonensis* and *Sigmadocia carnosus* from Southwest coast of India for their bioactivities” **International Journal of Current Microbiology and Applied Sciences** ISSN: 2319-7706 Volume 5 Number 2(2016) pp. 722-734 Journal homepage: <http://www.ijcmas.com>.
36. Anu P. Sebastian and **Keerthi T.R.,(2015)** “Molecular characterization and health promoting attributes of MBTU PBBM1 isolated from cow milk” **International Journal of Current Microbiology and Applied sciences**. ISSN: 2319-7706 Volume 4 Number 6 (2015) pp. 840-845. Impact factor-2.1.
37. Aneesha Devassy, Raj Kumar, P. P. Shajitha, Reshma John, K. G. Padmakumar, V. S. Basheer, A. Gopalakrishnan & **Linu Mathew (2015)**: Genetic identification and phylogenetic relationships of Indian clariids based on mitochondrial COI sequences, Mitochondrial DNA Mitochondrial DNA, Early Online: 1–4 2015 Taylor & Francis., <http://dx.doi.org/10.3109/19401736.2015.1079901>.
38. Reshma John, Shajitha P P, Aneesha Devassi, Linu Mathew., Callus induction and multiple shoot regeneration from nodal explants of *Achyranthes aspera* Linn. MG University, ISBN: 978-81-930000-8-3. pp 79-82.
39. PP Shajitha , NR dhanesh, P J Ebin, Laly Joseph, Aneesha devassy, Reshma John, Jomy Augustine , Linu Mathew molecular phylogeny of balsams(genus *Impatiens*) based on chloroplast atpB- rbcL region indicates two colonization events by the balsam ancestors. Proceedings of the national seminar on plant science technology for sustainable world.
40. Antibacterial properties of silver nanoparticles synthesized by marine *Ochrobactrum* sp. Roshmi Thomas, Anju Janardhanan, Rintu T Varghese, Sonia E V, **Jyothis Mathew** and Radhakrishnan EK (2015) *Brazilian Journal of Microbiology*, 2015, 45(4):1221-7 (Impact Factor – 0.452).

41. Inhibitory effect of silver nanoparticle fabricated urinary catheter on colonization efficiency of Coagulase Negative *Staphylococci* Roshmi Thomas, Soumya KR, **Jyothis Mathew**, Radhakrishnan EK (2015) Journal of Photochemistry and Photobiology B: Biology 149:68–77 (**Impact Factor – 2.960**).
42. Lal Raisa Helen, M Jyothilakshmi and M. S Latha. Isolation and quantification of tannins from the root bark of *Clerodendrum infortunatum* Linn. And assessment of their antioxidant potential and anti-proliferative effect on HCT-15 cells. International Journal of Pharmacy and Pharmaceutical Sciences 2015, 7(10): 170-75.
43. Jyothilakshmi M, L.R Helen, Jyothis M and M.S Latha. Trypsin inhibiting activity of extract of aerial parts of *Mikania micrantha*. International Journal of Pharmaceutical Science and Research (IJPSR) 2015, 6(2): 259-61.
44. Sunitha V S¹, Sunil M A², E K Radhakrishnan³, **Jyothis Mathew**⁴ (2015 Immunomodulatory Activity of *Caesalpinia sappan* L. Extracts on Peritoneal macrophage of Albino Mice). International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 .

Dr Prakah Kumar B

45. Physicochemical and antimicrobial properties of sodium alginate/gelatin based silver nanoformulations. **Polymer Bulletin**.
46. Antioxidant *Aerva lanata* Extract suppresses proliferation and induce Mitochondria mediated Apoptosis in Human Hepatocellular carcinoma cell line. **Journal of Experimental and Integrative Medicine**.
47. Inhibition of Tumor Necrosis factor- α and Interleukin 1 β production in Lipopolysaccharide stimulated Monocytes by Methanolic extract of *Elaphoglossum scaber* Linn and Identification of Bioactive components. **Appl Biochem Biotechnol (2016) 2016 Jun; 179(3):427-43 doi 10.1007/s12010-016-2004-0**.
48. Protective effect of p-Coumaric acid against doxorubicin induced toxicity in H9c2 cardiomyoblast cell lines. **Toxicology Reports 2 9 (2015) 1213-1221**.

49. Dual COX/LOX inhibition: screening and evaluation of effect of medicinal plants of Kerala as Anti-inflammatory agents. **Journal of Pharmacognosy and Phytochemistry 2015; 3(6): 62-66.**
50. Regulation of acyl homoserine lactones synthesis in *Pseudomonas putida* JMQS1 under phenol stress" (DOI: 10.1007/s11270-016-3018-5). Merlin Antony and Jayachandran.K. Accepted for publication in Journal of Water, Soil and Air pollution, Springer.
51. Surya P Rajendran, Liji, Jayachandran K, Anie Y, Bacteria from South Indian fermented foods and food-waste dump sites as sources of fibrinolytic enzymes. Imperial journal of interdisciplinary research (accepted and published online).
52. Dhanya V & **Ray J G**, (2016) Ecology and Diversity of Diatoms in *Kuttanadu* Paddy Fields in Relation to Soil Regions, Seasons and Paddy-Growth-Stages, Canadian Journal of Plant Studies; Vol. 5, No. 2, pp.7-21
53. Santhoshkumar, K., Prasanthkumar, S. and **Ray, J.G.** (2016) *Chlorococcum humicola* (Nageli) Rabenhorst as a Renewable Source of Bioproducts and Biofuel Canadian Journal of Plant Studies; Vol. 5, No. 1, pp.48-57.
54. Dhanya V & **Ray J G**, (2015) Ecology and Diversity of Cyanobacteria in Kuttanadu paddy wetlands, Kerala, India. *American Journal of Plant Sciences* (in the Press).
55. Santhoshkumar, K., Prasanthkumar, S. and Ray, J.G. (2015) Biomass Productivity and Fatty Acid Composition of *Chlorella lobophora* V M Andreyeva, a Potential Feed Stock for Biodiesel Production. *American Journal of Plant Sciences*, **6**, 2453-2460. <http://dx.doi.org/10.4236/ajps.2015.615247>
56. Dhanya V & **Ray J G**, (2015) Green algae of a unique tropical wetland, Kuttanadu, Kerala, India in relation to Soil regions, Seasons and Paddy-growth stages, International Journal of Science, Environment and Technology, 4(3), pp.770-803.

57. **Ray JG & Mariamma Jacob** (2015) Critical Analysis of ecological theory for the emergence of right human environmental perspectives, *LISSAH Journal* 1(1) pp. 37-52.
58. Screening of Fungal Isolates for Keratinase Production By Submerged Fermentation K. D. Mini & **J. Mathew** (2015) *International Journal of Scientific Research and Engineering Studies (IJSRES)* Volume 2 Issue 7, July 2015 **ISSN: 2349-8862**.
59. Optimization of conditions for production of keratinase by *Aspergillus flavus* by submerged fermentation Mini.K.D, Mini Paul & **Jyothis Mathew** (2015) *Int J Pharm Bio Sci* 2015 Oct; 6(4): (B) 377 - 385 **ISSN0975-6299** .
60. Screening and Selection of Fungus for Keratinase Production by Solid State Fermentation and Optimization of Conditions of SSF and Formulation of Low Cost Medium for the Production of Keratinase by *Aspergillus flavus* S125 K.D. Mini*, Sumi Mary George and **Jyothis Mathew** (2015) *Int.J.Curr.Microbiol.App.Sci* 4(9): 535-548 **Global IF 0.654** .
61. Isolation and functional characterisation of endophytic bacterial isolates from *curcuma longa* Neethu Sahadevan, Vishnupriya. S & **Jyothis Mathew** (2016) *Int J Pharm Bio Sci* Jan; 7(1): (B) **ISSN0975-6299**.
62. **Jyothilakshmi M, Jyothis M, Latha MS.** (2015) Antidermatophytic Activity of *Mikania micrantha* Kunth – An Invasive Weed. *Pharmacognosy Research*, Vol.7(Suppl1): S20–S25.
63. **Jyothilakshmi M, Jyothis M, Latha MS.** (2015) Antidermatophytic and Protease inhibiting activities of the rhizome of *Zingiber zerumbet* (L) Roscoe ex J.E:Smith from central Kerala, India. *International Journal of Pharmacy and Pharmaceutical Sciences*, Vol 7 (Suppl 1):56-59. **ISSN- 0975 – 149156**.

64. **Purification and characterization of chitinase enzyme from *Kurthia gibsonii* Mb126.**
Journal of Environment & Biotechnology Research, Vol. 2, No. 1, Pages 37-44, January 2016 (Accepted for publication)
65. Immunomodulatory activity of *Vetiveria zizanioides* extract on peritoneal macrophages of albino mice Sunitha V.S., Sunil M.A., Radhakrishnan EK, **Jyothis Mathew** (2015) International Journal for Pharmaceutical Research .Scholars ISSN No: 2277 – 7873 V4 1-4.
66. Antiinflammatory efficacy of the rhizome of *Zingiber zerumbet*-an in vitro study using THPI cell line Madhavankutty Jyothilakshmi, **Mathew Jyothis**, Mukalel Sankunni Latha (2016) Journal of Medicinal Plants Studies 4(1):103-106
67. Madhavankutty Jyothilakshmi, **Mathew Jyothis**, Mukalel Sankunni Latha (2016) *Mikania micrantha* –A natural remedy to skin infections Int.J.Curr.Microbiol.App.Sci.5 (2):742-745.
68. Ouseph Varghese, Neethu Sahadevan, E.K.Radhakrishnan, Jyothis **Mathew** (2016) Antifungal effect of zingiber zerumbet extract and its compatibility with tobacco decoction-a biopesticide International Journal of Advanced research 4(2) 455-460.
69. Mini K.D. and **Jyothis Mathew** Purification of keratinase from *Aspergillus flavus*S125. Journal of Microbiology and Biotechnology Research 2016 6(1) 17-21.

Chapters in edited books

1. Elizabeth Mary John, Shabanamol S., Jisha M.S., (2015) "Pesticide Degradation: Practical Approaches, Environmental Science and Engineering series, published by Studium Press LLC, USA.

2. "Role of Probiotics in Functional food/ Nutraceuticals". Keerthi.T.R:10-29 in Book entitled "BiosafetyinIndia-Current Issues", Publishers-Sooryagadha Publishers, Ernakulam, and ISBN978-81-7255-071-5.
3. "Probiotic based Functional feed Formulation by Solid State Fermentation Using Wheat Bran". Glyindya Bhagya Lakshmi & Keerthi.T.R:41-55.in"BiosafetyinIndia-Current Issues", Publishers-Sooryagadha Publishers, Ernakulam, ISBN978-81-7255-071-5.
4. "Enzymes in development of probiotics" Keerthi.T.R, Honey Chandran.C & Muthusamy Chandrasekaran published in Enzymes in Food & Beverage processing Publishers: CRC publishers, Taylor and Francis Group.
5. **Ray J G (2015)** Ecology & Ecotechnology; Focus Articles, Mathrubhumi Year Book Plus 2016, pp. 785-794.
6. **Ray J G (2015)** International Year of Soils; Our needed attention - Healthy soils for healthy humans', In: 'Thidhi Sosthavritam', Published by the Thidhi Trust, Kozhikodu, pp 64-73.
7. **Ray J G (2015)** The greatness of Soils, Labour India Year Book, Labour India Publications, Marangattupally, Pala, pp 1-40.

School of Letters

Dr. Harikumar S, Assistant Professor Details of articles published

Sl No.	Title of Article	Month of publication	Journal in which published	Page no.
1	Sahithyacharithrathile pramanavalkkaranam	June-December 2015	Malayalam Research Journal Vol.VIII No.3	

Chapters published in books

Sl.No	Title with page nos.	Book Title, editor & publisher	ISBN
1	Samagravum Santhulithavumaaya Sahithyacharithram	Vagardhapratipatti Ed Prof. K.P. Sankaran , Current books, kottayam	ISBN No:978-81-240-1996- 2
2	Manushyasannidhi yil oru manushyan	Akkitham Kavitha Padanangal, Vallathol Vidyapeetam, Sukapuram	ISBN No.978-93-83570-51- 5

Dr. P.S. Radhakrishnan

Details of articles published

Sl N o.	Title of Article	Month of publication	Journal in which published	Page no.
1	New generation Cinemaye enthenu pedikkanam?	June 2015	Grandhalokam Vol. 65 No.6	38-44
2	Himsayude Abodhakamanakal	October 2015	Grandhalokam Vol. 65 No.10	20-28
3	Ganaveechikalile Ekanthatharam	April 2016	Grandhalokam Vol. 66 No.4	9-20
4	Vaijnanikaanveshanathinte Thuranna Idangal	May 2016	Grandhalokam Vol. 66 No.5	39-50

5	Sahithyacharithra vijnaneeyam :Indian pariprekshyam	June-December 2015	Malayalam Research Journal Vol.VIII No.3	2840-60
6	Navacinemayude Samvada bhoomika	April 2015	Malayalam Research Journal 21 Vol.VIII No.1	2688-2700
7	Pattum Manipravalavum: Pracheenakavya akhyanangalude vyavaharabhoomika	June 2016	Malayalam Sarvakalasala Journal Vol1 no.1	43-60
8	Nataka tharjamakal:Shakespearil ninnulla thutakkangal	April/May 2016	Keli Official Journal of Kerala Sangeetha Nataka Akademi	12-19
9	Rajyathe pravachicha rashtreeya sahithyam	April 2016	Mathrubhumi Vol 94 no.5	62-73
10	Bhoomiyezhuthiya kalikalangal	October 2015	Madhayamam Vol 16 no.39	68-73

S.No	Title with page nos.	Book Title, editor & publisher	ISBN
1	Bhoomiyezhuthiya kalikalangal	Bhoomikku oru Amarageetham Ed. N. Jayakrishnan, Kerala Bhasha	ISBN No:978-81-200-3900-1

	P 70-78	Institute , Thiruvananthapuram	
2	Ganaveechikali le Ekanthatharam p.131-145	Kaviyasarasile ragapournami Ed Ajaypuram Jyothish Kumar Kerala Bhasha Institute , Thiruvananthapuram	ISBN No:978-81- 200-4003-8
3	G kavithayum Nerupavanum p.297-310	Vagardhapratipatti Ed Prof. K.P. Sankaran , Current books, kottayam	ISBN No:978-81- 240-1996-2
4	Amanushikam p.116-21	Akkitham Kavitha Padanangal, Vallathol Vidyapeetam, Sukapuram	ISBN No.978-93- 83570-51-5

Chapters published in books

Edited Volume

Malayalam Research Journal –Guest Editor Sahithyacharithra vijnaneeyam issue 23
September – December, 2015 Vol.VIII No.3
Malayalam Research Journal –Guest Editor
Sahithyacharithra vijnaneeyam issue 24 January –April 2016 Vol.IX No.1.

Dr KM Krishnan, Associate Professor

Publications

- 1) “Death of the Author” (Revised) *Pashchatyasahityasidhanthangal* Ed. Noushad and Anil Kumar, Kerala Bhasha Institute, 2015.

