The Annual Quality Assurance Report (AQAR) of the IQAC

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. (Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)

Part – A

I. Details of the Institution

| 1.1 Name of the Institution          | Amrita Vishwa Vidyapeetham |
| 1.2 Address Line 1                   | Amrita Vishwa Vidyapeetham |
| Address Line 2                       | Amritanagar P. O.          |
| City/Town                            | Coimbatore                 |
| State                                | Tamil Nadu                 |
| Pin Code                             | 641112                     |
| Institution e-mail address           | info@amrita.edu            |
| Contact Nos.                         | +91 9943984498, +91 994394483 |
| Name of the Head of the Institution | Dr. P. Venkat Rangan       |
| Tel. No. with STD Code:              | (0422) 2685020             |
| Mobile                               | +91 9047037777             |
Name of the IQAC Co-ordinator: Dr. Sriram Devanathan

Mobile: +91 9943984498

IQAC e-mail address: sriram@amrita.edu

1.3 NAAC Track ID (For ex. MHCQGN 18879) TNUNGN10142

1.4 NAAC Executive Committee No. & Date: EC(SC)/03/RAR/60 dated 24-09-2014

(For Example EC/32/A&A/143 dated 3-5-2004. This EC no. is available in the right corner- bottom of your institution’s Accreditation Certificate)

1.5 Website address:

www.amrita.edu

Web-link of the AQAR:


1.6 Accreditation Details

<table>
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<th>Sl. No.</th>
<th>Cycle</th>
<th>Grade</th>
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<th>Year of Accreditation</th>
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1.7 Date of Establishment of IQAC: DD/MM/YYYY

17/04/2009
1.8 AQAR for the year (for example 2010-11)  2013-14

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

   i. AQAR__2008-09________ (20/11/2012)
   ii. AQAR__2009-10________ (20/11/2012)
   iii. AQAR__2010-11________ (28/12/2012)
   iv. AQAR__2011-12________ (27/12/2012)
   v. AQAR__2011-12________ (23/08/2013)

1.10 Institutional Status

University  
State  [ ] Central  [ ] Deemed  [x] Private  [ ]

Affiliated College  
Yes  [ ] No  [ ]

Constituent College  
Yes  [ ] No  [ ]

Autonomous college of UGC  
Yes  [ ] No  [ ]

Regulatory Agency approved Institution  
Yes  [ ] No  [ ]

(eg. AICTE, BCI, MCI, PCI, NCI)

Type of Institution  
Co-education  [x]  Men  [ ] Women  [ ]

Urban  [ ] Rural  [ ] Tribal  [ ]

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

Grant-in-aid + Self Financing  [ ] Totally Self-financing  [x]

1.11 Type of Faculty/Programme

Arts  [✓]  Science  [✓]  Commerce  [✓]  Law  [ ]  PEI (Phys Edu)  [ ]

TEI (Edu)  [✓]  Engineering  [✓]  Health Science  [✓]  Management  [✓]

Others (Specify)  
Biotechnology

Revised Guidelines of IQAC and submission of AQAR  Page 3
1.12 Name of the Affiliating University *(for the Colleges)*

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

Autonomy by State/Central Govt. / University

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

**2. IQAC Composition and Activities**

2.1 No. of Teachers 140

2.2 No. of Administrative/Technical staff 40

2.3 No. of students 19

2.4 No. of Management representatives 19

2.5 No. of Alumni 15

2.6 No. of any other stakeholder and community representatives 11

2.7 No. of Employers/ Industrialists 2

2.8 No. of other External Experts 11

2.9 Total No. of members 217
2.10 No. of IQAC meetings held: 43

2.11 No. of meetings with various stakeholders:

<table>
<thead>
<tr>
<th>Students</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>43</td>
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<tr>
<td>Non-Teaching Staff</td>
<td>Students</td>
</tr>
<tr>
<td>43</td>
<td>8</td>
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</table>

2.12 Has IQAC received any funding from UGC during the year? Yes [ ] No [x] If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

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

<table>
<thead>
<tr>
<th>Total Nos.</th>
<th>International</th>
<th>National</th>
<th>State</th>
<th>Institution Level</th>
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<td>65</td>
<td>3</td>
<td>14</td>
<td>1</td>
<td>47</td>
</tr>
</tbody>
</table>

(ii) Themes

Sample of themes:

1. Two day National Seminar – Down to Earth: Ecological Orientations in Literature and Arts
3. Hands on Workshop on Computer Hardware, Assembling & Troubleshooting.
4. Two Day National Conference on the Economic Impact on Common Man in Rural Areas
5. Two day National Seminar on Innovations in Banking for Future Growth
6. One day seminar on International Women’s Day: Inspiring Change, towards Safe & Happy Living, 21st March 2014
7. Role of women in industry by Dr. B.J.SREEDEVI, Director, of National Transportation Planning & Research Centre (NATPAC), an R&D Centre of Govt. of Kerala
8. A faculty development programme on “Pedagogical Techniques and Proactive Academic Delivery System
9. Two day national workshop cum seminar on creative photography, CAMERA SPEAKS
10. Vidyamritam Sessions
11. Workshop on Clinical Skills/Hospital Management/Investigation Skills
13. Partners for Development of e-Content for Skill
14. Multibody Dynamics Simulation and Analysis Workshop
15. Distributed Computing
16. Satsang
17. How to get into research
18. Insider’s perspective of IT Industry
19. Learning about & Protecting our Civilizational Heritage Session on
20. Research and its impact
21. Intelligent Systems for Crime Investigation and E learning
22. Dr. Venkat Krovi from SUNY Buffalo on Quantifying skills
23. On 4th January, Dr. Ron delivered a talk to the faculty of all the schools in the Amritapuri, campus on “Starting a Research Program” through which he encouraged budding researchers to publish papers.

24. On 7th January, Dr Ron delivered a talk to students about “Robotics: Large and Small” where he gave an overview of the robotics research undertaken at his lab.

25. Lecture on Augmented Reality Tangible Interfaces by Dr. Sebastien Cuendet, EPFL, Switzerland.

26. Talk on Posture Related Issues by Dr. Ravi Shankaran.

27. **IEEE Award Function and Technical Talk**
   IEEE IAS SBC conducted “Award Function and Technical Talk” on 23/01/2014. Mr. Blake Lloyd, President IEEE Industry Applications Society and Dr. Peter Magyar, Fellow IEEE, IEEE IAS Chapters and Membership Development Chair were the chief guests for the event. Mr. Murali Krishnan, former chairperson was honoured with the “Outstanding Contributions Award” for the exemplary service to the IAS activities of our chapter in the year 2012-’13, by Mr. Blake Lloyd.

28. **Effects of Modern Variable Speed Drives on Motor Winding Insulation**
   IEEE IAS SBC organized an invited talk on “Effects of Modern Variable Speed Drives on Motor Winding Insulation” at Amritapuri on 23rd January 2014. The session was handled by Mr. Blake Lloyd, President, IEE IAS. UG and PG students were introduced to the effects of variable speed drives on winding insulation.

29. **Energy awareness campaign**
   IEEE IAS SBC organized an “Energy awareness and Auditing” campaign on 3rd April 2014 at A201, ASE, Amritapuri for UG and PG students to create an awareness among students about the importance of energy saving and energy saving devices.

### 2.14 Significant Activities and contributions made by IQAC

In addition to the other activities aimed at quality sustenance and enhancement, the IQAC committees at the department, school and university level coordinated the preparation of the Re-accreditation Report (RAR) for the 2nd cycle of accreditation, with the report successfully being submitted to NAAC in January 2014. Considering the size and complex structure of the university, this was a significant effort, involving staff at all levels.

The university IQAC Coordinators toured the five campuses and conducted orientation and awareness sessions at each constituent school.

The IQAC in each school has been continuously engaged in initiating and coordinating the following activities (quality sustenance and quality enhancement):

1. Conduct of technical conferences/seminars/workshops/guest lectures
2. Discussion of previously proposed activities and their outcomes
3. Initiation of efforts for launching new programs (e.g., B.Sc. Visual Media, B.Com Taxation)
4. Assistance for placement activities (Ayurveda)
5. Set up of photo gallery to showcase school’s activities and accomplishments
6. Weekly seminar by PG students (Ayurveda)
7. Weekly seminar by faculty for PG students (Ayurveda)
8. Collect of feedback from key stakeholders and implementing improvement activities
9. Set up of dynamic exhibition showcasing strengths and achievements of each campus

Specific activities are given below (sample):

1. **Seminar on – “ROLE OF WOMEN IN INDUSTRY : HOW TO BE AN EFFICIENT MANAGER”**
   As a part of women’s day celebrations, the IEEE Industrial Applications Society (IAS) Student Branch Chapter (SBC) conducted a seminar “Role of Women in Industry” on 10th September 2013.
The main intention of the program was to motivate the women in engineering and to showcase their potential. The session was handled by Dr. B.J.SreeDevi, Director, of National Transportation Planning & Research Centre (NATPAC), an R&D Centre of Govt. of Kerala. Around 350 students participated in the seminar.

2. **IEEE Award Function and Technical Talk**

IEEE IAS SBC conducted “Award Function and Technical Talk” on 23/01/2014. Mr. Blake Lloyd, President IEEE Industry Applications Society and Dr. Peter Magyar, Fellow IEEE, IEEE IAS Chapters and Membership Development Chair were the chief guests for the event. Mr. Murali Krishnan, former chairperson was honoured with the “Outstanding Contributions Award” for the exemplary service to the IAS activities of our chapter in the year 2012-'13, by Mr. Blake Lloyd. Mr Kiran P, former member was honoured with the “Academic Excellence Award” by Dr. Peter Magyar, for scoring highest marks among the IAS members in the academic year 2012-'13. Prize for the winners of “Yauktika” and “Samazya” (contests conducted during 1st Anniversary celebration of IAS SBC) were also distributed. This was followed by the talk on “IAS Benefits and Opportunities” by Dr. Peter Magyar.

3. **Effects of Modern Variable Speed Drives on Motor Winding Insulation**

IEEE IAS SBC organized an invited talk on “Effects of Modern Variable Speed Drives on Motor Winding Insulation” at Amritapuri on 23rd January 2014. The session was handled by Mr. Blake Lloyd, President, IEEE IAS. UG and PG students were introduced to the effects of variable speed drives on winding insulation.

4. **Energy awareness campaign**

IEEE IAS SBC organized an “Energy awareness and Auditing” campaign on 3rd April 2014 at A201, ASE, Amritapuri for UG and PG students to create an awareness among students about the importance of energy saving and energy saving devices. The programme was organized in association with PES SBC of AVV, IEEE Educational Activities Board and IEEE Kerala Section. Mr. Johnson Daniel and Mr. Subhash B V, Energy technologists, EMC, Kerala has addressed students on the occasion.

5. **Dr. Venkat Krovi from SUNY Buffalo on Quantifying skills**

6. **On 4th January, Dr. Ron delivered a talk to the faculty of all the schools in the Amritapuri, campus on “Starting a Research Program” through which he encouraged budding researchers to publish papers.**

7. **On 7th January, Dr Ron delivered a talk to students about “Robotics: Large and Small” where he gave an overview of the robotics research undertaken at his lab.**

8. **Lecture on Augmented Reality Tangible Interfaces by Dr. Sebastien Cuendet, EPFL, Switzerland.**

9. **Talk on Posture Related Issue by Dr. Ravi Shankaran.**

10. **CIR trainer Mr. Rajesh delivered a power point presentation on Virtual campus tour for ASE and ASAS induction programmes**

11. **CIR trainers Sri. Rajesh and Sri. Mohansundaram delivered a session on ‘Managing Bioquest’ with real life scenarios on volunteering and working in teams.**

12. **Col. Krishnan Nair’s sessions on Indian Culture – Dec 1**

13. **Satsangh by Br. Ramkumarji on Jan 3rd 2014,**

14. **‘How to get into research’ by Prof Ron Lumia, University of New Mexico – during January 4, 2014.**

15. **Insider’s perspective of IT Industry by Shri. Bharath, S28 Inc; on Jan 24, 2014.**

16. **Session on "Learning about & Protecting our Civilizational Heritage" by Shri. Rajiv Malhotra – Jan 27th**
19. Session on “Research and its impact” by Dr. Vinod Kumar Gopal and Dr. Chandramohan Nair – Jan 24th
20. Contribution for Vidyut 2014 – a, CIR team were judges for the event Creo – Product marketing competition, b) Hosting and crowd control duty (Jan 30-Feb 1)
22. Talk on the topic “Theory of Karma and Reincarnation” by Mr. Shiriram Anantha Narayanan.
26. Discussion on “How to build student’s profile?” facilitated by Br. BijuKumar
27. Talk on “Insider’s perspective of IT industry” by Shri. Bharath,S28 Inc;
29. Book review on “What India should Know” by Ms. Parvathy Venugopal, CIR
30. Talk by Shri Rahul Gandhi on Growth in India.
32. Workshop on Importance of Communication for AMMACHI Labs by Ms. Amritha V, Ms. Parvathy V and Ms. Indira Namboothiripad, CIR
33. Soft skill training programme for 101 Villages Project.
34. Talk on “Insider’s perspective of IT industry” by Shri. Bharath, S28 Inc;
35. Motivational Talk by Shri. Vijay Menon
36. Discussion on “Amrita Ethos” by Col. Krishnan Nair
37. Talk on Challenges in Education by Col. Krishnan Nair
38. Talk by Shri. Renith Radhakrishnan, Programmer Analyst, CTS on the topic “What does Industry expect from a fresher?”
40. Discussion on “Work Culture” by Col. Krishnan Nair
41. Talks by Swami Amritageetanandapuriji, Shri. Gurumurthyji, Sister Niveditaji and Swami Gnanamritanandapuriji as a part of AYUDH, Amritapuri
42. Shri. Nithin Radhakrishnan from IBM, Mr. Sujith Gopinath- Bank of America, Mr. Anand Mohan (Ericsson) from BM, Shri. Dharmateja from MS, Vamsikrishana from CIT, Rakesh from Tata Motors, now with IIM, Mr. Praveen from Ashok Leyland, Vinoth Rengaraj / Mr. Prabaharan from e-learning, Mr. Manish from WNA delivered a talk on “Industry expectation from a fresher”
43. Soft skill trainers delivered “Learning Ramayana through games and scenarios” for Ramayana camp organized by ashram for Std 10th students of Amrita Vidyalayam
44. Guruvandanam- Farewell function organised by 2014 graduating Btech EC and EEE was attended by CIR team
45. CIR trainers were a part of evaluation panel for S6 BCom project viva voce.

School of Engineering

- Procedures to ensure smooth functioning of the university’s day-to-day administration – with transparency, reliability, comprehensiveness, and clarity.
- New degree programmes to meet current and future needs of society and industry.
- Innovation to enhance the teaching-learning process – learning from national and international best practices.
- Achieving faster growth and excellence in research.
- Conduct of, and participation in, faculty development programmes.
- Outreach to the scientific community, via technical and non-technical seminars/conferences/workshops.
- Expansion of its infrastructure with respect to buildings, library facilities, computing facilities, laboratories, etc.
- Links to recognized international and national academic institutions, industries, and Centres of excellence.
- Participation in co-curricular, extra-curricular, and community service activities among students.
School of Biotechnology
- IQAC facilitated steady progress of academic activities through projects and internships at premier research institutes and Pharma/Biotech companies including TIFR, IISc, IGIB, NCBS, Biocon, Lupin etc.
- Facilitating support for research activities involving natural products with additional infrastructural support and enhanced instrumentation capability in the areas of Cancer Biology, Neurobiology, Venomics, etc.

School of Business
The IQAC is constantly trying to ensure the maintenance and improvement of the quality of our programmes. Every year it makes suggestions to the School management to make improvements in different aspects of school’s functioning. It tracks with the PGP office to ensure that all the faculty members teaching different courses submit their course outlines in time. It tries to ensure that the faculty members reach the course feedback from the students in time. It works with the office to ensure that all the hardware and software are being managed efficiently. It tries to ensure that all the courses are following the system of continuous evaluation. It audits the exam question papers to ensure that they are of good quality. To give fillip to research at the school, the IQAC recommended that the Annual Performance Management System be revised to give more points for research. This suggestion was accepted by the management and a new Integrated Performance Review System has been developed by a faculty team which the management has accepted. The IQAC works with the School’s Library Committee to ensure that our library remains up to date.

