Chettinad
Academy of Research & Education
(Deemed to be University Under Section 3 of the UGC Act 1956)

SELF STUDY REPORT - Volume I
Cycle 2

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Criteria wise Input

Submitted to
National Assessment & Accreditation Council
Bengaluru
September 2015

CHETTINAD ACADEMY OF RESEARCH AND EDUCATION

SELF STUDY REPORT VOLUME 1

PREFACE

Chettinad Academy of Research & Education (CARE) was established as a Deemed to be University under Section 3 of the UGC Act, 1956 on the 4th of August, 2008. The two constituent colleges that come under the University are: Chettinad Hospital and Research Institute with academic programs under the Faculty of Medicine and Faculty of Allied Health Sciences and Chettinad College of Nursing under the Faculty of Nursing. The University is located at Kelambakkam, a rural area about 45 kilometers from Chennai. The campus extends over an area of 33.45 acres with the built-up section covering 51,557.54 sq.mts.

Chettinad Academy of Research & Education was accredited by the National Assessment & Accreditation Council on the 28th March, 2010 with Grade B and a CGPA of 2.83. The Internal Quality Assurance Cell of the University was established on 1.06.2010. Going for NAAC in the early years of its inception has enabled the University to make a beginning in the right direction with internalization of the documentation and quality processes required for an academic Institution. In its pursuit of quality, the University has been submitting the Annual Quality Assurance Report to the NAAC annually, subjecting itself to the inspection and compliance of the various regulatory bodies, such as Medical Council of India and Indian Nursing Council. The University adheres to the guidelines stipulated by these regulatory bodies and the University Grants Commission. The IQAC of Chettinad Academy of Research and Education has been very active in organizing programs periodically related to quality for the internal faculty as well as faculty from other organizations. The IQAC conducts periodic Academic Audit of the University. Now it is my pleasure to submit the NAAC Self Study Report – Cycle 2 for the reaccreditation process and we look forward for inspection by the NAAC Peer team.

10/09/2015

(Dr. K. RAVINDRAN)

VICE CHANCELLOR
Chettinad Academy of Research & Education

Rural / Urban Distribution of Students
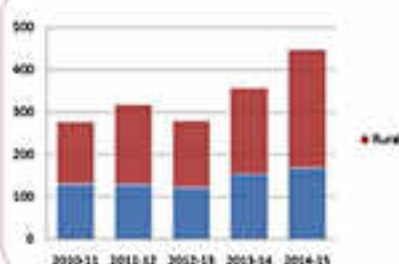
Sex wise Distribution of Students
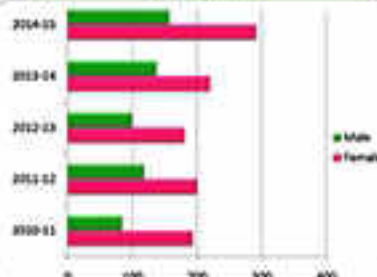
Publication
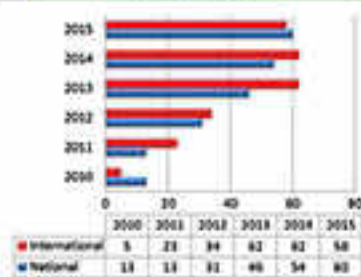
Chettinad Academy of Research & Education

Citations per Year
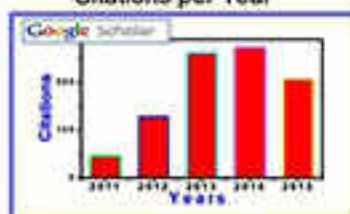
Google Scholar	All	Since 2010
Citations	954	947
h-index	12	12
i10-index	17	17

Citation indices	All	Since 2010
Citations	662	657
h-index	10	10
i10-index	14	14

Faculty Enrichment Program

Outreach Programs

Intercollege/Interuniversity Sports Awards

Executive Summary

CRITERIA 1: CURRICULAR ASPECT

In 2008, the Ministry of Human Resource Development on the advice of University Grants Commissions conferred the Deemed to be University status on Chettinad Academy of Research and Education under section 3 of UGC act, 1956. In conformity with the Vision and Mission statements of the University, 51 academic programs in faculty of Medicine, nursing and Allied Health Sciences ranging from undergraduate to Research are being offered. This includes 7 undergraduate, 35 post graduate, 1 postgraduate diploma, 7 superspeciality courses and Doctor of Philosophy.

The University follows a three step systematic process in developing the curricula that includes studies by the local enquiry committee on the feasibility and justification for starting the course, discussions in the Board of Studies and approval by the Academic Council and the Board of Management. Curriculum design and review is periodically done by the curriculum committee which has been formed for undergraduate and postgraduate programs in each of the faculty separately. Design and development of curriculum are based on community/industrial needs, employability and scope for academic progression. Major revisions are done based on the regulatory body guidelines. Minor revisions are done annually (if any) based on the feedbacks from various stakeholders.

Skill-oriented courses initiated in the last five years include Postgraduate Diploma in Clinical Embryology, Medical Bionanotechnology, Occupational Health and Industrial Safety, Clinical Research and Experimental Medicine etc. The University has also introduced value-added courses like Basic Life Support, ACLS, courses on IPR & Ethics, Health Economics, Yoga, Complementary Medicine, Communication skills etc. In the last five years, 9 postgraduate courses in emerging areas have been introduced. Teaching schedules are designed to allow for vertical and horizontal integration in the learning process. Core and elective options have been introduced for the undergraduate and postgraduate courses in Allied Health Sciences. Semester system is followed for 32% of the courses.

The institution promotes personality development and emphasizes the physical, mental and emotional well-being of students. The indoor and outdoor games facilties, gymnasium, yoga centre and the indoor auditorium complements in this process.

Feedback obtained on the curriculum and evaluation are analyzed and placed before the board of studies of the respective academic program, reviewed and then placed before the academic council and board of management for approval and incorporation into the syllabus of the academic program.

CRITERIA II: TEACHING LEARNING AND EVALUATION

Information on student enrolment for the various courses is advertized in regional and national news papers and is made available in the Institutional website. The University also participates in career guidance exhibitions and arranges teachers to visit matriculation schools and distribute pamphlets and posters on career options. Guidelines of MCI and INC are followed for admission for courses in Medicine and Nursing. Admission for undergraduate and postgraduate courses in the Faculty of Medicine is based on marks scored in All India Entrance Examinations conducted by the University held in four centers in the country followed by counseling. In the Faculty of Nursing and Faculty of Allied Health Sciences, selection for the undergraduate and postgraduate courses is based on merit in qualifying examinations and personal interview. Admission for Ph.D program is made as per UGC guidelines based on performance in a written examination and interview as per UGC guidelines 2009.

Equal opportunity for entry for all the courses based on merit is provided for all categories of students including those belonging to SC/ST and OBC. Ratio of female students is more in all the courses. Students in faculty of Nursing and Allied Health Sciences are first generation graduates from rural and semi urban areas. Structured orientation programs are arranged for all new entrants.

Qualified and accomplished teachers form the back bone of the University offering quality teaching using latest teaching aids. Teaching is more learner centered with active teaching methodologies. All clinical teachings are handled in the tertiary care hospital, rural and urban health centers attached to the University. CARE has implemented a computer-based Learning Management System (LMS) wherein instruction is concept-focused and principle-driven, allowing students to participate in the learning process at their own pace. Faculty update their knowledge on contemporary teaching learning techniques by attending faculty development programs, Medical Education Technology workshops etc. conducted in the University and in the MCI Regional Center at CMC Vellore. Recruitment of faculty is based on the guidelines laid down by the regulatory bodies by the selection committee with advertisements given in national dailies and website of the University.

The University gives due weightage to the formative and internal assessments. Performance in these also makes the candidate qualify to appear for the summative assessment examination. The examinations are conducted by duly appointed examiners by the office of the controller of examinations. Transparency in evaluation is emphasized with external examiners, coding of answer scripts, answer keys, double evaluation, etc. Examination manual gives clear direction on handling any malpractice by the students. The examination system has been computerized. Programmers of the Institution have developed a special software 'Examination Management System' based on Visual Studio 2008 and SQL Server 2005. The Integrated Examination Platform is designed to ensure effective operational steps, transparency and confidentiality of all examination-related processes – Pre-examination, examination and post-examination.

CRITERIA III: RESEARCH, CONSULTANCY AND EXTENSION STUDENT

CARE established the Board of Research Studies in 2008 with two external members. This was followed by the establishment of the Research Advisory Committee with nine external members, Internal Review Board, Institutional Ethics Committee, Animal Ethics Committee, Dissection Monitoring Committee and the Plagiarism Standing Committee.

The institution has focused on community health needs and research in biomedical sciences. The thrust areas in research include: nanotechnology and biotechnology, human genomics and genetic epidemiology in infectious & lifestyle diseases, native medicine, marine pharmacology & drug discovery, environment, pollution & infection surveillance, bioinformatics & systems biology, pathway analysis in diseases, innovation, import substitutions & diagnostics etc. The Institution has been accorded SIRO status by DSIR (2010). The Institutional Ethics Committee has secured DCGI Registration of DGHS (2013).

The Central Research Facility incorporates genomics and nanotechnology laboratories, tissue culture facility, bioinformatics & computational biology labs, in-vitro fertilization lab, high throughput computing facility for drug discovery and CPCSEA-approved animal facility. CARE has collaborations with 13 academic institutions and industries for enhancing research capabilities and facilities.

The University has conducted over 26 Conferences in the last 5 years with eminent speakers from across the country and few from abroad as well. The University has filed one patent application and 4 coding sequences have been uploaded in the Genebak data base. The University has successfully completed few research projects funded by National and International funding agencies and clinical trials. A total of 11 faculty research have been sponsored through CARE fellowship. The University offers CARE JRF and Post doctoral fellowship given for full time PhD and post doctoral students. Currently there are 16 CARE fellowship JRF among the total 47 PhD students. Undergraduate students are also encouraged to conduct research and 27 of our students have successfully completed the ICMR STS projects sanctioned for undergraduate medical students in the last 5 years. Faculty and students have received several research awards in the last 5 years. The number of publications by faculty and students shows a steady increase with 523 publications in national and international journals with impact factor ranging from 0.17-14.3. The University has 540 and 786 citations and h index of 9 and 12 in Scopus and google scholar respectively. CARE has been publishing Chettinad Health City Medical Journal, a quarterly, international, peer reviewed scientific journal for the last 3 years. The journal is currently indexed in index Copernicus, Genamics journal seek, Google scholar, research bible, Directory of research journal indexing, directory of science journal index and cite factor.

The Institution offers healthcare consultancy services to several establishments in the nearby areas. Chettinad Hospital & Research Institute has developed MoUs with several NGOs, The Institution has adopted 10 villages covering a population of 87387 people within a radius of 13 to 22 kilometers to provide primary and preventive healthcare and health education services. CARE has organized 1212 Health Awareness Camps in several urban and rural areas between 2010 and 2014 benefiting 161919 people. In addition, community-based surveys and research on health problems in these areas have been carried out. Undergraduate and postgraduate students and NSS volunteers participate in these activities. The University has MoU with Michelin Tyres, an Industry partner, to facilitate healthcare services in 32 villages covering a population of 3,44,850.

CRITERIA IV: INFRASTRUCTURE & LEARNING RESOURCES

The University is located in 33.45 acre campus with 30% built up area and with scope for future expansion. The campus houses the institution, hospital, administrative block and accommodation for faculty, staff and students. Two state of the art auditoria with 1200 and 375 seating capacity respectively equipped with advanced AV aids and acoustics are available. Sport facilities include indoor stadium, swimming pool, football and cricket grounds, tennis and basket ball courts, 400 m track and gymnasium. The University has separate hostels for men (including postgraduates and interns) and women students in the campus. Separate hostel facilities are provided for overseas students.

The institution has air conditioned lecture theatres with LCD projection and other AV support. LAN available in lecture theatres and the entire campus has wi-fi enabled zones. Laboratories complement the lecture schedules in most of the streams and the 1200 bed hospital complements the clinical and bed side teaching. The rural and urban health centres are utilized for clinical teaching. The department of Allied Health Sciences has well equipped laboratories. The skills lab available in the institute is used for medical and nursing students skill training. The central research facility with sophisticated instrumentation and CPCSEA approved animal house facilitate faculty and student research in the campus. The well stocked central library and the computer centre offer additional academic support to the students and faculty.