School of Inter National Relations and Politics

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- Mathew John, Santhosh. P. Thampi, Corporate Social Responsibility- A Tool To Empower Corporate Sustainability: The Experiences of Indian Rare Earths Ltd, Chavara, Marthoma College Ayoor, 3 February 2016

III. Dr. Siby Zacharias, Associate Professor, SMBS

<i>Sl.no</i>	<i>Details</i>
I.2011-12	“Spatio-Temporal Trajectory Similarity and Applications in Mining Tourist Mobility”, International Journal of Tourism and Travel , ISSN NO. 0974-2603, Vol.5, January 2012
II.2012-2013 1	“Implementing Organisational change – A case study on successful initiative of ministry of corporate affairs”, Paradigm Shift In Innovative Business Management-Placitium,2012, November 16,17, 2012, SNGCE, Kadayiruppu, Ernaulam, Published by CBA publishers ,

	Chennai, ISBN 978-93-80430-14-0. <i>Chaired technical session too</i>
111.2014- 2015 1	“Study on Personality and Its Influence on Purchase: Strategic Study With Reference to Women Consumers in Chennai’, Global Journal of Management & Commerce Perspective ,G.J.C.M.P.,Vol.3(1):XXX,(January-March 2014), ISN 2319-7285
2	‘A study on Cosumer Behaviour of Online Shoppers in Kerala’ Unleashing Management Potential, <i>Published by Prakash publications</i> , Changanacherry; ISBN:978-93-81888-58-2, March 2014
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5	‘Micro Finance in India-An Overview’, UGC Sponsored National Seminar, 30 & 31st October 2014, K.E. College, Mannanam, Published by <i>PRATIBHA Publishers, Changanacherry, ISBN: 978-81-907782-99</i>
6	‘A Study on the impact of Mentoring on Employees Turnover Intentions’, Trends and Challenges in Indian Business Management, ISBN: 978-93-83241-60-6, Published by Archers & Elevators Publishing House, Bangalore, International Conference, Placitum November 6 &7, 2014, SNGC, Kolenchery, Kerala .
7	Impulse Buying among Women of Kottayam Municipality ”, International Conference on Evidence Based Management 2015(ICEBM 2015), Birla Institute of Technology & Science Pilani, Pilani Campus, March 20-21, 2015, Siby Zacharias & Joshy John; ISBN 978-93-84935-18-4, Excel Publishing House, New Delhi 110 070

Criterion 3.5

Details on Impact Factor of Publications

School of Computer Sciences

Prof. (Dr.) R. Vijayakumar

Sl · N o.	Title with page Nos.	Journal	ISSN / ISBN No.	Wheth er peer review
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				ed. Impact Factor, if any
1	Enhancement of Parallel K-Means Algorithm	IEEE Sponsored 2nd International Conference on Innovations in Information, Embedded and Communication systems (ICJJECS)2015 ,		2.00
2	A Survey On Multi-Target Detection And Tracking In Wireless Sensor Networks	Innovative Thoughts International Research Journal http://itirj.naspublishers.com ,	pISSN 2321-5143 eISSN 2347-5722	0.405

Criterion 3.7

Books published:

School of Behavioural Sciences

1. Inclusive education – Thought and practice: IPH Publications, New Delhi 2016, March ISBN.
2. Text book on inclusive education, Lipi publishers, Kozhikkode ISBN: 81-8801-873-2, February 2016(author: Sreeja. S, Research scholar)
3. Counselling needs of parents having mentally challenged children, Lipi Publishers, Kozhikkode ISBN: 81-8801-894-5, March 2016(author: Sreeja. S, Research scholar)

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2. Ultrasensitive detection of a 1-pyrenecarboxylic acid by surface enhanced Raman scattering hot spot with reduced graphene oxide/silver nanoparticles composites, OS Oluwafemi, A Saha, S Thomas, N Kalarikkal, *Materials Letters* 171, 137-141 (2016)
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51. Sruthy S and E.V.Ramasamy (2015) Biodegradation of High density polyethylene using bacteria isolated from solid waste dump yards, Presented at 11th Kerala Environment Congress, 6-8 May 2015, Kottayam, Kerala has won the Young Scientist Award.
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53. E.V.Ramasamy (2015). Solid Waste Management: Emerging Trends and Challenges. National Seminar on Solid Waste Management –Emerging Trends and Challenges (SWMETAC), September 17-18, 2015, St.Stephen's College, Pathanapuram.
54. Sajithkumar, K.J., E.V.Ramasamy (2015). Role of natural and synthetic biofilm support systems in continuously stirred tank reactors, National Seminar on Solid Waste Management –Emerging Trends and Challenges (SWMETAC), September 17-18, 2015, St.Stephen's College, Pathanapuram.
55. E.V.Ramasamy (2015). Decontamination of wastewater with Phytoremediation. National seminar on emerging trends in herbal technology. 07-09 October, 2015. St. Thomas' college, Thrissur, Kerala.
56. Arunbabu V, Ignatius Antony, E.V. Ramasamy (2015). Cadmium removal potential of *Macaranga peltata*. National seminar on emerging trends in herbal technology. 07-09 October, 2015. St. Thomas' college, Thrissur, Kerala.
57. Sruthi S Nair and E.V.Ramasamy (2015).Evaluation of the toxicity of organochlorine pesticides on a native earthworm species *Perionyx ceylanensis*.Vermitechnology Conference in Human Wellfare, Vermitech 2015, 16-18 December 2015, Konganadu arts And Science College, Coimbatore, Tamilnadu.
58. Sruthy S and Ramasamy E V. (2016). Plastic degrading bacteria from Cochin mangrove soils of Kerala, 28th Kerala science congress, 28-30 January 2016. 28th Kerala Science Congress, January 27-29, 2016 Kozhikod.
59. Daniya M. Thomas, Jerry Mechery and Syllas V.P. (2015). Selection of native flue gas tolerant microalgae in view of carbon sequestration. In

Proceedings of International Conference on Climate Change & Developing world. CMS College, Kottayam, Kerla. Page no. 324-328.

60. Praveenkumar C.S., J. Mechery, V. Ambily, D.M Thomas and V.P Sylas (2015) Wastewater treatment and subsequent lipid production potential of freshwater microalga, *Chlorella sp.* International Conference on Water : Pollution to purification. MG University, Kottayam.
61. Praveen Kumar C.S. and **Sylas V.P.** (2015). An experimental study on the cultivation of mixed microalgal culture and its potential for lipid production. Kerala Environment Congress , 6-8 May 2015, Kottayam, Kerala.
62. Ambily V. and **Sylas V.P.** (2015). An Experimental Study on the Lipid Production by *Dunaliella sp.* and *Chaetoceros sp.* – A Bioenergy Approach. Kerala Environment Congress , 6-8 May 2015, Kottayam, Kerala.
63. Raisa Kabeer and **Sylas V.P.** (2015). Heavy Metal Tolerance Pattern and Antibiotic Susceptibility of *Chromobacterium sp.* isolated from the Rhizosphere of *Eichhornia crassipes*. Kerala Environment Congress , 6-8 May 2015, Kottayam, Kerala.
64. Jerry Mechery and **Sylas V.P.** (2016) Biohydrogen Production From *Eichhornia Crassipes* By *Pseudomonas Aeruginosa* Through Dark Fermentation. 28th Kerala Science Congress, Kozhikkode.
65. C.S. Praveen Kumar, Ambily V., Jerry Mechery and **V.P. Sylas** (2016). Phycoremediation Of Cashew Nut Processing Wastewater Using Two Native Microalgae And Subsequent Lipid Production. 28th Kerala Science Congress, Kozhikkode.
66. Raisa Kabeer and **Sylas V.P.** (2016). Multiple Antibiotic Resistance Of Bacteria Isolated From The Rhizosphere Of Water Hyacinth, An Invasive Weed In The Kuttanad Wetland Ecosystem, Kerala. 28th Kerala Science Congress, Kozhikkode.

67. Babu Padmakumar, N.P.Sreekanth, V.Shanthi Prabha, Joby Paul, K. Sreedharan, M.Rameshan, V.Arun Babu, Mahesh Mohan, **V.P.Sylas**, E.V Ramasamy, A.P Thomas (2016). Home Garden And Carbon Stock Estimation- A Case Study From Thodupuza Municipality Of Idukki District In Kerala. 28th Kerala Science Congress, Kozhikkode.
68. Praveenkumar C.S., J. Mechery, V. AMbily, D.M. Thomas and **V.P. Sylas** (2016). Waste water treatment and subsequent lipid production potential of freshwater microalga, *Chlorella sp.* National Seminar on Environmental issues – a factual profile. NSS College, Vazhoor, Kottayam.
69. Jerry Mechery and **Sylas V.P.** (2016). Biohydrogen : a promising energy carrier from bacterial communities. National Seminar on Environmental issues – a factual profile. NSS College, Vazhoor, Kottayam

Criterion 3.11

No. of conferences organized by the Institution

School of Chemical Sciences

International Conference Organised in 2015-2016

1. International Conference on Macromolecules: Synthesis, Morphology, Processing, Structure, Properties and Application (ICM 2016): 13-15, May 2016
2. First International Conference on Advanced Materials for Power Engineering (ICAMPE 2015) : 11-13 December, 2015
3. International Conference on Nanostructured Polymeric Materials (ICNPM 2015) : 13-15 November, 2015

4. World Congress on Microscopy (WCM 2015): 9-11 October,2015
5. Fourth International Conference on Natural Polymers (ICNP 2015) :
10-12 April 2015
6. Fourth International Conference on Nanomedicine and Tissue Engineering (ICNT 2016) : 12-14 August 2016 (**UPCOMING**)

University Centre for International Cooperation

University Centre for International Cooperation was associated with an International Conference on 'Understanding Contemporary India' organized by Rajiv Gandhi Chair for Public Policy Studies, School of International Relations and Politics, Institute for Contemporary Chinese Studies, Mahatma Gandhi University during 14-15 January 2016.

School of Computer Sciences

S.No.	Title of the Lecture/ Academic Session	Title of Conference/ Seminar	Organised by	Whether International/ National
1	Inauguration of MCA 2015		SNGIST, North Paravoor , Cochin	National
2	Faculty development programme	Accelerate (for teachers)	Shantigiri College , Thodupuzha	National

- Attended a one day Workshop on Syllabus Revision of MSc and MTech of the School on 9.06.2015. A major revision of the syllabi of M Sc and MTech

programmes of the School was done, introducing new theory and practical core courses.

- Attended a workshop/training session on Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt. of India) on 12.08.2015 organized as part of the Faculty Development Programme conducted by the University. Mr. Swapnil More, Training Coordinator, Spoken Tutorial (MHRD, NMEICT) IIT Bombay was the resource person.
- Attended a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” at School of Computer Sciences on 08.09.2015. The scheme and syllabi for the new M Phil programme to be commenced in the School in the current academic year was framed.
- Attended a seminar on “**Image Processing Technologies for Defence Applications**” by Dr. Lekshmi S, Scientist, NPOL (also an alumnus of the School), on 4.12.2015. This seminar was organized as part of Interface 2015, the 20th annual technical meet of Computer Science students, organized by the members of C\$\$A(Computer Science Students' Association) of School of Computer Sciences.
- Attended a special **meeting of the Alumni of the School convened on 6.12.2015**, as part of the Silver Jubilee celebrations of the School. During the occasion, the first five batches (1993-1997) of the alumni were honoured by the School.
- Attended the “NAAC Workshop on Documents to be Prepared” organized by the University on 12.04.2016

Name of Faculty Member: Dr. Bindu V.R.

a) Conferences/Symposia/Seminars/Workshops Attended

- Attended the **User Awareness Programme on Plagiarism** on 3/6/2015 for Faculty, Researchers and Students, organized by University Library, Mahatma Gandhi University, Kottayam convened at University Library, which included a technical session by Mr. Manoj Kumar K (Scientist D(CS) of Information and Library Network (UGC-INFLIBNET) Centre, Gujarat on the use of **Anti-Plagiarism Software for Research Integrity and Ethics**.
- Organized a workshop on “M Sc and M Tech Syllabus Revision” as Chair Person, BOS, School of Computer Sciences on 9/6/2015. A major revision of the syllabi of M Sc and M Tech programmes of the School was done, introducing new theory and practical core courses.
- Participated in the Consultative Meeting with “Committee on Gender Justices in Campuses” organized by the Kerala State Higher Education Council on 29.07.2015.
- Co-ordinated a workshop/training session on Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt. of India) as the chief-coordinator of the University on 12.08.2015 organized as part of the Faculty Development Programme conducted by the University. Mr. Swapnil More, Training Coordinator, Spoken Tutorial (MHRD, NMEICT) IIT Bombay was the resource person. Teachers from about 30 affiliated institutions participated.
- Organized a one-day workshop on “Skill Enhancement” for students of the School in remembrance of Dr. A.P.J. Abdul Kalam, on 19th August 2015. Two of our alumni, who are well experienced have handled the sessions on “Principles and Practices for a Good Professional and Personal Life” and “How to Face an Interview”.
- Organized a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” as Chair Person, BOS, School of Computer Sciences on

08.09.2015. The scheme and syllabi for the new M Phil programme to be commenced in the School in the current academic year was framed.

- Attended the “International Seminar on Science of Music” organized by Inter University Centre for Studies in Science of Music and Mahatma Gandhi University during 25-27 September 2015
- Participated in the conference to streamline the admission and academic excellence on MCA 2016-17 representing the University. The meeting was convened by “Admission Supervisory Committee and Fee Regulatory Committee for Professional Colleges of Kerala” chaired by Justice J S James at Thiruvananthapuram on 27.10.2015.
- Organized a 3 day workshop on “Network Simulator 2” (19.11.15 to 21.11.15) as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech and Research students of the School.
- Attended an Orientation Programme on “NAAC Accreditation” organized by the University on 26.11.2015.
- Organized and Attended a seminar on “**Image Processing Technologies for Defence Applications**” by Dr. Lekshmi S, Scientist , NPOL (also an alumnus of the School), on 4.12.2015. This seminar was organized as part of Interface 2015, the 20th annual technical meet of Computer Science students, organized by the members of C\$\$A(Computer Science Students' Association) of School of Computer Sciences.
- Organized a special **meeting of the Alumni of the School on 6.12.2015**, as part of the **Silver Jubilee celebrations of the School**. During the occasion, the first five batches (1993-1997) of the alumni were honoured by the School.
- As professional member of ACM, attended the ACM-India Annual Event 2016 held on 22.01.2016 at Thiruvananthapuram.

- Organized and attended a **National level 3-day E-conference** using the virtual class room and video-conferencing facility set up in the School. The School participated as a Nodal Centre in the **National Conference on Research in Emerging Areas (NACORE 2016)**, a National e-conference organized by Amal Jyothi College of Engineering and Technology from **28.01.2016 to 30.01.2016**. The event was sponsored by KSCSTE in association with ISTE Kerala Section.
- Organized and attended a two-day National Workshop on “**India’s First Cloud Computing Championship – IFC3 INDIA**” in collaboration with **Neuromancers, IIT Bhubaneswar and Inero, Scitech Council IIT Hyderabad** from 9.02.16 to 10.02.16. Our School served as a zonal centre. Students from affiliated institutions also participated.
- Attended the District Innovation Committee meeting held on 23/02/2016 convened by the District Collector, Kottayam.
- Attended the **National Workshop on Cyber Crimes and Cyber laws** organized by School of Indian Legal Thought, MGU during **27th and 28th February 2016**.
- Chaired the programme in connection with the commemoration of **World Zero Discrimination Day on 1st March 2016**, conducted by Inter University Centre for Disability Studies(IUCDS), School of Behavioral Sciences in association with NSS and DSU, M G University.
- Attended the workshop on “**NAAC Accreditation**” organized by the University on 12.04.2016.
- Organized and attended a three day **National level workshop on “Data Analytics and Machine Learning Using R”** June 15-18, 2016 as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School.

- Organized and attended a workshop on **“Cloud Solutions and Implementation”** for faculty and technical staff of the School on 28.06.2016. Mr. Saneesh Kaniyath, Sr. Technical Consultant, Smartsoft, Cochin was the resource person.