Dentistry:
1. Improving teaching quality by feedback from student.
2. Sterilization monitoring.
3. Alumini activities.
4. Soft skill classes for overall development of students.

Pharma:
- Organised a national seminar on “Challenges in Drug Delivery Research”
- Pharmacy week celebrated with the theme “Pharmacist: A Healthcare Professional" as recommended by Indian Pharmaceutical Association
- Hospital pharmacy posting for B.Pharm 7th semester students
- Implemented M.Pharm semester system

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 *

General
- To arrange national conferences on various emerging areas and to arrange sessions by experts from industry
- To introduce new programmes
- Extension of Academic block
- Extending the use of AUMS for the access of parents
- Expansion of hostels
- Conduct of National level FDPs

Avurveda
Starting PG
Starting PhD
Infrastructure Modification
Increasing the Number of External Activities

**AMMACHI Labs**
Introduce M.Tech program in Robotics
Bring in more staff with industrial experience
Encourage staff to get involved in more development programs
Invite more distinguished professors from various international universities

Implement the idea of vocational portal with courses for VET, e-guilds, employment and entrepreneurship opportunities
Post training activities for beneficiaries of cVET
Reach out to more number of people and places and train in VE.
Develop more courses
Publish more papers
File patents

**Cyber Security**
• Submit project proposals to external agencies like DietY
• Conduct faculty development program
• Organize workshops /special lectures
• Establish new research labs
• Recruitment of resources for further expansion of the project
• To develop student skills through academic and extracurricular events.
• Give opportunity to students to do internship in International Universities through Student Exchange Program.

**ECE Department**
• Establish consultancy projects with industries.
• Start Funded Research Projects
• Start a research lab in the area of VLSI.
• Establish a research lab dedicated to solving the problems and providing necessary solution to humanitarian needs.
• Expand Research activities in the department.
• Improve the number of publications within the department.(12I,3N,8INC)
• Enhance Internship opportunities for MTech VLSI Students.
• Improve placement in core companies for MTech VLSI graduates
• Motivating more BTech students to apply for university abroad
• Motivating more BTech students in take part in competitive exams like GATE and GRE

**EEE Department**
New M.Tech. programme in Control & Instrumentation Engineering
• Set up of Power Electronics & Drives lab
• Set up of Microprocessor & microcontroller lab
• International IEEE Conference TAP Energy 2015

**ME**
• Establish consultancy projects with industries.
• Start Funded Research Projects
• Expand Research activities in the department.
• Improve the number of publications within the department.
• Increase the number of equipment for the MTech Programme in T&F and also in research thrust area labs.
•Motivating more BTech students to apply for university abroad
•Encourage students to go for higher studies
•Motivating more BTech students in take part in competitive exams like GATE and GRE.

Business Management: Plan of Action
1. To get the Annual Performance Management System revised to give more incentives for research;
2. To start the Amrita Research Seminar Series;
3. To encourage the participation of our students in the inter B-School and other national and international competitions meant for MBA students;
4. To encourage our faculty members to participate in research conferences, seminars and Faculty Development Programs;
5. To implement the Assurance of Learning programme;

Medical School -Plan of Action
1. Preparation of documents for the MCI inspection for continuance of MBBS degree course. The initial recognition was until 2012-13 academic tear.
2. Starting new undergraduate and postgraduate courses
3. Grant of recognition by the MCI for the existing courses which are scheduled for the final year university examination
4. Starting more UG (B.Sc.) courses in allied health sciences
5. Establishing a centre exclusively for allied health sciences courses for further augmenting the administrative and academic activities of allied health sciences students
6. Sanction of 2nd year extension for BASLP course by the Rehabilitation Council of India
7. Adding the latest equipments and diagnostic facilities and specialty clinics to augment the patient care services
8. increase the infrastructure facilities and electronic data bases in the central library in consonance with the increase in the number of students

Dentistry - Plan of Action
To improve the research activities
To increase the Post Graduate seats
To increase the quality of patient care
To improve the overall development of the students

Pharma: – Plan of Action
Academics
Hospital pharmacy posting for B.Pharm and Pharm D students
Switch over to Semester and grade system for M.Pharm from 2013 academic year onwards
Research
Organising seminars and conferences once in a year.
Improve the quality of publications
Strengthen research through more funded projects
Promote faculty participation in conferences

Pharma Achievements:
We conducted 5 national level conferences, 3 Institution Level conferences and 21 Vidyamritam Sessions during the year

Tread Mill, Dumbbells, Multi machine, Weights, Parallel bars etc set up in an area of 97 sq mts.
Canteen is set up in 280 sq mts.
Two new programmes B.Sc Visual Media & B Com – Taxation, introduced.
Extension is taken up with an addition of 20 more classrooms
Started parent portal registration for easy & ready access of academic performance and attendance status of the students
Plan for ladies hostel – approved and sanctioned
Workshop on Image Processing and Visual Media Techniques was conducted in April 2014.

**Achieved**
- Approved by BOS submitted to University for Approval
- Under Construction
- Outdoor & Indoor Free Medical Camps

**Engineering**
- M. tech program got sanctioned
- Gayathri Manikutty, Shankar sir, Prema Pillai have joined the team
- Team has attended many workshops, trainings, conferences, seminars. Like MIT, Mumbai workshop our staff, Unni was selected for the "Performance capture” track of the 4th "Design in Innovation”. SERB workshop was great learning experience for Haptics team. International Workshop "Learning technologies for vocational education" in EPFL Switzerland. Jose is selected for Erasmus Mundus Exchange program at TUM Germany. Counselling workshop.
- Lecture by Venkat Krovi, lecture on Augmented Reality Tangible Interfaces by Dr. Sebastien Cuendet, EPFL, Switzerland. Most eminent one was visit by Dr. Ron Lumia who made a jampacked one month visit with the purpose of guiding Ammachi Labs in starting its MTech in Robotic & Automation program.
- Vocational portal ‘mysangham’ was launched during Amritavarsham 60 which is celebration of birthday of Mata Amritananadamayi devi.

Part of post survey of all deployments, we offered there Grassroots Entrepreneurship, secret pillow project, workshops.
- Two centers in Karnataka are started. As part of Amrita SeRve project Ammachi Labs is setting up vocational centers in many rural areas of Indian states. Deployed FP Hindi in Rajasthan Two Villages Arain and Dadiya. Training in Uttarkhand has started already. Part of WE project 3134 women being trained in states of Kerala and Tamilnadu. Made field visits to Chhattisgarh to open center.
- Tailoring, tie Making, Automobile repair, Courses in languages Telugu, Kannada. Composting course was made with experts Peter Ash and Laurel Miltenberger.
- This year there has been 8 papers published. Among which 3 papers are Scopus listed. Two papers are in process of being submitted.

We have filed two US patents and two Indian patents.

Participated in ABC at Pamba, Sabarimala. Entire Ammachi labs staff volunteered one day for WE expo at Ettimadai as a service. During Amritavarsham 60 all Ammachi Labs staff volunteered their time at Embracing the world stall. cVET beneficiaries raised many social activities after or during their LEE courses.

- Impart training for the development of research staff.
- Got funding from Hypress and Analog Devices for research projects 34.5 &48 lakhs respectively.
- Established ASPIRE VLSI Research Lab
- Humanitarian Research Lab, HUT is established.
- More number of Faculty and students published research papers in various conferences and journals.
- Students got internships in various companies. 5 MTech students got paid internship at AMS and ADI. This in inaddition to the several unpaid internships got for BTech and MTech students. Two PhD scholars also got paid internships in Hypress and AMS.
- Students got placement in the respective companies just after their internships. 2 isro,AMS semiconductors Hyderabad 2, Analog devices banglore 2, Broadcom Banglore2,
- The number of student joining core companies increased.
- The number of BTech students attending GATE and GRE has also increased significantly 20-60%.
- Around 20 BTech students got admission for higher studies abroad.
- Two faculty got internship in ADI
- Conducted National Conference sponsored by IEEE, TAP Energy 2014
- M.Tech in Control & Instrumentation Engineering, approved for the academic year 2014-2015
• Got approval for TAP Energy 2015 from IEEE
• CFD studies of heat pipes and thermosyphon under normal operation and transients granted 32,08,850 by Board of studies Nuclear science.
• Added Flow-Visualization & wind tunnel equipment in the lab.
• 12 International journal publication and one book chapter which is sighted more than 10000 times(Elseiver)
• 11 conference papers in the International/national.
• 5 students for PhD programmes in IIT Madras
• GATE coaching classes arranged after regular classes.

**Biotechnology**

<table>
<thead>
<tr>
<th>Plan of Action</th>
<th>Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of a new cell biology lab.</td>
<td>Two new research grants from CSIR, KSCSTE for research in cancer, wound healing</td>
</tr>
<tr>
<td>Up gradation of the Amrita Agilent Analytical research Centre for proteomics research.</td>
<td>The existing MS facility was strengthened through the induction of a nano HPLC system for proteomics related work.</td>
</tr>
<tr>
<td>Initiation of a research lab for renewable energy sources and technologies.</td>
<td>A grant proposal on microbial fuel cell submitted to MNRE, Govt. Of India.</td>
</tr>
</tbody>
</table>

**Business Management**

Achievements
A new Integrated Performance Review System was developed which gives a lot of emphasis on Research while deciding the annual incentives for faculty. This new system is being adopted from the academic year 2013-14 itself;
The Research Seminar Series was launched in July, 2013. We conducted 12 Research Seminars in 2013-14 as a part of this Seminar Series;
Our students participated in a number of inter-college events and won many prizes and recognitions;
Many of our faculty members participated in various conferences, seminars and FDPs. The details are reported in this document;
Out of the five learning goals that the school has chosen, four were measured and the fifth one viz. global, societal and environmental awareness was partially measured. We could not measure the societal awareness component as the instrument is yet being developed;

**Medicine**
1. MCI inspection was held in 9th & 10th July 2012 and the degree re-recognized vide MCI letter No.34(41)/2013-Med/Kerala/32405 dated 5-9-2013 for another 5 years.
2. New UG Programmes started : B.Sc.(8);
   PG Programms : M.Ch. (1); M.Sc. (1);
   PG Dip.(1)
3. Degrees Recognized after MCI inspection:
   MD (6); M.Ch. (5).
   MCI inspections conducted and outcome awaited :MD (6);DM(4); PG Dip (1); M.Ch. (6)
4. New courses started in allied health sciences subjects during the year: B.Sc. (8); M.Sc. (1)
5. Space has been identified for the Centre and renovation/furnishing work is in progress. Mr. M.V. Thampi and Mr. V.G. Prasad has been appointed as Chief Program Administrator and Program Coordinator respectively.

To finalize the curriculum of subjects in allied health sciences, a two day Workshop is scheduled to be held at AIMS on 4th & 5th Sept.2014 wherein 40 delegates from various Medical colleges and PHFI and Dr. Biswas Mehta, Health Secretary, Govt. of India will be participated.
6. BASLP extension from RCI received for the academic years 2014-15 and 2015-16 (No.17-538/BASLP/11/RCI/1743 dated 1-5-2014)

One of the major equipment added is installation of a new 3 T MRI in April 2014. Many depts have commenced new diagnostic tests and specialty clinics.

Central Library shifted to a new exclusive building where more space is provided (from 1400 to 2500 sq mt). Additional seats and computers installed in the Central Library. Started two databases “Clinicalkey” and “Proquest”. Approx 800 new books added.

**Dentistry – Achievements**
The number of research projects has improved considerably.
The application has been sent to the Central Government to enhance the seats in 4 specialities.
The sterilization monitoring unit is made active. Patient feedback is recorded.
The IQAC was able to conduct a good number of soft skill development classes for the benefit of the students.

**Pharma – Achievements**
Initiated posting for B.Pharm seventh semester students in different satellite pharmacies in hospital for two months
Implemented M.Pharm semester system in three specialisations (M.Pharm Pharmaceutics, M.Pharm Pharmaceutical Chemistry, M.Pharm Pharmacy Practice) from the academic year 2013-14.
Research
Conducted two days conference on “Challenges in drug delivery research” by Dept. of Pharmaceutics on November 8th & 9th, 2013 and the next national conference is scheduled on 29th and 30th of Aug 2014 by the Dept. of Pharm. Chemistry and Pharmacognosy.
25 out of 28 publications are Scopus/Elsevier indexed
13 student projects and 3 major projects
All the faculty have attended conferences and three faculty have presented in conferences, including one oral presentation in an International conference in Japan.
One of the faculty received best research paper award in the 3rd Annual National Convention of the Association of Pharmacy Professionals (APP) at Gujarat

2.15 **Whether the AQAR was placed in statutory body**  Yes  No

Provide the details of the action taken

Every year, the AQAR is presented to the members of the academic council, and recommendations for follow up actions are taken up for consideration in the next academic council. The discussions are captured in the minutes of the academic council meetings.
Part – B

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

<table>
<thead>
<tr>
<th>Level of the Programme</th>
<th>Number of existing Programmes</th>
<th>Number of programmes added during the year</th>
<th>Number of self-financing programmes</th>
<th>Number of value added / Career Oriented programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td>5</td>
<td>1</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>PG</td>
<td>133</td>
<td>9</td>
<td></td>
<td>133</td>
</tr>
<tr>
<td>UG</td>
<td>37</td>
<td>8</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>PG Diploma</td>
<td>14</td>
<td>1</td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>Advanced Diploma</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>194</strong></td>
<td></td>
<td></td>
<td><strong>194</strong></td>
</tr>
</tbody>
</table>

Interdisciplinary
Innovative

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

(ii) Pattern of programmes:

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Number of programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>59</td>
</tr>
<tr>
<td>Trimester</td>
<td>11</td>
</tr>
<tr>
<td>Annual</td>
<td>92</td>
</tr>
</tbody>
</table>

1.3 Feedback from stakeholders* (On all aspects)

Alumni [x] Parents [ ] Employers [x] Students [x]

Mode of feedback : Online [x] Manual [x] Co-operating schools (for PEI) [ ]

*Please provide an analysis of the feedback in the Annexure

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

Every four years for UG, and every two years for PG programs.

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

Center of Excellence in Advanced Materials & Green Technologies (MHRD Grant sanctioned in May 2013 and center activities started in June 2013) - Located in the Coimbatore campus - details are provided in an annexure.
Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

<table>
<thead>
<tr>
<th>Total</th>
<th>Asst. Professors</th>
<th>Associate Professors</th>
<th>Professors</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1521</td>
<td>1092</td>
<td>164</td>
<td>265</td>
<td></td>
</tr>
</tbody>
</table>

2.2 No. of permanent faculty with Ph.D.

377

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

<table>
<thead>
<tr>
<th>Asst. Professors</th>
<th>Associate Professors</th>
<th>Professors</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>R V</td>
<td>R V</td>
<td>R V</td>
<td>R V</td>
<td>R V</td>
</tr>
</tbody>
</table>

2.4 No. of Guest and Visiting faculty and Temporary faculty

| 24 | 126 | 9 |

2.5 Faculty participation in conferences and symposia:

<table>
<thead>
<tr>
<th>No. of Faculty</th>
<th>International level</th>
<th>National level</th>
<th>State level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attended</td>
<td>210</td>
<td>255</td>
<td>35</td>
</tr>
<tr>
<td>Presented papers</td>
<td>568</td>
<td>130</td>
<td>5</td>
</tr>
<tr>
<td>Resource Persons</td>
<td>170</td>
<td>93</td>
<td>27</td>
</tr>
</tbody>
</table>

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

As part of the National Pedagogy Project under the NME-ICT mission, Amrita University has been awarded the development of 7 new courses. The innovative application of ICT as well as pedagogical approaches of international standards, have been disseminated to teachers of other subjects as well.