The Chettinad learning management system developed by the inhouse IT department offers 24 x 7 learning resources to the students with content developed by faculty via a secure portal. Automation of hospital services, administrative departments like finance, purchase, library, etc are in place. The IT department periodically updates the institution website. Students are provided with Laptops. The entire campus has wi fi enabled zones and LAN facility. The IT department endeavors to upgrade computers periodically to the latest minimum configuration standards and to provide technological training to the end users.

Clean energy in the form of solar panels, electricity from windmill (given to Tamil Nadu government from the source of installation in exchange of power at CARE), water recycling, sewage treatment plant, Battery driven carts, fossil fuel driven vehicles free green zones, free cycles for in-campus mobility, etc has made the campus ecofriendly. The campus is secured with turnstile and CCTv camera monitoring at strategic locations, limiting the access to authorized persons. The campus is self contained with Banks, ATMs, food courts, Stationary shop, Beauty parlor, Gym etc. Infrastructure maintenance is done by the in-house maintenance department apart from the AMC for sophisticated instruments.

Disposal of bio-hazardous waste is in accordance with the recommendations of the Tamil Nadu Pollution Control Board (TNPCB). Bio-hazardous waste is handled for disposal by an approved agency recognized by TNPCB.

CRITERIA V: STUDENT SUPPORT AND PROGRESSION

The University publishes updated prospectus and Student Handbook annually. In addition to the Academic Calendar, the Student Handbook includes information on University Rules & Regulations, Hostel and Library Rules & Regulations, Accessibility and Infrastructure, healthcare and recreation facilities, food court and travel desk, forewarning against the practice of ragging and a list of 'Suggested' and 'Desirable' books.

Orientation program at the time of admission gives the students a complete overview of the University and their roles and responsibilities. Anti ragging committee enforces the campus environment to be student friendly and the mentorship further offers all the required support to the students. Remedial coaching is provided to students who are academically weak. Additional tutorial sessions are arranged for slow learners. All the students have the access to the digital library for advanced learning material and research journals and encouraging them to carry out home projects. The University has recorded several academic awards won by the students in the last five years. All students have access to the clinical psychologist/counseling for sealing with psychosocial and stress-related issues. The Institution has a registered Alumni Association.

Fee concession and assistance in obtaining governmental and non-governmental scholarship are also provided. Academic fee for certain courses are significantly low to encourage student admission. The student counseling and placement cell offers support to the students. Several of the programs offered by the institution are professional in nature with self employability. Students from faculty of allied health sciences have been well placed with the curricula designed to meet the industry needs. Currently campus interviews for placement are regularly conducted for nursing graduates. Students of the institute have also been employed in our own campus. CARE Junior Research fellowship with free boarding and lodging and contingency expenses is being given to full time PhD students to encourage research.

The sports facility of the campus and inhouse Physical Director further helps in nurturing their physical well being. The Institution encourages student participation in sports, games and cultural activities. Several facilities for indoor and outdoor games & sports including an indoor auditorium with badminton and basket ball courts are made available to the students. Full-time physical instructor who holds a doctoral degree in the field coaches the students. The students of the University have received several awards in inter-collegiate events in the last five years. The Institution provides incentives and financial support for the students who participate in sports and cultural activities.

The students organize 'Chet fest,' the intra-collegiate and 'Fusion Chettinad,' the inter-collegiate cultural events each year. The University arranges bi-monthly screening of popular movies for the students in the campus.

CRITERIA VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

In conformity with the motto of the University, "Educate, Enlighten and Empower", academic programs offered are either professional or job oriented. All activities of the University are student centric.

Chettinad Academy of Research and Education was conferred with Deemed to be University status by the UGC under section 3 of the UGC act 1956 and the governance of the University is as per UGC guidelines. All the statutory committees as per UGC norms have been formed and proactive in formulating University decisions through periodic meetings.

The University believes in participatory governance and faculties from various levels are included as members in various committees. Students are also inducted into certain committees. This enables the University to obtain inputs from the various stakeholders in all its policy decisions. Staff, faculty and student grievance redressal committee are also active in resolving any issues effectively apart from the remedial measures taken based on the feedback. The in-house IT department has spearheaded the implementation of E-Governance strategies in several areas in the Institution's management system.

Faculty and staff development programs are regularly conducted. Faculty appointment and promotions are as per the statutory regulatory body guidelines and overseen by the faculty appointment and promotions committee. The Institution has developed an Annual Faculty Appraisal system consisting of self appraisal and assessment by the heads of the departments.

The University subjects itself to periodic audit by the regulatory bodies (MCI, INC, etc) and also conducts annual internal audit. The University is self financing and the major source of fund has been the academic fees collected apart from the monetary support given by the management. The University has created a corpus fund as per the UGC guidelines. All the financial data of the University are audited by independent auditors and reports are submitted annually to the appropriate authorities.

The Internal Quality Assurance Cell of the University has been active right from the time of its inception. Apart from timely submission of Annual quality Assurance Report to the NAAC, IQAC has also been conducting quality related programs for internalizing quality policies among the faculty and staff. In December 2014, the IQAC organized a Disaster Awareness Program supported by the National Disaster Response Force, the disaster response agency under National Disaster Management Authority (NDMA), Government of India.

CRITERIA VII: INNOVATION AND BEST PRACTICE

The ecofriendly campus is noise, smoke and pollution free with vehicle restriction areas as well. Petrol/diesel drivel (fossil fuel driven) vehicles are prohibited in these green zones and mobility is facilitated by bicycles and motorized carts. The University has conducted Green audit and implemented measures based on the audit teams recommendations.

The institution has mechanisms for renewable sources of energy. The windmill installed at a remote location generates power to meet 80% of power requirement of the campus. The University also uses solar power and has installed several solar water heaters in the hostels. In addition, six heat pumps with 2000 LPD capacity have been installed in the hostels. Methods of energy conservation like 50 VFDs (Variable Frequency Drive) for Air Handling Unit Blower motors have been installed with 18 to 25% energy saving. The entire campus is also disabled friendly too.

Bio hazardous waste, e waste management are in place. Two Sewage Treatment Plants (with 600 KL / day capacity) have been installed in the campus for effluent treatment & recycling. On an average, 750 KL of sewage is treated per day using Moving Bed Bio Reactor (MBBR) technology. Treated water is maintained within the standards set by TNPCB and is used for gardening. The infection control committee is in place and active. The Institution follows AERB guidelines to ensure radiation safety.

Chettinad Academy of Research and Education is proud of its in-house developed learning management system that delivers learning material developed by the faculty 24x7 to the students. This learning management system has various special features to cater to students, faculty and parents. Presence of in-house IT department has enabled smooth functioning of all the automated processes of the University. To facilitate the efficient use of the learning management system, students are provided with laptops, lecture theatres are IT enabled with LAN facility at every desk and the entire campus having wi-fi enabled zones. Use of LCD monitors in place of CRT monitors reduces generation of e-waste. Used batteries and PC boards are disposed of through a buy-back arrangement with the suppliers.

To serve the less privileged members of our community has been a major initiative of the institute through its outreach camps conducted in the nearby localities, villages, schools, etc. The University conducts periodically camps focusing on health education, preventive, palliative and curative camps catering to all ages right from the new born to the geriatric age group. Faculty and students actively take part in these camps and this has enabled a sense of belonging and social responsibility among the students.

Action Taken Report

ACTION TAKEN REPORT ON NAAC PEER TEAM VISIT IN 2010

RECOMMENDATIONS FOR QUALITY ENHANCEMENT OF INSTITUTION

1. **Thrust areas of stem cell research nano sciences, drug development and delivery system can be strengthened**

The University has formulated clear thrust area for all the research initiatives under the following.

Thrust area for research has been identified as

- Human genomics & genetic epidemiology in infectious & life style diseases.
- Nanotechnology in diagnostics, targeted drug delivery & vaccination.
- Native medicines, Marine pharmacology & Drug discovery
- Environment, Pollution & Life style diseases epidemiology.
- Bioinformatics, Computational Biology - Pathway analysis in diseases status.
- Innovations, Import substitutions & Diagnostics.

Currently the University has 41 Students carrying out PhD in Bio Medical sciences, Drug Development and drug delivery.

Necessary infrastructure and man power facility have also been augmented and laboratories developed.

In vivo animal imaging laboratory

- Small Animal Imaging System with anesthetic chamber & monitor

Bionanotechnology and high through-put screening laboratory

- FT-IR Spectrometer with accessories
- Particle Size Analyzer with Zeta Potential
- Fluorescence Spectrometer
- UV Vis Spectrophotometer (Double Beam)
- Revolutionary High Speed Centrifuge (cooling)
- Electronic balance
- Sonicator

High performance computing lab for biomarker discovery & drug designing

- Work station Dell Precision T3610 and nodes

Tissue culture laboratory

- Inverted Microscope - Olympus CKX41
- Biosafety Cabinet
- CO2 Incubator
- Deep freezer (20° C -- 80° C)
- Hot Air Oven
- Autoclave – digital

Molecular Diagnostics laboratory

- Fluroscent Microscope with cytovision software
- Trinocular Phase contrast Microscope with camera
- Laminar Air Flow – 4Ft
- Incubator
- Gradient Thermocycler (PCR)
- Gel Documentation System

Microbial Genomics Laboratory
- Refrigerated Centrifuge -5430 R
- Research Microscope - CH20i
- Laminar Air flow-Biosafety Chamber
- Autoclave
- BOD incubator
- Microfuge - spinwin
- Magnus stereo zoom binocular microscope, Bottom Heater Hot Air Oven, Oil free vacuum pump, Centrifuge with 50 ml rotor R8C, Centrifuge with 15 ml rotor R8C, Deep Freezer -20°C, Water bath 28 L Capacity, Olympus Compound microscope, Magnetic stirrer

Genographic Laboratory
- Class II Biosafety cabinet
- AB Real Time PCR
- AB Thermocyclers (2 no.s)
- Plate Centrifuge Eppendorf
- ABI 3130Genetic Analyzer, Class II Biosafety cabinet, Deep Freezer -20°C, Proline Bio Hit Multichannel Pipette 0.5-10μl, 96 well micro plates F Bottom, Deep Freezer -80°C, Plate sealer (263 kg)

Preclinical laboratory (Neuropharmacology)
- Extraction unit, clinical Pharmacology, Assay equipment, neuropharmacology, etc)
- HPLC

2. *May consider starting departments of pediatric surgery and oncology*	

Pediatric surgery services are available and Dr.Moorthy, MS, MCh (Pead. Surgery) is regularly doing cases.
Oncology department is in the pipeline

3. *Attractive incentives and reward systems may be installed to enhance talent pool in teaching*	

Regular promotion and performance-linked increments
Salary over and above the UGC prescribed norms
It has been finalized to provide Faculty with citation and award for

> "Best paper published" during the year in refereed journals with Thomson Reuter impact factor equal to or above 3.00.
> Maximum Cited paper in a year
> Generated Patent from this institute
> Receiving National awards like: BC Roy Award, Bhatnagar Award, HariOm Ashram Alembic award, Padmashree, Padmabushan, etc.,

4.	*Strengthening research culture on priority basis*

The University has been regularly conducting workshops and sessions to promote faculty and students to write research proposal and appropriate guidance is provided by the Research Advisory Committee and Institutional Review Board with eminent scientists. Faculty from various departments have submitted over 17 proposals to various funding. Though a few of them have gone for a couple of rounds at the funding agencies, they have not been successful. Four of the proposals submitted are still under active considerations. Faculty with international research experience, Post doctoral experience as evidenced by publications and patents have been appointed (http://www.chettinadhealthcity.com/University/medical_ahsfaculty.htm). Faculty of eminence have been inducted as visiting professors of our University (**http://www.chettinadhealthcity.com/University/researchcentre_visiting_professors.htm**) We hope in years to come we will definitely be successful in receiving extramural research funds. Undergraduate students have been regularly submitting research proposals to ICMR Short term studentship and till date 27 students have been successful. Over the years we have shown steady increase in the number of publications. Currently we have 523 publications for the period 2010-2014 and the average impact factor ranges 0.17 – 14.3

Google scholar	All	Since 2010
Citations	954	947
h-index	12	12
I10-index	17	17

SCOPUS	All	Since 2010
Citations	662	657
h-index	10	10
I10-index	14	14

5.	*Faculty may be encouraged to improve academic qualifications by suitable leaves and financial support*

- Faculty are provided with academic leave for enhancing their academic qualification.
- Academic leave is granted for empowering them in research and development
- Faculty members are encouraged to register for PhD.
- Seed-money is provided for their research.