Name of Faculty Member: Ms. Pushpalatha K.P.

a) Conferences/Symposia/Seminars/Workshops Attended

- Attended a one day Workshop on Syllabus Revision of MSc and MTech of the School on 9.06.2015. A major revision of the syllabi of M Sc and M Tech programmes of the School was done, introducing new theory and practical core courses.
- Attended a workshop/training session on Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt. of India) on 12.08.2015 organized as part of the Faculty Development Programme conducted by the University. Mr. Swapnil More, Training Coordinator, Spoken Tutorial (MHRD, NMEICT) IIT Bombay was the resource person.
- Attended a one-day workshop on “Skill Enhancement” organized for students of the School on 19.08.2015. The event was organized in remembrance of Dr. A.P.J. Abdul Kalam. Two of our alumni, who are well experienced, have handled the sessions on “Principles and Practices for a Good Professional and Personal Life” and “How to Face an Interview”.
- Attended a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” at School of Computer Sciences on 08.09.2015. The scheme and syllabi for the new M Phil programme to be commenced in the School in the current academic year was framed.

- Attended a 3 day workshop on “Network Simulator 2” (19.11.15 to 21.11.15) organized as part of Capacity Building and Knowledge Upgradation of Faculty
- Attended a seminar on “**Image Processing Technologies for Defence Applications**” by Dr. Lekshmi S, Scientist, NPOL (also an alumnus of the School), on 4.12.2015. This seminar was organized as part of Interface 2015, the 20th annual technical meet of Computer Science students, organized by the members of C\$SA(Computer Science Students' Association) of School of Computer Sciences.
- Attended a special **meeting of the Alumni of the School convened on 6.12.2015**, as part of the Silver Jubilee celebrations of the School. During the occasion, the first five batches (1993-1997) of the alumni were honoured by the School.
- Attended a **National level 3-day E-conference** using the virtual class room and video-conferencing facility set up in the School. The School participated as a Nodal Centre in the **National Conference on Research in Emerging Areas (NACORE 2016)**, a National e-conference organized by Amal Jyothi College of Engineering and Technology from **28.01.2016 to 30.01.2016**. The event was sponsored by KSCSTE in association with ISTE Kerala Section.
- Attended a two-day National Workshop on “**India’s First Cloud Computing Championship – IFC3 INDIA**” in collaboration with **Neuromancers, IIT Bhubaneswar and Infero, Scitech Council IIT Hyderabad** from 9.02.16 to 10.02.16. Our School served as a zonal centre. Students from affiliated institutions also participated.
- Attended the “NAAC Workshop on Documents to be Prepared” organized by the University on 12.04.2016.
- Attended a three day **National level workshop on “Data Analytics and Machine Learning Using R”** June 15-18, 2016 organized by the School

as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School.

- Attended a workshop on “**Cloud Solutions and Implementation**” for faculty and technical staff of the School on 28.06.2016. Mr. Saneesh Kaniyath, Sr. Technical Consultant, Smartsoft, Cochin was the resource person.

Name of Faculty Member: Dr. Anuj Mohamed

a) Conferences/Symposia/Seminars/Workshops Attended

- Attended a one day workshop on syllabus revision of MSc and MTech of the School on 9.06.2015. A major revision of the syllabi of M Sc and M Tech programmes of the School was done, introducing new theory and practical core courses.
- Attended a workshop/training session on Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt. of India) on 12.08.2015 organized as part of the Faculty Development Programme conducted by the University. Mr. Swapnil More, Training Coordinator, Spoken Tutorial (MHRD, NMEICT) IIT Bombay was the resource person.
- Attended a one-day workshop on “Skill Enhancement” organized for students of the School on 19.08.2015. The event was organized in remembrance of Dr. A.P.J. Abdul Kalam. Two of our alumni, who are well experienced have handled the sessions on “Principles and Practices for a Good Professional and Personal Life” and “How to Face an Interview”.

- Attended a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” at School of Computer Sciences on 08.09.2015. The scheme and syllabi for the new M Phil programme to be commenced in the School in the current academic year was framed.
- Attended the “International Seminar on Science of Music” organized by International Centre for Studies in Science of Music and Mahatma Gandhi University from 25.9.15 to 27.9.15
- Attended a 3 day workshop on “Network Simulator 2” (19.11.15 to 21.11.15) organized as part of Capacity Building and Knowledge Upgradation of Faculty members as well as M Sc/M Tech and Research students of the School.
- Attended an Orientation Programme on “NAAC Accreditation” organized by the University on 26.11.2015.
- Attended a seminar on “**Image Processing Technologies for Defence Applications**” by Dr. Lekshmi S, Scientist, NPOL (also an alumnus of the School), on 4.12.2015. This seminar was organized as part of Interface 2015, the 20th annual technical meet of Computer Science students, organized by the members of C\$\$A(Computer Science Students' Association) of School of Computer Sciences.
- Attended a special **meeting of the Alumni of the School convened on 6.12.2015**, as part of the Silver Jubilee celebrations of the School. During the occasion, the first five batches (1993-1997) of the alumni were honoured by the School.
- As professional member of ACM, attended the ACM-India Annual Event 2016 held on 22.01.2016 at Thiruvananthapuram.
- Attended a **National level 3-day E-conference** using the virtual class room and video-conferencing facility set up in the School. The School participated as a Nodal Centre in the **National Conference on Research**

in Emerging Areas (NACORE 2016), a National e-conference organized by Amal Jyothi College of Engineering and Technology from **28.01.2016 to 30.01.2016**. The event was sponsored by KSCSTE in association with ISTE Kerala Section.

- Attended a two-day National Workshop on **“India’s First Cloud Computing Championship – IFC3 INDIA”** in collaboration with **Neuromancers, IIT Bhubaneswar and Inero, Scitech Council IIT Hyderabad** from 9.02.16 to 10.02.16. Our School served as a zonal centre. Students from affiliated institutions also participated.
- Attended the “NAAC Workshop on Documents to be Prepared” organized by the University on 12.04.2016.
- Attended a three day **National level workshop on “Data Analytics and Machine Learning Using R”** June 15-18, 2016 organized by the School as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School.
- Attended a workshop on **“Cloud Solutions and Implementation”** for faculty and technical staff of the School on 28.06.2016. Mr. Saneesh Kaniyath, Sr. Technical Consultant, Smartsoft, Cochin was the resource person.
- Organized a workshop on “M Sc and M Tech Syllabus Revision” of the School on 9/6/2015. A major revision of the syllabi of M Sc and M Tech programmes of the School was done, introducing new theory and practical core courses.
- Organized a workshop/training session on Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt. of India) on 12.08.2015 organized as part of the Faculty Development Programme conducted by the University. Teachers from about 30 affiliated institutions participated.

- As part of strengthening the activities of the Placement Cell of the School, a one-day workshop on “Skill Enhancement” was organized for students of the School on 19.08.2015. The event was organized in remembrance of Dr. A.P.J. Abdul Kalam. Two of our alumni, who are well experienced, have handled the sessions on “Principles and Practices for a Good Professional and Personal Life” and “How to Face an Interview”.
- Organized a workshop on “Framing of Scheme and Syllabus of M Phil Computer Science” at School of Computer Sciences on 08.09.2015. The scheme and syllabi for the new M Phil programme commenced in the School in the current academic year was framed.
- 1.10.2015 was observed as the cleaning day in the School
- As part of Capacity Building and Knowledge Upgradation of Faculty members, a 3 day workshop was organized on “Network Simulator 2” (19.11.15 to 21.11.15) for faculty members as well as M Sc/M Tech and Research students of the School.
- 26.11.2015 was observed as the constitution day in the School,
- Seminar on “**Image Processing Technologies for Defence Applications**” by Dr. Lekshmi S, Scientist, NPOL (also an alumnus of the School), on 4.12.2015. This seminar was organized as part of Interface 2015, the 20th annual technical meet of Computer Science students, organized by the members of C\$\$A(Computer Science Students' Association) of School of Computer Sciences.
- This year’s Interface, the 20th annual technical meet of Computer Science students, was conducted on **December 4th and 5th 2015**. The meet was organized by the members of C\$\$A(Computer Science Students' Association) of School of Computer Sciences, MG University under the guidance of the faculty members and with the support of the Alumni of the School. Students from 30 institutions participated. The

technical events included Paper Presentation, Trouble shooting and Cyber Skills, Software Coding, Web Designing and Technical Quiz.

- The 17th edition of the annual technical publication of the School “**IT Glimpse**” was also released, both the printed and online versions, during the inaugural function of Interface 2015.
- A special **meeting of the Alumni of the School was convened on 6.12.2015**, as part of the Silver Jubilee celebrations of the School. During the occasion, the first five batches (1993-1997) of the alumni were honoured by the School. More than 50 alumni members were present.
- Organized a workshop on “**Cloud Solutions and Implementation**” for faculty and technical staff of the School on 28.06.2016. Mr. Saneesh Kaniyath, Sr. Technical Consultant, Smartsoft, Cochin was the resource person.
- Organized a **National level 3-day E-conference** using the virtual class room and video-conferencing facility set up in the School. The School participated as a Nodal Centre in the **National Conference on Research in Emerging Areas (NACORE 2016)**, a National e-conference organized by Amal Jyothi College of Engineering and Technology from **28.01.2016 to 30.01.2016**. The event was sponsored by KSCSTE in association with ISTE Kerala Section. Research scholars and M Tech students of the School presented research papers in the conference, which had around 20 nodal centres participating from across the Nation.



National Conference on Research in Emerging Areas (NACORE 2016)

28.01.2016 to 30.01.2016

- Organized a two-day National Workshop on “**India’s First Cloud Computing Championship – IFC3 INDIA**” in collaboration with

Neuromancers, IIT Bhubaneswar and Inero, Scitech Council IIT Hyderabad from 9.02.16 to 10.02.16. Our School served as a zonal centre. Students from affiliated institutions also participated. Three delegates were selected for the National level competition.



“India’s First Cloud Computing Championship – IFC3 INDIA”

9.02.16 to 10.02.16

- Organized a three day **National level workshop on “Data Analytics and Machine Learning Using R”** June 15-18, 2016 as part of Capacity Building and Knowledge Upgradation for faculty members and M Sc/M Tech/M Phil and Research students of the School, in collaboration with **Scientific Computing Solutions, Chennai.**





Criterion 3.12**No. of faculty served as experts, chairpersons or resource persons****School of Chemical Sciences**

No. of faculty served as experts, chairpersons or resource persons: **2**

1. Dr Sabu Thomas

2. Dr Suresh Mathew

Membership in Professional Bodies:

- Member of American Chemical Society (Rubber Division)
- Member of Indian Membrane Society
- Member of Polymer Society of India
- Member of Society of Disordered Materials
- Member of Society of Polymer Technologists, University of Cochin
- Member of Mahatma Gandhi University Chemical Society
- Fellow of New York Academy of Sciences, USA.
- Actively engaged in the Peoples Science Movement for the Popularization of science to villages and rural areas

Reviewer for International Refereed Journals:

- Journal of the American Chemical Society,
- Macromolecules
- Journal of Applied Polymer Science
- Composites Science and Technology
- Journal of Thermal Analysis
- Polymers and Polymer Composites
- Polymer

- Soft Matter
- Journal. of Polymer Science Part B: Polymer Physics
- Composites Part A & Part B
- Polymer Composites
- Polymer Engineering and Science
- European Polymer Journal
- Journal of Materials Science
- Langmuir
- Applied Clay Science
- RSC advances
- Bio macromolecules
- Industrial crops and products

Academic Referee for Universities and Funding Agencies:

- University of Sains, Malaysia
- University of Calcutta, Calcutta, India
- University of Rajasthan, Jaipur, India
- DST, India
- DBT, India
- CSIR, India
- NRF, South Africa

Editorial Board Memberships

- SM Journal of Nanotechnology and Nanomedicine
- Nano Advances
- Materials Science and Engineering (Editorial Key Reviewers Committee)
- International Journal Of Advances In Engineering Research
- World Journal of Biotechnology
- Journal of Emerging Materials Technology

➤ Associate Editor, Bulletin of Materials Science

Regional Editor of the journal "Current Smart Materials".

Resource Persons:

- Chairman of Ph D Adjudication Committee of Karunya University, annamalai university, Kerala Agriculture University **Dr.Suresh Mathew**, Department of Physics and Medical Engineering, Rzeszow University of Technology, Rzeszow, Nov 26, 2015, Poland.
- **Dr.Suresh Mathew**, Department of Chemistry, New York University, Abu Dhabi, May 17, 2015, UAE.
- **Dr.Suresh Mathew**, National Workshop on Renewable Energy Technologies (RET) – 2016, 7th April, 2016, organized by the Department of Vocational Studies, St. Alberts College, Ernakulam.
- **Dr.Suresh Mathew**, International Seminar on Materials Chemistry, Prof A.J. Benjamin Lecture on “Recent Trends in Material Chemistry”, 26th February, 2016, organized by St. Alberts College, Ernakulam
- **Dr.Suresh Mathew**, Chaired the Technical Session IV in the National Conference on Analytical Science and Technology 2015, September 24-26, 2015, (ANASAT-2015), Munnar, organized by Indian Society of Analytical Scientists, Kerala Chapter (ISASK).
- **Dr.Suresh Mathew**, Dr. A.M. Chacko Endowment Lecture, 17th January, 2015, Union Christian College, Aluva.
- **Dr.S.Anas**. “*Exploring the versatility of pentafulvenes*”, Invited lecture at the national conference on recent advances in spectroscopy: chemical and biological perspective-II organized by Newman College, Thodupuzha, September, **2015**, Abs-14.