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

203 (Average)

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

- Online Multiple Choice Questions for some courses; centralized valuation.
- Continuous assessment or evaluation which includes periodical tests, assignments, tutorials, quizzes, seminars, oral presentations, small projects, visits and an End semester Examination.
- Internal : End Semester = 60 : 40
- Continuous evaluation of each lab course.
• Declaration of Results and conducting supplementary / arrear examination for failed students
• Timely result publication within 10-12 days from the last day of the end semester examination
• Result through AUMS (Amrita University Management System)
• Conduct of online Examinations for the courses- Environmental studies, Cultural Education & Soft Skills.
• Publication/ Submission of paper in journal/conference is made mandatory for the award of distinction- UG (B.Tech) students. For PG (M.Tech) paper publication/submission is mandatory for the award of degree.
• School level (Campus wise) exams conducted for PG Programs.
• Research article based assignments
• Grant proposal/project submissions

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

2.10 Average percentage of attendance of students

2.11 Course/Programme wise
distribution of pass percentage : Ranges from 85% to 100%

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

• IQAC is involved in facilitating academic audits - there is a list of activities to be undertaken by all departments and schools, and corresponding documentation. For e.g., record of student feedback on teaching, minutes of Board of Studies meeting, attendance records, work register containing information on classroom transactions, minutes of class committee meetings, etc. The IQAC constantly monitors the teachings and learning process by student evaluation forms, monitoring of exam results, patient satisfaction feedbacks. The IQAC plans and organizes soft skill development classes and CDE classes for the faculty and students. There is a conscious effort to cover address the spirit behind the key assessment indicators provided by NAAC.
• The IQAC of the institution contributes monitors and evaluates the Teaching & Learning processes by way of conducting periodical meetings. The outcomes of various proposals are recorded for improving the system of the quality of education. It also decides on the measures to be taken to improve and sustain the quality of higher education.
• In the Action Plan for the curricular year is prepared after going through the performance in the professional examinations. IQAC gives some guidelines for the faculty to modify their teaching learning methodology.
• The feedback received from the students also utilised for helping the faculty to know the outcome of their teaching learning methodology and make some modifications to achieve the best.
• Change in regulations and grading norms suggested by School IQACs as per the best practices and benchmarks in various programmes subject to regulations stipulated by statutory authorities have been escalated for approval to academic council through University IQAC. For example for B.Tech programmes, internal evaluation percentage for theory courses was reduced from 60% to 50% as per new UGC guidelines.

• Suggestion that answer scripts of all examinations in the University be retained under safe custody for a period of one year only, excepting those related to any judicial enquiry.

• Working with the school head to implement and document a formal system of student feedback and faculty course evaluation as well as ensure closure of the loop.

• IQAC works in tandem with the team developing and maintaining academic ERP system, AUMS (Amrita University Management System) to promote extensive ICT usage in facilitating teaching-learning process using the AUMS module, Academic Administration system which encompasses course registration, management & evaluation, grading, results and certificate generation across all campuses and programmes with central monitoring at the University headquarters.

• Sharing of best practices for continuous evaluation like Weekly Quiz from IQAC of School of Engineering, Coimbatore to other schools Enforce uniform punishments to be awarded for malpractices committed during the Examinations.

• IQAC has suggested an ICT initiative towards blended learning, virtual classrooms, flip classrooms and MOOCs in addition to our strong and sustained programmes in e-learning, skill development, educational technologies and virtual labs.

• Regular Class committee meetings involving IQAC members, teaching faculty and student representatives to review academic programs, address problems and initiate new approaches to improve quality.

• Review online feedback received from students at the end of the semester.

• Monitor and recommend necessary classroom and laboratory infrastructure improvements and upgrades.

• The IQAC monitors the submission of the course outlines of all the courses to the PGP office. It works with the PGP office to ensure that all the classroom hardware and software are kept working efficiently. It ensures that all the students get a copy of the course outline for every course. It monitors the course feedback to ensure that students feel satisfied with different courses and that their suggestions are given due importance.

• Teaching and learning process of all the paramedical programmes are reviewed annually considering the requirement and expertise of the country with reference of the advancement of medical technology.

### 2.13 Initiatives undertaken towards faculty development

<table>
<thead>
<tr>
<th>Faculty / Staff Development Programmes</th>
<th>Number of faculty benefitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refresher courses</td>
<td>55</td>
</tr>
<tr>
<td>UGC – Faculty Improvement Programme</td>
<td>14</td>
</tr>
<tr>
<td>HRD programmes</td>
<td>6</td>
</tr>
<tr>
<td>Orientation programmes</td>
<td>68</td>
</tr>
<tr>
<td>Faculty exchange programme</td>
<td>5</td>
</tr>
<tr>
<td>Staff training conducted by the university</td>
<td>300</td>
</tr>
</tbody>
</table>
2.14 Details of Administrative and Technical staff

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Permanent Employees</th>
<th>Number of Vacant Positions</th>
<th>Number of permanent positions filled during the Year</th>
<th>Number of positions filled temporarily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Staff</td>
<td>1527</td>
<td></td>
<td></td>
<td>228</td>
</tr>
<tr>
<td>Technical Staff</td>
<td>2383</td>
<td></td>
<td></td>
<td>323</td>
</tr>
</tbody>
</table>
3. Research, Consultancy and Extension

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

**General**
- Regular reviews to encourage the progress of research, constituting committees compromising of external experts, conducting course work and comprehensive viva, encouraging publication and paper presentation.
- The IQAC of the institution encourages the staff members to undertake major and minor research projects and to organize seminars, workshops and conferences, etc.
- The staff and students are informed about the various fellowships available and they are encouraged to apply for the same.
- The IQAC meets regularly to discuss various plans to promote research climate and motivate the faculty for academic advancement.

**Arts & Science**
- IQAC suggested conducting a National level Workshop on an emerging area in the field of Computer Science – Dept of CS conducted a One Day National Level Workshop on *Image Processing and Visual Media Techniques*.
- 6 faculty members have registered for Ph.D

**Engineering Amritapuri**
- Compulsory research oriented paper publications for final year BTech and MTech students.
- Research oriented MTech labs.
- Recruit eminent people with research background
- Research associates are encouraged to pursue PhD in their field of interest.
- Consistent exposure to people with academic excellence in related field across the year.
- Staffs are encouraged to publish and attend workshops, seminars, conferences with incentives.
- Eminent researchers like Dr. Ron Lumia who plan to visit Amrita and stay to help Ammachi labs to come with the curriculum for M.Tech program. Invited eminent people from field of robotics, Haptics like Dr. Ron Lumia, Dr. Venkat Krovi, Dr. Sebastien Cuendet
- Awareness and encouragement to file patents.
- Encouraging and facilitating faculty and student exchange programs with reputed universities

**Engineering Coimbatore**
- Set up of Patenting cell to coordinate the Intellectual Property (IP) generation and safeguarding for all campuses and schools.
- Directive to all researchers in the university to use the affiliation, —Amrita Vishwa Vidyapeetham, in addition to their department, centre, or school in all research publications.
- Adjunct faculty appointments of eminent academic leaders for research activities and Ph.D guidance.
- Introduction of Research Methodology Course for the Ph.D. Scholars as per the new UGC regulations
- Initiation of Seed fund and research initiation grants for research promotion.
- Initiate and promote collaborative activities between various centres of excellence & research with various schools of the university especially those which need expansion of research activities
- IQAC has pointed out the need to procure a plagiarism detection software.

**Biotechnology:**
- Resource Mobilization through MoUs with leading pharma/biotech companies and premier research institutes, such as,
- Agilent Technologies, Germany
- Regional Cancer Centre, Thiruvananthapuram
- University of Oxford, UK
- NIIST, Thiruvananthapuram
- THSTI, New Delhi
- Britsol-Myers-Squibb, Bengaluru

- Enhanced support for M.Sc final year students in finding research internships in premier research organisations and Pharmaceutical/ Biotechnology companies including TIFR, IGIB, NCBS, IISc, Biocon, Lupin, Piramal Life Sciences Ltd.
- A monthly Research Seminar series was initiated at the school in 2013-14 to promote research. One academic expert from outside is invited every month to present his/her research work at this seminar. One internal faculty member also presents his/her research work every month.

**Dentistry:**
- IQAC organizes classes on research topics, workshops on research methodology. Amrita School of Dentistry has a research wing to help the faculty to undertake research projects. The IQAC has initiated a provision of seed money for research for the students.

**Pharmacy:**
- Encouraged the faculty and students in submitting the proposal to the funding agency

### 3.2 Details regarding major projects

<table>
<thead>
<tr>
<th></th>
<th>Completed</th>
<th>Ongoing</th>
<th>Sanctioned</th>
<th>Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>17</td>
<td>71</td>
<td>10</td>
<td>27</td>
</tr>
<tr>
<td>Outlay in Rs. Lakhs</td>
<td>528.19</td>
<td>3159.89</td>
<td>610.1</td>
<td>703</td>
</tr>
</tbody>
</table>

### 3.3 Details regarding minor projects

<table>
<thead>
<tr>
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<th>Completed</th>
<th>Ongoing</th>
<th>Sanctioned</th>
<th>Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>47</td>
<td>60</td>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td>Outlay in Rs. Lakhs</td>
<td>26.1</td>
<td>92.4</td>
<td>1.2</td>
<td>2.75</td>
</tr>
</tbody>
</table>

### 3.4 Details on research publications

<table>
<thead>
<tr>
<th></th>
<th>International</th>
<th>National</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Peer Review Journals</td>
<td>494</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Non-Peer Review Journals</td>
<td>24</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>e-Journals</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Conference proceedings</td>
<td>386</td>
<td>114</td>
<td></td>
</tr>
</tbody>
</table>

#### 3.5 Details on Impact factor of publications:

- Range [ ]
- Average [ ]
- h-index [ ]
- Nos. in SCOPUS [618]

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

<table>
<thead>
<tr>
<th>Nature of the Project</th>
<th>Duration Year</th>
<th>Name of the funding Agency</th>
<th>Total grant sanctioned</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major projects</td>
<td></td>
<td></td>
<td>610.1</td>
<td></td>
</tr>
<tr>
<td>Minor Projects</td>
<td></td>
<td></td>
<td>1.2</td>
<td></td>
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</table>
### Interdisciplinary Projects

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Industry sponsored</td>
<td>Industry sponsored</td>
<td>Industry sponsored</td>
</tr>
<tr>
<td>Projects sponsored by the University/College</td>
<td>Projects sponsored by the University/College</td>
<td>Projects sponsored by the University/College</td>
</tr>
<tr>
<td>Students research projects (other than compulsory by the University)</td>
<td>Students research projects (other than compulsory by the University)</td>
<td>Students research projects (other than compulsory by the University)</td>
</tr>
<tr>
<td>Any other (Specify)</td>
<td>Any other (Specify)</td>
<td>Any other (Specify)</td>
</tr>
<tr>
<td>Total</td>
<td>Total</td>
<td>Total</td>
</tr>
</tbody>
</table>

3.7 No. of books published  


<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapters in Edited Books</td>
</tr>
</tbody>
</table>


<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
</table>

3.8 No. of University Departments receiving funds from  

<table>
<thead>
<tr>
<th></th>
<th>UGC-SAP</th>
<th>CAS</th>
<th>DST-FIST</th>
<th>DPE</th>
<th>DBT Scheme/funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.9 For colleges  

<table>
<thead>
<tr>
<th></th>
<th>Autonomy</th>
<th>CPE</th>
<th>DBT Star Scheme</th>
<th>INSPIRE</th>
<th>CE</th>
<th>Any Other (specify)</th>
</tr>
</thead>
</table>

3.10 Revenue generated through consultancy  

|          | NIL |

3.11 No. of conferences organized by the Institution  

<table>
<thead>
<tr>
<th></th>
<th>Level</th>
<th>International</th>
<th>National</th>
<th>State</th>
<th>University</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>7</td>
<td>23</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Sponsoring agencies</td>
<td>DST, DIT, MNRE, AICTE, UGC, ISRO, BRNS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

|          | 148 |

3.13 No. of collaborations  

<table>
<thead>
<tr>
<th></th>
<th>International</th>
<th>National</th>
<th>Any other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
<td>31</td>
<td>15</td>
</tr>
</tbody>
</table>

3.14 No. of linkages created during this year  

|          | 24 |

Revised Guidelines of IQAC and submission of AQAR
3.15 Total budget for research for current year in lakhs:

From Funding agency** 3770.08
From Management of University/College 8975
Total 12745.08

** Amount is research funding ongoing + research funds sanctioned during the year

3.16 No. of patents received this year

<table>
<thead>
<tr>
<th>Type of Patent</th>
<th>National</th>
<th>International</th>
<th>Commercialised</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Applied</td>
<td>Applied</td>
<td>Applied</td>
</tr>
<tr>
<td></td>
<td>Granted</td>
<td>Granted</td>
<td>Granted</td>
</tr>
<tr>
<td>Number</td>
<td>15</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Total</th>
<th>International</th>
<th>National</th>
<th>State</th>
<th>University</th>
<th>Dist</th>
<th>College</th>
</tr>
</thead>
<tbody>
<tr>
<td>83</td>
<td>29</td>
<td>23</td>
<td>11</td>
<td>3</td>
<td>1</td>
<td>16</td>
</tr>
</tbody>
</table>

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

138
297

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

20

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

JRF 21
SRF 52
Project Fellows 30
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:

<table>
<thead>
<tr>
<th>Level</th>
<th>University</th>
<th>State</th>
<th>National</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>University level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.24 No. of Awards won in NCC:

<table>
<thead>
<tr>
<th>Level</th>
<th>University</th>
<th>State</th>
<th>National</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>University level</td>
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</tr>
<tr>
<td>State level</td>
<td></td>
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</tr>
<tr>
<td>National level</td>
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<td></td>
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</tr>
<tr>
<td>International level</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

3.25 No. of Extension activities organized

<table>
<thead>
<tr>
<th>Forum</th>
<th>University</th>
<th>College</th>
<th>National</th>
<th>International</th>
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</thead>
<tbody>
<tr>
<td>University</td>
<td>6</td>
<td>127</td>
<td></td>
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</tr>
<tr>
<td>NCC</td>
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<tr>
<td>NSS</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Any other</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

**Arts & Sciences-Amritapuri**

I) Amalabharatam cleaning campaign at Sabarimala and Pampa.
II) Amrita Self–Reliant Villages Programme under which villages were made aware of healthcare, education and other activities to make them self reliant.
III) A community extension programme was conducted for the students under the auspices of the department of chemistry in association with the Amrita Sanjeevani and Ammachi labs. It was arranged as a one day Training Programme on the fabrication of finger caps, rubber bands, balloons and gloves for students at Amrita School of Arts and Science, Amritapuri on 27-03-13. The participants were engaged in the fabrication of finger caps, balloons, gloves and rubber bands during the hands on session.
IV) Teachers Training workshops (TTPs) are conducted for Higher Secondary school teachers from Kollam district on Environment Education sponsored by WWF-India and CP Ramaswami Aiyer Environment Education Centre (CPREEC), Chennai as part of their ongoing programme on spreading Environment Education 4th January 2013.
V) Conducted blood donation camp.
VI) Awareness programme through street plays against atrocities on women

**Arts & Sciences-Kochi**

- A three day Nature Camp was held at Nelliampathy, by the Forest Department of Kerala for the students of B.Sc. Visual Media 2011 batch.
- A three day Wildlife Photography Camp was held at Tekkady, by the Forest Department of Kerala for the students of MFA 2012 batch
- Mathruchaya visit
**Arts & Sciences-Mysore**
- A five day **Free Computer Training Programme** for housewives, retired employees and professionals – June 2013
- **400 Students and Staff** served as volunteers at Amritavarsham 60 at Amritapuri, Kollam, Kerala – crowd control, Security, Accommodation, Food Serving – September 2013
- **320 students & staff** registered as blood donors – September 2013

**Engineering-Amritapuri**
- Participation in AServe Village Project
- Participation in Amala Bharatham Clean Up Drives
- Amritavarsham 60
- Energy Awareness Campaign at kadampanad Panchayath conducted by S2 MTech students under IEEE IAS chapter.
- Nilambur Tribal Village Project for Street Lighting under IEEE IAS chapter.
- Conducted Counselling workshop
- Started identifying and planning courses needed for Amrita Serve villages.
- Participated in clean up drive at Sabarimala and Pamba
- Staff volunteered and co-ordinated the expo’s for M3, M4 and Embracing the world stall during Amritavarsham 60
- Provided training for the graduates in entrepreneurship
- Helped the graduates get into Secret pillow project
- Extended the work to northern part of India (Rajasthan and Uttarkhand) and in Karnataka.
- Conducted Yoga and Meditation camp.
- Facilitated self defence workshop with
- Inspired by LEE classes graduates conducted LEE activities in their communities

**Engineering-Bangalore**
- **Drawing Competition:** The students of MBA went to nearby schools and conducted Drawing Competition for high school students on Green Bangalore; Clean Bangalore.
- **Blood Donation:** On Aug 28th, the Students of Amrita Engineering Students organized Blood Donation Campaign, where more than 411 units of blood were collected, which was a record in the past 20 years of service.
- **Amalabharatham:** On Sep 1st, the students of Engineering & Management students along with the faculty cleaned one of the major unhygienic places of Bangalore, i.e. K R Market. This was done in coordination with BBMP.
- **Ratha Yatra:** On Sep 1st noon, we did a very big road rally on Amma’s 60th Birthday. The rally started from BBMP Office near K R Market to Shanthi Nagar Bus Stand. More than 500 Students, 100 faculty, 100 devotees along on many bikes, in cars and buses were lead by a ratha.
- **Organ Donation:** On Sep 2nd more than 490 students and faculty pledged for Organ Donation. This program was organized in co ordinaton with ZCCK (Zonal Coordinator Committee of Karnataka of Transplantation).
- **Plant Sapling:** On Sep 21st, the students and faculty together planted trees in the college premises.