6. *Encouragement to teachers to participate in Medical Education Programmes*

Faculty are nominated and sponsored for Faculty development program at the MCI Nodal Centre for our institute, Christian Medical College, Vellore. Under the Aegis of CMC Vellore in house faculty development programs are also conducted annually.

Year	Basic Medical Education Training Workshop at CHRI			Basic Medical Education Training Workshop at MCI Regional Centre	
	No. of workshops		No. of Participants	Regional Centre	No. of Participants
2010	1		14	SRMC, Chennai	2
2011	2		26		1
2012	1	With MCI observer from CMC Vellore	19	CMC, Vellore	9
2013	1		30		2
2014	1		28		2
Total	6		129	5	16

7. *Laboratories involved in Bionanotechnology could be upgraded with latest facilities for molecular genetics*

Yes done. Equipment worth over 2 crores have been procured for both student and research use in this area

8. *May consider, in future, starting PG medical programmes in some specialties and super – specialities*

Post graduate program in all the Pre clinical, Para clinical and clinical specialties have been started.
Super specialty courses like MCh and DM have also been started.

9. *Transplant programme could be strengthened*

The hospital is attached with State cadaver transplantation program and all transplantations are done in collaboration with them.

10. *Collaboration with other universities in India as well as abroad*

MoU with reputed academic institutions and industries have been signed for facilitating research capabilities and collaborative research.
- NICHE Malaysia and CARE
- The National Geographic Society
- Emory Vaccine Centre, Emory University, Atlanta, USA
- Madras Diabetes Research Foundation
- Hindustan University
- Orchid Chemicals, Chennai
- Azidus Laboratories Limited
- Vellore Institute of Technology

ACTION TAKEN ON INSTITUTIONAL OPPORTUNITIES SUGGESTED BY NAAC PEER TEAM

1.	***Use of excellent infrastructure for basic medical research, drug development and drug delivery research***

Thrust area for research has been identified as
- Human genomics & genetic epidemiology in infectious & life style diseases.
- Nanotechnology in diagnostics, targeted drug delivery & vaccination.
- Native medicines, Marine pharmacology & Drug discovery
- Environment, Pollution & Life style diseases epidemiology.
- Bioinformatics, Computational Biology - Pathway analysis in diseases status.
- Innovations, Import substitutions & Diagnostics.

Currently the University has 41 Students carrying out PhD in Bio Medical sciences, Drug Development and drug delivery.
Publications by the University in these areas of research have shown steady increase in peer reviewed indexed journals.

2.	***Use the good financial position to invest more on staff development***

Faculty development programs are regularly conducted

Regular CME, CNE, CSE, Research Seminar, Guest lecture, Chettinad Lecture series, conferences and workshops are conducted towards faculty and student enrichment.

	2010	2011	2012	2013	2014	2015
CME	20	22	36	41	55	25
CSM	18	14	26	33	61	27
CNE	6	10	6	13	15	12
Research Seminar	1	9	8	8	6	6
Conferences		2	1	3	4	6
Workshops, CME, etc	5	3	10	16	16	8
Guest lectures		8	18	18	12	1

Academic leave is provided for faculty to facilitate participation in conferences
.

3.	***Use the rural settings and outreach programmes for epidemiology study and research***

Data from rural settings and the outreach programs have been streamlined and epidemiology study and research are conducted. To list a few of them:
- Risk and determinants of Respiratory Morbidity among stone sculptors, A community based retrospective cohort study
- Morbidity profile, health seeking behavior of immigrant construction workers, a community based cross sectional study
- Incidence and factors affecting falls in elderly Indian population, a hospital based cross sectional study
- Musculoskeletal morbidity among construction workers, a community based cross sectional survey
- Self care practices of rural diabetic patients. A community based cross sectional survey
- Maternal Knowledge, Attitude and Practices regarding childhood immunization

- Morbidity profile and health care seeking behavior of migrant construction workers
- Undiagnosed burden of refractory errors in school children, findings from a school health programme
- Impact of community based health education intervention on uptake of cervical cancer screening services, a cluster randomized trial
- Conditional Cash Transfer & It's Utilization: Tamil Nadu's Experience with Dr.Muthulakshmi Reddy Maternity Benefit Scheme

The University has Clinical Epidemiological Unit. We have six IndiaCLEN members as well. Director of Clinical epidemiological Unit: Prof.Dr.Ravivarman (life member & Secretary of IndiaCLEN)

4. *Optimal utilization of state of art facilities like auditoria, seminar halls*
Auditoria and Seminar Hall facility of the University are regularly used for The conduct of scientific programs (conferences, workshops, seminars, regularly) as listed above. In house cultural festival (Chetfest) and intercollegiate cultural festivals (Fusion Chettinad) are conducted Annually
5. *Attract more patients to make use of facilities and also for better exposure to student doctors*
This is evidenced by the enhancement in our patient census in the OP, IP and the utilization of laboratory services

SECTION B : PREPARATION OF SELF-STUDY REPORT

1. PROFILE OF THE HEALTH SCIENCE INSTITUTIONS

1. **Name and Address of the Institution:**
   - **Name :** CHETTINAD ACADEMY OF RESEARCH AND EDUCATION
   - **Address:** Rajiv Gandhi Salai (OMR), Padur, Kelambakkam
   - **City:** Kanchipuram District, Tamil Nadu
   - **Pin:** 603 103
   - **Website:** http://www.chettinadhealthcity.com/university/index.htm

2. **For communication:**

Designation	Name	Telephone with STD code	Mobile	Fax	Email
Vice Chancellor	Dr. Ravindran.K	044-47413330	90940 19000	044-47413300	vc@chettinadhealthcity.com
Pro Vice Chancellor (s)	-	-	-	-	-
Registrar	Mr.Spk.Chidambaram	044-47411010	98412 02000	044-47411011	registrar@chettinadhealthcity.com, care@chettinadhealthcity.com
Dean, CHRI	Dr.K.Ramesh Rao	044-47413320	984182 9000	-	dean@chettinadhealthcity.com
Vice Principal, CHRI	Dr.Arunkumar	044-47413322	909475 2000	-	arunkumar@chettinadhealthcity.com
Director AHS	Dr.R.Murugesan	044-47419047	770830 3696	-	rammurugesan@yahoo.com
Principal CCN	Mrs.L.Lakshmi	04447419 020	984092 5268	-	llakshmi@chettinadhealthcity.com
Vice Principal CCN	Mrs.Veena Joseph	04447419 022	984061 5042	-	veenamjoseph@yahoo.com
Steering Committee /IQAC Co-ordinator	Dr.Mathangi DC	044-47429114	994063 5874	-	iqac@chettinaduniversity.edu.in, mathangidc@chettinadhealthcity.com

3. **Status of the Institution:**
   University under Section 3 of UGC Act, 1956 (A Deemed to be University)
   Chettinad Academy of Research and Education
   Constituent Colleges
   - (i) Chettinad Hospital and Research Institute (CHRI)
   - (ii) Chettinad College of Nursing (CCN)

4. **Type of University:**
   - **Unitary** ✔
   - **Affiliating**

5. Type of College:

Ayurveda
Dentistry
Homoeopathy
Medicine   ✔
Nursing   ✔
Pharmacy
Physiotherapy
Siddha
Unani
Yoga and Naturopathy
Others (specify and provide details) : Allied Health Sciences

6.   Source of funding:

Central Government
State Government
Grant-in-aid
Self-financing ✔

Trust   ✔
Corporate
Any other (specify)

7.   a.   Date of establishment of the institution : 04/08/2008

b.   In the case of university, prior to the establishment of the university, was it a/an

i.	Autonomous College	Yes	No ✔
ii.	Constituent College	Yes	No ✔
iii.	Affiliated College	**Yes ✔**	No
iv.	PG Centre	Yes	No ✔
v.	De novo institution	Yes	No ✔
vi.	Any other (specify)	-	

c. In the case of college, university to which it is affiliated

The Tamil Nadu Dr. M.G.R. Medical University, Chennai 600 032

8.   State the vision and the mission of the institution.

Vision:
A global centre for excellence in learning, teaching, research, healthcare and service to the community.

Mission:
- Create a nurturing and supportive environment to ensure students a fulfilling demanding and intellectually stimulating experience.

- Enable students to imbibe values, cultivate a desire for lifelong learning and maximize their potential.
- Prepare students for employment in the global arena.
- To establish a team of well – qualified faculty that will enable the institution to grow holistically.
- Provide the best in state of the art infrastructure.
- Offer quality health services to all strata of society.
- To facilitate independent innovative research and share knowledge and understanding with the society.
- To contribute to the social, economical and national development.

9. **a. Details of UGC recognition / subsequent recognition (if applicable):**

Under Section	Date, Month and Year (dd/mm/yyyy)	Remarks (If any)
i. 2(f)*	-	-
ii. 12B*	-	-
iii. 3*	04/08/2008	Deemed to be University under Section 3 of the UGC Act, 1956

* Enclose the certificate of recognition, if applicable- Annexure 1

b. **Details of recognition/approval by statutory/regulatory bodies other than UGC (MCI, INC)**

Under Section / Clause	Date, Month and Year (dd/mm/yyyy)	Validity	Program / Institution	Remarks
Sub-section(2) of the section 11 of the IMC Act, 1956	11/12/2013	For a period of 5 years	MBBS / CHRI	This shall be a recognized medical qualification when granted on or after Dec 2012 / Jan 2013 with an annual intake of 150 seats
Under section 10A of the IMC Act, 1956	All Post graduate courses in medicine clinical / non clinical vide list enclosed			
INC Act	All Nursing UG & PG programmes approved by Indian Nursing Council, New Delhi			

(Enclose the Certificate of recognition/approval)- Annexure 2

10. **Has the institution been recognized for its outstanding performance by any national / international agency such as DSIR, DBT, ICMR, UGC-SAP, AYUSH, WHO, UNESCO, etc.?**

Yes ✔   ~~No~~

If yes, name of the agency Department of Scientific and Industrial Research, New Delhi
Date of recognition: 01/04/2013

Nature of recognition: Recognition of Chettinad Academy of Research & Education as a Scientific and Industrial Research Organization (SIRO) under the scheme of recognition of Scientific and Industrial Research Organizations (SIROs) 1988. (Validity from 01.04.2013 to 31.03.2016) – Annexure 3 Certification by Department of Revenue (CBDT) section 35 of Income tax act (Annexure 4)

11. **Does the institution have off-campus centres?** ~~Yes~~   No ✔
If yes, date of establishment : …………………………….…. (dd/mm/yyyy)
Date of recognition by relevant statutory body/ies: ……………. (dd/mm/yyyy)

12. **Does the institution have off-shore campuses?**
~~Yes~~   No ✔
If yes, date of establishment : …………………….…………… (dd/mm/yyyy)
Date of recognition by relevant statutory body/ies: ……………. (dd/mm/yyyy)

13. **Location of the campus and area:**

	Location *	Campus area	Built up area in acres in sq. mts.
i. Main campus area	Rural	33.45 acres	51,357.54
ii.Other campuses in the country	No	No	No
iii.Campuses abroad	No	No	No

* Urban, Semi-Urban, Rural, Tribal, Hilly Area, any other (specify)
If the institution has more than one campus, it may submit a consolidated self-study report reflecting the activities of all the campuses.

14. Number of affiliated / constituent institutions in the university

Types of institutions	Total	Permanent	Temporary
Ayurveda	-	-	-
Dentistry	-	-	-
Homoeopathy	-	-	-
Medicine	**1**	**1**	**0**
Nursing	**1**	**1**	**0**
Pharmacy	-	-	-
Physiotherapy	-	-	-
Siddha	-	-	-
Unani	-	-	-
Yoga and Naturopathy	-	-	-
Others (specify and provide details)	-	-	-

15. **Does the University Act provide for conferment of autonomy to its affiliated institutions? If yes, give the number of autonomous colleges under the jurisdiction of the University.**

Yes   **No (Does not arise)** ✔   Number: Not applicable

16. **Furnish the following information**

Particulars	Number
a. Accredited colleges by any professional body/ies	2
b. Accredited course / department by any professional body/ies	-
c. Affiliated colleges	-
d. Autonomous colleges	-
e. Colleges with Postgraduate Departments	1 – CHRI
f. Colleges with Research Departments	1 – CHRI
g. Constituent colleges	2
h. University Departments	
Undergraduate	
Post graduate	-
Research centres on the campus and on other campuses	- 1
i. University recognized Research Institutes/Centres	1 (Skills lab)

17. **Does the institution conform to the specification of Degrees as enlisted by the UGC ?**

Yes ✔   ~~No~~

If the institution uses any other nomenclatures, specify.