- **Dr.S. Anas** , Delivered a general talk on 4th February 2016 at St.Michaels College, Cherthala as part of inauguration of UGC sponsored national seminar on “*New trends in material science*”.
- **Dr.S. Anas** , Delivered a general talk on “*Teacher education and society*” on 13th January 2016 at Sobha College of Teacher Education, Mararikulam, Alappuzha as part of inauguration of various subject association activities of the college.
- **Dr.S. Anas** ,Invited talk on “*Applications of Palladium catalysis in Organic synthesis*” at Devamatha College, Kuruvilangad, in a national seminar on “Recent trends in catalysis-2016” on 7th January 2016
- **Dr.S. Anas** ,Conducted a motivation class on “Emerging Youth” for National Service Scheme (NSS) Volunteers of Govt. Devi vilasom HSS, Kudavechoor,Vaikom in connection with the training camp held at Gov. H.S.S. T.V. Puram, Vaikom on 22nd December 2015.
- **Dr.S. Anas** ,Invited talk on “*Metals in Organic synthesis*” at Govt. Brennen College, Thalassery, Kerala in a National Seminar on “Recent Advances in Chemistry (RAC-2015) on 15th December 2015.
- **Dr.S. Anas** ,Invited talk on “*Developments in Organic synthesis*” at Alphonsa College, Pala, Kerala in connection with the college chemistry association inauguration on 11th August 2015
- **Dr.S. Anas** ,Invited talk on “*Organic synthesis: History and developments*” at KE College, Mannanam, Kerala in connection with the college chemistry association inauguration on 28th July 2015
- **G. Anilkumar**, “Transition metal catalyzed C-C and C-heteroatom bond formations” **Invited oral presentation** at the UGC sponsored National Seminar on Recent Trends in Catalysis on 7th January 2016 at Deva Matha College, Kuravilangad, Kottayam, India

- **G. Anilkumar**, “Catalytic Asymmetric Epoxidation and related Chemistry” **Invited oral presentation** at the KSCSTE sponsored National Seminar on Current Trends in Organic and Medicinal Chemistry on 27th January 2016 at Catholicate College, Pathanamthitta, India
- **G. Anilkumar**, “Asymmetric Synthesis: Challenges and Strategies” **Invited oral presentation** at the UGC sponsored National Seminar on Organic Synthesis on 28th January 2016 at St. Joseph’s College, Irinjalakuda, Trissur, India
- **G. Anilkumar**, “Asymmetric Synthesis: Strategies and Challenges” **Invited oral presentation** at the UGC sponsored National Seminar on Recent Trends in Chemistry on 15th March 2016 at St. Paul’s College, Kalamassery, Cochin, India
- **G. Anilkumar** “Workshop on Quantum Mechanics” for M Sc Chemistry students and faculty on 20-21 June 2015 at Kottayam (Organized)
- **G. Anilkumar** “Workshop on Group Theory” for M Sc Chemistry students and faculty on 30 Oct-1 Nov 2015 at Kottayam (Organized)
- **G. Anilkumar** “Workshop on Stereochemistry “for M Sc Chemistry students and faculty on 8-10 January 2016 at Kottayam (Organized)
- Invited talk on “ Pharmaceutical Industry and Chirality ” Dr.I.Ibnusaud
- **Dr.S. Anas** ,Academic Co-ordinator of National work shop on ”Fundamentals and applications Material science” organized in association with SRIBS(KSCSTE) on march 4-6 held at Kottayam.
- **Dr.I.Ibnusaud** ,National Level Young Scientists Meeting under DST - Fast Track, 16th – 17th January 2015
- **Dr.I.Ibnusaud** “ International symposium on Concurrent Methodologies in organic Synthesis.organized by IIRBS,

School of Bio Sciences
Smt.Keerthi.T.R

1. Director, School of Biosciences,Mahatma Gandhi University ,17-08-2015 onwards
2. Member Academic Council-Mahatma Gandhi University
3. Chairperson, PhD Doctoral Committee of Biosciences
4. Convenor, Expert committee of M.Sc.Biotechnology,Mahatma Gandhi University
5. Member, Board of Studies, (Biosciences), Mahatma Gandhi University.
6. Member, Board of studies Microbiology (PG) Mahatma Gandhi University
7. Member Board of Studies, (Microbiology PG&UG), Kannur University
8. University Nominee Governing body of St.Albert College,Ernakulam (Autonomous)
9. Subject Expert Women back to lab programme KSCSTE Thiruvananthapuram
- 10.Member,(former & present) Anti harrasment Cell Mahatma Gandhi University.
- 11.Member (Former & Present) SC/ST monitoring cell of Mahatma Gandhi University
- 12.Member Institutional Biosafety Committee, Mahatma Gandhi University
- 13.Former Convener expert committee of B.Sc., Biotechnology, Mahatma Gandhi University
- 14.Former Warden, Ladies Hostel, Mahatma Gandhi University..

15. Former Member Institutional Ethical Committee, Mahatma Gandhi University.
16. Former Member, Board of Studies PG, (Microbiology), Calicut University
17. Member, Board of question paper setters and examiner in Biotechnology, Kannur University.
18. Member, Board of question paper setters and examiner in Biotechnology and Microbiology (B.Sc., M.Sc and MPhil), Calicut University.
19. Member, Board of question paper setters in Biotechnology (M.Sc & B.Sc) Kerala University. .
20. Member, Board of question paper setters and examiner in Biotechnology (MSc, Mphil & Ph.D. qualifying), Cochin University of Science and Technology.
21. P.T.A Secretary, School of Biosciences-2013-2015 batch
22. Departmental Co-coordinator UGC remedial coaching -2013-2015.

Membership in Scientific Societies

- International Probiotics Association (IPA), Zurich, Switzerland
- Asian Federation of Biotechnology (AFOB), Korea
- Indian Dairy Association (IDA), New Delhi
- Society for Biotechnology (India)
- Association of Microbiologist in India (AMI), India
- Kerala Science Academy.

Editorial Board Member – Iranian Journal of Biotechnology

Smt Jisha MS

- Member Kerala academy of Science
- Member – Board of Studies in Microbiology, Calicut University
- Member – Board of Studies in Microbiology, M.G. Universit

- Subject Expert – Board of Studies in Microbiology, SB College, Changanassery
- .Member, Board of Studies, (Biosciences), Mahatma Gandhi University.
- Member, Board of studies Microbiology (PG) Mahatma Gandhi University
- Member Board of Studies, (Microbiology PG&UG), Kannur University
- Subject Expert Women back to lab programme KSCSTE Thiruvananthapuram
- Member Institutional Biosafety Committee, Mahatma Gandhi University

S.No.	Type of Activity
	i. Extension, Co-curricular & field based activities
	As Director College Development – College facilities verification for UGC CPE(Centre with Potential of Excellence Three Colleges) II Stage
1	St Thomas College, Pala
2	CMS College
	ii. Contribution to Corporate Life and Management of the Institution
1	Director College Development
2	Dean Engg Tech as Syndicate member
3	IQAC Nominee from the Management of University
4	Selection committee of professor–Member , Kannur UTY
5	Selection committee of Asso.Professor–Member , Kannur UTY
	iii. Professional Development Activities
1	Core committee – Add on courses -Colleges under the UTY – Syllabus revision --- as DCDC
2	Inauguration of the MCA courses at SNGC Engg & Tech , Kolencherry --- as DCDC
3.	Selection for the Faculty development programme conducted – 4 Colleges --- as DCDC

- Member, Board of question paper setters and examiner in Biotechnology, Kannur University.
- Member, Board of question paper setters and examiner in Biotechnology and Microbiology (B.Sc.,M.Sc), Calicut University.

- Member, Board of question paper setters in microbiology (M.Sc&B.Sc) Kerala
- Member, Board of question paper setters and examiner in Biotechnology (MSc), Cochin University of Science and Technology.
- P.T.A Secretary ,School of Biosciences-2014-2016 batch
- Membership in Scientific Societies
- Society for Biotechnology (India)
- Association of Microbiologist in India (AMI), India
- Kerala Science Academy.
- Member Society for Fisheries Technologist (India)
- Member Indian Science Congress Association

School of Computer Sciences

Name of Faculty Member : Prof. (Dr.) R. Vijayakumar

Ongoing Projects / Consultancies

S.No.	Title	Agency	Period
1	University e-governance XII plan –Implementation committee member	Kerala State Govt	On going
2.	E-learning /ICT – Tech committee Chairman	UGC / Kerala State Govt	On going

Invited Lectures and Chairmanships at National or International Conference/Seminar etc.

S.No.	Title of the Lecture/ Academic Session	Title of Conference/ Seminar	Organised by	Whether International/ National	API Score
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1	Inauguration of MCA 2015		SNGIST, North Paravoor , Cochin	National	
2	Faculty development programme	Accelerate (for teachers)	Shantigiri College , Thodupuzha	National	

Name of Faculty Member : Dr. Bindu V.R.

1. Chairperson, Board of Studies, School of Computer Sciences.
2. Member Board of Studies Computer Science (PG), University of Kerala.
3. Question Paper setter for Kerala Public Service Commission.
4. Member of Expert Committee to strengthen the System Administration Wing of the University
5. Chief Co-ordinator of the Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt of India), in the University .
6. Presiding Officer of the Permanent Cell to Combat Sexual Harassment in the University–

Enquiries completed:

- a. On the complaint of M Phil student of SES, MGU.
- b. On the complaint of M B A student of SMBS, MGU.-Enquiries

Ongoing:

- c. On the complaint of students of UCTE, MGU.
7. Member of University level Implementation and Monitoring Committee (E-Governance)
8. Member of the Technical committee to assess the Software/Hardware requirements for the e-learning project of the University.

9. Member of e-learning/ICT Committee for e-learning project approval, e-content approval and for taking other decisions related to e-learning and net working.
10. Professional member of ACM (Association of Computing Machinery).
11. Member – IAENG (International Association of Engineers)
12. Faculty Advisor – M Sc 2014-16 batch
13. Conducted External valuation camp of M Sc II semester and M Tech II semester Examinations and Ph D course work Examinations of the School.
14. Published an article “Granular Computing” in the Annual Technical Publication of the School “IT Glimpse 2015” released on 4.12.2015.
15. Member of the Revision Committee for drafting revised CSS Regulations of the University to be implemented from 2016 admissions. Participated in the discussions and meetings for drafting the revised regulations.
16. External Examiner for the M Sc Examinations, Kerala University. Conducted the External evaluation of the Project and Viva-Voce of M Sc Computer Science Examination in the Department of Computer Science, University of Kerala on 22.09.2015.
17. Organized “Interface 2015” annual technical meet of Computer Science students organized by the School in association with Computer Science Students’ Association of the School on 4th & 5th December 2015.
18. Organized Annual Alumni Meet of the School held on 6th December 2015.
19. Made a reasonable contribution to the Chennai Disaster Relief Fund collected by the University.
20. 1.10.2015 was observed as the cleaning day in the School
21. Conducted External valuation of M Sc Examinations of University of Kerala on 28.03.2016
22. As Placement co-ordinator of the School, co-ordinated the placement activities of the School. Four M Sc students(2014-16batch) got well placed.

- 23.26.11.2015 was observed as the constitution day in the School,
24. Chaired the programme in connection with the commemoration of **World Zero Discrimination Day on 1st March 2016**, conducted by Inter University Centre for Disability Studies(IUCDS), School of Behavioral Sciences in association with NSS and DSU, M G University.
25. Member of selection committee (subject expert) for appointment in various posts(Hardware Engineer/Programmer/Assistant Professor) in the University.
26. As Head of Department, organized several meetings of the Faculty Council, Technical staff and Administration wing and Internal Quality Assurance Cell of the School for discussing the innovative schemes/programmes to be introduced for supporting research, upgradation of faculty and enhancing teaching methodology and for preparing the Annual Quality Assurance Reports.

Name of Faculty Member : Ms. Pushpalatha K.P.

1. Member Board Of Studies Computer Science (PG) of School Of computer Sciences.
2. Member , Permanent Cell to combat sexual harassment in the University.
3. Question Paper setter for Kerala University and Mahatma Gandhi University.
4. Member of e-learning/ICT Committee for e-learning project approval, e-content approval and for taking other decisions related to e-learning and networking.
5. Faculty Advisor – MSc 2015-17 Batch of the School.
6. Staff Editor, ‘IT Glimpse’ the annual technical publication of the School, released as part of annual technical event ‘Interface 2015’ conducted in December 2015.

7. An active member of the Faculty Council of the School, taking part in all activities of the School.
8. Member, Organizing Committee, “Interface 2015” the annual technical meet of Computer Science students organized by the School in association with Computer Science Students’ Association of the School on 4th & 5th December 2015.

Dr. Anuj Mohamed

1. Member - Board of Studies Computer Science (PG) of School Of computer Sciences.
2. Member – IQAC of the University.
3. Faculty Co-ordinator, IQAC of the School.
4. One of the Co-ordinators of the Spoken Tutorial Project (an initiative of NMEICT, Ministry of Human Resource Development, Govt. of India), in the University.
5. Chairman, Scrutiny Board, S6 Career Related BCA and BSc PCA Examinations April 2016 of University of Kerala.
6. Question paper setter, S6 Career Related BCA and BSc PCA Examinations April 2016 of University of Kerala.
7. Actively taking part in all the decision making activities of the School as a faculty council member of the School.
8. Actively involved in the preparation of Annual Quality Assurance Reports of the School.
9. Member, Organizing Committee, “Interface 2015” annual technical meet of Computer Science students organized by the School in association with Computer Science Students’ Association of the School on 4th & 5th December 2015.

10. Member, Organizing Committee, Annual Alumni Meet of the School held on 6th December 2015.
11. Faculty Co-ordinator, Cultural programs conducted in connection with Interface 15.
12. Professional Member of ACM (Association of Computing Machinery).

Criterion 3.13

No. of collaborations

School of Chemical Sciences

Collaborating Institutes:

a) In India

- Dept of Materials Engineering, Indian Institute of Science (IISc), Bangalore.
- Rubber Research Institute of India, Kottayam, Kerala, India - 686 009.
- NIIST, Trivandrum, Kerala, India - 695 012.
- Central Power Research Institute, Bangalore, India – 56094.
- Vikram Sarabhai Space Research Centre, Trivandrum, India
- Rubber Technology Centre, Indian Institute of Technology, Kharagpur, India
- .
- COMPTECH, Indian Institute of Technology, Chennai.
- Polymer Chemistry Division, National Chemical Laboratory, Pune, India
- Sree Chitra Thirunal Institute of Medical Sciences and Technology, Trivandrum, Kerala, India.
- Central Institute of Plastic Engineering and Technology, Guindy, Madras, India

- Department. of Polymer Science & Rubber Technology, Cochin University of Science & Technology, Cochin - 22, Kerala, India
- Indian institute of Chemical Technology, Hyderabad, India
- Laboratory of Condensed Matter Physics, Department of Physics, University of Rajasthan, Jaipur, India.
- Reliance Industries Limited, Maker Chambers IV, 3rd Floor, 222, Nariman Point, Bombay
- Elastomers Technical Services, Madurai, India
- High Polymer Engineering Division, Department of Chemical Engineering, Indian Institute of Technology, Madras, India
- Department of Chemistry, Karnatak University, Dharwar, Karnataka, India
- Department of Civil Engineering, Indian Institute of Technology, New Delhi, India
- Common Facility Service Centre, Industrial Estate, Changanacherry, Kottayam, Kerala, India
- Department of Physics, University of Mysore, Mysore

b) Abroad

- Macromolecular Science & Engineering Research Centre, Laval University, Quebec, Canada G1K7P4. (Prof. Prud 'homme).
- Abt. Kunststoffee/Verbundwerkstoffe, TU Hamburg-Harburg, AB 5-09, Denickestraße 15, D-21073 Hamburg, Germany (Prof. V. Alstädt)
- Technische Universitat Chemnitz, Polymerchemiie, Straße der Nationen 62, 0911 Chemnitz, Germany (Prof. Steffan Spange)
- Directeur de ENSCCF, 24 avenue des Lais, BP - 187 - 63174 Aubiere, Cedex, France (Prof. Jacques Lacoste).

- Laboratory of Macromolecular Structure Chemistry, Department of Chemistry, Katholieke University of Leuven, Belgium (Prof. Gabriel Groninckx).
- Martin-Luther-Universität Halle Wittenberg, FB Physik, Fridemann-Bach Platz 6, 06108, Halle, Germany (Prof. Manfred Knorren)
- Assoc. Prof. of Polymer Physics, University of Chemical Technology Metallurgy, 8, Kilment Ohridski Blvd., 1756 Sofia, Bulgaria (Dr. Christo Betchev)
- Institute of Material Science & Technology, Martin-Luther-Universität, Halle-Wittenberg, Postanschrift D-06099 Halle, Haussanschrift Geusaer Straße, Germany (Prof. (Dr.) Ing. Hans-Joachim Radusch).
- Institute of Composite Materials Ltd., University of Kaiserslautern, Kaiserslautern, Germany (Prof.(Dr.) Jozef Karger Kocsis)
- Institute of Polymer Research, Hohe Strasse 6, D- 01069 Dresden, Germany (Prof. Manfred Stamm, Dr. Jürgen Pionteck, Dr. Petra Poetschke Dr. Cornelia Bellman)
- CNRS Lab, Laboratoire de Recherche sur les, Polymers, UMR 7581-CNRS, 2-8 rue Henri Dunant, 94320 Thiais, Paris, France (Prof.(Dr.) Françoise Lauprêtre)
- R&D, Du Pont, Wilmington, Delaware, USA (Dr. Joseph V. Kurian) .
- Institut des Matériaux de Rouen, faculté des sciences, BP12, 76801 Saint etienne du rouvray, responsable de LECAP, équipe de l'UMR6522 Polymères-Biopolymères-Membrane, France (Prof. Jean Marc Saiter) .
- Laboratoire L2PIC, University of South Brittany, Rue Saint Maude, Lorient Cedex, France (Prof. Yves Grohens) .
- Polymers Nanotextures & Nanocomposites, Centre de Recherche sur la Matière Divisée 1B, rue de la Ferrollerie, 45071 Orleans Cedex 2, France (Dr. Christophe Sinturel) .