**Engineering-Coimbatore**
- Students and faculty actively participate in the Community development programmes of Mata Amritananda Mayi Math – Amalabharatham (1.9.2013), Amrithakuteeram, Feeding the poor, Adoption of Village, Fabrication of horse cart for transporation in the rural area where transport is not available, Tree planting etc.
- The Department of Social Work, coordinates the activities of Amrita Serve project of Tamil Nadu Region and had organized a 3 day Training Programme on “Planning, Executing, & Managing Corporate Social Responsibility (CSR) Projects” on 29th to 31st Jan 2014 in association with Shanti Ashram, a voluntary and Gandhian organization from Coimbatore. Totally there were 56 registered participants from 16 different organisations including educational institutions and voluntary organisations situated in Tamilnadu and Kerala.
• Department of Social Work was the part of E- Literacy Program of Government of India, and this program initiated by the department along with PN Panikkar Foundation (July 2013 to till date) The Inaugural details Published in The MalayalaManorama dated 3rd and 4th of September 2013.

• Department of Social Work Organized one Workshop on PRA ON 9th & 10th of January 2014

• Department Conducted PRA Exercise for the Department of Forestry Government of Kerala(Idukki range of forest), by one Faculty and 15 students of the department, Research results published in The Hindu News Daily on 21st January 2014.

• The Village Outreach Programme in the Ettimadai Village which has been going on for last eight years under the guidance of Prof. Shobhana Madhavan & Dr. Deepak Gupta has involved many students and alumni. It has contributed significantly to the education, health, sanitation and general living standards of the inhabitants of the Ambedkar Colony in the village.

• Our students and faculty members engaged in the cleaning exercise in the Ettimadai village as a part of the Amala Bharatham (Clean India) campaign on the occasion of Amma’s (our university’s Chancellor’s) birthday. Amala Bharatham campaign is a campaign launched by Amma to raise the awareness of the nation towards cleanliness and hygiene.

Biotechnology
Guided by the motto, “Pray with your heart and serve with your hands”, Amrita Sanjeevani, is a student run seva association of Amritapuri Campus. Amrita Sanjeevani organises youth camps, awareness campaigns and fundraisers for the needy. The association has already sponsored the education of several children through its activities.

Sanjeevani also regularly conducts workshops and takes care of an organic garden on the campus. The events organised by Sanjeevani during the year were:

Community Outreach:
• Clean up drive at Medical Centre, Vallikavu
• Clean up drive at Sabarimala
• Fund raising fair for charity during Diwali
• Visit to orphanage – Celebrating Diwali at Paripally

Green Initiatives:
• Tree planting
• Organic Farming
• Composting

SAH (Serve An Hour): It is a unique initiative for the first year students under ‘Amrita Sanjeevani’, designed over the free-slots available during the week days, where each batch of students was given a designated slot to participate in various service activities. The goal of this course is to introduce students to social and environmental issues that impact the society today.

This year, an awareness campaign on ‘environmental and social issues was organized in various schools for classes VI and above, where our students conducted sessions on:

Eco Friendly Initiatives
• ABC Awareness
• Anti Alcoholism and Anti smoking
• Organic Gardening
• Direct Recycling
• Use and Misuse of Technology

Awareness campaigns on:
• World Water Day – Painting competition
• World Car Free Day – Cycle Rally
• Earth Day
Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Existing</th>
<th>Newly created</th>
<th>Source of Fund</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus area (acres)</td>
<td>1000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class rooms</td>
<td>196</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratories</td>
<td>125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seminar Halls</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of important equipments purchased (≥ 1-0 lakh) during the current year.</td>
<td>127</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of the equipment purchased during the year (Rs. in Lakhs)</td>
<td>443</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2 Computerization of administration and library

- Bar-coding is implemented for circulation of books.
- Auto e-mail alert is introduced through AUMS software to know the circulation status of the books for every member.
- LIBSYS software for library management
- Bar-coded circulation
- Online reservation
- Email alerts
- Internet access
- Computer terminals increased for Digital Library and OPAC: 100 Nos.
- Network Printing facility
- Wi-Fi connectivity
- Web OPAC

ADMINISTRATION:
Computerization of administration involves the Amrita University Management System (AUMS) with the following features:
- Integrated system that enables easy access to data
- Data recovery across Campuses
- Reports and statistical analysis of student progression
- Security, Roles and Privilege
- Easy management of fee payments
- Complete modelling of the academic workflow

EXAMINATION:
AUMS has been developed exclusively to cater to a credit based system. The system allows flexibility in offering courses to various branches, batches and semesters with credits and staff allocation all possible to be done by department secretaries and users identified for that role. Role based tracking and audit trails offer added security to ensure data integrity. Student attendance, mark records, grade entry, printing of grade sheets, publishing of results in the internet and local intranet, generation of various analysis reports are some of the areas that AUMS strengths lie in. Also, the ease with which system allows for users to get reports has helped the School generate consolidated certificates in just 10 days after final exams result has been published.
LIBRARY:
The library management system uses AUMS to handle basic housekeeping functions of a library. The School Library is an integrated library system. The modules incorporated in AUMS are Acquisition, Cataloguing, Circulation, Serial Control, OPAC (Online Public Access Catalog) and OPAC (Online Public Access Catalog).

All the administrative activities are fully computerized. All the faculty members are provided computers and email IDs, most of them with internet connections. Laboratory and patient care

We also have a Hospital Management system called HIS.

4.3 Library services:

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
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<th></th>
<th>Newly added</th>
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<th></th>
<th>Total</th>
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<tr>
<td></td>
<td>No.</td>
<td>Value (Rs)</td>
<td>No.</td>
<td>Value (Rs)</td>
<td>No.</td>
<td>Value (Rs)</td>
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<td>9437</td>
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<td>1846</td>
<td>395083</td>
<td>41581</td>
<td>12504692</td>
<td></td>
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<td>Journals</td>
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<td>2384021 9</td>
<td>1493</td>
<td>2479261</td>
<td>2511</td>
<td>25186338</td>
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<td>1361480 6</td>
<td>8403</td>
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<td>38</td>
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4.4 Technology upgradation (overall)

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<tr>
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<th>Total Computers</th>
<th>Computer Labs</th>
<th>Internet</th>
<th>Browsing Centres</th>
<th>Computer Centres</th>
<th>Office</th>
<th>Departments</th>
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<tbody>
<tr>
<td>Existing</td>
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<td>259</td>
<td>1839</td>
<td>11</td>
<td>14</td>
<td>53</td>
<td>171</td>
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<td>Added</td>
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<td>32</td>
<td>100</td>
<td>10</td>
<td>0</td>
<td>1</td>
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<td>1185</td>
<td>2031</td>
<td>57</td>
<td>15</td>
<td>511</td>
<td>667</td>
<td>151</td>
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</table>
4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

- Giving training to teachers and students to use computers and access internet; frequent upgradation in this field.
- Information and Communication Technology services (ICTS) is an integral part of the School, providing computing resources for all academic, research, and administrative needs.
- Well equipped systems with latest hardware configuration and upgraded versions of software supported by internet facility of **14Mbps leased line**.
- Wi-Fi facility is provided in the academic block for easy access of Internet to staff and students.
- 5 computer labs with 180 desktop systems, networked with high speed fast Ethernet and wireless LAN enabling 1:1 student-system ratio ensures individual participation and results in practical learning experience.
- Students are permitted to use the lab off their class hours with prior booking.
- Each faculty member is provided with individual cubicles along with easy and free access to computer and internet facility.
- We use A-VIEW for online classes like Structural Bioinformatics, Comparative Genomics, Pharmacoinformatics, Computer Aided Drug Design. We also use Skype and WebEx for research meetings.
- All our faculty members and staff have unlimited access to the internet. Students have their own laptops and our computer lab has 49 ethernet ports. Since the School building is Wi-Fi enabled, our students have unlimited access to the internet. The ICT facilities at our School is managed by the University’s ICTS department who give us excellent support. We have adopted the AUMS (Amrita University Management System) which is a paperless approach to manage academic related activities like Student registration for courses, attendance, record of marks and grades, academic related resources sharing. All our faculty and staff members have undergone training on how to integrate AUMS in their work. Students are given training on how to use the different library software. There are many courses in the Systems area which gives ample exposure to the students in the area of IT.
- Regular training programs were conducted for all employees in Hospital Information System and other Software. Separate training division under IT department is available.
- All the departments are connected via intranet. We give professional training to the students and faculty in computer.

4.6 Amount spent on maintenance in lakhs:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) ICT &amp; Equipments</td>
<td>687</td>
</tr>
<tr>
<td>ii) Campus Infrastructure and facilities</td>
<td>7889</td>
</tr>
<tr>
<td>iii) Others</td>
<td>3133</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>11709</strong></td>
</tr>
</tbody>
</table>
Criterion – V
5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Counselling extra classes for upgradation of academically weak students, students participating in various conferences in India and abroad, provide guidance for presenting papers in seminars and conferences. Health insurance is also offered.
  - IQAC provides information about various Student Support Services available at the institution and other levels.
  - The IQAC regularly conducts national level seminars
- Feedback from the students to Identify the required area
- Meetings with Administratives & Faculties
- Industrial Visits
- Fast track & Contact programmes
- Technical training for placements
- Mock interviews for placement assistance
- Counsellor Ward interaction
- Counselling extra classes for upgradation of academically weak students, students participating in various conferences in India and abroad, provide guidance for presenting papers in seminars and conferences. Health insurance is also offered.
- Opportunities for students to go to foreign universities for exchange programmes
- Flexibility to opt electives across the school/Dept.
- Students can undertake projects in industries / research organizations like ISRO, FACT, NAL etc.
- Minor projects in TBI, IIT’s during the vacations
- Placement training by CIR which manages placements, soft skill training and special training for CAT/GMAT/GATE.
- The physical education dept has a modern gymnasium, and organizes regular coaching in games and athletics.
- Initiation of Training programmes for various competitive examinations like GRE, CAT, GATE, and GMAT.
- Initiation of strong Co-curricular engagement of students through the conduct of national-level inter-university techfests and management fests.
- Some fests have been initiated through suggestions from School IQACs.
- Initiation of optional foreign language courses in Japanese, German, Spanish, etc., to improve employability.
- IQAC has pointed out the need to attract more foreign students leveraging the extensive tie-ups and MoUs that AMRITA has with 75 premier universities in USA, Europe, Japan and Australia.
- Regular meetings with Class Counsellors to provide information
- Presence at Class Committee meetings
- Interaction with students to provide guidance for new opportunities e.g. employment, research fellowships, international conferences and workshops
- The IQAC had suggested that every course outline should also contain a section where the instructor mentions his availability for at least one hour every week outside the class. This suggestion has been incorporated from the academic year 2014-15 onwards. Making this mandatory has encouraged greater faculty-student interaction with respect to different courses outside the class.
- As a student support service, a Railway reservation counter has been opened in the campus for going to and fro to home.
- We have a well established IQAC, which monitors the proper functioning of women grievance cell, student mentoring system, student feedback and complaint redressal cell.
- Student mentors other than class coordinators in each class with 10 students under each mentor; Career guidance and student counselling
5.2 Efforts made by the institution for tracking the progression

- Continuous monitoring of the progress of students, counselling, students representation in class committee, course committee etc.
- The institution monitors and ensures the achievements of the learning outcome through analysis of the tests, examination results and the pass percentage
- Faculty counsellors keep a track of the student progression
- Meeting with students & Parents
- Faculty-Advisor for every 60 students and a counsellor for every 20 students to monitor the academic and personnel issues.
- Students having more than 6 arrears have to register for the failed subjects which are being offered before they register subjects of the higher semester subject to a maximum of 28 credits.
- The result analysis is discussed in the academic committee and parents are informed of the arrear subjects.
- Class committee meetings
- Introduction of counselling diary
- Counselling by class advisors and counsellors for students with poor academic record
- Counselling periods increased from 1 to 2 periods
- Discussing the students progress with their parents
- Coordination with CIR with regards to technical as well as soft skills
- Technical and non technical competitions conducted by AEEE and IEEE students chapter
- Regular interaction with parents
- Strong support for remedial courses
- Continuous assessment is conducted for students for tracking their progression
- International and industrial internship for students.
- In-plant training for 2nd and 3rd year students
- In the Department of ECE, a staff is made in charge to collect all the student accomplishments and achievements from time-to-time. A separate form is maintained in the department which students may submit during their final year of study with their achievements.
- In the Department of Social Work, learning through fieldwork is closely monitored and the reports are corrected and given feedback to improve. Based on the performance in the periodical tests, the feed backs were given to the students by the respective course faculty to improve their academic aspects. A month wise work schedule was prepared for the students regarding their research dissertation to track their progression. The fieldwork manual was used to track the progression of the students in their fieldwork learning.
- Placement cell with dedicated Placement Officer
- Maintaining a register that is updated to reflect recruitment of students to new positions across the country and overseas
- Constant updates through Alumni Association records and information.
- We follow a system of continuous evaluation with a minimum of four evaluation components in every course. There are quizzes, assignments, presentations, projects being continuously evaluated apart from the examinations. This helps us to track student progression continuously.
- Feedback forms are collected form students and parents including international elective trainees.
- The institution takes interest in fast rectification of complaints of the faculty as well as the students. We also make sure that the action taken on the complaints are intimated from time to time.
- Meet regularly with class coordinators and HODs to evaluate progression
5.3 (a) Total Number of students

<table>
<thead>
<tr>
<th></th>
<th>UG</th>
<th>PG</th>
<th>Ph. D.</th>
<th>Others</th>
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</thead>
<tbody>
<tr>
<td>Last Year</td>
<td>12813</td>
<td>3279</td>
<td>460</td>
<td>550</td>
</tr>
</tbody>
</table>

(b) No. of students outside the state

(c) No. of international students

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>%</td>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Last Year</th>
<th>This Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>SC</td>
<td>ST</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Demand ratio

Dropout % <1%

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

- Special Coaching for NET/JRF Exams
- Soft skill training for career guidance; special coaching for NET/JRF examinations.
- Training for those appearing for CAT, for a duration of 1.5 years by T.I.M.E.; 5 hours in a week.
- **PG Entrance Coaching for internees (Ayurveda)**
- Regular Classes for training them to succeed well in GATE, CAT, GMAT, GRE, Soft Skill Training, ..
- The Directorate of Corporate & Industry Relations (CIR) is a unique and dedicated department of “Amrita Vishwa Vidyapeetham”, established to provide expert guidance to students in specific areas beyond their regular academic curriculum and help them fulfil their career ambitions.
- Apart from training in the area of Life Skills, CIR also aids in the preparation and coaching for competitive examinations/entrance tests for higher learning. This is because not all students wish to take up a placement offer immediately and enter the corporate world. Some of them may wish to pursue higher studies, usually in the fields of engineering or management. These courses could be either in India or abroad. Admission to most such programmes requires performing well in an entrance exam.
- CIR conducts extensive Aptitude, Verbal & Communication and Soft Skills courses for students. In addition, CIR arranges training through external agencies for all such exams like GATE, GRE, GMAT, TOEFL, CAT, etc. For the 2010-2014 batch the following number of students were enrolled:
- No. of students beneficiaries: 216
- Major competitive exam oriented study material made available in Library reference section.
- The Department of EEE conducts one month job oriented vacation training program by department faculty on important subjects in coordination with CIR.
- The Department of English conducts Coaching classes for Business English Certificate (BEC) conducted by ESOL, Cambridge University.
- The departments encourage the students to appear for GATE, GRE, TOEFL, Tancet etc and most of them conduct GATE coaching class for final year students.
• Interested students are encouraged to form groups and provided area/module/topic specific guidance for competitive exams by respective faculty member.
• Soft skills and area/opportunity specific coaching with mock interviews involving all faculty members in preparation of students for entrance exams e.g. Integrated Ph.D. programs, SRF selection interviews etc.
• GPAT coaching provided to the final year students and online exams are conducted periodically based on previous question papers. This coaching also helps the students to attend any competitive examinations. 12 students qualified in the GPAT exam conducted in the year February 2014.