Post Graduate Diploma in Clinical Embryology

18. **Academic programs offered and student enrolment: (Enclose the list of academic programs offered and approval / recognition details issued by the statutory body governing the programs)**

Programs	Number of Programs	Number of students enrolled (2014-15)
UG	7	363
PG	35	67
DNB	-	-
Integrated Masters	-	-
Integrated Ph.D.	-	-
PharmD.	-	-
M.Phil.	-	-
Ph.D.	1	11
Certificate	-	-
Diploma	-	-
PG Diploma	1	5
D.M. / M.Ch.	7	5
Sub / Super specialty Fellowship	-	-

Any other (specify)	-	-
Total	51	451

Annexure -2

19. Provide information on the following general facilities (campus-wise):

Auditorium/seminar complex with infrastructural facilities   Yes ✔

Sports facilities

     *   Outdoor   Yes ✔   No

     *   Indoor   Yes ✔   No

Residential facilities for faculty and   Yes ✔   No
non-teaching staff

Cafeteria   Yes ✔   No

Health centre

    *   First aid facility   Yes ✔   No

    *   Outpatient facility   Yes ✔   No

    *   Inpatient facility   Yes ✔   No

    *   Ambulance facility   Yes ✔   No

    *   Emergency care facility   Yes ✔   No

    *   Health centre staff   Yes ✔   No

       Qualified Doctor   Full time ✔   Part-time

       Qualified Nurse   Full time ✔   Part-time

☐   Facilities like banking, post office, book shops, etc.   Yes ✔   No

☐   Transport facilities to cater to the needs of the   Yes ✔   No
    students and staff

☐   Facilities for persons with disabilities   Yes ✔   No

☐   Animal house   Yes ✔   No

☐   Incinerator for laboratories   Yes ✔   No

☐   Power house   Yes ✔   No

☐   Fire safety measures   Yes ✔   No

☐   Waste management facility, particularly   Yes ✔   No
    bio-hazardous waste

☐   Potable water and water treatment   Yes ✔   No

☐   Any other facility (specify).

20. Working days / teaching days during the past four academic years

Academic Program		Working days				Teaching days			
		2011 -12	2012 -13	2013 -14	2014 -15	2011 -12	2012 -13	2013 -14	2014 -15
Faculty of Medicine (UG)	Number stipulated by the Regulatory Authority	240	240	240	240	240	240	240	240
	Number by the Institution	274	274	274	274	265	265	265	265
Faculty of Medicine (PG)	Number stipulated by the Regulatory Authority	290	290	290	290	Not less than 80% in each academic year			
	Number by the Institution	304	304	304	304				
Faculty of Allied Health Sciences	Number stipulated by the Regulatory Authority	180	180	180	180				
	Number by the Institution	222	222	222	222				
Faculty of Nursing	Number stipulated by the Regulatory Authority	245	245	245	245	240	240	240	240
	Number by the Institution	310	310	310	310	280	280	280	280

('Teaching days' means days on which classes/clinics were held. Examination days are not to be included.)

21. Has the institution been reviewed or audited by any regulatory authority? If so, furnish copy of the report and action taken there upon (last four years).

Yes (UGC, MCI & INC)-Annexure 5

22. Number of positions in the institution

Positions		Teaching faculty						Non Teaching Staff	Teaching Staff
		Prof.	Assoc. Prof. / Reader	Asst. Prof.	Lecturer	Tutor / Clinical Instructor	Senior Resident		
Sanctioned by the Government Recruited Yet to recruit		-	-	-	-	-	-	-	-
Sanctioned by the Management/ Society or other authorized	MCI	59	47	113	-	5	39	743	-
	INC	6	5	7	-	-	-		-
	UGC	6	4	18	-	5	-		-

bodies Recruited Yet to recruit									
Stipulated by the regulatory authority	MCI	29	51	69	-	33	113	-	-
	INC	4	5	9	-	-	-	-	-
Cadre ratio Recruited Yet to recruit	UGC	7	10	20	-	12	-	-	-
Number of persons working on contract basis		-	-	-	-	-	-	-	-

23. Qualifications of the teaching staff

Highest Qualification	Prof.		Assoc. Prof. / Reader		Asst. Prof.		Lecturer		Tutor / Clinical Instructor		Senior Resident	
	M	F	M	F	M	F	M	F	M	F	M	F
Permanent teachers												
D.M./ M.Ch.	8	1	6	1	7	2	-	-	-	-	-	-
Ph.D./D.Sc./D.Litt/ M.D./ M.S.	39	24	30	12	59	37	-	-	-	-	-	-
PG (M.Pharm./ PharmD, DNB, M.Sc., MDS., MPT, MPH, MHA)	1	6	1	5	12	12	-	1	1	5	6	7
AB/FRCS/FRCP/ MRCP/MRCS/ FDSRCS	-	-	-	-	-	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	3	-	-	-	-	-	-
UG	-	-	-	-	-	-	-	-	51	84	-	-
Temporary teachers, Contractual teachers & Part-time teachers												
D.M./ M.Ch.	-	-	-	-	-	-	-	-	-	-	-	-
Ph.D./D.Sc./D.Litt/ M.D./ M.S.	-	-	-	-	-	-	-	-	-	-	-	-
PG (M.Pharm./ PharmD, DNB, M.Sc., MDS., MPT, MPH, MHA)	-	-	-	-	-	-	-	-	-	-	-	-
AB/FRCS/FRCP/ MRCP/MRCS/ FDSRCS	-	-	-	-	-	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-	-	-	-	-	-
UG	-	-	-	-	-	-	-	-	-	-	-	-

*Tutor & Junior residents of medical college are not included

24. Emeritus, Adjunct and Visiting Professors.

	Emeritus		Adjunct		Visiting	
	M	F	M	F	M	F
Number	-	-	-	-	3	3

25. Distinguished Chairs instituted:

Department	Chairs
-	-

26.   Hostel
*   **Boys' hostel**
i.   Number of hostels   4
ii.   Number of inmates   369
iii.   Facilities :Swimming pool, Volley ball court, Basket ball court & Tennis court
*   **Girls' hostel**
i.   Number of hostels   5
ii.   Number of inmates   676
iii.   Facilities: Swimming pool, Volley ball court, Basket ball court & Tennis court
*   **Overseas students hostel**
i.   Number of hostels   -
ii.   Number of inmates   -
iii.   Facilities   -
*   **Hostel for interns**
i.   Number of hostels: 1 (This is one among the four mentioned in the
                                                      Boy's hostel)
ii.   Number of inmates: 12
iii.   Facilities: Swimming pool, Volley ball court, Basket ball court & Tennis court
*   **PG Hostel**
i.   Number of hostels: 1 (This is one among the four mentioned in the
                                                      Boy's hostel)
ii.   Number of inmates   10
iii.   Facilities: Swimming pool, Volley ball court, Basket ball court & Tennis court

27.   Students enrolled in the institution during the current academic year, with the following details:

Students	UG		PG						Integrated Masters		M.Phil.		Ph.D.		Integrated Ph.D.	
			PG		DM		MCh									
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
From the state where the institution is located (Tamil Nadu)	105	225	21	35	1	-	1	-	-	-	-	-	6	1	-	-

From other states	7	12	4	10	2	-	1	-	-	-	-	-	4	-	-	-
NRI students	9	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Foreign students	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Total	121	242	25	47	3	-	2	-	-	-	-	-	10	1	-	-

M-Male   F-Female

28. Health Professional Education Unit / Cell / Department

Year of establishment : 2008
Number of continuing education programs conducted (with duration)

*	Induction	609
*	Orientation	(CME, CSM, Guest Lecture, Faculty
*	Refresher	Development programme, CNE, Research
*	Post Graduate	Seminar)

29. Does the university offer Distance Education Programs (DEP)?

Yes   No ✔

If yes, indicate the number of programs offered.
Are they recognized by the Distance Education Council?

30. Is the institution applying for Accreditation or Re-Assessment?

Accreditation   Re-Assessment
~~Cycle 1~~   Cycle 2   ~~Cycle 3~~   ~~Cycle 4~~

31. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4)

Cycle 4: NA
Cycle 3: NA
Cycle 2: NA
Cycle 1: **28/03/2010, Accreditation outcome/Result CGPA 2.83, Grade B**
* Enclose copy of accreditation certificate(s) and peer team report(s)- Annexure 6 & 7

32. Does the university provide the list of accredited institutions under its jurisdiction on its website? Provide details of the number of accredited affiliated / constituent / autonomous colleges under the university.

Yes. http://www.chettinadhealthcity.com/university/index.htm
Chettinad Hospital and Research Institute
     Faculty of Medicine
     Faculty of Allied Health Sciences
Chettinad college of Nursing
     Faculty of Nursing

33. Date of establishment of Internal Quality Assurance Cell (IQAC) and dates of submission of Annual Quality Assurance Reports (AQAR).

IQAC date of establishment: 01/06/2010
AQAR submission dates: (i)   03/06/2011
                                 (ii)   03/11/2012
                                 (iii)   04/11/2013
                                 (iv)   09/10/2014

34. Any other relevant data, the institution would like to include (not exceeding one page).

- Orientation program for freshers
- Innovative teaching methodology
- In-house IT department developed Learning Management System
- Effective utilization of skills lab
- Anti ragging committee
- Regular Parent teachers meet
- Student representations in committees
- Registered Alumni Association
- Chancellors medals for meritorious students in University examination
- Structured faculty development programs
- Management sponsored sports and cultural programs
- Research monitoring through Institutional review board and Ethics committee
- Active Research advisory committee
- Dissection monitoring committee
- CARE Junior Research Fellowship for full time PhD Students
- CARE Post doctoral fellowship
- CARE sponsored projects
- Subscription to INFLIBNET – shod Ganga for e thesis repository
- Commitment to society through periodic outreach programs
- Active collaboration with Governmental, non-governmental and industrial partners for outreach camps
- External members in various boards and committees
- Implementation of E-governance
- In-house IT department
- Comprehensive ecofriendly campus

Criteria - I

Curricular Aspects

2. CRITERIA-WISE INPUTS

CRITERION I : CURRICULAR ASPECTS

1.1.1   Does the institution have clearly stated goals and objectives for its educational program?
Yes, the educational programs of CARE are guided by clearly stated goals and objectives.
These are as follows:
Goals:
To create a Centre of Excellence designed to meet the needs of the community/nation in healthcare and related fields through

- well planned and innovative educational programmes tailored to transform young and inquisitive minds from being eager knowledge seekers to competent and confident graduates capable of meeting effectively the healthcare needs of the society
- Creation of state of the art infrastructure with all the facilities necessary for effective teaching, training and healthcare delivery
- Generation of new ideas and knowledge through promotion of well-designed basic and applied clinical research.
- Well thought out outreach programmes

1.1.2   How are the institutional goals and objectives reflected in the academic programs of the institution?

- All educational programs fulfil statutory requirements of respective accreditation agencies. Within those frameworks, all the programmes have been refined and fine-tuned to make them comparable to and competitive with the best programmes offered in the country.
- The teaching and training methods are continually updated to incorporate the newer developments including Learning Management System, Problem Based Learning (PBL), and Evidence Based Medicine (EBM) etc.
- New and innovative courses are being introduced regularly. Last year witnessed the introduction of BSc in AHS such as dermato-cosmetology, emergency room and trauma care technology, respiratory care technology, neuroscience technology; MSc in Tissue engineering and regenerative medicine, Medical genetics and molecular diagnostics and Human nutrition. All the new courses have been introduced after careful assessment of societal needs and employment opportunities.
- CARE has invested substantially in creating an advanced research wing to promote basic as well as applied clinical research. The students are encouraged to participate in large numbers in ICMR's Short-term Studentship Programme. An active Doctoral Programme is being run by CARE since 2009 in medical, nursing and allied health subjects. So far, two scholars have successfully completed their PhDs with well over 30 others are in various stages of progression/completion
- Extension activities are being actively pursued by CARE. One village has been adopted for outreach activities. All the National, state and local health

programs are implemented. The CARE reaches out to community through camps, educational programs to create awareness about health issues and house calls.

1.1.3. Does the institution follow a systematic process in the design, development and revision of the curriculum? If yes, give details of the process (needassessment, feedback, etc.).