- Beijing University of Chemical Technology International Exchanges and Cooperation Dept, Add. No.15 Beisanhuan East Road, Beijing 100029,P.R.China (Dr. Yang Weimin)
- Thermal lab, UIT, University of Paris 12, Creteil Campus, France(Prof. Dr.Yves Candau and Prof. Dr. Abdel Boudenne).
- Department of Chemical Engineering, CIT, Katholieke University of Leuven, Belgium (Prof. Paula Mouldnaers).
- CNRS, Strasbourg, France, (Prof. Dr. Rene Muller).
- Department of Chemsitry, Walter Sisulu University, Mthatha, South Africa. (Dr Oluwatobi S Oluwafemi).
- Department of Chemical Engineering, Katholieke University of Leuven, Belgium (Prof.Dr. Paula Moldnaers).
- Jozef Stefan institute, Ljubljana, Slovenia (Prof. Miran, Prof. Dr. Uros Cvelbar)
- General Cables, Indianapolis, USA (Dr. Vijay).
- University Technology Mara (UiTM), Malaysia (Dr. Chan Chin Han)
- Institute for Polymer Research Dresden (IPF), Dresden, Germany (Prof. Dr. Manfred Stamm and Dr. Jurgen Pionteck).
- Macromolecular Science & Engineering Research Centre, Laval University, Quebec, Canada G1K7P4. (Prof. Prud 'homme)
- Abt. Kunststoffee/Verbundwerkstoffe, TU Hamburg-Harburg, AB 5-09, Denickestraße 15, D-21073 Hamburg, Germany (Prof. V. Alstädt
- Technische Universitat Chemnitz, Polymerchemiie, Straße der Nationen 62, 0911 Chemnitz, Germany (Prof. Steffan Spange).
- Directeur de ENSCCF, 24 avenue des Lais, BP - 187 - 63174 Aubiere, Cedex, France (Prof. Jacques Lacoste)

- Laboratory of Macromolecular Structure Chemistry, Department of Chemistry, Katholieke University of Leuven, Belgium (Prof. Gabriel Groninckx).
 - Martin-Luther-Universität Halle Wittenberg, FB Physik, Fridemann-Bach Platz 6, 06108, Halle, Germany (Prof. Manfred Knorren).
 - Assoc. Prof. of Polymer Physics, University of Chemical Technology Metallurgy, 8, Kilment Ohridski Blvd., 1756 Sofia, Bulgaria (Dr. Christo Betchev).
 - Institute of Material Science & Technology, Martin-Luther-Universität, Halle-Wittenberg, Postanschrift D-06099 Halle, Haussanschrift Geusaer Straße, Germany (Prof. (Dr.) Ing. Hans-Joachim Radusch).
 - Institute of Composite Materials Ltd., University of Kaiserslautern, Kaiserslautern, Germany (Prof.(Dr.) Jozef Karger Kocsis).
 - Institute of Polymer Research, Hohe Strasse 6, D- 01069 Dresden, Germany (Prof. Manfred Stamm, Dr. Jürgen Pionteck, Dr. Petra Poetschke Dr. Cornelia Bellman)
 - CNRS Lab, Laboratoire de Recherche sur les, Polymers, UMR 7581-CNRS, 2-8 rue Henri Dunant, 94320 Thiais, Paris, France (Prof.(Dr.) Françoise Lauprêtre).
 - R&D, Du Pont, Wilmington, Delaware, USA (Dr. Joseph V. Kurian) .
 - Institut des Matériaux de Rouen, faculté des sciences, BP12, 76801 Saint etienne du rouvray, responsable de LECAP, équipe de l'UMR6522 Polymères-Biopolymères-Membrane, France (Prof. Jean Marc Saiter) .
 - Laboratoire L2PIC, University of South Brittany, Rue Saint Maude, Lorient Cedex, France (Prof. Yves Grohens) .
1. Polymers Nanotextures & Nanocomposites, Centre de Recherche sur la Matière Divisée 1B, rue de la Ferrollerie, 45071 Orleans Cedex 2, France (Dr. Christophe Sinturel) .

2. Beijing University of Chemical Technology International Exchanges and Cooperation Dept, Add. No.15 Beisanhuan East Road, Beijing 100029,P.R.China (Dr. Yang Weimin).
3. Thermal lab, UIT, University of Paris 12, Creteil Campus, France(Prof. Dr.Yves Candau and Prof. Dr. Abdel Boudenne).
4. Department of Chemical Engineering, CIT, Katholieke University of Leuven, Belgium (Prof. Paula Mouldnaers)
5. CNRS, Strasbourg, France, (Prof. Dr. Rene Muller).
6. Department of Chemsitry, Walter Sisulu University, Mthatha, South Africa. (Dr Oluwatobi S Oluwafemi).
7. Department of Chemical Engineering, Katholieke University of Leuven, Belgium (Prof.Dr. Paula Moldnaers).
8. Jozef Stefan institute, Ljubljana, Slovenia (Prof. Miran, Prof. Dr. Uros Cvelbar)
9. General Cables, Indianapolis, USA (Dr. Vijay).
- 10.University Technology Mara (UiTM), Malaysia (Dr. Chan Chin Han).
- 11.Institute for Polymer Research Dresden (IPF), Dresden, Germany (Prof. Dr. Manfred Stamm and Dr. Jurgen Pionteck).

• **Details of collaboration with other research and academic institutions with in the state**

1. National Interdisciplinary Institute for Science and Technology (NIIST), Thiruvananthapuram, Kerala, India
2. Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram, Kerala, India
3. Indian Institute for Science Education and Research (IISER), Thiruvananthapuram, Kerala, India
4. Vikram Sarabhai Space Centre, Thiruvananthapuram, Kerala, India
5. Sree Chithirathirunal Institute of Medical Science and Technology, Thiruvananthapuram, Kerala, India
6. Hindustan Latex Limited, Thiruvananthapuram, Kerala, India

7. Ruber Research Institute Kottayam, Kerala, India
8. Common Facility Service Centre, Industrial Estate Changanacherry, Kerala, India
9. Cochin University of Science and Technology, Kerala, India
10. Central Institute of Plastics Engineering and Technology (CEPT), Kerala, India
11. Centre for Materials for Electronics Technology (CMET), Kerala, India
12. National Institute of Technology, Calicut, Kerala, India
13. Central University, Kerala, India
14. Amritha Institute of Medical Science, Kerala, India
15. *St. Teresa's College*, Ernakulam, Kerala, India
16. Pushpagiri Medical College Hospital, Kerala, India
17. Amal Jyothi College of Engineering, Kottayam, Kerala, India
18. Harrisons Malayalam, Kerala, India
19. MRF Limited, Kerala, India
20. Appolo Tyres, Kerala, India

Details of collaboration with other research and academic institutions outside the state

21. University of California , Santa Cruz, USA
22. Vanderbilt University, USA
23. University of Texas in Airlingto, USA
24. Functional Materials Division, Pusan National University, Busan, Korea
25. University of Paris Sud, France.
26. Johnson Matthey, New Jersey, USA
27. Department of Physics and Medical Engineering, Rzeszow University of Technology, Rzeszow, Nov 26, 2015, Poland
28. Institute of Plasma Research, Gandhinagar
29. Indian Institute of Tropical Meteorology, Pune
30. SAHA Institute of Nuclear Physics, Calcutta
31. Osmania University, Hyderabad
32. Raman Research Institute, Bangalore

33. Bhabha Atomic Research Centre, Mumbai, India
34. Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India
35. UGC–DAE Consortium for Scientific Research, 700098 Kolkata, India
36. *CMR Institute of Technology*, Bengaluru, Karnataka
37. Inter University Accelerator Center
38. CSIR-Central ElectroChemical Research Institute, Karaikudi, TamilNadu
39. Biotechnology Centre, National Dairy Research Institute, Karnal, 132001, India
40. Indian Institute of Science (IISc), Bangalore
41. Central Power Research Institute, Bangalore, India - 56094
42. Rubber Technology Centre, Indian Institute of Technology, Kharagpur, India
43. COMPTECH, Indian Institute of Technology, Chennai
44. Polymer Chemistry Division, National Chemical Laboratory, Pune, India
45. Central Institute of Plastic Engineering and Technology, Guindy, Madras, India
46. Indian Institute of Chemical Technology, Hyderabad, India
47. Laboratory of Condensed Matter Physics, Department of Physics, University of Rajasthan, Jaipur, India
48. Reliance Industries Limited, Maker Chambers IV, 3rd Floor, 222, Nariman Point, Bombay
49. Elastomers Technical Services, Madurai, India
50. Indian Institute of Technology, Madras, India
51. Karnatak University, Dharwar, Karnataka, India
52. Indian Institute of Technology, New Delhi, India
53. University of Mysore, Mysore, India
54. Université de Bretagne Sud, Laboratoire Ingénierie des Matériaux de Bretagne, BP 92116, 56321 Lorient Cedex, France
55. Cape-Peninsula University of Technology, P.O. Box 652, Capetown, South Africa

56. Walter Sisulu University, Mthatha, Private bag XI, Mthatha 5117, South Africa
57. Cape-peninsula University of Technology, Wellington, 7655, South Africa
58. Macromolecular Science & Engineering Research Centre, Laval University, Quebec, Canada G1K7P4.
59. Abt. Kunststoffee/Verbundwerkstoffe, TU Hamburg-Harburg, AB 5-09, Denickestraße 15, D-21073 Hamburg, Germany
60. Technische Universität Chemnitz, Polymerchemie, Straße der Nationen 62, 0911 Chemnitz, Germany
61. Directeur de ENSCCF, 24 avenue des Lais, BP - 187 - 63174 Aubiere, Cedex, France
62. Laboratory of Macromolecular Structure Chemistry, Department of Chemistry, Katholieke University of Leuven, Belgium
63. Martin-Luther-Universität Halle Wittenberg, FB Physik, Fridemann-Bach Platz 6, 06108, Halle, Germany
64. University of Chemical Technology Metallurgy, 8, Kilment Ohridski Blvd., 1756 Sofia, Bulgaria
65. Institute of Material Science & Technology, Martin-Luther-Universität, Halle-Wittenberg, Postanschrift D-06099 Halle, Haussanschrift Geusaer Straße, Germany
66. Institute of Composite Materials Ltd., University of Kaiserslautern, Kaiserslautern, Germany
67. Institute of Polymer Research, Hohe Strasse 6, D- 01069 Dresden, Germany
68. CNRS Lab, Laboratoire de Recherche sur les, Polymers, UMR 7581- CNRS, 2-8 rue Henri Dunant, 94320 Thiais, Paris, France
69. R&D, Du Pont, Wilmington, Delaware, USA

70. Institut des Matériaux de Rouen, faculté des sciences, BP12, 76801 Saint etienne du rouvray, responsable de LECAP, équipe de l'UMR6522 Polymères-Biopolymères-Membrane, France
71. Laboratoire L2PIC, University of South Brittany, Rue Saint Maude, Lorient Cedex, France
72. Polymers Nanotextures & Nanocomposites, Centre de Recherche sur la Matière Divisée 1B, rue de la Ferrollerie, 45071 Orleans Cedex 2, France
73. Beijing University of Chemical Technology International Exchanges and Cooperation Dept, Add. No.15 Beisanhuan East Road, Beijing 100029, P.R.China
74. Thermal lab, UIT, University of Paris 12, Creteil Campus, France
75. Department of Chemical Engineering, CIT, Katholieke University of Leuven, Belgium
76. CNRS, Strasbourg, France,
77. Department of Chemical Engineering, Katholieke University of Leuven, Belgium
78. Jozef Stefan institute, Ljubljana, Slovenia
79. General Cables, Indianapolis, USA
80. University Technology Mara (UiTM), Malaysia
Institute for Polymer Research Dresden (IPF), Dresden, Germany

School of InterNational Relations and Politics

International Collaborative Programmes and Linkages

The School has three memoranda of understanding (MoU) signed with three universities/institutes. An MoU between the Institute of Political Studies (IEP) of Rennes, France and the School of International Relations and Politics, Mahatma Gandhi University has been in place since 2008. As part of this, French students have been admitted to the MA Programme to do two semesters in the School. There is

another MoU with the Sciences Po Bordeaux (IEP), FRANCE and students from France are admitted for two-semester studies in SIRP. Scholars from China also keep visiting the SIRP in accordance with the memorandum of understanding (MoU) signed with the Institute of Chindian Studies, Jinan University, China in 2011. During 2014-15, a scholar from China visited the School and offered lectures on China.

School of Behavioural Sciences

Since the focus of the department is on disability prevention management and rehabilitation and promoting mental health academic collaboration with pioneer institutions working in the field is established and maintained. These agencies extend their support by providing practical training in relevant areas taking expert lectures etc. The department support the agencies by extending help in the conduct of workshops/conferences and also in the conduct of research. The agencies which had collaboration with Department during the academic year are National Institute of Speech and Hearing, Thiruvananthapuram, Nirmala Sadan Training College of Special Education, Muvattupuzha, Institute of Child Health Medical College, Kottayam, Snehasadan college of Special Education, Angamaly, St. John the Baptist College of Special Education, Nedumkunnam, St. John of God College for Special Education, Pampady, Medical College, Kottayam. Bhabha Atomic Research Centre, Mumbai, India.

School of Pure and Applied Physics

- Raman Research Institute, Bangalore, India
- Indian Institute of Science, 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

- Inter University Accelerator Centre, New Delhi, India.

Criterion 3.16 No. of patents received this year

School of Chemical Sciences

Patents Filed:

1. Highly gas impermeable elastomeric rubber- rubber blend nanocomposite, Indian Patent Application no: 135/CHE/2012, Sabu Thomas, Ajesh K. Zachariah, P.K. Mohammad, Arup Kumar Chandra.
2. Fibre reinforced composites with toughened epoxy matrix and a process for preparing the same, Application 940/CHE/2006, published 2007-12-07. Vattikuti Lakshmana Rao, Bejoy Francis, Rajagopal Ramaswamy, Kavoor Ninan Ninan, Sabu Thomas.
3. Biodegradable, Biocompatible Wound Healing Dressing Film and ointment from the Biocomposite of Marine Origin, Indian Patent application : 840/DEL/2013, M. Kurup and Sabu Thomas.
4. Method for improving the comparative tracking index of polymer composites, Indian patent Application No:239/CHE/2014, Harinarayanan Puliyalil, Uros Cvelbar, Miran Mozetic, Sabu Thomas.
5. A polymer Nanocomposite, Process And Application there-of, Indian patent Application No: 638/DEL/2015 Mohammed Arif P, Sabu Thomas, Nandakumar Kalarikkal.

Criterion 3.17

No. of research awards/ recognitions received by faculty and research fellows

Of the institute in the year

School of Chemical Sciences**Dr Sabu Thomas****Awards and Prizes Won:**

- **Awarded Doctorat Honoris causa-LIMATB**, University of South Brittany, **France 2015**

1. ICMST Young Researchers Award in Second International Conference on Material Science and Technology (ICMST-2016) organized by Department of Physics, St. Thomas College, Palai, Kerala. (5th to 8th, June 2016).

2. Best Paper Presentation award for Young Scientist in Engineering & Technology Subject area of 28th Kerala Science Congress organized by Kerala State Council for Science, Technology and Environment (KSCSTE), held at University of Calicut, Kerala. (28th to 30th January 2016).

3 .Best Paper presentation award in Chemical & Nanotechnology track (T3) of Kerala Technological Congress-2016 jointly organized by A.P.J. Abdul Kalam Technological University (KTU), Kerala and Kerala State Council for Science, Technology and Environment (KSCSTE). (08th and 09th January 2016).