<table>
<thead>
<tr>
<th>No. of students beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

5.5 No. of students qualified in these examinations

<table>
<thead>
<tr>
<th>NET</th>
<th>SET/SLET</th>
<th>GATE</th>
<th>CAT</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td></td>
<td>161</td>
<td>130</td>
<td>61</td>
</tr>
<tr>
<td>IAS/IPS etc</td>
<td>State PSC</td>
<td>UPSC</td>
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</tr>
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<td></td>
<td>1</td>
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</tbody>
</table>

5.6 Details of student counselling and career guidance

• A set of 30 students are assigned to a faculty member to ensure constant individual student monitoring of academic and personal progress.
• The practice of assigning a Faculty Advisor to each class gives an assurance to the students of a ‘one point contact’ for any clarification required.
• Placement cell takes care of providing career guidance to all final year students
  o Each class of 60 or more students have 3 counsellors (one of whom is also the Adviser) such that around 20-25 students have one counsellor to whom they can approach for counselling for academic, personal or psycho-social guidance
  o The faculty are trained in counselling and are periodically given instructions by HOD as to upcoming events, requirements etc.
  o The advisers and counsellors maintain an individual file for each student and keeps constant track of the progress of student.
  o The counsellors are also the point of contact between the department and the students’ parents/guardian. They keep the parents abreast of the events in case of any problems, or concerns.
  o Career guidance programs are arranged by CIR.
• Batch Coordinators/Class Advisors/Counsellors interact with the students of the respective class.
• Regular counselling of students.
• Counselling status being continuously updated in student counselling diary for each student. This is maintained for the complete course duration of B.Tech. program, in order to have a track of student progress in academic, extracurricular and emotional aspects.
• Display of counselling periods in time table in class rooms
• Counselling periods increased from 1 to 2 periods
• The departments assist the students towards exploring their career options. Orientation sessions are organized for students during their early days at the department highlighting the various opportunities. Equal emphasis is given on ‘research as a career’.
• Whenever an alumnus of repute visits the department, the department organizes a session for the alumni to interact with the current students on various avenues and opportunities for choosing their career. Through this process students get immensely motivated towards their career. The...
students are well informed about the opportunities and challenges. This helps the students in choosing their career options.

- **Career guidance**
- Career guidance programs are provided by the CIR. The centre maintains a student record for every student in their final year with details of their performance in quantitative and logical aptitude, verbal communication, group discussions, mock interviews etc. One-on-one interaction, counselling and feedback on performance are provided to each student, increasing their confidence and providing them direction for improvement.
- Students often seek to clarify their career goals while in the campus. Some of them have career goals that need alignment inputs. These are provided by trainers with industry experience. One-on-one interaction sessions are also provided by asking probing questions, reviewing student records and administering specific tests. If required, training is recommended. Students are encouraged to approach CIR faculty, fix appointments and seek career guidance inputs from them. Support includes career assessment, informational career workshops, individual career opportunity mapping (matching career aspirations, market availability and individual competency), career guidance seminars, industry research, and company research, networking skills, negotiation techniques and guidance on higher education.
- **Foreign Language Proficiency**
- Many companies, who recruit from Amrita, often send students to other countries for training and projects. They appreciate the fact that CIR goes the extra mile in arranging foreign language training in the campus itself for interested students. CIR offers training in German language. This gives the students a distinct advantage. Likewise, an expert trainer proficient in the Japanese language teaches Japanese to students interested in learning that language. CIR also has access to Alliance Franchise faculty for teaching French. The foreign language experts are handpicked from an array of individuals and institutions. Conducting these courses has been found to be very useful for students joining companies that have international operations.
- In the Dept. of Social Works the following measures and taken to cater to student counselling and career guidance
  - Most often it is an open unstructured system of counselling to students on the personal and professional aspects.
  - A formal orientation sessions and informal guidance about various specialisations [elective stream] were given to the students.
  - Enhanced students’ commitment to profession and department in a very generalised but consistent and regular manner.
  - Regular consultations to students in joining doctoral programme.
  - Significantly improved the starting salary level of passing out students up to Rs. 20,000 p.m.
  - Managed internship and job placements of students in national organisations (HAQ, MS Swaminathan Research Foundation, Baba Amte’s Organiztion, Anna Hajare’s organization), international organizations (Plan International, regional government–SAARC -Nepal), national commission (national commission for protection of child rights) and corporate sector ( AMD capital fund).
  - Class counselors are available for regular interactions
  - Faculty members frequently provide guidance on best options based on student performance, interest, aptitude and merit.
  - Regular updates on school notice boards of new opportunities and announcements
  - Frequent updates on school website of new positions, fellowship opportunities/ announcements
  - Options to pursue career within School with new research funding for grants and projects
  - All the second year MBA students are exposed to 50 hours of Classroom training in Soft Skills to help sharpen the various soft skills like communication, better body language, basic etiquette, making presentations etc. This helps improve our students’ readiness for industry jobs. Apart from that, our
Corporate and Industrial Relations department helps our students to prepare their CVs, conducts Mock Interviews, and gives them general guidance and counsellng to prepare for the placement exercise. Students also receive a lot of mentoring outside the class from the faculty members. For the last two years Alumni Bootcamps have been conducted where alumni have come and conducted workshops for our graduating students in order to help prepare for the campus placements.

- All the UG students undergone meditation courses (I AM Tech).
- At the time of joining, orientation programmes were conducted with regard to the course, curriculum, teaching and learning process, rules and regulations in the campus etc.
- GPAT coaching provided to the final year students.
- Assignments and special coaching are provided to slow learners.
- Encouraged to perform group projects.
- Career guidance and soft skill training is provided for final year B.Pharm and M.Pharm students.

No. of students benefitted

5.7 Details of campus placement

<table>
<thead>
<tr>
<th>On campus</th>
<th>Off Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Organizations Visited</td>
<td>Number of Students Participated</td>
</tr>
<tr>
<td>525</td>
<td>2705</td>
</tr>
</tbody>
</table>

5.8 Details of gender sensitization programmes

- Girl students are given counseling separately. Anti-Ragging committee is coordinated by the advisors, counselors. Grievance redressal committee to handle gender related issues.
- The Women Development Cell conducts a number of programmes regularly on various issues relating Women empowerment.
- Professional counselors are invited to conduct programmes for women staff and girls students.
- The cell works under a faculty in charge. It has representation from the staff and students
- As a part of women’s day celebrations, the IEEE Industrial Applications Society (IAS) Student Branch Chapter (SBC) conducted a seminar “Role of Women in Industry” on 10th September 2013. The session was handled by Dr. B.J Sreedevi, Director, of National Transportation Planning & Research Centre (NATPAC), an R&D Centre of Govt. of Kerala. Around 350 students participated in the seminar.
- The department of Mechanical Engineering nominated student for “SINE” Student Industry Education Programme with focus on ‘Growth Through Diversity’.
- Value education/ cultural education is an integral part of curriculum
- We have a Co-education programme and both male and female students do combined studies and interact freely as a part of different groups for the various group projects and assignments. They also actively participate together in the organizing of different cultural events at the school such as UTSAV (an internal inter-house competition in different sports and cultural and business
management events), PRAGATI (A B-School Festival where many B-Schools participate), cultural evenings under the auspices of KALAKRUTI (A forum which has been created for students to showcase their various talents), the Gokulashtami float and many more such celebrations. We do not feel the need for a gender sensitization programme. But our lady students stay in separate girls’ hostels and there are lady wardens to take care of all their needs. Our lady faculty members are also available for them whenever they need it as most of our faculty members live inside the campus. We have a zero tolerance policy towards eve-teasing and ragging. There is a 24 hour camera surveillance of the campus. All these steps taken by us ensure a very pleasant and safe stay for our lady students at the campus.

5.9 Students Activities

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

<table>
<thead>
<tr>
<th>Level</th>
<th>State/ University level</th>
<th>National level</th>
<th>International level</th>
</tr>
</thead>
</table>
| No. of students participated in cultural events
| Level         | 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

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of students</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial support from institution</td>
<td>124</td>
<td>Rs 11 lacs</td>
</tr>
<tr>
<td>Financial support from government</td>
<td>54</td>
<td>Rs 18.5 lacs</td>
</tr>
<tr>
<td>Financial support from other sources</td>
<td>95</td>
<td>Rs 9.9 lacs</td>
</tr>
<tr>
<td>Number of students who received International/ National recognitions</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

5.11 Student organised / initiatives

<table>
<thead>
<tr>
<th>Type</th>
<th>State/ University level</th>
<th>National level</th>
<th>International level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairs</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Revised Guidelines of IQAC and submission of AQAR</td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Exhibition: State/ University level                  National level                  International level

5.12  No. of social initiatives undertaken by the students  101

Sample given below:
Amalabharatam clean-up drive (9-10th Nov.2013) :Faculty, students, staff and Ashramites actively participated in the drive at the sacred Sabarimala Sanidhanam and Pamba riverside.

“Amritajyoti Prayamam”, a marathon from AIMS to Amritapuri, covering approximately 150 KM with the Amritajyoti torch (Olympic torch) to spread the message of love and peace preached by our beloved AMMA. The marathon was flagged off by Shri.K.J.James, City Police Commissioner in the presence of Addl. District Magistrate Shri.Ramchandran on the 25th of September at 7:00AM from AIMS (Main Entrance). Faculty, students and staff participated.

As part of the Children’s Day celebrations, The Department of Paediatrics conducted a Drawing Competition on the 9-11-2013 and Toy Donation Drive (old & New) from 14-17th Nov.2013 for the children admitted in the paediatric ward and to populate the play room.

Free Hearing Assessment and Hearing Aid distribution program :12th – 14th November 2013 : As part of the 60th Birthday Celebrations of “ AMMA”, Mata Amritanandamayi Math, Amrita Institute of Medical Sciences and Starkey Foundation, jointly organized the programme. Shri K.M.Mani, Hon’ble Finance Minister, Government of Kerala in the presence of Mr. Bill Austin, Chairman, Starkey inaugurated the programme. Distribute free hearing aid to 1600 persons hard of hearing or the hearing handicapped children from various Special Schools - giving them the Gift of Hearing!

Dept of Endocrinology & Podiatry: In connection with World Diabetes Day (14th November 2013) conducted (i) a Street Play on Diabetes at various locations in AIMS (ii) Public function attended by Political dignitaries and Cine artists followed by cultural programmes - Mime & Drama on Diabetes, Dances by students and songs by staff & students (iii) Complete free Diabetes check up for 250 pre-registered ADWA members and General public at Brahmasthanam temple auditorium, Kunnumpuram (iv) educational sessions and counselling sessions for the parents and (v) games & entertainments for the children.

Organized a free hepatitis screening camp from the 1st August to 15th of August 2013 as part of the World Hepatitis Day Programme.

As part of observing World Health Day 2014, Staff and students of Department of Social Work are organized a poster exhibition followed by awareness sessions on April 7th at various OPD’s. at the AIMS Hospital.

World Environment Day celebrations :  As a part of the activities of Green Friends, on the World environment day, free distribution of saplings were held.

Anti-Tobacco Movement at Amrita (ATMA) : Programme for ATMA – May 31st 2014 (World No Tobacco Day) Dr. Dinesh (Dept of Radiation Oncology) and Shri Baiju (S.I. Alapuzha) made presentations. Lamp Lighting was conducted by Cine Artist Ms. Rima Kallingal. A Rally around AIMS campus was also held.

5.13 Major grievances of students (if any) redressed: ___________________________________________
6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

**Vision**

We envision a world endowed with the wealth of knowledge and the strength of discrimination (Viveka).

We envision a system, which is a healthy breeding ground for the sprouting, culturing and dissemination of the whole gamut of knowledge in a wholesome and holistic manner for the well-being of humankind.

We envision a human being empowered with wholesome knowledge, which makes one an enabler and facilitator in the deep search and striving of every human being for that knowledge.

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We envision a system where in there is a great interplay and exchange of ideas, thoughts, feelings and actions which develop people empowered with noble character and wholesome values. They go out into the fields of action to build a world of love, harmony, peace and knowledge. They follow the path of “Dharma” and give a clear direction in every thought and human endeavor.

**Mission**

To provide value-based education and mould the character of the younger generation through a system of wholesome learning, so that their earnest endeavor to achieve progress and prosperity in life is matched by an ardent desire to extend selfless service to society, one complementing the other.

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6.2 Does the Institution has a management Information System

Yes. Amrita University Management System (AUMS) is a comprehensive software system that was developed in-house, and encompasses all aspects of the university’s academic and administrative functioning. A brief discussion of its usage with respect to the above points is given below:

a. **Administrative procedures including finance:** includes student and staff profiles, fee management, accounting, issue of certificates (bonafide, transfer certificate, grade sheet, degree certificate, etc.), etc.

b. **Student admission:** a state-of-the-art admissions module enables simultaneous counseling for BTech admissions across multiple campuses (in three different states), and the entire data - from issue of hall tickets, to rank data, and entry data upon admission – is captured in the system, subsequently generating roll numbers that feed into the student registration & evaluation processes.

c. **Student records:** apart from personal profiles, this includes student registration records, marks & grades, student progression data, progress reports, hostel information, etc.
d. **Evaluation & Examination procedures:** the entire gamut of activities from registration through results, including attendance and other data are captured and maintained with appropriate access levels to students, faculty, management, administrative personnel, parents, and other stakeholders.

e. **Research administration:** in the staff profile, there is a provision for faculty members to maintain records of research publications, conferences attended, research grants received, etc.

f. **Others:** E-learning module – this provides an excellent suite of tools for the teaching-learning process, including the provision to set up question banks, conduct online exams, share teaching materials & resources, host discussion forums, conduct surveys & polls, generate course-related performance-reports, etc.

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

6.3.1 **Curriculum Development**

The University follows a systematic process in the design and development of the curriculum. Syllabus is subjected to periodic updates. Feedback from each course teacher is collected by the respective departments which is consolidated and forwarded to the Board of Studies to be considered at the time of revision. Feedback from employers and alumni gives direction on the required modifications to be made in the syllabus. Subject experts both from academia (Professors from other Universities) and industry who are on the Board of Studies are consulted before revision of syllabus. The Board of Studies frames the curriculum and the detailed syllabi of each program, after the discussion among its members. The suggestions of the board will be taken up by higher bodies such as Committee for PG Programs and Academic Council.

- Department introduces new electives in emerging areas on a regular basis as per current and projected needs.
- In some departments the curriculum revision also takes inputs from additional sources like ACM IEEE-CS Curricula, MIT Open Course Ware, Coursera, etc.
- Faculty members are asked to maintain a separate file regarding the changes needs to be made in the next curriculum revision based on their day-to-day experience with the course content & current issues.