Yes, the Institute follows a systematic plan while designing, developing and revising curriculum

Designing the curriculum:

The responsibility for designing the curriculum rests initially with Curriculum Committees. These committees consist of members drawn from specialities on which the curriculum is based. These members are selected based on their expertise/background in Curriculum design and implementation. Besides, inputs from external experts are also sought. For each course, the guidelines given by the respective accreditation agencies provides the basic framework on which the Curriculum is built taking into consideration the following:

- Goals and objectives of the particular course
- Assessment of general needs as well asthe particular needs of the targeted learners
- Needs of community and other stakeholders
- Scientific advances
- Incorporation of educational strategies including innovation
- Socioeconomic realities of the region
- Financial and infrastructural requirements

Once the curriculum is developed, it is placed before the board of studies for further discussion, analysis, evaluation and approval. If any aspect of it is found to be unsatisfactory, it is referred back to Curriculum Committee for further fine tuning. Once the curriculum is approved by the board of studies, it is taken up for discussion by the academic council. When academic council approves the curriculum, it is ready to be placed before Board of Management for final seal of approval. The curriculum then becomes the institution's blueprint of the educational experience.

Evaluation of curriculum and Revision

Following its implementation, it is continually evaluated to ascertain if it is effective and whether the goals have been satisfactorily realised. The short-term evaluation is done by obtaining feedbacks from all the stakeholders

- The teachers and examiners
- The learners
- Members of the community including the parents of the learners
- The management.

The long-term evaluation is done based on

- Quality of the product (the learner)
- Employment and higher educational potential of the product (the learner)
- Performance of the product in the real world
- Feedback from the places of their placement/employment

- Scientific and technological advancement
- Emergence of new diseases

Results of these evaluations are used update and revise the curriculum

1.1.3. How does the curriculum design and development meet the following requirements?

- Community needs
- Professional skills and competencies
- Research in thrust / emerging areas
- Innovation
- Employability

As described in 1.1.3, the community needs are taken into account while designing and revising the curriculum. Community healthcare needs are assessed through periodic interactions/surveys.

Skill development is an important component of the curriculum as the curricula are designed keeping in mind employability of the learner. The learner is made to acquire relevant skills through carefully designed practical exercises, simulated experiments, clinical examination of the real patients and training in skills laboratory. The learner spends as much time acquiring the skills as he spends acquiring the theoretical knowledge. The acquired skills are tested periodically throughout the course by carefully designed practical and clinical examinations.

The following thrust areas have been identified for further exploration through well planned research.

The focus of research at CARE can be broadly categorized into:

1. Nanotechnology & Bio-technology in diagnostics, targeted drug delivery & vaccination
2. Human genomics & Genetics Epidemiology in Infection and Life Style Diseases
3. Native medicines, Marine Pharmacology & Drug discovery
4. Environment, Pollution & Infection Surveillance
5. Systems Biology and pathway analysis in diseases status
6. Innovations & Import substitutions in Diagnostics.

The learners are exposed to basics of research very early in their education including research methodology, basic statistics, epidemiological principles, animal and human ethics. The undergraduate learners are encouraged to participate from the beginning in short-term research projects.

All the postgraduate students and research scholars are made to attend compulsorily a well-designed course in research methodology. Submission of a dissertation is a fundamental requirement of PG curriculum in CARE.

1.1.5. To what extent does the institution use the guidelines of the regulatory bodies for developing and/or restructuring the curricula? Has the institution been instrumental in leading any curricular reform which has created a national impact?

All the curricula are designed using the guidelines of the respective regulatory body as the basic framework. All innovations and modifications are thoughtfully introduced without violating this basic framework as accreditation of the courses of study are

dependent on broad adherence to these guidelines. Each time these guidelines are modified/amended by the regulatory agency, the curricula are appropriately updated to reflect these amendments.

1.1.6 Does the institution interact with industry, research bodies and the civil society in the curriculum revision process? If so, how has the institution benefitted through interactions with the stakeholders?

The institution selectively seeks inputs from Industry, research bodies, academic institutions and civil societies while designing the curriculum. Eminent members of these bodies are invited to participate in discussions and some of them are co-opted as members of Boards of studies and Academic Council. These interactions are particularly useful when new courses are being introduced.

1.1.7 How are the global trends in health science education reflected in the curriculum?

Some of the important developments in health science education are being incorporated progressively into the curriculum. Chief among these are Problem based learning (PBL), Evidence based medicine (EBM), emphasis on small group teaching, less emphasis on didactic lectures and elimination of the use of animals for teaching purposes. In addition, attempts are being made to develop an integrated curriculum with horizontal and vertical integration of multiple disciplines. The curricula are being made progressively learner-centred. In some of the curricula of allied health sciences, Choice Based Credit System (CBCS) has been introduced.

1.1.8 Give details of how the institution facilitates the introduction of new programs of studies in its affiliated colleges.

There are no affiliated colleges

Decision on initiation of new courses are given by department / individuals with need/ justification for starting such academic program. Following this proposal University appoints a Local inquiry Committee to inspect the feasibility of starting the course. The Committee inspects the availability of teaching staff/Administrative staff, area, equipment, furniture, computers, books and journals, etc., based on the recommendations and justifications given by the department to start the specified course. Recommendations of the committee are placed before the Board of Management. If any statutory bodies are available for the proposed new course, appropriate proposal will be submitted for necessary approval. Further to this we have a three tier system that is followed viz a viz. Board of Studies (for approving the eligibility, regulations and syllabus of the course), Academic Council and Board of Management.

1.1.9 Does the institution provide additional skill-oriented programs relevant to regional needs?

Yes.

For the academic programs under the regulatory authorities, training in skills laboratory, communication skills, community orientation, etc are given as additional training to meet the needs of the community.

Chettinad Academy of Research and Education is a deemed to be university under section 3 of UGC act. This has given the impetus to initiate academic programs with curriculum meeting the societal needs with appropriate skill impartment.

Example, bridging the gap between trained man power with skills in cell biology and appropriate medical qualification Post Graduate Diploma in Clinical Embryology has been initiated.

Interface between medicine and skill training in technology aspects has resulted in the introduction of courses in emerging areas like Medical Bionanotechnology, Occupational Health and Industrial Safety, Clinical Research and Experimental Medicine, etc.

Interested students across specialities are given training in Basic Life Support, Advanced Cardiac Life Support and Disaster preparedness.

Active participation of students in the outreach and NSS activities of the university has made the students develop their communication skill and also belongingness to the community and a sense of citizenship.

1.1.10 Explain the initiatives of the institution in the following areas:

* Behavioral and Social Science:

The University has introduced Postgraduate course in Counselling Psychology, Occupational health and industrial safety.

Active Mentorship program for undergraduate program has enabled us in the identification of student needs. Both academic and psychological support and guidance are given by the mentors. Student counselling cell of the university offers counselling to the students. In addition clinical psychologist attached with the psychiatry department and Allied Health Sciences also helps in distressing the students.

Academic programs: Apart from the post graduate program in Counselling Psychology, Health and Yoga, Occupational Health and Industrial safety. Clinical Psychology, Psychology and Sociology are papers for various academic courses B.Sc. (Nursing) Course has also the subject psychology in first year and sociology in second year

* Medical Ethics / Bio Ethics / Nursing Ethics:

They are part of the curriculum for undergraduate and postgraduate students of Medicine and Nursing. Research ethics is a part in M.Sc. courses especially Clinical research and experimental medicine, etc.

All students are guided in ethical principles for carrying out their research / dissertation work. Research methodology workshop conducted for both PhD and PG students have a session on Research ethics.

Ethical clearances are mandatory for both human and animal studies.

Plagiarism software (Turnitin) is available in the University and plagiarism standing committee oversee and guide the students on this issue with their publication and dissertation.

*Practice Management towards curriculum and/or services.

Practical syllabuses has been formulated in all the innovative courses and observing the curriculum and schemes, the students are being trained in practical classes in the relevant semester.

* Orientation to research

Undergraduate students are encouraged to take up short research projects and present / publish their findings in conferences / journals.

Undergraduate medical students are motivated to submit original research proposal and supported to carry out ICMR short term research projects.

Research is integral part of all postgraduate courses of the university.

Post graduate students and PhD students are oriented to research methodology, research ethics, and publication ethics through structured research methodology workshop.

Full time PhD scholars are given stipend with free boarding and lodging facility.

Training to interested faculty and students are given when any new equipment is procured and installed.

Researchers of eminence are periodically invited to the campus to deliver lectures and enthuse faculty and students.

Monthly research seminars by research scholars and faculty highlight the research capabilities available in the campus

* **Rehabilitation**

The Department of Physical Medicine and Rehabilitation offers all the rehabilitative support both for patients and students. Slow learners are also rehabilitated in their academics by mentors.

* **Ancient scriptural practices: NIL**
* **Health Economics.**
* **Medico legal issues**

For students of MBBS medico legal issues forms part of their curriculum and it is offered by the Forensic Medicine department.

Periodic mortality & Medical Audit meeting is conducted and interns and postgraduate students attend these meetings. Proceedings of this meeting educate students on the various causes that result in morbidity/mortality and methods to be adopted to avoid them.

* **Enhancement of quality of services and consumer satisfaction.**
    – The university is committed to quality in education, patient care and research
    – The University subjected itself to accreditation by National Assessment and Accreditation Council in its early years of inception
    – The service laboratory are accredited by National assessment Board for Laboratories periodically
    – Both the constituent colleges of the university regularly subject ourselves to the inspection by the regulatory bodies, Medical Council of India, Indian Nursing Council and State Nursing council
    – Ethics committee member appointment and functioning as per the guidelines of ICMR and CPCSEA
    – Registered under DCGI for drug trials as well
    – Research Advisory Committee to give direction to research at the University
    – Institutional Review Board reviews all the research proposal which are submitted to extramural funding.
    – Quality publication without plagiarism is ensured with Antiplagiarism software (Turnitin) and Plagiarism Standing committee
    – Registered under DCGI for drug trials as well
    – The university is a member of Asia Pacific Quality Network and Association of Indian Universities
    – Active Internal Quality Assurance Cell
    – Periodic Audit with internal and external members

    – Environment audit, and financial audit with external experts

1.1.11 How does the institution ensure that evidence based medicine and clinical practice guidelines are adopted to guide patient care wherever possible?

The Laboratory accreditation and University accreditation ensures quality education and patient care.

Periodic Morbidity and Mortality meeting ensures accountability and quality healthcare

Faculty development program at MCI regional centre, Christian Medical College, Vellore and with trained resource faculty at in-house faculty development program imparts and updates the teacher and teaching quality and patient care as well.

1.1.12 What are the newly introduced value added programs and how are they related to the internship programs?

During the Internship period, the interns are actively involved in the outreach programs

1.1.13 How does the institution contribute to the development of integrated learning methods and Integrated Health Care Management?

* Vertical and horizontal integration of subjects taught.

Teaching schedule of the various departments of an academic year are well planned and prepared to ensure horizontal integrity as this ensures better understanding among the students.

During the clinical years, pre and para clinical subjects are refreshed through vertical integration classes

Curriculum design for Allied health sciences courses are prepared in consultation with departments including industrial experts

* Integration of subjects taught with their clinical application.

Medical and Nursing curriculum are followed as per their respective regulatory norms. Basic sciences subjects have designed their practical classes in such way the students learn to apply their concepts of basic sciences in simulated clinical scenarios.

Clinical postings through the years and during the internship for the Medical and Nursing students are further planned to make them integrate the subjects learnt and use this knowledge to see a patient as a whole in an integrated manner.

* Integration of different systems of health care (Ayurveda, Yoga, Unani, Homeopathy, etc.) in the teaching hospital.

Though the institution does not use other systems of medicine in patient care, well planned experimental studies approved by the IRB and ethics committee are conducted, which is also evidenced by publications.

1.1.14 How is compatibility of programs with goals and objectives achieved with particular reference to priority of interface between Public Health, Medical Practice and Medical Education?

    – Adhering to the regulatory guidelines (MCI & INC) in all the curricular aspects has enabled us interface public health and medical practice and health education.

    – Participation of students of this university in NSS and outreach programs and community engagements has given them an insight into public health and community needs.

    – This is ensured by Infrastructure with state of art facilities to impart quality

education, Faculty trained periodically through the faculty development programs helps to train them with these strategies.

- – Outreach programs, protective, preventive and educative are conducted in the villages around the University. A couple of villages have been adopted by the university.