4 .Second Best Poster Presentation award in the 'International conference on Recent Innovations in Tissue Engineering' (ICRIT-15) held at Pushpagiri Research Centre, Tiruvalla, India. (9th October 2015).

5 .Best Poster Presentation award (Prof. D.M. Vasudevan award) in Bioradiance-2015 'National conference on frontiers in diabetic research and treatment' organized by Pushpagiri Research Centre, Tiruvalla, India. (24th July 2015)

- 6 Best Paper presentation award** in UGC sponsored National seminar on “Emerging Trends in Nanomaterials” organized by Dept. of Chemistry, Sree Sankara Vidyapeetom College, Perumbavoor, India. (9th and 10th of July 2015).
- 7 Best paper award** in National seminar on Advanced polymers, Department of Polymer Engineering, Mahatma Gandhi University College of Engineering, Thodupuzha, September 11, 12 2015
- 8 Best paper award** in National seminar on Emerging trends in Chemistry, Post graduate department of Chemistry, St. Josephs College Moolamattom. December 9, 10 2015
- 9 Best Poster award** in First International Conference on Advanced Materials for Power Engineering (INCAMPE -2015), 11-13 December 2015 held at IIUCNN Kottayam, Kerala.
- 10 Best Poster award** Second Prize in World Congress on Microscopy (WCM 2015): 9-11 October, 2015 held at IIUCNN Kottayam, Kerala.
- 11 Best Poster Prize** International Conference On Holistic Medicine -ICHM 2015, held at Kottayam, Kerala.
- 12 Best poster award** -Deakin India Research Initiative – International Symposium on Translational Research 2015

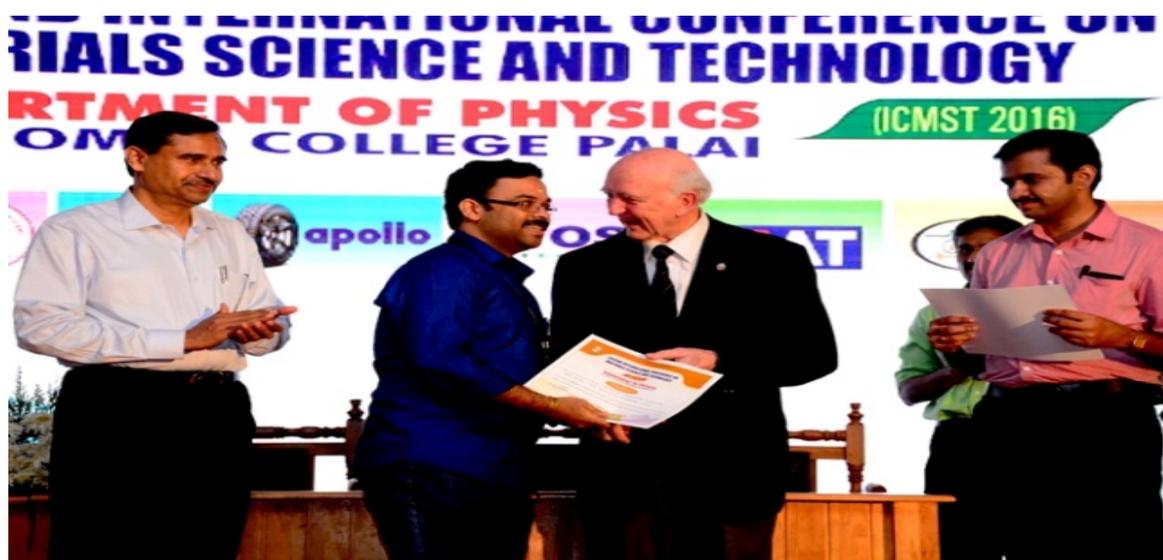
Awards and Achievements received:

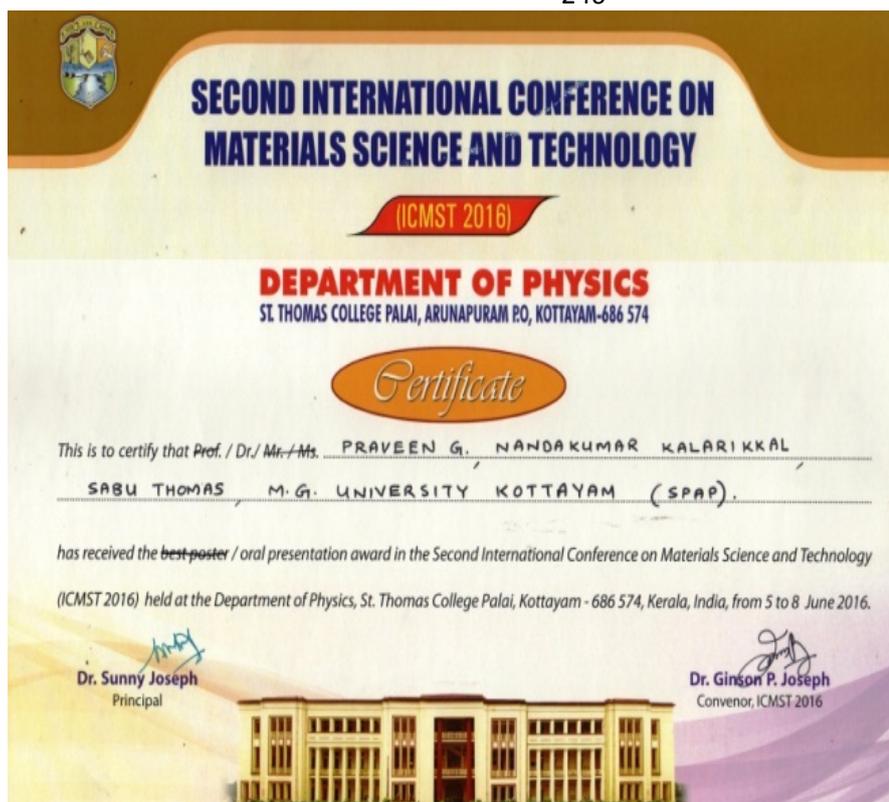
- **ICMST Young Researchers Award** in Second International Conference on Material Science and Technology (ICMST-2016) organized by Department of Physics, St. Thomas College, Palai, Kerala. (5th to 8th, June 2016).

Award	Authors	Paper
Best Oral Presentation - International Conference On Plasma Science And Nanotechnology, & 29 th National Symposium On Plasma Science And Technology	Jemy James	Plasma Science

Third prize for poster presentation ,2nd International Conference of Nano Materials(<i>ICNM</i>)2014	Robin Augustine	Biomedical
Best Oral Presentation Award - National Seminar on Material Science and Modern Analytical Techniques on 26 th &27 th of March 2014	Preetha Balakrishnan	Fully Biodegradable Potato Starch Composites : Effect Of Nano Fiber Reinforcement On Mechanical And Water-Sorption Characterestics
Best Oral Presentation Award, National Seminar On Biopolymers And Green Composites (BPGC-14)	Dr.Praveen.G	Biomedical
Best Oral Presentation Award, National Seminar On Nanochemistry And Nanobiotechnology (Nanochembio-14)	Dr.Praveen.G	Biomedical
EUPHRATES Erasmus Mundus scholarship by European Union from Institution: University of Maribor, Slovenia	Sreerag Gopi	Bionanocomposites
Best Paper Award - National Seminar on Nanostructured Materials (NSM2014),	Jiji Abraham	Elastomer nanocomposites
Best Paper Award,National Seminar On Advanced Polymer Materials(Hesperos 2015)	Jiji Abraham	SBR/CNT nanocomposites
Best Poster Prize International Conference On Holistic Medicine - ICHM 2015	Blessy Joseph	Cordyceps- a potent antidote for cancer
Best Poster Presentation Award (Prof. D.M. Vasudevan Award),In Bioradiance-2015	Dr.Praveen.G	Biomedical

'National Conference On Frontiers In Diabetic Research And Treatment'		
Best Poster Presentation Award (Prof. D.M. Vasudevan Award),In Bioradiance-2015 'National Conference On Frontiers In Diabetic Research And Treatment'	Dr.Praveen.G	Biomedical
Best Oral Presentation Award , UGC Sponsored National Seminar On “Emerging Trends In Nanomaterials”	Dr.Praveen.G	Biomedical
Best poster award -Deakin India Research Initiative – International Symposium on Translational Research 2015	Aneesa .P	Epoxy nanocomposites
Best paper award ,28th Kerala Science Congress,2016	Dr.Praveen.G	Biomedical





- **Best Paper Presentation award for Young Scientist in Engineering & Technology Subject area of 28th Kerala Science Congress** organized by Kerala State Council for Science, Technology and Environment (KSCSTE), held at University of Calicut, Kerala. (28th to 30th January 2016).



- **Best Paper presentation award in Chemical & Nanotechnology track (T3) of Kerala Technological Congress-2016** jointly organized by A.P.J. Abdul Kalam

Technological University (KTU), Kerala and Kerala State Council for Science, Technology and Environment (KSCSTE). (08th and 09th January 2016).



- **Second Best Poster Presentation award** in the 'International conference on Recent Innovations in Tissue Engineering' (ICRIT-15) held at Pushpagiri Research Centre, Tiruvalla, India. (9th October 2015).



- **Best Poster Presentation award** (Prof. D.M. Vasudevan award) in Bioradiance-2015 'National conference on frontiers in diabetic research and treatment' organized by Pushpagiri Research Centre, Tiruvalla, India. (24th July 2015)



- **Best Paper presentation award** in UGC sponsored National seminar on “Emerging Trends in Nanomaterials” organized by Dept. of Chemistry, Sree Sankara Vidyapeetom College, Perumbavoor, India. (9th and 10th of July 2015).



- **Best Paper presentation award** in the National seminar on Biopolymers and Green composites (BPGC-14) organized by the Centre for Biopolymer Science and Technology (CBPST), a unit of CIPET, Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India. (14th November 2014)



- **Best Oral presentation award** in UGC sponsored national seminar on Nanochemistry and Nanobiotechnology (Nanochembio-14) organized by Dept. of Chemistry, St. Thomas College, Palai, India. (8th and 9th of October 2014).



Pedagogies attended (with merit of sponsorship)

- Selected with Industrial sponsorship to attend Molecular Spectroscopy Workshops on “UV-Vis-NIR Techniques for Advanced Material Characterization” and “FTIR Microscopy and Chemical Imaging” conducted at [Agilent Technologies Centre of Excellence](#), Manesar (Gurgaon), India during 9th and 10th June 2016.



- Selected with sponsorship to attend the five days JNCASR-Cambridge University “Winter School-2015 on Frontiers in Materials Science” conducted at [Jawaharlal Nehru Centre for Advanced Scientific Research \(JNCASR\)](#), Bangalore, India during 7th to 11th December 2015.



Selected with full sponsorship to attend the three days “National Colloquium on NMR and MS for Biological applications” organized by [Srinivasa Ramanujan Institute for Basic Sciences \(SRIBS\)](#), Kottayam, India during 31st July to 2nd August 2015.



Awards :

- 1 Dr Sabu Thomas, Awarded Doctorat Honoris causa-LIMATB, University of South Brittany, France 2015**
- 2 Dr.Praveen.G** The Best Poster Presentation Award (Prof. D.M. Vasudevan Award), In Bioradiance-2015 'National Conference On Frontiers In Diabetic Research And Treatment' Organized By Pushpagiri Research Centre, Tiruvalla, India
- 3 Blessy Josseph,** 1st Prize For Poster Competition "International Conference On Holistic Medicine -ICHM 2015

- 4 **Jiji Abraham**, Best Paper Award, National Seminar On Advanced Polymer Materials (Hesperos 2015), Organized By Department Of Polymer Engineering Mahatma Gandhi University College Of Engineering, Muttom, Thoupuzha, Kerala September 11&12, 2015
- 5 **Dr.Praveen.G** ,Best Oral Presentation Award , UGC Sponsored National Seminar On “Emerging Trends In Nanomaterials” Organized By Dept. Of Chemistry, Sree Sankara Vidyapeetom College, Perumbavoor, India
- 6 **Dr.Praveen.G** ,Best Oral Presentation Award, National Seminar On Biopolymers And Green Composites (BPGC-14) The Centre For Biopolymer Science And Technology (CBPST), A Unit Of CIPET, Department Of Chemicals & Petrochemicals, Ministry Of Chemicals & Fertilizers, Govt. Of India
- Kinetic Study on the Catalytic Amidolysis of Z-L-Phe-PNA Using Phosphonate Analogue Imprinted Polymer Catalysts as Chymotrypsin Mimics (*National Seminar on Phytochemistry An Emerging Branch for the Development of Potential Anticancer Drugs*, Assumption College, Changanasserry, September 2015)- *Best poster award* (Divya Mathew).
Divya Mathew^a, Benny Thomas^{a, b}, K.S. Devaky^{a*}
 - Kinetic Studies on Hydrolytic Activities of Polymer Supported Enzyme like Catalysts in the Amidolysis of Z-Tyr-Gly-OCH₃ (*Recent Trends in Spectroscopy: A Chemical and Biological Perspective-II*, Newman College, Thodupuzha, 13-14 September 2015)- *Best poster award* (Divya Mathew).
Divya Mathew^a, Benny Thomas^{a, b}, K.S. Devaky^{a*}
 - Effect of the Nature and Extent of Crosslinking on Catalytic Amidolysis of Z-L-Tyr-PNA Using Chymotrypsin Mimics (*National Seminar on Advanced Functional Materials*, Mar Athanasius College, 15-16 September 2015)- *Best poster award* (Divya Mathew).
Divya Mathew^a, Benny Thomas^{a, b}, K.S. Devaky^{a*}

- Kinetic Study on the Catalytic Amidolysis of the Dipeptide H-Tyr-Gly-OH Using Boronic acid Analogue Imprinted Chymotrypsin Mimics (*RTSB, Recent Trends in Organic Synthesis and Chemical Biology*, Annamalai University, Department of Chemistry, October 2015)- *Best poster award* (Divya Mathew)

Divya Mathew^a, Benny Thomas^{a, b}, K.S. Devaky^a

School of Environmental Studies

- **Prof.C.T. Aravindakumar** was invited as a Team Leader in Environmental Science to formulate the research policy of the Ministry of Earth Science in India's Polar Research (Arctic/Antarctic/Southern Ocean/Himalaya) for the next 10 years. The Brainstorming Meeting on *Polar Sciences and Global Water Cycle* was held at the National Center for Antarctic and Ocean Research (NCAOR), Goa during April 13-14, 2016.
- **Prof.C.T. Aravindakumar** was invited as an expert for identifying research proposals for the *India's 36th Antarctic Expedition 2016*. The workshop was held during June 9-10, 2016.
- **Prof.C.T. Aravindakumar** was nominated to the Expert Panel of the *Water Technology Initiative (WTI)* of the Department of Science & Technology, Govt. of India
- Prof.C.T. Aravindakumar served as Visiting Professor at the University of Paris-East with full professor status, June-July, 2015.
- Prof.C.T. Aravindakumar has been re-nominated as the Executive Committee member of the Kerala State Institute of Climate Change Studies.