- Internships: Compulsory for PG Students
- Courses comprise Lectures/Tutorials/Labs.
- Seminars/Group Discussions/Presentations are highly encouraged
- Enrichment courses to support regular academic courses
- Soft skills training programme for final year UG and PG students
- Cultural education classes to inculcate social, ethical and moral values
- Special guidance given to students for qualifying exams like GPAT
- Experts from pharmaceutical fields are invited to interact with staff and students

Individual departments have customized ways of gathering additional feedback. As an example, the following pertains to the school of management. “We normally have a student population that comes from diverse streams. Some of them lack skills in quantitative methods because of humanities background; some may lack business orientation because of their lack of exposure to business during their UG and so on. To take care of these problems, we try to bring all the students at par before the formal programme begins by giving them a ten day Orientation Module wherein we teach basics of Accounting, Mathematics, introduce them to General Management principles, expose them to basic software that they will use extensively during the programme, and also expose them to business newspapers and how to read and understand them.”

6.3.2 **Teaching and Learning**

The university’s teaching, learning and assessment strategies are structured in order to facilitate the achievement of the intended learning outcomes. The curriculum of every semester is completed within the stipulated time through planning of the courses of study, timely conduct of continuous evaluation,
periodicals, end semester examinations, followed by grading of results which is finalized in course committees.

- The college provides course outline and course schedule for enabling the students to get an idea of what they are going to learn.
- Learning in all courses is made more student-centric. Computer-aided learning is given priority in teaching and learning methods.
- The college creates a culture of instilling and nurturing creativity among the learners through various academic activities.
- It has a feedback mechanism to evaluate the teachers and the feedback is reviewed every semester.
- Significant increase in staff strength over the last four years.
- Fully qualified and competent faculty members with a back ground of academia and Industry.
- Healthy faculty-student ratio (university-level it is 1:11)
- Detailed course plan in line with the prescribed syllabus for every theory course and a separate lab cycle for lab courses ensures smooth conduct of classes.
- Periodic Class Committee meetings: Chairperson, Faculty Advisor, course teachers and two student representatives of the class meet to ensure transparency in curriculum delivery and evaluation pattern.
- Objective assessment of teachers through student feedback administered in the middle of the semester helps in improved content delivery.
- Deployment of AUMS – Amrita University Management System, for academic and administrative purposes.
- Use of NCTF game environment for offensive & defensive skill development.
- Faculty development programs are conducted regularly, and faculty members are encouraged to attend FDPs at other eminent institutions as well.
- Continuous evaluation system is followed.
- Classrooms are equipped with audio-visual aids to enhance the quality of the teaching-learning process.

Specific activities reflective of these points are given below:

- Conducted a faculty development program on “Power System Laboratory” on 24 July, 2013.
- Conducted a faculty development program on PIC Microcontroller for the faculty members of EEE Department on 11 and 18 January 2014.
- Conducted a three days training on “Solar Photovoltaic Systems – Laboratory and Field Practice”, Coordinated by Mr. N. Krishnaprakash and Mr. Vijith K., during 25 to 27 July, 2013.
- The Department of Electrical and Electronics Engineering and SEEM (Society of Energy Engineers and Managers) organized a two days training on “Solar Photovoltaic Systems” during 03 to 04 August 2013.
- Conducted a seminar on 'Industrial Automation' by Mr.Sanket Sawalkar, MultiQuadrant Ind. Controls Pvt. Ltd., Mumbai, on 8 August, 2013.
- Conducted a two days workshop on “Solar Photovoltaic Systems”, coordinated by Mr. N. Krishnaprakash, during 5 to 7 September 2013.
- Conducted a workshop on ‘Circuit Simulation using SPICE’, on 6 to 7 September, 2013.
- Conducted a training Program on "LATEX", during 22 to 23 October, 2013.
- Conducted a hands-on workshop on “Signals and Systems with MATLAB”, during 8 to 9 November, 2013.
- Conducted a practice course on “Electronic Design and Applications” during 3 to 9 December, 2013.
- Conducted hands on training on “PIC Microcontroller” by Mr. Sivraj P, Mr. Vijith K and Mr. Nithin S during 09 to 12 December 2013.
- Conducted a lecture on “Research and Development Activities at RCI, Hyderabad”, by Mr. A. Thomas Jayaseelan, Scientist ‘E’, Head, Visit and Exhibition, Research Centre Iumar, Hyderabad, on 28 January, 2014.
- Conducted a lecture on “Notes on writing a paper from project” by Mr. Sivraj P on 06 February 2014.
• Conducted a workshop on “Fuzzy Logic Implementation in Embedded Systems”, coordinated by Dr. S. Balamurugan, during 7 to 8 March 2014.
• Faculty attends Training/Short Term Course from various professional bodies like FTII, NID & IIT.
• Weekly 2 hour live classes by IIT professors through Quality Enhancement in Engineering Education (QEEE) for the following courses:
  1. Heat Transfer for III year students and
  2. Fluid Mechanics for II year students
• NPTEL video lectures and notes are made available to students for a number of core subjects.
• Field visit to students to get more knowledge in the current trends in construction and structural engineering
• Teaching – Various tools like AUMS, A-View, Scratch, Arduino and Open Source Software
• Blended Learning Through E-learning Facility: QEEE – Mobile and Wireless Networking, Computer Architecture; EDUSAT; NPTEL - Computer Programming, Databases, Networking; IUCEE, etc.
• Collaboration With Industry For Invited Lecture Series – Webinar series, IBM (30 hours on Service Oriented Architecture)
• Distinguished Visitors from other Universities / Industries – for Invited Talks: Henry Muccini, Assistant Professor in Software Engineering at the Computer Science Department, University of L'Aquila, Italy

6.3.3 Examination and Evaluation

All the University examinations are conducted under the supervision of the Exam Control Division headed by the Deputy/Assistant Controller of Examinations. The centralized paper evaluation is undertaken in the office of the Exam Control Division itself and the results are declared after the approval of the concerned evaluation committee of the college.

Some of the features include:
- Central valuation
- Question paper vetting by the chief mentor before the exams and auditing after the exam
- Transparent Revaluation - Revaluation will be done in the presence of student, chairman of the department by the same faculty.
- Monitoring the performance of the students by means of Internal Exams, End Semester Exams, and Continuous Evaluation
- Communication of evaluation methods to the students by faculty at the beginning of each semester
- Mini Projects
- Journal/Research Article reading Assignments/Presentations in curriculum
- Declaration of Results and conducting supplementary / arrear examination for failed students
- Timely result publication within 10-12 days from the last day of the end semester examination
- Result through AUMS (Amrita University Management System)
- Systematic evaluation process supported by AUMS allows timely result publication within 10-12 days from the last day of the end semester examination.
- Effective student support system with constant monitoring and counselling where each Faculty Counsellor mentors and motivates a group of 30 students.
- Student progress report sent thrice a semester and access to parent portal for student performance & attendance result in increased rapport with stakeholders.
  o Systematic and methodical conduct of periodical tests and examination.
  o Provision of second chance exam and other remedial courses to support students of different learning capabilities.
- Double Valuation (Ayurveda)
- Revaluation on request
- External reviews of projects:

We follow a continuous evaluation scheme to help the students and the faculty to assess the students’ progress in all the courses continuously. All the courses have at least four components to give enough scope for evaluation through projects, group assignments, case analysis and presentations, role plays etc. We have appointed one of our faculty members as an internal Controller of Examination to regulate our examination process better. This includes setting the question papers ready in time, maintaining their confidentiality better, conducting the examinations and declaring the results on time, maintaining the standard of the question papers, and to have better discipline during the examinations.

The evaluation of final year project (for both UG and PG students) is carried out in a transparent fashion with the student progress, marks allotted and any issues being documented in the Project Log Book after each periodic review. The Project Log Book is made available to the student immediately after the review so that he/she can go through it and see the marks obtained as well as the comments of the reviewers. Any issues can immediately be taken up with the project review committee.

In the Department of Social Work, a new method of field based student presentation on child protection, women empowerment, water, waste management, etc., was introduced as part of the specialization [elective] courses to evaluate the students’ understanding.

6.3.4 Research and Development

The university has a Research Committee to monitor and address issues related to research. Each school also has a research committee to facilitate, monitor and encourage the research activities. It meets regularly to discuss various plans to promote research and motivate the faculty for academic advancement.

There is a chairman in each campus with overall responsibility for the PhD programme. The Dean of the campus/Dean of the school/Principal of the School/Senior is also involved closely in the overseeing of the research activities. Vice-Chairman and also representatives from each department, eminent scientists/researchers from premier institutes in India and abroad are included as members of the research committee.

Teachers are informed about the various fellowships available and they are encouraged to apply for the same.

Faculty members that do not have a doctoral degree are encouraged to register for PhD.

Monitory assistance and incentives provided to faculty members for publication and attending conferences.

- University is directly funding many research projects
- Research publications and guiding research is counted for promotion
- Special Laboratories have been setup for research
- University is funding teachers to participate in conferences /workshops/symposia.
- Support students in participate in International/National competitions.
- Few research centres have been setup attached to school.
- Robust QA team internal and external experts.
- Annual reviews with researchers from other research departments of Amrita University
- Arrange invited talks of experts from reputed International/National institutions.
- Thrust areas for research within the departments are identified and faculty members are grouped to work on the thrust areas, based on their expertise. Students and members of the faculty are encouraged to publish papers in journals and conferences.
- In B.Tech Program, Paper publication in International/National conference/Journal is mandatory for the award of distinction.
In M.Tech Program, Paper publication in International/National conference/Journal is mandatory for the award of degree.
Conducted faculty seminars on their research areas
The Department of Sciences involve student right from their second year of studies in the various funded research projects
Faculty are encouraged to come out with R&D proposals towards which Head, Research organization is facilitating interaction with various funding agencies like ISRO, NRB, BRNS etc.
Students are encouraged to take up research based projects associated with the funded projects.
The Department of Mechanical Engineering is in the process of Establishment of Amrita Automotive Research and Technology Centre – supported by Automotive Test Systems, New Delhi and Robert Bosch, Bangalore.
The Department of Mechanical Engineering has set up of new Tribology Laboratory and Condition Monitoring Laboratory
The total worth of all the ongoing research projects in the Mechanical Engineering department is around seven crores and total number of publications in the International journal/Conference is fifty eight.
Eighteen faculty members in the Department of Mechanical Engineering are with Ph.D.
ASCOM started research programme in the year 2013-14. Presently, 2 full time research scholars are working on their Ph.D programme. Committee consisting of senior faculty members to ensure the quality of course plans, Question Papers, conferences.FDP – getting input from experts related to develop the standard of course plan, class room delivery.
In the Department of Social Works an opportunity was created for both the students and faculty members to enhance their research knowledge by organizing reach methodology classes of a highly experienced social science research scientist.
Resource Mobilization through MoUs with leading pharma/biotech companies and premier research institutes, such as,
- Agilent Technologies, Germany
- Regional Cancer Centre, Thiruvananthapuram
- University of Oxford, UK
- NIIST, Thiruvananthapuram
- THSTI, New Delhi
- Britstol-Myers-Squibb, Bengaluru

All the faculty members have a computer and an office to themselves with unlimited access to internet. They have access to most of the major research databases such as EBSCO, PROQUEST, IBID, CAPITALLINE etc. We encourage our faculty to publish in good journals and our Performance Management System gives significant weightage to such publications. Faculty are encouraged to present their research at different national and international conferences. They are given special casual leave to do so and all their expenses are reimbursed. We have a research tie up with Deakin University, Australia and our faculty members are given study leave to pursue higher education and research abroad. For example, Prof. Shobhana Madhavan, Associate Professor (School of Management) is registered for her PhD with Deakin University and spent a semester at Deakin in 2012 as a result of our collaboration. Mr. Gyanendra Sisodia, who is a Faculty Associate (School of Management) is currently at University of Porto, Portugal for the last one year on a Research Project related to his doctoral dissertation area. His study leave has been extended by one more year.

We have an internal Amrita Working Paper Series where our faculty and PhD scholars can publish their research work and get feedback from their colleagues. We have started a Amrita Research Seminar Series from July, 2013 where an eminent external academic presents his work once a month and our internal faculty also get a chance to present their work once a month. 12 such seminars happened in the last academic year. Eminent scholars such as Prof. Neharika Vohra from IIM Ahmedabad, Prof. Raveendra Chittoor from ISB, Hyderabad, Prof. Shylendra from IRMA and others shared their research with us as a part of this seminar series.
Research proposals are reviewed by the Research Advisory Committee/Ethics Committee before implementation.

6.3.5 Library, ICT and physical infrastructure / instrumentation

The university had provided all infrastructures which in turn provide a conducive physical ambience for the faculty in terms of adequate library, research laboratories, ICT, computing facilities and allied services. The faculty can access on-line teaching and learning resources and other knowledge and information database/packages provided to the staff and students for quality teaching, learning and research through internet and intranet facilities. Teachers have access to internet, can download teaching materials and resources and take copies through the reprographic centre, free of cost. The university provides the basic necessities for research also in terms of lab facilities, instruments and open access library facilities which provides good atmosphere for effective teaching and research.

- Library is fully automated with Amrita University Management System (AUMS)
- The E-Learning Centre in the library provides access to the Vidya Digital Knowledge Archive.
- Classrooms, Seminar Halls and Conference Rooms are equipped with Computers and Video Projectors / LED Panels.
- Round the clock internet connectivity with 20 mbps (leased line) speed both for staff and students
- Wi-Fi connectivity to the staff members & students
- Audio Recording Studio, Visual Effects Studio
- Effluent treatments plant
- Uninterrupted power supply
- 1000 acres of land across the university’s five campuses
- Over 9 million square feet of built up area across the university’s five campuses
- Subscription to research databases (Science Direct, Scopus, Springer, jGate, ASCE, Access-Engineering) and plagiarism detection software
- Sophisticated software for design, simulation, modelling, computing, etc.
- The health sciences campus in Kochi has acquired many state of the art equipments and commenced new laboratory investigations and specialty clinics.

6.3.6 Human Resource Management

- The university has a Director of Human Resources, with separate HR offices within each campus.
- Social media is being used to attract the potential and huge base of prospective candidates, given the great success and popularity of social media like face book etc. Occasionally, a few students who were unable to continue the course and were about to discontinue, were provided part time jobs and also concession in the fees so as to motivate them to pursue their education. This has resulted in reducing the numbers of drops out. Staff members who reside in staff quarters are also involved in the student monitoring mechanism. This has resulted in more friendliness in student-faculty relationship.
- The institution has sincere, dedicated and committed faculty and visionary management.
- The college has an adequate number of qualified and competent teachers to handle the courses.
- The faculty members have access to the computer and internet facility that are available in the departments.
- Workshops and training programmes are arranged for the faculty to enrich their knowledge in handling the computers effectively
- Encouragement and support are provided to faculty members for participating and organizing of faculty development programmes.
6.3.7 Faculty and Staff recruitment

- The Strategic HR planning Process includes assessing the current HR capacity, Forecasting HR requirements, Gap analysis, and Developing HR strategies to support organizational strategies. The knowledge, skills and abilities of staff need is identified using skills inventory for each employee for the current as well as beyond the skills needed for the particular position. An employee's performance assessment form is reviewed to determine if the person is ready and willing to take on more responsibility and to look at the employee’s current development plans. HR requirements are forecasted based on the ongoing and futuristic project the lab is pursuing and will be in near future. Forecasts are mainly analysed based on how many staff will be required to achieve the deliverables, what jobs will need to be filled and what skill sets will people need. The gap between the future and the current position is analysed and HR strategies for meeting the organization's needs in the future is determined.

- On the basis of the availability of faculty requirement for new programmes new faculties in the emerging areas of study were selected and appointed in the university. Based on the educational qualification, previous experience and personal interview short listed candidates are selected.

- The university gives financial help to the existing faculty in attending various training programmes and national as well as International programmes/Conferences Symposia’s/ Seminars/FDPs organized in the emerging fields of their respective subjects and thus makes the faculty apt for reaching such programmes. Moreover study leave is provided for carrying out higher studies.

- The staff requirement is assessed on the basis of the students’ strength, vacancies arising due to retirement and as per the workload norms prescribed by UGC.

- The qualifications for teachers of various courses are prescribed by the UGC.