1.2 Academic Flexibility

1.2.1. Furnish the inventory for the following:

* Programs offered on campus

The following UG, PG and diploma programmes are offered under the faculty of medicine, Faculty of nursing and faculty of allied health sciences.

I. UNDER GRADUATE COURSES

- MBBS
- B.Sc. Allied Health Sciences (3 Years + 1 Year Internship) Semester credit system
- B.Sc. Medical Bionanotechnology (3 Years)
- B.Sc. Medical Biotechnology (3 Years)   Semester choice based credit system
- B.Sc. Medical Genetics (3 Years)

II. POSTGRADUATE COURSES

Medical Post Graduate Courses - M.D. Pre and Para Clinical (3 years)

- M.D. (Anatomy)
- M.D. (Physiology)
- M.D. (Biochemistry)
- M.D. (Pathology)
- M.D. (Microbiology)
- M.D. (Pharmacology)
- M.D. (Community Medicine)

Medical Post Graduate Courses - M.D./M.S. Clinical Courses (3 years)

- M.S. (General Surgery)
- M.S. (Obstetrics and Gynecology)
- M.D. (General Medicine)
- M.D. (Anesthesiology)
- M.D. (Dermatology, Venerology and Leprosy)
- M.D. (Respiratory Medicine)
- M.S. (Orthopedics)
- M.S. (Ophthalmology)
- M.D. (Paediatrics)
- M.D. (Psychiatry)
- M.D. (Radio-diagnosis)
- M.S. (Otorhinolaryngology)

Postgraduate courses (2 Years)

- M.Sc. Tissue Engineering & Regenerative Medicine
- M.Sc. Medical Genetics & Molecular Diagnostics
- M.Sc. Medical Bionanotechnology
- M.Sc. Medical Biotechnology
- M.Sc. Clinical Research & Experimental Medicine
- M.Sc. Marine Pharmacology
- M.Sc. Human Nutrition

- M.Sc. Occupational Health & Industrial Safety
- M.Sc. Health & Yoga
- M.Sc. Computational Biology
- M.Sc. Bioinformatics
- M.Sc. Counseling Psychology
- M.Sc. Pharamaceutical Chemistry

D.M. / M.Ch Courses
- D.M. (Cardiology)
- D.M. (Neurology)
- D.M. (Neonatology)
- M.Ch. (Cardio Vascular & Thoracic Surgery)
- M.Ch. (Neuro Surgery)
- M.Ch. (Urology)
- D.M. (Medical Gastroenterology)

M.Sc - Allied Health Sciences (2 Years)
- Echocardiography & Cardiovascular Imaging Technology
- Radiology and Imaging Science Technology

Postgraduate Courses in Nursing (2 Years)
- M.Sc. Medical Surgical Nursing (Cardio Vascular and Thoracic Nursing)

III. POSTGRADUATE DIPLOMA COURSES
- Postgraduate Diploma in Clinical Embryology (1 year)

IV. NURSING COURSES
- B.Sc. Nursing
- Post Basic B.Sc Nursing

Thus various programmes are available for the students to choose from.

Overseas programs offered on campus: NIL

* Eligibility for the various academic programs at the university are clearly displayed and made available for the prospective students for the entire range of programs given above`

1.2.2 Give details on the following provisions with reference to academic flexibility

a. Core options

Table below gives details of Core options and elective options

S.No.	Faculty	Core options	Options
1	Nursing	M.Sc. Nursing	
2	Allied Health Sciences	M.Sc. Allied Health Sciences	

b. Elective options : Following courses are offered with elective options

Faculty: Allied Health Sciences

Course	Elective options
B.Sc. Medical Bionanotechnology	Genomics and Proteomics / Principles of Enzymology Bioethics, biosafety and IPR / Transgenic Technology Biopharmaceuticals / Human Biochemical Genetics Molecular and Cellular Diagnostics / Clinical Trial and Management

B.Sc. Medical Biotechnology	Genomics and Proteomics / Principles of Enzymology Bioethics, Biosafety and IPR / Transgenic Technology Biopharmaceuticals / Human Biochemical Genetics Molecular and Cellular Diagnostics / Clinical Trial and Management
B.Sc. Medical Genetics	Genomics and Proteomics / Principles of Enzymology Bioethics, Biosafety and IPR / Transgenic Technology Reproductive and Cancer Genetics / Human Biochemical Genetics Molecular and Cellular Diagnostics / Clinical Trial and Management
M.Sc. Tissue Engineering & Regenerative Medicine	Introduction to nanomaterials / Molecular Biology Recombinant DNA technology / IPR, Biosafety and Bioethics Biostatistics and Research Methodology / Bioinformatics
M.Sc. Medical Genetics & Molecular Diagnostics	Human Physiology / Biostatistics and Research Methodology MEMS and BioMEMS / Stem Cell Technology IPR, Biosafety & Bioethics / Downstream Processing
M.Sc. Medical Bionanotechnology	Biostatistics and Research Methodology / Bioinformatics Bionanocomposites / MEMS and BioMEMS IPR, Biosafety & Bioethics / Product design, management techniques and entrepreneurship
M.Sc. Medical Biotechnology	Human Physiology/ Biostatistics and Research Methodology Molecular Diagnostics & Therapeutics / Stem Cell Technology IPR, Biosafety & Bioethics / Down Stream Processing
M.Sc. Clinical Research & Experimental Medicine	Regulatory affairs / Medical affairs CRO development / Drug development tools Trial designs for specific diseases 1 / Trial designs for specific diseases 2
M.Sc. Human Nutrition	Cell Biology / Regulatory affairs in clinical Research Nutrigenomics &Nutraceuticals / Molecular Diagnostics & Therapeutics Food Biotechnology / IPR, Biosafety & Bioethics

M.Sc. Bioinformatics	Mathematics for Biologists / Immunology and PharmacologyBiochemistry and Enzyme Technology / Bioanalytical TechniquesGenomics and Proteomics / IPR, Biosafety & Bioethics
M.Sc. Counseling Psychology	Social Psychology / Personality and development Stress Management & Problem Solving Techniques / Life Skills development Geriatric counseling & Corporate counseling / Forensic Psychology
M.Sc. Pharamaceutical Chemistry	Biostatistics & Bio Informatics / Natural Product Chemistry Process Validation & Drug Regulatory Action / Combinatorial Chemistry Pharmaceutics and Environment / Pharmaceutical Inorganic Chemistry

The programs offered under CBCS have about 70-75 % of core modules and the rest are electives for students to choose from

   c. **Bridge course**

     Students with mother tongue (Tamil /Malayalam) as medium of instruction receive special bridge courses for a few weeks.

   d. **Enrichment courses** – NA

   e. **Credit accumulation and transfer facility** – NA

   f. **Courses offered in modular form** – NA

   g. **Lateral and vertical mobility within and across programs, courses and disciplines and between higher education institutions** – NA

   h. **Twinning programs** – NA

   i. **Dual degree programs** – NA

1.2.3. Does the institution have an explicit policy and strategy for attracting students from other states

     – The institute participates in educational fairs in different parts of the nation.

     – With advertisements in various national dailies in both English and vernacular language

     – Admission details and advertisement on the institute website further makes the details available to all

     – The campus is friendly, accommodative and hostel facilities makes the stay in the institute comfortable

     – Hostel warder, peers and senior batch mates, Student counseler help the students to adjust and cope with their personal issues including home sick

     – As the Medical and Nursing program require patient care, training in local language is also given

  * socially and financially backward sections

     – The institute follows norms laid down by the government.

     – Financial assistance to economically underprivileged

  * international students ?

Chettinad Hospital and Research Institute is registered under the IMED and Faimer. This gives a visibility of the admissions related to the institute to International students as well. Students who qualify the eligibility will only be admitted sticking to the 15% norms laid down by the government for NRI and foreign students.

1.2.4. Does the institution offer self-financing programs ? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programs ?

All programs offered by university are self financing programs. As a deemed to be University under the section 3 of UGC act, no grants are received from UGC or any other sources.

Teacher qualifications are as per the regulatory bodies and salary or on par with other institutions.

1.2.5 Has the institution adopted the Choice Based Credit System (CBCS) / credit based system ? If yes, for how many programs ? What efforts have been made by the institution to encourage the introduction of CBCS in its affiliated colleges ?

The Faculty of Allied Health Sciences are adopted credit system for all its courses. All the PG programs of AHS are offered under CBCS.

1.2.6 What percentage of programs offered by the institution follow :
* Annual system / Non-semester   : 68%
* Semester system   : 32%

1.2.7 How does the institution promote multi/inter-disciplinary programs ? Name a few programs and comment on their outcome.

The M.Sc programs offered by the FAHS are truly innovative in the sense that these courses address the emerging areas at the interface of two or three disciplines. These courses are not similar to the conventional PG courses. These programs, implemented under choice based credit system are integrated with research projects that engage students in discovery through research. Potential of employment for students in industry is established.

1.2.8 What programs are offered for practicing health professionals for skills training and career advancement ?

All programs have inbuilt component for skills training
Students of Faculty of AHS are given specific training for career advancement both for higher education and job prospects

1.3 Curriculum Enrichment
1.3.1 How often is the curriculum of the institution reviewed and upgraded formaking it socially relevant and/or skill oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders ?

The interdisciplinary programs are reviewed every year. The experts drawn from industry serve in the board of studies and their views on the changing industrial and societal needs are incorporated in the curriculum

1.3.2 During the last four years, how many new programs were introduced at the

UG and PG levels ? Give details.

* multi/inter-disciplinary : All courses offered by the university are inter disciplinary

* programs in emerging areas : courses offered under faculty of AHS belongs to emerging area of Health sciences

The details of new programs during the last four years.

Sl.No	Year	Approval in Academic Council Meeting	Details of the program
1	2011		Nil
2	2012	X Meeting dated 20.01.2012	M.Sc. Nursing (2012-2013_) • Community Health Nursing • Child Health (Paediatric) Nursing • Mental Health (Psychiatric) Nursing • Obstetrics & Gynaecological Nursing • Medical Surgical Nursing (Neuroscience Nursing)
3	2013	XV Meeting dated 08.05.2013	Academic Year 2013-14 • M.Sc. Echocardiography & Cardiovascular Imaging Technology • M.Sc. Radiology and Imaging Science Technology
4	2014	XVII Meeting dated 06.02.2014	Academic Year 2014-15 B.Sc. (AHS) (4 Year) courses 1. Respiratory Care Technology 2. Emergency Room and Trauma Care Technology 3. Dermato – Cosmetology 4. Neuro Science Technology B.Sc. Medical Genetics (3 Year) Course
5	2014	XVIII Meeting dated 15.04.2014	Academic Year 2014-15 1. 2 year M.Sc. (Tissue Engineering & Regenerative Medicine) Semester Pattern 2. 2 year M.Sc. (Medical Genetics & Molecular Diagnostics) Semester Pattern. 3. 2 year M.Sc. Human Nutrition

1.3.3 What are the strategies adopted for the revision of the existing programs? What percentage of courses underwent a syllabus revision ?

Feedback from various stake holders if relevant to the needs of the society and required for development of the students they are discussed at the Board of Studies whose recommendations are forwarded to the Academic council and BoM for approval. Approximately 40% minor syllabus revision have been made.

1.3.4 What are the value-added courses offered by the institution and how does the institution ensure that all students have access to them ?

Value Added Programs offered to enrich the students to meet the national and global needs includes

the following.   These are offered either during the orientation program or along with the subjects taught by various departments as applicable.

- IPR and ethics
- Health economics
- Yoga
- Complementary Medicine
- Consumer protection act
- Evidence-based medicine
- Short term research projects
- Communication skills
- Active participation in outreach programs of the institute & NSS

1.3.5 Has the institution introduced skills development programs in consonance with the national health programs ?

Yes, The university outreach programs are in line with all the National health programs. Medical and Nursing students regularly participate in these programs. Students of college of nursing have family cards for the community activities and through these they offer health education in various aspects.

Students during their posting in community medicine and community health nursing create an awareness to the house hold by means of simple charts/ discussion/ group activities, models etc

Refer 3.6.9 & 3.6.10 for details.

1.3.6 How does the institution incorporate the aspects of overall personality development addressing physical, mental, emotional and spiritual well being of the student ?

Personality development programs are conducted regularly.

During the OP and IP training students learn to address patient needs and communication skills by observing their teachers.

Community based training in the villages and participation of students in the NSS activities further helps in the development of citizenship culture among the students.