- Prof.C.T. Aravindakumar was invited as a plenary speaker at the Third International Conference on Advances in Applied Science and Environmental Technology - ASET 2015, 28-29 December, 2015, Bangkok, Thailand.
- Dr. Mahesh Mohan was the team leader selected for the Indian Arctic Expedition (July, 2015).
- Dr. E.V.Ramasamy, Associate Professor, has participated in the selection committee meeting of the CWRDM (Centre for Water Resources Development and Management) .,Kozhikode as a subject expert in the interview board for the selection of Scientist-B during July 02- 03, 2015.
- Dr. E.V.Ramasamy, Associate Professor, has participated as the external examiner of the M.Tech project evaluation and viva-voce examination at Centre for Pollution Control and Environmental Engineering, Pondicherry University on July 11, 2015.
- Dr. E.V.Ramasamy, Associate Professor, has participated in the technical committee of Suchitwa Mission, Local Self Governance Department (LSGD), and Govt. of Kerala on August 07, at Suhcitwa Mission office, Thiruvananthapuram for evaluating the applications submitted by the Service Providers for renewal of their period.
- Dr. E.V.Ramasamy, Associate Professor, has participated as the member of Board of Studies for the the B.Voc. Programme on Environmental Assessment and Remediation on Monday the 14th September, 2015, at Virudhunagar Hindu Nadars'; Senthikumara Nadar College, (Autonomous), Virudhunagar, Tamil Nadu.
- Dr. E.V.Ramasamy, Associate Professor, has participated in the national seminar on Solid Waste Management: Emerging Trends and Challenges at St.Stephen's College, Pathanapuram as a resource person and delivered both inaugural address and the Keynote address on September 17, 2015.
- Dr. E.V.Ramasamy, Associate Professor, has participated in the technical committee of Suchitwa Mission , Local Self Governance Department (LSGD), Govt. of Kerala on October 01, at Suhcitwa Mission office, Thiruvananthapuram for

evaluating the proposal submitted by Thiruvananthapuram Corporation for installing Incinerator.

- Dr E.V. Ramasamy, Associate Professor, has served as the external examiner of the M.Tech. project evaluation and viva-voce examination at Centre for Pollution Control and Environmental Engineering, Pondicherry University during December 21- 24, 2015.
- Dr E.V. Ramasamy, Associate Professor, has participated in the national seminar on 'Emerging Trends in Herbal Technologies' at St.Thomas College, Thrissur as a resource person and delivered an invited lecture on 'Decontamination of wastewater with Phytoremediation', October 07, 2015.
- Dr E.V. Ramasamy, Associate Professor, has participated in the Technical Committee meeting on 29.10.2015 in the Chamber of Executive Director, Suchitwa Mission, Local Self Governance Department (LSGD), Govt. of Kerala on August 07, at Suchitwa Mission office, Thiruvananthapuram, for evaluating the Expression of Interest (EOI) from competent agencies for New Technologies.
- Dr E.V. Ramasamy, Associate Professor, has participated in the Technical Committee meeting for evaluating the technical presentations of the organisations who have short listed for New Technologies on 28.11.2015 at 10.30 A.M onwards at the Office of State Institute of Health and Family Welfare, Thycaud, Thiruvananthapuram, organised by Suchitwa Mission, Local Self Governance Department (LSGD), Govt. of Kerala.
- Dr E.V. Ramasamy, Associate Professor, has participated in the technical presentation of the organisations who have short listed for Service Providers on 10.12.2015 at 10.00 A.M onwards at the Office of Suchitwa Mission, Nathencode, Kowdiar P.O, Thiruvananthapuram for evaluating the proposal submitted by short listed agencies.
- Dr E.V. Ramasamy, Associate Professor, on invitation has attended 28th Kerala Science Congress at University of Calicut on 29th January as one of the panel

members of the Judging panel for selecting best oral and poster presentations (Environment, Wildlife and Agriculture).

- Dr E.V. Ramasamy, Associate Professor , has delivered a key note address on ‘*Environmental Biotechnology for Waste Management*’ on the occasion of **National Science day celebrations** organised by MET’s School of Engineering , Mala, Thrissur Dt., on February 26, 2016.
- Dr E.V. Ramasamy, Associate Professor, on invitation has attended Workshop on **World Water Day** organised by CWRDM and Institute for Climate Change Studies (ICCS), Kottayam on March 22, 2016 and participated in the panel discussion.

Criterion 3.19

No of PhD awarded by the faculty from the institution

School of International Relations and Politics

PhDs awarded: 4

1. Basil B Mathew (Supervisor Dr.Raju K.Thadikkaran)
2. Vijesh T.P (Supervisor Dr. R.Girishkumar)
3. Binoj Jose (Supervisor Dr. C.Vinodan)
4. Vinitha Varghese (Supervisor Dr. C.Vinodan)

School of Behavioural Sciences

No of PhD awarded: 3

1. Ajesh Manohar (A study on the Awareness and attitude of Local Bodies Secretaries on Disability and implementation of Laws and utilization of fund for the differently abled in Kerala).
2. Beena Mathew (The Effect of Laughter Yoga on selected psycho physiological variables among the elderly clients residing in the Old age Homes in Kottayam District).
3. Umadevi V.M (Quality of life and Parental expectations of Adolescent with Mental Retardation.)

School of Chemical Sciences

No of PhD awarded: 13

PhD degree awarded during (2015-16)

Studies on Hydrolytic reactions using polymer supported enzyme like catalysis	Christy Philip	Devaky K. S	2016
Investigations on the Synthesis of Few Chiral γ-Butyrolactone Based Pyrrolidines	Deenamma Habel	Ibnusaud, I	2016
Synthetic Investigations on Chiral Pyrrolidine Based Molecules of Drug-Likeness Employing (2<i>S</i>,3<i>S</i>)- and (2<i>S</i>,3<i>R</i>)-Tetrahydro-3-Hydroxy-5-Oxo-2,3-Furandicarboxylic Acids	Divya S. Nair	Ibnusaud, I	2016
Low Pressure driven multilayered polyelectrolyte membranes : A sustainable tool for Phosphate recovery.	Disha, V J	Usha, K, Aravindakumar, C T	2016
Molecular recognition sites on nanostructures and its application towards sensing of biologically active molecules	Jeena Abraham	Beena Mathew	2016
	Divyalakshmi P. V		
Free radical chemistry of naphthol and its analogues: Experimental and theoretical studies	Sreekanth, R	Aravindakumar, C T	2015

Morphology and transport characteristics of poly (ethylene-co-vinyl acetate)/clay nanocomposites	Runcy Wilson	Sabu Thomas, Anil Kumar, S	2015
Chiral pool approach towards the synthesis of few optically active γ -butyrolactone based natural products	Simimole, H	Ibnusaud, I	2015
Biosorption of hazardous metal ions using ion imprinted interpenetrating polymer networks	Girija, P	Beena Mathew	2015
Cross-linked polyethylene based inorganic hybrid nanocomposites	Josmin P. Jose	Varughese, K T, Sabu Thomas	2015
Biopolymer and phytochemical mediated facile synthesis of silver and gold nanoparticles	Siby Joseph	Beena Mathew	2015
Preparation and characterization of bionanocomposites	Visakh, P M	Sabu Thomas	2015
Tailoring of highly specific nanostructured sorbents for drugs based on molecular imprinting technology	Sooraj, M P	Beena Mathew	2015

Details of Integrated PhD students doing their internship out side.

Professors	Institutes	Student
1.A.Sigov/E.D.Mishina	1. MIREA ,Moscow Technical University, Moscow, Russia	Yadu Nath V K
	2.Physikalische Chemie und Physik der Polymere Leibniz-Institut fuer Polymerforschung Dresden e.V. (IPF) Hohe Strasse 6 01069 Dresden, Germany e-mail stamm@ipfdd.de Tel. (49) 351 4658 492 Fax (49) 351 4658 281	Neelakandan M S
2.Prof. Dr. Manfred Stamm		

	internet www.ipfdd.de	
Dr. Jayachandran Kizhakkedath	Center for Blood Research and Department of Pathology & Laboratory Medicine University of British Columbia, Vancouver BC, Canada V6T 1Z3	Snehamol Mathew
Tianduo Li	Professor of Polymer Science Key Lab. of Fine Chemicals(Shandong Province) Dean of The School of Chemistry & Pharmaceutical Engineering Qilu University of Technology Jinan 250353, China Tel: (86)-531-89631207 Fax: (86)-531-89631208 Email: ylpt6296@vip.163.com	Nitheesha Shaji Karthika M
Zwe-Ling Kong Richard, Ph. D.	Professor, Cellular Immunology Laboratory, Dept. Food science. National	Athira Johnson

	<p>Taiwan Ocean University. 2- Pei-Ning Road, Keelung20224, Taiwan MSN/E-mail: kongzl@mail.ntou.edu.tw</p>	
Ana Senos	<p>Associate Professor Dep. Materials and Ceramics Engineering/ CICECO University of Aveiro 3810-193 Portugal e-mail: anamor@ua.pt T: 00351234370257</p>	<p>Bilahari Aryat Sunija S</p>
Prof.Maria De Lourdes Pereira	<p>Ciceco, Department of Biology Aveiro university Portugal Invoice Prof.Maria De Lourdes Pereira University of Aveiro, CICECO-Aveiro Institute of Materials, Secretaria – sala 29.3.39, Campus Universitário Santiago</p>	<p>Parvathy Prasad Asfina Beegum</p>

	3810-193 Portugal NIF: 501461108 mlourdespereira@ua.pt 00351234370770	
Dr. Ulrich Scheler	Leibniz-Institut für Polymerforschung Dresden e.V. Hohe Strasse 6 D-01069 Dresden, Germany phone +49 351 4658 275 fax +49 351 4658 231 www.ipfdd.de	Aswathi Vasudevan

Criterion 3.25

Extension activities

School of Behavioural Sciences

No. of extension activities organised: 2

1. Organised health education for the parents and small children attending crèche on 7/4/2016 on the theme prevention of water borne diseases and importance of hand washing.

2. Conducted classes for the high school students of model residential school on

Adolescent health problem on 20/12/2015.

**INTER UNIVERSITY CENTRE FOR DISABILITY STUDIES (IUCDS),
SCHOOL OF BEHAVIOURAL SCIENCES**

**In association with
NATIONAL SERVICE SCHEME (NSS) AND DEPARTMENT STUDENTS UNION
(DSU),**

**M.G University, Kottayam
COMMEMORATION OF WORLD ZERO DISCRIMINATION DAY
1ST MARCH 2016**

**Venue : Seminar Hall, Department of Life Long Learning and
Extension, Ettukkettu**

The event:

Inter University Centre For Disability Studies (IUCDS), School of Behavioural Sciences in Association with National Service Scheme (NSS) And Department Students Union (DSU), M.G University, Kottayam is commemorating World Zero Discrimination Day on 1st March 2016 in the theme “**Discrimination against disability**”

Zero Discrimination Day highlights the negative impacts of discrimination and promotes tolerance, compassion and peace. It is a day with various activities to celebrate everyone’s right to live a full life with dignity regardless of age, gender, sexuality, nationality, ethnicity, skin color, height, weight, disability, profession, education, and beliefs.

Programmes

- **Public function**
- **Talk on “ZERO DISCRIMINATION IN THE PRESENT CONTEXT”**
- **Discussion on**

“ ZERO DISCRIMINATION TOWARDS DISABILITY : A MYTH OR A FACT”



School of Chemical Sciences

Social Initiatives

1. Conducted a competition for college students on paper presentation.
2. Professor Sabu Thomas, Dr Nandakumar Kalarikkal, Dr Latha M S, faculties of International and Inter University Centre for Nanoscience and Nanotechnology had conducted many lectures in colleges and schools in India as a part of promoting Nanoscience and Nanotechnology.

3. Conducted student outreach programme at KE school Mannanam for promoting research in Science.
4. Visited old age home and orphanage at Kottayam

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

School of Chemical Sciences

2015-2016			
Sl. No	Instrument	Quantity	Total amount
1	Aluminium ceramic crucible	1	Rs. 60,000/-
2	Balance shimadzu	1	Rs. 83,929/-
3	Camera for microscope	1	Rs.15,000/-
4	Fume hood-working table	1	Rs. 12,500/-
5	Fume hood-working table 2	1	Rs. 62,500/-
6	Fluorescent microscope with	1	Rs. 9,40,000/-

	acesories		
7	Gas permeability tester	1	Rs.20,500,44
8	Gel documentation system	1	Rs.8,96,535/-
9	Inert atmosphere furnace	1	Rs 5,00,000/-
10	Dip coating unit	1	Rs 91,600/-
11	Low humidity storage set up	1	Rs 89,800/-
12	Low temperature furnace	1	Rs 2,50,000/-
13	Dielectric set up	1	Rs 14,313/-
14	Mini bar freezer	1	Rs 8,750/-
15	MED air block	1	Rs 18,825/-
16	microcentrifuge	1	Rs 1,73,500/-
17	microbalance	1	Rs 7,500/-
18	Micro centrifuge (me01)	1	Rs 1,46,560/-
19	Mount fro optic	1	Rs 1,20,282.25/-

20	pelletizer	1	Rs 1,00,000/-
21	Photocatalysis set up	1	Rs 2,00,000/-
22	Platinum crucible	1	Rs 3,10,000/-
23	Spectrum 500ml triple jacketed reactor 250watt	1	Rs 2,00,000/-
24	Stainity chemicals and TEM analytic kit	1	Rs 1,00,000/-
25	Tem grids	1	Rs 1,50,000/-
26	UV-VIS spectrometer	1	Rs 5,50,000/-
27	Vaccum oven pump	1	Rs 45,000/-
28	Ultra sonic processor	1	Rs 4,00,000/-
29	UPS system online digital	1	Rs 2,90,258/-

Criterion 4.2

Computerization

School of Tourism Studies: Student Information database and computerized version of semester progress card. Fully automated office. Fully automated library using the KOHA software which enables easy functioning of library. Mendeley-reference management software was introduced in the library for scholarly writing and literature management. Introduced Placement assistance help desk inside the library including books and journals for reference. Coaching cell for CBSE-NET, PSC and other competitive exams. **Department of Communication and Journalism:** Computers are provided **School of Chemical Sciences :** Computers are provided **School of Indian Legal Thought :** Fully computerized with internet facility. **School of Physical Education and Sports Sciences :** Computerized **School of Indian Legal Thought :** Meeting with students whenever computer services are upgraded in computer lab and in the library .**SSS** Open Source Library Software '*Koha*' installed in 2011. **School of Management and Business Studies :** Setup smart class room with Virtual Learning facility. **School of Pure and Applied Physics :** Fully computerized administration and library with Internet facility. **School of indian Legal Thought :** Training in computer to teachers and students was imparted . Internet access and smart class room training are made available on all the days **School of Physical Education and Sports Sciences :** Networking. **School of Social Sciences :** Fully computerized administration wing. **School of BioSciences :** Fully computerized facilities for students and faculty, for admission procedure, administration and library. **School of Computer Sciences:** Interface 2015- 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 as a forum for information interchange in the field. Remedial classes were

organized for the second semester M Sc and M Tech batches during vacation. The resources in the School library have been migrated to 'KOHA', an open source web-based integrated library management system. Technological advancements are adopted on administration, admission and examination activities. **School of Environmental Sciences:** Fully computerized with internet facility in administration and in library. **School of Gandhian Studies and Developmental Studies:** Computer labs are provided and computerization is made in administration and library. **School of Letters:** Computerized library and administration. **School of Behavioral Sciences:** computer services are upgraded in computer lab and in the library **School of Technology and Applied Sciences Pathanamthitta::** All administrative exam and admission process are done with the help of computers and internet. Library **School of Technology and Applied Sciences Pullarikkunu** Being a Department of Technology, computer & Internet access are part of the curriculum. **University College of Teacher Education Muvattupuzha** Training to teachers and Principal given by University in UBUNT. **University College of Teacher Education Kudamaloor** Computer, internet access, computer training to teachers and students and hand on experience etc. are provided for technology up gradation. Administration and library is computerized **University College of Teacher Education Paippad:** Administration and library is computerised **Broadband Connection – NMEICT .University College of Teacher Education Kanjirappally:** 5 computers with internet facilities and photocopier in the office and library

Criterion 4.4 Technology up gradation

Many computers were purchased during this time for the students.