- Faculty and staff are recruited as per the recommendations of the selection committee/board where representative of the management is also ensured.

- Recruitment based on requirement especially for well qualified individuals with significant preference for those with already secured funded research projects.

- New recruits encouraged to provide exposure of respective areas of expertise to students to gain advantage

- Faculty and research staff also recruited through School being a host institute for women with break in career and applying for multiple schemes e.g. BioCARe, WOS etc.

6.3.8 Industry Interaction / Collaboration

The Corporate Relations wing of CIR focuses on achieving the following functions:

- To build and maintain excellent rapport with the top management of various organizations and industries and forge collaborative industry-academia alliances.

- Initiating Memoranda of Understanding with major companies, research agencies and institutions to fetch funded projects and bring about improvement in infrastructure and teaching methodologies to enhance exposure of students and faculty to industry practices and developments in technology.

- Facilitating visits by senior industry leaders for interaction with faculty and students.

- Securing sponsorships from industry for technical events like conferences, seminars, symposia, workshops and student contests through strategic relationships.

- Seeking the help of companies to spare working products / prototypes for academic demonstration purposes.

- Facilitating in-plant training, industry visits, summer and final semester internship for students across all disciplines and campuses.

- Soliciting support from highly reputed companies each year for the Corporate Action Plan with respect to engineering, management, biotechnology and other disciplines.
- CIR has signed several win-win Memoranda of Understanding (MoUs) with the industry, leading to mutual collaboration of Amrita and various companies.
- The interface with the industry is maintained by the Corporate and Industrial Relations (CIR) department for all the schools in the university. But we do have a lot of industry interaction apart from the CIR. All our students do a ten week Summer Internship Project at different organizations. Our faculty members interact with industry as consultants, trainers etc. Many industry experts come to us as Colloquium speakers where they address our students, faculty and staff members as a part of the Colloquium guest lecture series. Many of our alumni from the industry visit us from time to time and give us their inputs. Many of them also contribute in the Alumni Boot Camps that are held once every year to help our graduating batch prepare for their placements. Some of our faculty members also take feedback for their course outlines from industry experts. Experts from the industry are also valuable members of our Board of Studies and thus contribute immensely to the administration of our School.

Other specific points:
- Micro, Small and Medium Enterprises (MSME) Development Institute (Under the Ministry of Industries, Govt. of India) – Business Skill Development Programme (BSDP)
- BITS PILANI (WILP Programme)
- CUMI (Carborandum Universal Ltd.)
- Computer Society of India
- Membership to professional bodies – Confederation of Indian Industry (CII) – Sept 2013
- Technical talks by industry experts are arranged by the placement cell for the benefit of students
- Invited talks of industrial experts are arranged
- Faculty interaction in safety environmental industrial related problems in the nearby industries
- Students internships and projects in industries
- Industrial electives are offered

6.3.9 Admission of Students

To ensure publicity and transparency in the admission process, a separate admissions department exists, and they advertise in local & national dailies, and in our website (www.amrita.edu).

**Arts & Sciences**
- Advertisements in Matruvani, leading newspapers and in Web Site.
- Receiving Applications and Data Entry
- Prepare Merit list based on Marks in Qualifying Examinations (for U.G. Programme)
- Prepare Merit list based on Marks in Qualifying Examinations and Aptitude Interview for P.G.
- Call candidates for Counselling and Admission
- For M.C.A. Admissions follow the common Amrita Entrance Test, Interview Process etc.
- Inaugural Induction session (Common)

**Ayurveda**
- Advertisement
- Written Entrance Exam
- Counselling

**Engineering**
Admission of B.Tech. students is based on eligibility criterion and rank in the All India Entrance Exam conducted by the University. To maintain quality of students, an aggregate of 60% is prescribed as minimum score in Maths, Physics and Chemistry in Higher Secondary Exam. Additionally, the high ranks in the entrance exam assure quality of the students admitted in B.Tech. programmes. Admission is done through counselling in order to admit students based on their aptitude.
Biotechnology
National level entrance exam followed by stringent interview process for PG programs
High demand for UG programs based on class XII scores.

Many improvements have been made in the admissions process in the last few years. For example, now our application forms can be downloaded from our website and the entire admission process related documentation has been computerized. To ensure that our admission process gets wide publicity we place advertisements in major national and regional newspapers. The admission details are also updated on the University and School website. The school has a tie up with online service providers such as Shiksha.com, MBA Universe, Pagalguy.com, MingleBox.com etc., to promote the school online and to provide the details about the School and the admission process. Facilities are provided to students to apply online through Shiksha.com. We take students only with a good CAT/XAT/GRE/GMAT score to ensure that the quality of our students admitted to the school is good.

Health Sciences: Through All India Entrance conducted by the Amrita Vishwa Vidyapeetham University for MBBS/MD/MS/DM/M.Ch./PG Dip and through written test or interview for all other programmes.

6.4 Welfare schemes for

<table>
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<tr>
<th></th>
<th>Teaching</th>
<th>Non teaching</th>
<th>Students</th>
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</table>

Medical facilities are easily available to the staff of each school. Suitable arrangements are made to take the students to the hospital whenever advanced medical assistance becomes necessary. Teaching: Subsidized food, accommodation and health care benefits, Staff quarters, Transportation, maternity leave, sabbatical leave. Non teaching: Subsidized food, accommodation and health care benefits, Staff quarters, Transportation, maternity leave, sabbatical leave, orientation program for newly joined faculty. Teaching skill enhancement programs during weekly faculty meetings, Industrial visits, cash Incentive for Publications – based on Journal Impact factor, Sabbatical leave for Thesis/book writing, Reduction of workload for faculty involved in research projects

Students: Health care benefits, Motivation and support to attend conferences, Industrial visits, Job oriented training programs, Presentation skill (seminars) enhancement programs, Support for International travel to attend conference, Group Medical Insurance

Non teaching
• Training & Skill Development
• Motivation for acquiring higher qualification
• Multi tasking capability enhancement initiative by providing exposure in diverse technological domains, Industrial visits
• CEN provided training in Aquophonics, a new field of research

6.5 Total corpus fund generated
NIL

6.6 Whether annual financial audit has been done
Yes X No
6.7 Whether Academic and Administrative Audit (AAA) has been done?

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<thead>
<tr>
<th>Audit Type</th>
<th>External</th>
<th>Internal</th>
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<tr>
<td></td>
<td>Yes/No</td>
<td>Agency</td>
</tr>
<tr>
<td>Academic</td>
<td>X</td>
<td>NAAC</td>
</tr>
<tr>
<td>Administrative</td>
<td>X</td>
<td>NAAC</td>
</tr>
</tbody>
</table>

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

For UG Programmes
Yes [X] No [ ]

For PG Programmes
Yes [X] No [ ]

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

The IQAC constantly endeavours to collect feedback from various sources on exam policies, procedures, and student performance, and based on that various meetings are arranged (department level, UG Programs Committee, PG Programs Committee, Academic Council, etc.) to discuss and make improvements. This has led to numerous reforms including changes in the grade point system (letter grades and points), requirement for award of distinction, requirements on publishing journal & conference papers, administration and evaluation of curricular projects, weights associated with evaluation components of a subject, components of continuous assessment in a course, structure of a question paper, etc.

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

NOT APPLICABLE

6.11 Activities and support from the Alumni Association

The Alumni Association contributes various services to the institution in general and to the students opting for higher studies and getting employment in particular.

Involvement of Alumni
- Involvement in curriculum development
- Conducted seminars for the students
- Conducting interactive sessions for students and providing opportunities for students in worldwide universities
- Support for projects/SAE activities
- Feedback for the Alumni is being continuously received for academic development and career opportunities for students
- Contributing books to the department library.
In the department of social work a social media group is created by the alumni members and through that they shared the field experiences and career opportunities. Using the facility, the current students shared the department level activities along the alumni members.

- Information about placement/job openings across the country
- Recommendations for curriculum modifications based on industry requirement
- Visits from Alumni to provide guidance to graduating students
- Arranging industrial visits/educational trips
- Invited talks are arranged
- Internships for students
- Industrial visits
- Alumni entrepreneurs motivate students

School of Management
Our alumni have enthusiastically participated in the alumni boot camps being organized for the last three years to help our students prepare better for the placements. They tutor our students in various skills such as preparing an attractive CV, facing group discussion, interviews, etc., the qualities that industry looks for in a fresh MBA, some important concepts that are essential for different functional areas etc. Our alumni also participate in the admission process by helping us organize the admissions interviews at different locations. Some alumni who have become entrepreneurs have started to give summer placement projects as well as recruit our graduating students.

School of Medicine
Annual Alumni meetings were conducted. One international alumni association is formed at USA where more than 25 members are available. The number of international students/elective trainees joining the institution is increasing every year due to the active participation of the alumni association.

Dentistry:
We have a strong alumni association. The Alumni members take part an active role in the activities of the college like Amritasmitham and dental camps.

6.12 Activities and support from the Parent – Teacher Association

There is constant interaction between counsellors and parents which helps to provide timely support and encouragement to students in times of need. The faculty coordinators and other faculty members are often in touch with the parents. Additionally, when there is a disciplinary problem or if there is poor performance in the examinations, the parents are contacted over the phone and counselling is held with parents. The Amrita Parent Portal at the University Web Site enables the parents to assess the progress of their ward:

- Parents can contact the faculty any time
- Interactions between the parents and the teachers regarding the support & progression of their respective wards in academic & personal aspects.
- Parents who are working in core sector support the co-curricular activities through guest lectures and advise the department on matters pertaining to curriculum and career opportunities.

Health Science Campus:
We have an active parent teacher association. Parents share their views to improve the hostel facilities and various academic activities. Annual Parents meetings are conducted after declaration of results of the first year university examination. Parents can meet the Principal and the Head the Departments to discuss the performance of the student and measures to improve the results.
6.13 Development programmes for support staff

- Staff Development programmes (lectures/workshops/training programmes) are conducted regularly by the HR department or by individual departments. The training includes:
  - Computer training
  - Internet
  - Audio-visual aids
  - Computer aided packages
  - Yoga and meditation
  - Additionally, non teaching staff members have been encouraged to continue for higher education (there are instances of staff moving on to MTech, MBA & even PhD programmes) or for specialized programs like Agripreneurship
- Development programmes, workshops, conferences, symposia etc., are conducted for knowledge update and skill enhancement
- Some of the courses offered to students are also opened out to non-teaching staff
- Live demos are conducted by the industry representatives to make staff aware about the products supplied to the laboratory.

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

- Eco-friendly campus
- Energy Conservation
- “SEED” Programme by Mathrubhumi
- Vegetable Cultivation
- Samskriti Charity work in Wayanad tribal colonies (Kerala)
- Installation of 5 street lights of 15 watts within the campus and Solar water heaters of the capacity of 7000 lts cater to the needs of the hostellers
- Employment of Effective Microorganisms System (EM system) for conversion of food waste into manure.
- Commemoration of Earth Day to rekindle public awareness & support for environment protection through a talk and short film competition. (PRUTHVI)
- Segregation of degradable and non-degradable waste is done in the college campus and the degradable waste is taken for composting and plastic waste for recycling.
- Food waste and vegetable wastes from the canteen are also taken for composting, bio gas plant and are used as fertiliser for gardens.
- We have a nature club that takes care of eco-friendly activities in the campus. Tree plantation, rain water harvesting, recycling of waste water etc., are some of the initiatives taken by the institution.
- Awareness programme through nature club
- Water conservation and rain harvesting
- Use of renewable energy
- Planned power shutdowns in hostels during periods of low occupancy.
- Phasing out of incandescent lamps and partial phasing out tube-lights in favour of CFLs.
- Minimizing of air conditioner use through management controls
- Large scale tree plantations within campus and in neighbouring village
- Hazardous waste management
- The only hazardous waste that we generate is, from the chemicals that are generated during the regular lab experiments involving the ordinary chemicals used in the UG studies. These chemicals are collected in separate containers and discharged at the engineered land sites.
- Effluent Water Treatment plant treats the effluents with EM (Effective Micro organisms) and the treated water is reused inside the campus.
- Amala Bharatam Campaign has been taken up by the faculty, staff and students to raise awareness about hygiene inside the campus as well as the neighbouring village.
- Amrita Solid waste recycling centre treats the solid waste generated in the campus.
- Biomedical waste disposal: segregated, treated and disposed as per the color coding; State of the Art cleaning equipments; Campus with abundant greenery; Incinerator; Permanent staff for maintenance.
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.

- Department level seminars develop confidence of students in presenting papers in conferences.
- Systematic monitoring of academics.
- Introduction of OMR system in admission (Optical Mark Recognition).
- Attendance monitoring: Information to the parents in case of habitual absences and / or students with continuous absence of more than 5 days.
- Monetary incentive for journal publication of research papers in leading journals.
- Focus on project/case/problem based and experiential learning.
- Introduced another multi-disciplinary project ‘mysangham’ - A vocational educational portal.
- Inclusion of frontier areas such as Cyber Physical systems.
- Arranged a 2 week rural internship programme as a part of 101-Village project taken up by Mata Amritanandamayi Math during vacations.
- Launched a project called Serve an Hour as part of which children of nearby 100 schools were given lessons on environmental protection, drug abuse, misuse of technologies and ethics and values.
- Amrita Sanjeevani and green campus initiatives forums arranges number of programmes on societal issues like Sabarimala cleanup drive, Organic Gardening, Street plays.
- All the Students are encouraged & guided to do the Hardware Projects in the college & they are also motivated to present in the Conference. The registration and travel are supported by the management.

Some department level initiatives are given below:

Department of ECE
The evaluation of final year project (for both UG and PG students) is carried out in a transparent fashion with the student progress, marks allotted and any issues being documented in the Project Log Book after each periodic review. The Project Log Book is made available to the student immediately after the review so that he/she can go through it and see the marks obtained as well as the comments of the reviewers. Any issues can immediately be taken up with the project review committee.

Department of EEE
Planned and implemented faculty training program to enhance their practical know how and thus improve their project guiding capabilities during all working Saturdays.

Department of Sciences
Seed money given to young staff to initiate research, Faculty encouraged to apply for funded projects

Department of Communication
- Dedicated news room for the purpose of current affairs programme and television news production.
- High Definition support Studio System for the purpose of students training.
- Campus Beats – Students practice journal of Department of Communication.
- Weekly Reporting, Hands on practical training with the industry and regular interaction with media experts.

Department of Mechanical Engineering
- In B.Tech Program, Paper publication in International/National conference/Journal is mandatory for the award of distinction.
- In M.Tech Program, Paper publication in International/National conference/Journal is mandatory for the award of degree.

**Department of Chemical Engineering & Materials Science**
- Centre of Excellence in Advanced Materials and Green Technology has been established with the participation and support of multi-faculty from multi-disciplines
- All faculty from the department are directly or indirectly involved in the research activities of the Centre

**Department of Social Work**
- Moving away from the focus on clinical approach to community approach
- Addressing the issue of climate change and incorporating the same in the traditional community development specialization

**Department of CSE**

<table>
<thead>
<tr>
<th>Innovation</th>
<th>Outcome</th>
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</table>
| **State-of-the-Art Technologies & Innovations** | • Google Product Prodigy (75 participated)  
• GETVU ($25,000 award money + internship at SFO, US) |
| • Identify students with potential in coding/designing and development of software who are waiting to exhibit their technical talents.  
• Encouraged them to participate in national and international projects contests. | |
| **Contribution to Computing Community** | • Google Summer of Code (5 students)  
• GlitterGallery tool for Graphics design – Saroop Banskota  
• Fire Fox - Mozilla Developer (5 students)  
• Sarup Banskota  
• GardenCity Ruby Conf 2014, introduction to GlitterGallery  
• Mysore Ruby meetup 2014, introduction to the Grit ruby library  
• FOSSASIA 2014, Getting started with FOSS techniques  
• FOSSASIA 2014, Bringing GlitterGallery into Fedora  
• Libre Graphics Meeting 2014, Taking the designer's office online  
• EuroPython, Berlin |
| • Created an awareness on open source by conduct of workshop/ training to students  
• Motivated them to solve open issues/bugs in open source tools  
• Develop tools using open source platforms for the computing community | |
| **Exploring Research** | • Research Publications .  
• Presented work/papers in  
• AdhocNow-2014, Spain  
• Asian Summer School, Japan  
• Augmented-Reality World Expo 2014 @ Santa Clara, California |
| • Identified students who have interest/potential in research  
• Associated them with research labs of the department  
• Co-work with researchers/ JRFs/ PG research scholars  
• Summer & Winter in-house internship projects | |
Biotechnology
• Active involvement of faculty in mandatory research projects for final semester B.Sc. Biotechnology and Microbiology programs. 18 separate group projects yielded high quality data with several publications being submitted and one international publication already published
• Focused effort to support students (Final semester, MSc. Biotech, Microbio, Bioinfo) to secure final semester 6 month project positions at premier research institutes and pharmaceutical/ biotechnology companies (e.g. TIFR, NCBS, IISc., CCAMP, IGIB; Biocon, Piramal Life Sciences, Lupin)
• Multidisciplinary combined effort by faculty to be selected for Gates Foundation/DBT/BIRAC Grand Challenge Sanitation Innovation Award Proof of Concept Project.