The NSS unit of CARE has organized Yogathon in collaboration with Vyakti Vikas Kentra, The art of Living for the students and faculty (initiated in January 2015)

With physical education instructor and infrastructure for all sport activities (both indoor and outdoor games) in house Gym and Yoga training helps in physical and mental well-being.

Mentorship, student counsellor and clinical psychologist further offers support and guidance to handle any mental stress.

1.3.7 Does the curriculum provide for adequate emphasis on patient safety, confidentiality, rights and education ?

Yes

1.3.8.Does the curriculum cover additional value systems ?

Yes

1.4 Feedback System

1.4.1   Does the institution have a formal mechanism to obtain feedback from studentsregarding the curriculum and how is it made use of ?

- Formal feedback is obtained from students by the concerned department on various aspects that includes, curriculum, teaching and evaluation methodologies, etc.
- The feedback is obtained after the student completes the course and informal feedback are also obtained from the Alumni.
- These have helped in making appropriate amendments in the curriculum to suit the needs of the students.

1.4.2 Does the institution elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods such as conducting webinars, workshops, online discussions, etc. and their impact.

Feedback from experts include distinguished visitors to the university as well as examiners who are specialist in the area. Their inputs are discussed both at departmental level and in the Board of studies and if accepted, appropriate revisions are made in the curricula. Experts in the field also are inducted as members of the Board of studies and this becomes a platform for effective change in curricula to suit the societal and national needs.

1.4.3 Specify the mechanism through which affiliated institutions give feedback on curriculum and the extent to which it is made use of.

There are no affiliated institutions, and the university has only two constituent colleges, Chettinad Hospital & Research Institute and Chettinad College of Nursing

The feedback on the curriculum, obtained from the students, external examiners and experts from the industry is brought for discussion in the ensuing BOS for appropriate action.

1.4.4 Based on feedback, what are the quality sustenance and quality enhancement measures undertaken by the institution in ensuring the effective development of the curricula?

Keeping in tune with the current needs of various stakeholders through formal and informal feedbacks modification have been recommended & implemented in the curricula, teaching methodology and examinations of the academics in the University.

1.4.5 What mechanisms are adopted by the management of the institution to obtain adequate information and feedback from faculty, students, patients, parents, industry, hospitals, general public, employers, alumni and interns, etc. and review the activities of the institution?

- Faculty feedback are obtained during the college council meeting in a formal manner and through their departmental meetings. Highlights of departmental meeting are shared by the Head of the Department with the Dean / Principal.
- Students feedback are obtained formally in a confidential manner using a structured questionnaire. However their inputs through their mentors are also taken into consideration at departmental level.
- Parents: though there is currently no structured feedback from the parents, they give valuable inputs during the parent teacher meetings and their interactions with the heads of the institutions.
- Patients feedback are obtained using suggestion box and using structured questionnaire.
- Alumni and employer feedback are obtained through informal discussion and emails.
- Experts in the field are inducted as members of various boards and committees of

the university and also invited as examiners. During these sessions their inputs are obtained for necessary discussion and implementation.

– Feedback from the community are obtained in an informal manner from the village panchayat heads, NGO, PHC and the school heads to assess their health care requirement. These have made our outreach programs need based programs to meet the needs of the community.

Criteria - II

Teaching Learning & Evaluation

CRITERION II : TEACHING-LEARNING AND EVALUATION

2.1 Student Enrolment and Profile

2.1.1 How does the institution ensure publicity and transparency in the admission process?

The Institute ensures publicity to the admission process through

- Issue of Prospectus,
- Institutional Website,
- Advertisements in the leading Regional and National Newspapers, wherein the students' profile and eligibility for the various courses offered are advertised. The date and regulations for applying for the All India Common Entrance Examinations and the details of the four centers across the country are announced in the same .
- Other means such as participation in career guidance exhibitions, addressing+2 students on career options, communicating course details to matriculation schools, Undergraduate colleges and Nursing Schools through pamphlets and posters which are displayed in their respective notice boards.

2.1.2 Explain in detail the process of admission put in place by the institution. List the criteria for admission

The University offers courses under the Faculty of Medicine, Faculty of Allied Health Science and Faculty of Nursing. The student profile and criteria for admission is as per MCI and INC guidelines As per the guidelines for admissions in the Deemed Universities by Government of India. All India level entrance examination is conducted in four centers (Delhi, Bangalore Chennai and Hyderabad), for admitting students in MBBS,Medical PG Super Specialty- D.M/M.CH and Medical PG- M.D. Pre &Para Clinical and M.D/M.S Clinical Courses, the admissions are accorded after the rank based counseling process.

All other courses admissions are made on the basis of merit cum interview following stipulated guidelines as per the course.

PhD admissions are made as per UGC guidelines based on merit, written examination and interview.

S.NO	Courses	Eligibility	Mode of Selection
1.	Medical PG Super Specialty-D.M/M.CH 1. D.M .(Cardiology) 2. D.M .(Neurology) 3. D.M. (Neonatology) 4. M.Ch.(Cardio Vascular & Thoracic Surgery) 5. M.Ch. (NeuroSurgery) 6. M.Ch.(Urology) 7. D.M. (Medical	As Per MCI	Merit in the All India level common Entrance Examination (Rank based Counseling)

	Gastroenterology) *		
2.	Medical PG- M.D. Pre &Para Clinical and M.D/M.S Clinical Courses 1. M.D. (Anatomy) 2. M.D. (Physiology) 3. M.D.(Biochemistry) 4. M.D.(Pharmacology) 5. M.D.(Pathology) 6. M.D.(Microbiology) 7. M.D.(Community Medicine) 8. M.D.(General Medicine) 9. M.D.(Anesthesiology) 10. M.D.(Dermatology, Venerology & Leprosy) 11. M.D. (Respiratory Medicine) 12. M.S.(Orthopedics) 13. M.s.(Ophthalmology) 14. M.D.(Paediatrics) 15. M.D.(Psychiatry) 16. M.D.(Radio-Diagnosis) 17. M.S.(OtoRhinoLaring ology) 18. M.S. (General Surgery) * 19. M.S. (Obstetrics and Gynecology) *	As Per MCI	Merit in the All India level commonEntrance Examination (Rank based Counseling)
3.	Medical UG MBBS	As Per MCI Cut off mark in qualifying examination fixed at 70% (as per MCI it is 50%)	Merit in the All India level common Entrance Examination (Rank based Counseling)
4.	1 Year PG Diploma (PG Diploma in Clinical Embryology)	Graduate in medicine/ dentistry	Marks in qualifying examination and Interview
5.	M.Sc 2 Years 1. M.Sc.(Medical Bionanotechnology)	M.B.B.S / B.D.S. / B.Sc. (Allied Health Sciences) / B.Sc. (Life Sciences / Biosciences) / B.Sc. Botany with Ancillary Zoology / B.Sc. (Biotechnology / Microbiology /	Based on merit & personal interview.

		Chemistry / Biochemistry / Physics) / Bachelor of Physiotherapy (B.P.T.) / Bachelor of Occupational Therapy (B.O.T.) / Bachelor of Pharmacy (B. Pharm.) / Bachelor in Audiology and Speech Language Pathology / B.Sc. Nursing / B.Sc. Physician's Assistant / B.E. Biomedical Engineering or any graduate degree in Medical / Health Sciences awarded by a recognized University with a minimum of 55% marks.	
	2. M.SC. (Occupational health and Industrial safety)	M.B.B.S. / B.D.S. / B.Sc. (Allied Health Sciences) / B.Sc. (Life Sciences / Biosciences) / B.Sc. Botany with Ancillary Zoology / B.Sc. (Biotechnology / Microbiology) / Bachelor of Physiotherapy (B.P.T.) / Bachelor of Occupational Therapy (B.O.T.) / Bachelor of Pharmacy (B.Pharm.) / Bachelor in Audiology and Speech Language Pathology / B.Sc. Nursing / B.Sc. Physician's Assistant or any graduate degree in Medical / Health Science awarded by a recognized University with a minimum of 55% marks.	
	3. M.Sc (Marine Pharmacology)	M.B.B.S. / B.D.S. / B.Sc. (Allied Health	

		Sciences) / B.Sc. (Life Sciences / Biosciences) / B.Sc. Botany with Ancillary Zoology / B.Sc. (Biotechnology / Microbiology) / Bachelor of Physiotherapy (B.P.T.) / Bachelor of Occupational Therapy (B.O.T.) / Bachelor of Pharmacy (B.Pharm.) / Bachelor in Audiology and Speech Language Pathology / B.Sc. Nursing / B.Sc. Physician's Assistant or any graduate degree in Medical / Health Science awarded by a recognized University with a minimum of 55% marks.	
	4. M.Sc (Medical Biotechnology)	M.B.B.S / B.D.S. / B.Sc. (Allied Health Sciences) / B.Sc. (Life Sciences / Biosciences) / B.Sc. Botany with Ancillary Zoology / B.Sc. (Biotechnology / Microbiology / Chemistry / Biochemistry) / Bachelor of Physiotherapy (B.P.T.) / Bachelor of Occupational Therapy (B.O.T.) / Bachelor of Pharmacy (B. Pharm.) / Bachelor in Audiology and Speech Language Pathology / B.Sc. Nursing / B.Sc. Physician's Assistant or any graduate degree in Medical / Health Sciences awarded by a recognized	

		University with a minimum of 55% marks.
	5. M.Sc .(Clinical Research & Experimental Medicine)	M.B.B.S. / B.D.S. / B.Sc. (Allied Health Sciences) / B.Sc. (Life Sciences / Biosciences) / B.Sc. Botany with Ancillary Zoology / B.Sc. (Biotechnology / Microbiology) / Bachelor of Physiotherapy (B.P.T.) / Bachelor of Occupational Therapy (B.O.T.) / Bachelor of Pharmacy (B.Pharm.) / Bachelor in Audiology and Speech Language Pathology / B.Sc. Nursing / B.Sc. Physician's Assistant or any graduate degree in Medical / Health Science awarded by a recognized University with a minimum of 55% marks.
	6. M.Sc. (Computational Biology)	B.Sc. Physics/Chemistry/Life Sciences/Mathematics /Computer Science or B.E., or M.B.B.S., B.D.S., B.V.Sc., B.Pharm., or any graduate degree in Medical/ Health Sciences awarded by a recognized University with a minimum of 50% marks.
	7. M.Sc .(Bioinformatics)	Bachelor's degree in any relevant area of Physical/ Chemical/ Life Sciences / Mathematics / Computer Science (or) Bachelor of Engineering (or) M.B.B.S / B.D.S. / B. Pharm./B.Sc.

		or any graduate degree in Medical/ Health Sciences awarded by a recognized University with a minimum of 50% marks.	
	8. M.Sc .(Pharmaceutical Chemistry)	B.Sc. Chemistry / Pharmacy / Pharmaceutical Chemistry / Biochemistry / Microbiology / Genetics / Industrial Microbiology / Botany / Zoology / Biotechnology with Chemistry as ancillary subject are eligible to apply.	
	9. M.Sc. (Health & Yoga Therapy)	MBBS, BDS, BAMS, BSMS, BHMS, BNYS, Bachelor degree in biosciences, physics, chemistry and allied sciences are appended, with graduates from other streams are also eligible provided they have taken "Biology" at 10+2 level awarded by recognized university with a minimum of 50% marks.	
	10.M.Sc. (Counseling Psychology)	B.A. / B.Sc. Psychology Degree Examination or any of the following subjects ; Bachelor of Social Work (B.S.W.), B.A. Sociology, B.Sc. Home Science or Human Development or Child Development; B.A. Philosophy, B.Ed. or any other related subjects B.A./ B.Sc. or M.A. / M.Sc. with Psychology, M.B.B.S., B.D.S., or any other Bio-Medical	

		Science Post Graduate from any recognized University.
	11. M.Sc. (Radiology& Imaging Science Technology)	Eligibility: M.B.B.S. / B.D.S./B.Sc. (Allied Health Sciences) awarded by the recognized University with a minimum of 55% of marks . 3 Year B.Sc. (Physician Assistant) course with one year internship or training in the relevant field.
	12. M.Sc. (Echocardiography & Cardio vascular imaging)	Eligibility: M.B.B.S. / B.D.S./B.Sc. (Allied Health Sciences) awarded by the recognized University with a minimum of 55% of marks . 3 Year B.Sc. (Physician Assistant) course with one year internship or training in the relevant field.
	13. (M.Sc. Tissue Engineering & Regenerative Medicine) *	**Eligibility:** M.B.B.S. / B.D.S. /B.Sc. (Allied Health Sciences)/ B.Sc. Life Sciences (Biotechnology / Microbiology/ Biochemistry/ Genetics/ Zoology / Botany & related subjects) B.Sc. Physical and Chemical Sciences with Biology at +2 level / Bachelor of Pharmacy (B. Pharm) or any graduate degree in Medical / Life Sciences awarded by a recognized University with a minimum of 55% marks.
	14. (M.Sc. Medical Genetics & Molecular Diagnostics)*	**Eligibility:** M.B.B.S. / B.D.S. /B.Sc. (Allied Health Sciences)/ B.Sc. Life Sciences