Criterion 4.5

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

Name of the software	Licensed by
Microsoft Windows	Microsoft Corporation - Corporate version
Microsoft Office	Microsoft Corporation - Corporate Version
LINUX	Open source software
Anti - virus software	Purchased

- In Inter University Centre for Nano Science and Nanotechnology, well equipped computer labs with high speed internet access for the students were established in this period. All faculties have high speed internet facility (100mbps bandwidth). These are strictly monitored by network administrators to prevent inappropriate use and prevent chances of digital hacking. The faculty and students in the schools are benefitted from the

training and orientation programmes conducted by the University in advanced computer/software management from the experts in the field.

- The department has corporate license software with the Micro soft. All the software loaded has been licensed with different agencies.
- Scanner, print facility and Xerox facilities are available to the students and the faculty.

EVALUATIVE REPORT OF MAHATMA GANDHI UNIVERSITY LIBRARY

The University library was established in 1989 under the supervision of Special Officer Prof. K A Isaac, former University Librarian and Prof. & Head, Dept of Library & Information Science, University of Kerala. Sri K Ravindran Asari took over charge of the University Library in 1991. Under his leadership, the library system built up the required Information and Communication Technology infrastructure to facilitate access to relevant internal and external sources of information to academic community of the University. The Library introduced various services on modern lines. On his retirement Smt. K R Jayammal, Deputy Librarian was in-Charge of the library. And after her tenure the library was under the supervision of the Deputy Librarian, Sri P K Rajendra Kurup till the post of the University Librarian was filled up in 2006. Dr. R. Raman Nair was appointed in March 2006. The vision of Dr. Raman Nair had brought a wide acceptance to the University Library among other Universities in India. He had implemented the digitization of PhD theses and enabled its access in public domain. The digital archive has brought many coveted recognitions to the University like E-Learning award of Government of Kerala, recognitions from INTUIT, U.K and inclusion in UNESCO Library Portal during 2010 in his tenure. At present Smt. Laila T. Abraham, the senior most Deputy Librarian is in

charge of the Library. Many innovative services have been introduced in the library during her tenure like Koha implementation for library automation, introduction of graduate library membership, Extended remote access of E-Resources subscribed in the library including UGC-INFONET access facility to University departments and Study Centres located outside the campus, Setting up of 'ETD Lab' and 'Electronic Lab for Visually Challenged', Website creation exclusively for the library and so on. Considering the library's contribution in the online theses submission into 'Shodhganga', she has been nominated as the member of National ETD committee and University's coordinator by UGC- INFLIBNET.

Mahatma Gandhi University Library System consists of University Library, more than 30 libraries of the departments/schools and 4 Study Centres situated in campuses of affiliated colleges. The Department Libraries function independently under the respective Departments/ Schools/ Centres. The 4 Study Centres function in the campus of 4 affiliated colleges in order to cater to the needs of the academic community of affiliated colleges of the University, who are located away from the University Library.

1.The Library at a Glance

Year of Establishment	1989
Working hours of the Library	8 am to 8 pm on all working days. 10 am to 2 pm on Second Saturdays and Sundays. The library remains closed on public holidays The Library functions on an average of 345 days in a year

Library Building	
Total Area : Stack Area : Reading Area : Reading facility :	2000 sq.m 600 sq.m 600sq.m 150 seats
Membership	: 6447 (as on 17-10-2015)
Library Website	http://library.mgu.ac.in
Web-OPAC	http://mgucat.mgu.ac.in
Online Theses Library	http://mgutheses.org , http://mgutheses.in
Email	library@mgu.ac.in
Library Automation Package used	KOHA
Library Collection	
Books	59000
Journals	253
Bound Journals	7500
PhD Theses	2135
E-Journals (in UGC Infonet, renamed as E-Shodh Sindhu)	15000
Online databases (in UGC Infonet)	11 185 Titles
Online Archives subscribed	4
Online databases subscribed	6700
E-books	

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2. Organization of the Library

The University Library is divided into 8 sections and their activities are as given below:

1. Acquisition Section – Purchase of books, Accessioning, Payment processing for vendor etc.
2. Technical Section – Physical and Technical processing of items (books, theses, audio visual materials etc) and Preparation of New Additions List.
3. Maintenance Section – Maintaining books and theses in stacks, Reference service, Display of books on special occasions and Stock verification.
4. Circulation Section – Membership of Library users, Issue/Return/Renewal of books.
5. Periodicals Section – Subscription & renewal of journals including online journals databases, online bibliographic databases, archives of online journals, newspapers, popular magazines etc., Binding of back volumes of journals.

6. Documentation Section - Online information services, Document Delivery service & Inter-Library Loan through DELNET, Reprographic service, Maintenance of Library management package KOHA and Design, development & maintenance of Library Web Portal (www.library.mgu.ac.in).

7. Union Catalogue Section – Accessioning of PhD theses/ MPhil dissertations, Digitization and archiving of PhD theses, Uploading PhD theses to Shodhganga (Online

Sl No	Type of Document	Year 2012			Year 2013			Year 2014		
		No of Document procured	Amount Spent	Amount allotted	No of Document procured	Amount Spent	Amount allotted	No of Documents procured	Amount Spent	Amount allotted
1	Books	1033	39,75,298	40,00,000	1794	47,34,769	40,00,000	1632	52,82,694	50,00,000
	E-Books (English)	2500	57,00,000	60,00,000	Nil			Nil		

repository of the INFLIBNET Centre) and MGU Online Theses Library and Archiving of MPhil dissertations.

8. Administration Section – Establishment work

3. Major activities of the library are:

3.1. Collection Development

The growth of the library collection during the last three years is as follows

Books

Year 2015		
No of Documents procured	Amount Spent	Amount allotted
1131(purchase continuing)	36,13,446	50,000,00
4200+(Malayalam E-Books)	5,00,000	500000.00(UGC XII Plan fund)

Journals, Online Journal Archives and Online Databases

Sl No	Type of Document	Year 2012			Year 2013			Year 2014		
		No. subscribed	Amount Allotted	Amount spent	No. subscribed	Amount Allotted	Amount spent	No. subscribed	Amount Allotted	Amount spent
1	Print Journals	270	44,00,000.00	4197725	285	44,500,00.00	4399198	256	70,00,000.00	484758.00
2	Online Journal Archives	79	70,00,000.00 (UGC Fund)	5194363	-	-	-	107		1362026.00
3	Online Databases	2	10,00,000.00	712575	3		1277195	4		1433035.00

Year 2015		
No. subscribed	Amount Allotted	Amount spent
237	8000000	45,42,754.00
1(new)		15,67,350.00
6		1809272.00

3.2 UGC Infonet Digital Library Consortium

Under the UGC Infonet Digital Consortium, now renamed as E-Shodh Sindu, the Library has access to 15000 online journals and databases. Access of these resources is provided across the campus through the Campus LAN of the University. The Depts. /Centres of the University located outside campus have access to the above resources using VPN/IP Authentication.

3.3 PhD Theses Digitization

Mahatma Gandhi University had launched the digital archive of PhD theses in the web on November 9, 2008. In this regard, the University stands top in many aspects among other Universities in India like first to initiate Digitization of PhD Theses, to sign MoU with INFLIBNET in submitting e-theses in to the national repository 'Shodhganga' and to completely digitize all the available PHD theses awarded by the University.

A total number of 2238 Ph D Theses awarded by the University are digitally archived in the MGU Online Thesis Library (www.mgutheses.in). These are also uploaded in the

Shodhganga, the online digital repository of PhD Theses developed by the INFLIBNET Centre. M.G.University is one among the topmost contributors of online theses in to Shodhganga.

3.4. Website for University Library

University Library has created a Website hosted in the domain of IT Mission for showcasing the important activities and events of the library. Various Online Journal Archives/E-books purchased on perpetual access, E-resources including e-journals, e-books and databases purchased/subscribed and INFONET E-Journal consortium can be made available for access through library's website www.library.mgu.ac.in

3.5. RFID/CCTV Project implementation

University Library has implemented RFID/CCTV Project using Annual State Plan Fund 2015-16 at a total cost of Rs. 40 lakhs approximately. The project implies modernization in in-house operations of the library using RFID technology. As part of its implementation, all books available in the library have been tagged with RFID tags. The project is useful with regard to its accuracy and speed in issue/return of books using RFID Readers, enables Anti-Theft control of books and time-saver in Stock-verification of books. The system also enables Self Check-in/ Check-out of books by the library users themselves using Kiosk and Drop Box installed, at rush hours due to integration with KOHA, the Integrated Library Management Software used for library automation. As an additional security facility, CCTVs have also been installed with proper monitoring and recording facilities.

3.6. Infrastructure Development & Automation

The University Library is housed in a total area of 2000 sq meters consisting of two floors and a Cellar portion.

Sl.No.	Item	Quantity
1	Building	2000 sq m
2	IT Infrastructure	
	Desktop Computer System	49
	Server Class System	3
	Heavy Duty Printers/ Copiers	4
	Desktop Printers	7
	Scanners	3
	LCD Projector	1
	Wi-Fi Access Terminals	2
3		a. 3
	Special Equipments for Visually Challenged:	b. 7
		c. 3
	An Electronic Lab for Visually Challenged has been set up with following hardware(s) & Software(s)	
	a. Computers	
	b. Other Equipments	
	c. Software(s)	

4. Lab Facilities provided

4.1 Infonet Lab

Online reading facility is provided in the Infonet lab setup in two rooms. Besides Wi-Fi facility is provided for users with Laptop.

4.2 Electronic Theses and Dissertations (ETD) Lab

A Laboratory for Electronic Theses and Dissertations was setup in the Library with the financial assistance provided by the INFLIBNET Centre. Digitization and archiving of theses are carried out at this centre.

4.3 Electronic Lab for Visually Challenged

Electronic Lab for Visually Challenged has been set up in the library during October 2015 with an objective to provide reading facilities to blind and low vision library users. The lab has following equipments and software for catering to the specific requirements of the visually challenged persons. As part of providing service, the library started audio recording of books as per request from users who are sight denied.

1. A reading library for blind and low vision

- a. JAWS Talking software for the blind
- b. MAGic screen magnification software without speech
- c. MAGic large print keyboard
- d. ZoomEx instant reader
- e. Ruby hand held video magnifier
- f. Flash desk top print magnifier

2. Talking book library

Angel pro talking Daisy Player-E book for the blind

3. Braille Book Library

- a. Index Basic V-4 Braille Printer
- b. Duxbury Braille Translation Software

5. Major Services

5.1 Circulation Services

Library membership is opened to the students, teachers, research scholars and the graduates who are the residents of Kerala. The library has around 6500 active members. In June, 2014, the library introduced Graduate Membership to public by which a graduate in any discipline can avail membership in the library. At present, the library has 75 graduate members. An Average of 1000 users visit the library per week.

Online book renewal, reservation and book suggestion facilities are also provided. Book reminders are generated by the software directly and sent to members through emails.

5.2 Online Information Services

- Provides information services on demands from users.
- Library has developed special tools such as **Journal Article index** (Index of journal articles which are unavailable through internet but available as hard copy in the Periodicals Section of the Library) and
- Database on **Kerala Studies** for the promotion of Information services.
- These special databases are searchable on open access mode in the library website.
- These services are supplemented with full text document delivery.

5.3 Document Delivery Service and Inter Library loan

The Library collects and issues journal articles and books on Inter Library Loan which are not available in its collection to the users based on their demand, mainly from DELNET(Developing Library Network), NEW Delhi and other resourceful R&D Institutions at National level.

5.4 Electronic Theses and Dissertations

The Ph.D Theses awarded by the University are digitized and made available over the Internet on open access mode. MGU Online Theses Library (www.mgutheses.in) is the Online Theses Library of the University. The project obtained the E-Governance Award of the Govt of Kerala during 2010 and other significant recognitions from INTUIT, U.K and inclusion in UNESCO's library portal.

Theses Digital Library of M.G.University has been launched by the former President of India H.E. Dr. A.P.J.Abdul Kalam on 8th November, 2008.

5.5 Special Services for the Visually Challenged

Students and other users of the library who are blind and having low vision are provided facility to read books using the specialized equipments and software available in the 'Electronic Lab for Visually Challenged' in the library. The library has also started audio recording of books as per the request of users concerned.

5.6 Publication of List of New additions

The Library brings out a bi-monthly publication, List of New Additions to make the users aware of the latest books in different subjects which are available in the library along with their position on the shelf. It is a subject-wise list of new books added to the library. The list is sent to all teaching departments, higher officials of the University, Study Centres of the University, Members of Syndicate and University libraries of other Universities. It is also sent to five patrons each with the most checkouts in different categories (Research scholars, Department teachers, Affiliated college teachers, P G students and Non-teaching staff of the University) by e-mail. A digital version of this publication is made available in the library website also.

6. Library Statistics

6.1. Usage of the Library

Sl No	Item	2011	2012	2013	2014	2015	2016 (till April 30,2016
1	Library visitors	26622	29634	35624	4699	33940	10228
					1		
2	Books issued	11394	8400	10506	1069	9961	3200
					0		
3	Library Membership	880	841	788	926	810	222
3	Temp membership	1050	504	952	1135	1269	426
4	Laptop Usage in numbers (wifi started on 2.5.2014)	-	-	-	5490	7261	2433
4	Online users		16280	21440	2826		
					0		
5	DDS/ILL		350	275	205		

6.2. Usage of UGC Infornet Digital Library Consortium

M.G.University is provided with access to UGC-INFONET E-Journal facility provided by the INFLIBNET to selected 199 Universities in India. As per the statistics, the University is placed in the 29th position as on 2013 and 27th position as on 2014. The access to the facility has been extended to remote departments and Study centres of the university during February 2015.

Sl No	Name of Journal Database	Usage by Mahatma Gandhi University (No of articles downloaded)		
		<i>Year 2012</i>	<i>Year 2013</i>	<i>Year 2014</i>
1	Science Direct	79476	75376	87957
2	JSTOR	21250	28833	27809
3	American Chemical Society	18662	18437	26728
4	Wiley-Blackwell	13886	1313	19383
5	Springer Link	10788	18064	17230
6	Royal Society of Chemistry	5670	8517	9946
7	Taylor and Francis	4771	6168	6822
8	Institute of Physics	2990	3014	3480
9	American Institute of Physics	1696	1749	3062
10	Nature	1680	1182	3000
11	APS	1598	953	2958
12	Cambridge University Press	911	1012	1375
13	Project Muse	814	1197	972
14	Annual Reviews	513	562	909
15	Portland Press	187	135	661
16	Oxford University Press	152	229	8
17	Project Euclid	4	2	4
Total		165048	166743	212304

	286		
<i>RANK of M G University out of 199 universities under the Consortium</i>	<i>NA</i>	<i>29</i>	<i>27</i>

7. University Study Centres

There are four Study Centres under the control of University Library. The Study Centres are set up in the campus of some affiliated colleges in various locations like Kottayam, Changanacherry, Palai and Thodupuzha. These centres provide reference to the library resources. As an innovative service, the centres are given remote access to all e-resources subscribed/purchased by the University Library including UGC-INFONET e-journal consortium facility through Hi-Tech connectivity. These Centres are intended for the use by the students, faculty and research scholars of affiliated colleges. At present academic community belonging to the concerned college as well as in nearby colleges use the centres.

The Study Centres are functioning at various locations under the jurisdiction of the University like:

1. Study Centre, Kottayam situated in CMS College, Kottayam
2. Study Centre, Changanacherry situated in NSS College, Changanacherry
3. Study Centre, Pala situated in St Thomas College, Pala
4. Study Centre, Thodupuzha situated in Newman College, Thodupuzha.