Assurance of Learning goals were measured for Ethical Reasoning and Environmental Awareness on a pilot basis this year. This new process has compelled the faculty members to focus on the specific learning goals that their courses will impart to the students. They are also required to mention in their course outline which learning goal/s is/are relevant to their course. Every course would have to cater to at least one of the Learning goals to stay relevant in the curriculum.

School of Medicine
The Amrita clinical skill Simulation Center started in 2013, first in India, caters to all the clinical departments with in-house & exported mannequins, and is a major innovation introduced by the School. Simulation based medical education is an Innovative, Noninvasive Medical-Surgical Technology and Education; various clinical procedures –skills- are practiced on artificial human body parts made of silicon rubber & PVC.

Pharmacy
• Clinical clerkship in M.Pharm Pharmacy Practice (10 credits)
• Hospital Pharmacy Posting for B.Pharm and Pharm D

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

School of Engineering
• Conducted FDP and invited talks. Promote student involvement in extra curriculum activities.
• Extension of Academic Block
• To raise the level of ANTARPRERANA to state level – Attracted participation from more number of colleges.
• To organize company visits for Management and Computer Science students – 3 such visits were organised.
• Student associations of different departments to conduct competitions for the students of the other stream. – Conducted once a semester.
• Extending the use of AUMS even to the parents through registration to parent portal – effective from 2013 admission onwards
• Extension of AUMS to registration process including endorsement from accounts section - effective from 2013 admission onwards
• Organize more extension activities – A 5-day free computer training programme for housewives and other interested persons was conducted.
• To establish industry interface through membership to professional bodies like CII (Confederation of Indian Industries) – Became an Institutional member since September 2013.
• Construction of a ladies hostel – Plan sanctioned
• Separate canteen set up to start services from 2013-14 – Functional from November 2013.
• Setting up a gymnasium – Set up in January 2014.
• Setting up of an additional computer lab with high end systems – **Set up with 36 systems with high end configuration.**
• Asphalting of road within the campus – **Done**
• Installation of surveillance camera at strategic points on the campus – **46 cameras are fixed**
• **The authority has applied for PG and faced inspections from the Apex Body to get the approval for PG Programmes**
• **Proper Actions have been taken to improve the infrastructure**

Department of Chemical Engineering & Materials Science
• Implemented the policies with regard to enhancing the teaching learning process
• Implemented the R&D policies by which major funding for research was received from MHRD, UGC-DAE, NRB and ISRO
• Many student projects were made research oriented that resulted in submission of research papers
• As a result of the continued encouragement of the department for students to appear for GATE, GRE etc, students have secured admission for higher studies in premier institutes in India and abroad

Department of Communication
• Department decided to start CRS and action taken
• Introduction of new courses – **Action under process**
• FDP planned and conducted

**Biotechnology**

<table>
<thead>
<tr>
<th>Plan of Action</th>
<th>Action Taken Report</th>
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<tbody>
<tr>
<td>Implementation of a new cell biology lab.</td>
<td>Two new research grants from CSIR, KSCSTE for research in cancer, wound healing</td>
</tr>
<tr>
<td>Upgradation of the Amrita Agilent Analytical research Centre for proteomics research.</td>
<td>The existing MS facility was strengthened through the induction of a nano HPLC system for enhanced capability in proteomics related work.</td>
</tr>
<tr>
<td>Initiation of a research lab for renewable energy sources and technologies.</td>
<td>A grant proposal on microbial fuel cell submitted to MNRE, Govt. Of India.</td>
</tr>
</tbody>
</table>

We had planned five things at the beginning of the Academic Year. Following is the Action Taken Report on each one of them:

1. A committee comprised of faculty members was set up to develop the new Performance Management System. This new system was developed by the team and has been accepted by the management.

2. A new Research Seminar Series was launched in July, 2013 as planned. 12 research seminars were conducted as a part of this seminar series.

3. Our students actively participated in a number of events and won a number of laurels for the college.
4. Many of our faculty members participated in various conferences, seminars and FDPs.

5. Out of the five learning goals that the school has chosen, four were measured and the fifth one viz. global, societal and environmental awareness was partially measured. We could not measure the societal awareness component as the societal awareness component as the instrument is yet being developed.

**Dentistry**
1. Successful completion of dental council inspections for the final MDS in 3 specialities.
2. Increase in research activities by classes which results in increase in number of research projects among faculty and students.

<table>
<thead>
<tr>
<th>Pharmacy</th>
<th>Plan of Action</th>
<th>Achievements</th>
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<tbody>
<tr>
<td><strong>Academics</strong></td>
<td></td>
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</tr>
<tr>
<td>Hospital pharmacy posting for B.Pharm and Pharm D students</td>
<td>Initiated posting for B.Pharm seventh semester students in different satellite pharmacies in hospital for two months</td>
<td></td>
</tr>
<tr>
<td>Implementation of M.Pharm Semester system with grade from 2013 academic year onwards</td>
<td>Started M.Pharm semester system with grade in three specialisation (M.Pharm Pharmaceutics, M.Pharm Pharmaceutical Chemistry, M.Pharm Pharmacy Practice) from the academic year 2013-14.</td>
<td></td>
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<tr>
<td><strong>Research</strong></td>
<td></td>
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<tr>
<td>Organising seminars and conferences once in a year.</td>
<td>Conducted two days conference on Pharmaceutical research on “Challenges in drug delivery research” by Dept. Of Pharmaceutics on November 8th &amp; 9th, 2013.</td>
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<tr>
<td>Increase indexed publications</td>
<td>25 Nos. of publication are scopus/Elsevier indexed</td>
<td></td>
</tr>
<tr>
<td>Increase funded projects</td>
<td>13 student projects and 3 major projects</td>
<td></td>
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<tr>
<td>Promote faculty participation in conferences</td>
<td>All the faculty have attended conferences and three faculty have presented in conferences, including one oral presentation in an International conference in Japan. One of the faculty received best research paper award in the 3rd Annual National Convention of the Association of Pharmacy Professionals (APP) at Gujarat</td>
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7.3 Give two Best Practices of the institution (*please see the format in the NAAC Self-study Manuals*)

Innovative practices are presented as examples of the university’s continuous efforts towards quality improvement in applied research, teaching, and administrative aspects.

1. Peer Evaluation in Amrita School of Arts & Sciences, Amritapuri
We conduct peer evaluation of the lecture classes of all faculty members twice in a semester. The lecture of each faculty member is evaluated by two other faculty members of the department. All the members of the department are involved in the process.

Objective of the Practice: The objective of the ‘best practice’ is to improve the quality of the lecture classes and also to point out and rectify defects, if any, so as to make the classes more effective.

The Context: The young faculty members get good opportunity to share the experience of senior faculty members in teaching. This will help them to develop a good teaching methodology. The weakness or defects, if any, can be rectified. The overall performance of the Department can be improved. A cordial relation among the faculty members can be developed.

The Practice: Two members of the faculty will make the evaluation of the lecture class of each faculty member. Prior information will be given to the members. Also all the members will involve in the process of evaluation. The evaluation team will submit a report of the evaluation to the Head of the Department. The Head of the Department will make detailed discussion with the concerned faculty about the report. This will enable the faculty to take necessary changes, if any, in the teaching method.

Evidence of Success: The regular increase in the TEI score of most of the teachers is a clear evidence for the success of the practice.

Problems: For the implementation of the ‘best practice’ no special resources are required. As all the faculties of our institution whole heartedly welcome the practice, no problem is encountered in its implementation.

Amrita School of Ayurveda, Amritapuri

- Introductory classes by the experts as a bridge to enter into the learning
- Ten days language classes to easy the learning process.
- Special class provided for the exam going batch for a particular course (subject)

Amrita School of Business, Coimbatore

(i) One best practice that we have adopted since the beginning of our school is to give a lot of importance to the education for life courses such as Self Awareness and Personal Growth, Managerial Values and Business Ethics, Environmental Management, Management Beyond Profit, Management of Self for Success and Happiness etc. We have also encouraged our students to participate in social sector projects such as the village outreach programme, Amala Bharatham (Clean India) campaigns, Blood Donation camps etc. These efforts that we make help us to sensitize our students to the problems faced by the bottom of the pyramid segments of our society and also help them to realize the importance of values and ethics in their careers. As a result of this, our students are recognized by the industry as very sincere, grounded and ethical. This is helping us to develop good relations with many of our recruiters.

(ii) Second best practice is what we have started in the last two years. This is the Assurance of Learning program. As a part of this innovative program, the school has adopted five learning goals which are (i) critical & integrative thinking, (ii) global, environmental & societal awareness, (iii) effective communication, (iv) ethical reasoning, and (v) leadership skills. We have visualized a system where the pedagogy focuses upon the actual student learning and how it can be demonstrated through actual measurements. All these five learning goals would be measured at different points in different courses. We would have internal targets for each of these learning goals which would then be compared to actual achievement. For example, for ethical reasoning, the target for the year 2013-14 was that at least 60% of the students would demonstrate acceptable level of ‘ethical reasoning’ ability. This was measured through a question in the End Term examination of Managerial Values and Business Ethics which is a core course. After the results are obtained from the measurement, analysis is conducted with the entire faculty body to learn from the process. This last part tells us where we can improve the pedagogy and also should we further increase the target. For example, in the above mentioned course, around 66% of the students demonstrated acceptable level of ‘ethical reasoning’ ability. But they did not do so well on one component of this skill viz. application of theories to analyse a given Business Ethics situation. So,
the concerned faculty has decided to raise the overall target for the year 2014-15 to 70% and has modified his course structure to teach the relevant theories better

7.4 Contribution to environmental awareness / protection

- Eco-friendly campus
- Energy Conservation
- “SEED” Programme by Mathrubhumi
- Vegetable Cultivation
- Samskriti Charity work in Wayanad tribal colonies (Kerala)
- Installation of 5 street lights of 15 watts within the campus and Solar water heaters of the capacity of 7000 lts cater to the needs of the hostellers
- Employment of Effective Microorganisms System (EM system) for conversion of food waste into manure.
- Commemoration of Earth Day to rekindle public awareness & support for environment protection through a talk and short film competition. (PRUTHVI)
- Segregation of degradable and non-degradable waste is done in the college campus and the degradable waste is taken for composting and plastic waste for recycling.
- Food waste and vegetable wastes from the canteen are also taken for composting, bio gas plant and are used as fertiliser for gardens.
- We have a nature club that takes care of eco-friendly activities in the campus. Tree plantation, rain water harvesting, recycling of waste water etc., are some of the initiatives taken by the institution.
- Awareness programme through nature club
- Water conservation and rain harvesting
- Use of renewable energy
- Planned power shutdowns in hostels during periods of low occupancy.
- Phasing out of incandescent lamps and partial phasing out tube-lights in favour of CFLs.
- Minimizing of air conditioner use through management controls
- Large scale tree plantations within campus and in neighbouring village
- Hazardous waste management
- The only hazardous waste that we generate is, from the chemicals that are generated during the regular lab experiments involving the ordinary chemicals used in the UG studies. These chemicals are collected in separate containers and discharged at the engineered land sites.
- Effluent Water Treatment plant treats the effluents with EM (Effective Microorganisms) and the treated water is reused inside the campus.
- Amala Bharatam Campaign has been taken up by the faculty, staff and students to raise awareness about hygiene inside the campus as well as the neighbouring village.
- Amrita Solid waste recycling centre treats the solid waste generated in the campus.
- Biomedical waste disposal: segregated, treated and disposed as per the color coding; State of the Art cleaning equipments; Campus with abundant greenery; Incinerator; Permanent staff for maintenance.

7.5 Whether environmental audit was conducted? Yes No

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)
8. Plans of institution for next year

Curricular Enhancements
- Revision of B Pharm syllabus and switch over to grade system
- Continue to enhance academic programs with inclusion of updated cutting edge areas e.g. Advanced Discovery Biology, Advanced Analytical Chemistry, Ayurvedic Biology
- Introducing flexibility in concurrent fieldwork placements to maximize learning by using maximum learning opportunities.
- Inducting macro level community orientation
- Encourage the students to pick up any random news item from the newspaper and explore what implication it has to the students’ area of specialization.
- Learn from the alumni for minimizing the mismatch between the inputs given in the training situation and the demands of the job situation.
- To introduce an elective course on ‘Women and Society’

New Programs / Program Renewal / Increase in intake
- Commence M.Ch. in Gynaecological Oncology and M.Phil. in Clinical Psychology programs
- Seat increase in DM Endocrinology program
- MCI recognition for the programmes commenced in 2012 (3Nos) and re-recognition of programmes (16Nos)
- To make the Institution to the forefront of dental education, we are planning to increase the PG seats in all specialities.
- Starting B.Sc (Visual Communication) and MA (Media Management)
- Starting of five year integrated M.Sc program in Statistics and Informatics
- Starting M.Tech programme in Industrial Mathematics
- Start PhD programme in Ayurveda

Faculty & Staff Development
- Faculty will be encouraged and facilitated to increase their research output to at least one peer reviewed publication every year
- To implement the new Integrated Performance Review System effectively and to ensure that it motivates faculty to increase the quality and quantity of their contributions
- To conduct more quality improvement programmes for non teaching staff

Research & Consultancy Enhancement
- To get more funded research projects and collaborations.
- To organise more International Conferences
- To encourage our faculty members to participate in research conferences, seminars and Faculty Development Programs conducted by other reputed institutes and organizations
- To give a significant boost to conducting Management Development Programs this year
• To help the students, staff and faculty members by providing all the resources that they need to cope up with this additional requirement of the Masters’ thesis. Workshops would be conducted for the students, A course would be introduced on ‘Research Methodology’ in the curriculum and additional office support will be provided to cope with additional load
• To revise the curriculum to integrate the new requirement from the university of a Masters’ level thesis which every MBA student needs to submit before graduation
• Strengthen interdisciplinary, multifaceted research programs e.g. Gates Foundation, Sanitation care, Diabetes care.
• Increase collaboration with leading Institutes for enhancing academic programs/research capabilities: IISc, IITB, TIFR, IGIB.
• Joint academic and research programs with sister institute ‘Amrita Center for Nanosciences and Molecular Medicine’ to be able to jointly harness the strengths of the two campuses
• To have more industry related projects
• To set up more industrial consultancy projects
• Setting up a Centre for Discrete Mathematics. Funding for this centre will be obtained from Department of Science and Technology (DST).
• To conduct a two-day seminar on women’s writing
• Arrange National/International Conferences in the area of Biosensors, Fuel cells

Infrastructure Enhancement
• Increase number of inpatient beds from 1250 to 1500
• Increase the infrastructure facilities so as to enhance the MBBS seat from 100 to 150
• To upgrade the structural engineering laboratory
• Completion of Herbal Garden (Ayurveda)
• New PG block & PG Hostel (Ayurveda)
• Animal House (Ayurveda)
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• To upgrade the structural engineering laboratory.
• Completion of Herbal Garden (Ayurveda).
• New PG block & PG Hostel (Ayurveda).
• Animal House (Ayurveda).

Name **PRASHANT R. NAIR**

Signature of the Coordinator, IQAC

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Revised Guidelines of IQAC and submission of AQAR
Annexure I

Abbreviations:

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

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