		(Biotechnology / Microbiology/ Biochemistry/ Genetics/ Zoology / Botany & related subjects) B.Sc. Physical and Chemical Sciences with Biology at +2 level / Bachelor of Pharmacy (B. Pharm) or any graduate degree in Medical / Life Sciences awarded by a recognized University with a minimum of 55% marks.	
	15. M.Sc. (Human Nutrition)*	**Eligibility:** M.B.B.S. / B.D.S. /B.Sc. (Nutrition / Home Science/ Dietician/ Food Science and Technology)/ B.Sc. (Allied Health Sciences)/ B.Sc. Life Sciences (Biotechnology / Microbiology/ Biochemistry/ Genetics/ Zoology / Botany & related subjects) / Bachelor of Physiotherapy (B.P.T) with Biology at +2 level/ Bachelor of Occupational Therapy (B.O.T) / Bachelor of Pharmacy (B. Pharm) / B.Sc. (Nursing) / B.Sc. Physician's Assistant or any graduate degree in Medical / Health Sciences awarded by a recognized University with a minimum of 55% marks.	
6.	UG Courses 1. (Allied Health Sciences) (3 year + 1year internship) 2. B.Sc. (Medical Biotechnology)	Candidate must have passed HSC/CBSE/ISCE in subjects of Physics, Chemistry, Biology/Botany and Zoology and English	Marks in qualifying examination and Interview

	3. B.Sc. (Medical Bionanotechnology) 4. B.Sc. (Medical Genetics)	individually. Candidates who have passed the HSC in Vocational stream are eligible to apply.	
7.	B.Sc Nursing	As Per INC norms • 45%(aggregate of Physics, Chemistry, Biology and English) • 5 % relaxation for SC and ST	Marks in qualifying examination and Interview
8.	Post Basic B.Sc Nursing	As Per INC norms	Pass in the qualifying examination
9.	M.Sc Nursing	As per INC • 55% in the B.Sc / Post Basic B.Sc Examination • 5 % relaxation for SC & ST	Marks in qualifying examination and Interview
10.	Ph.D (Full time & Part Time)	As per UGC	Based on Entrance test and Interview

2.1.3 Provide details of admission process in the affiliated colleges and the university's role in monitoring the same.

Since it is a Deemed to be University declared under section 3 of the UGC Act 1956, there are only constituent colleges and no affiliated colleges under this University. However for the Constituent College, admission criteria are as per the stipulated guidelines.

2.1.4 Does the institution have a mechanism to review its admission process and student profile annually ? If yes, what is the outcome of such an analysis and how has it contributed to the improvement of the process?

Yes, the University reviews admission process through demand ratio for different courses specially the innovative courses. The admission criteria is modified to accommodate the demand for innovative courses by students/ passed out graduates from industries/ Service providing centres.For courses in Medical and Nursing the University follows stipulated guidelines as per MCI and INC . Board of studies reviews selection process related to respective programs, the recommendations are approved and executed by the Board of management.

The University provides opportunity for students from all sections of the society to be admitted in the different courses offered. Different strategies are used to reach out to students in rural and urban.

2.1.5 What are the strategies adopted to increase / improve access for students belonging to the following categories :
    *SC/ST
    *OBC

*Women
*Persons with varied disabilities
*Economically weaker sections
*Outstanding achievers in sports and other extracurricular activities

The University does not come under the statutory regulations of reservation policy on communal Basis. However

- An Equal opportunity cell is available and functioning in the university.
- Students belonging to SC/ST and OBC are also admitted based on the admission criteria for the program
- University takes into consideration the recommendations given by Indian Nursing Council (3% disability reservation to be considered with a disability of loco motor to the tune of 40- 50 %)
- We try to ensure equal access to all students, especially the above said groups.
- Concession in the hostel and mess fee is provided for students from disadvantaged community (on case to case basis)
- The ratio of female students is more than male students in all the courses.

2.1.6   Number of students admitted in the institution in the last four academic years:

Categories	Year 1 (2011-12)		Year 2 (2012-13)		Year 3 (2013-14)		Year 4 (2014-15)	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	04	22	03	22	10	37	18	40
ST	03	02	0	01	01	01	02	02
OBC	11	21	19	30	16	46	27	65
General	100	155	77	128	110	136	110	184
Total	318		280		357		448	

2.1.7   Has the university conducted any analysis of demand ratio for the various programs of the university departments and affiliated colleges? If so, highlight the significant trends explaining the reasons for increase / decrease.

The University conducts analysis of the demand ratio for the various academic programs. Analysis of the ratio reveals that there has been increase in the demand for certain course and decrease in demand for few courses.

Most of the innovative courses offered would take time to instill its impact on the student/ parent community to take up these programs.

With the passed out students taking up placements in reputed industries would give higher visibility for the stakeholders about the potentials of students from these programs.

The University has been actively involved in measures to take these programs to the prospective students both from schools and colleges through various methods like open house, hands on workshops, career guidance programs, educational fairs etc.

2.1.8   Were any programs discontinued/staggered by the institution in the last four years ? If yes, specify the reasons.

Yes

Under the Faculty of Nursing, the Post Basic Diploma Programs in Nursing (7 in No - Post Basic Diploma in Nurse Practitioner in Midwifery, Post Basic Diploma in Operation

Room Nursing, Post Basic Diploma in Cardio Thoracic Nursing, Post Basic Diploma in Critical Care Nursing, Post Basic Diploma in Emergency and Disaster Nursing, Post Basic Diploma in Neonatal Nursing and Post Basic Diploma in Neuroscience Nursing was discontinued in 2012-2013 as per Indian Nursing Council norms .

The M.Sc three years course in Anatomy, Physiology, Biochemistry, Pharmacology and Microbiology staggered in 2014-15. And hence kept on hold, it may be revived at a later period

2.2   Catering to Diverse Needs

2.2.1 Does the institution organize orientation / induction program for fresher's? If yes, give details such as the duration, issues covered, experts involved and mechanism for using the feedback in subsequent years.

Yes, Orientation program is given to all the new entrants of the University.

- Fresher's are oriented to the rules and regulations, Curriculum, Organizational structure, facilities in the campus and career prospects of their respective course.
- Students are also oriented to the various departments, provided opportunity to interact with faculty and also acquire familiarity with the learning facility.
- In addition the student calendar provided contains details of academic calendar, rules and regulations and timelines for examinations, fee payment and the leave details.

For the MBBS students a structured orientation program extending over a period of 12 days is scheduled which includes

- Ice breaking sessions and introduction of fresher
- Orientation to faculty, college and clinical departments and Curriculum
- Orientation to learning facilities in the college , including library and Learning Management system
- Oriented to the Examination system
- Sharing of experience at Chettinad Health city both by senior students and senior faculty
- Life in the Hostel and the facilities available in the campus is shared by their peers
- Mind Body wellness is encouraged through yoga sessions and stress management and indoor games
- They are also subjected to medical examination and Psychometric tests and Hepatitis B vaccination
- Motivational talks on How to study Medicine, Time Management, self discipline and issues like Ethics in Medicine is discussed by senior faculty and great citizen like Dr Shantha who has contributed enormously to the society by her dedicated service
- Cultural to identify student interest and motivate spirit of oneness

    All of the above help the fresher's develop good inter personal relationship with their peers, seniors, faculty and also promote a smooth transition from school life to professional life

2.2.2 Does the institution have a mechanism through which the "differential

requirements of the student population" are analyzed after admission and before the commencement of classes? If so, how are the key issues identified and addressed ?

The differential requirements of the fresher's are analyzed through

- Informal feedbacks received from the seniors with regard to the obstacles faced by them which hindered their learning process, methods/ strategies that helped them perform better.
- Suggestion on methods of teaching that was appropriate or not appropriate for different learning needs. These feedbacks are taken consideration to serve as guidelines for planning for the freshers.
- Guidance is provided for accommodation and other adjustments expected during their entry into the new campus.
- Students are counseled and guided by student Counselor, personal mentoring.
- The new entrant's predominant styles are identified using the validated learning questionnaire designed by Fleming and this helps to plan their teaching strategies to cater to the diverse learning styles.
- Remedial programs are offered on the basis of student requirement.

2.2.3 How does the institution identify and respond to the learning needs of advanced and slow learners ?

Slow learners and advanced learners are identified through formative evaluation.

- There is active longitudinal mentoring for all students
- The slow-learners are assisted and guided in solving their learning problems,
- Tutorial / remedial program are planned and implemented to cater to individual learning needs
- Additional coaching during vacation/ review classes are implemented
- The advanced learners are encouraged to explore the advantages, and reap the benefits, of self-directed learning.
- Advanced learners are made group leaders to motivate and guide other students. In addition they are encouraged and trained to participate in intercollegiate quiz and initiate short student's projects, present at various conferences.

The institute has also been successfully implementing the learning Management System (LMS), which is designed to meet the diverse needs of the learners. Instruction is concept focused and principle driven. All the students have the opportunity to explore and apply the key concepts of the subject being studied. All students come to understand the key principles on which the study is based. Such instruction enables the slow learners to grasp and use powerful ideas and, at the same time, encourages advanced learners to expand their understanding and application of the key concepts and principles. Such instruction helps understanding/ sense making rather than retention and regurgitation of fragmented bits of information.

University toppers of all the courses are awarded recognized and suitability awarded.

Vertical and Horizontal integration of clinically relevant topics further help students in their understanding and enriching their learning process.

2.2.4 Does the institution offer bridge / remedial / add-on courses? If yes, how are they structured into the time table? Give details of the courses offered, department-wise/faculty-wise?

No , the University does not offer any bridge programs

The individual department/ Faculty of the University organizes remedial programs based on the need of the slow learners in their respective programs/ course. As it is need based, these remedial programs are planned and implemented during the free hours/ after college working hours/ during vacation.

2.2.5 Has the institution conducted any study on the academic growth of students from disadvantaged sections of society, economically disadvantaged, differently-abled, etc.? If yes, what are the main findings ?

No,

However students from disadvantaged sections of society are encouraged to take up the academic programs and offered financial concession, personal attention and counseling through mentorship program has enabled them to handle the rigor of the academic programs In the Academic year 2014-15

	Female	General	SC	ST	OBC	Rural
Percentage admitted in academic year 2014-15	65	66	13	0.89	21	63

2.2.6 states/countries ?

The student counseling cell caters to the needs of students from other students and countries. International student cell further provides all the other logistic support and guidance required for them to clear governmental norms and also settle down well and align with our teaching and learning methodology.

2.2.7 What are the institution's efforts to teach the students moral and ethical values and their citizenship roles ?

These concepts are oriented to the students during their orientation program by having experts to share their knowledge and views on aspects such as Ethics in Medicine and they are also reinforced from time to time.

Students and faculty are encouraged to participate in outreach activities where they are sensitized to community needs

Students are encouraged to join as volunteer members in Youth Red Cross/ NSS and Voluntary Blood donation club and thus contribute to the society and also develop a feeling as they work together

Periodically inspirational talks by few great citizens who have been a role model by their simplicity and yeomen service like Dr Shantha (WIA Adyar Cancer Institute) are arranged so that the students benefit from their views

The national health days are celebrated and involving students' and faculty by organizing health talks, awareness programs, quiz competitions, poster competitions , display of balanced and nutritious diets

National integrity days are remembered like the Good Governance day was celebrated organizing oratorical competition among students. Republic day and Independence Day is also remembered and honored.

2.2.8   Describe details of orientation/ foundation courses which sensitize students to national integration, Constitution of India, art and culture, empathy, women's

empowerment, etc.

Students are sensitized to National integration by observing and remembering   Republic and Independence day, celebrating good governance day, International students day etc. As students are admitted from different States and Regions, there is an opportunity for sharing and respecting respective cultures and views.

Ample opportunities are provided to students to sensitize them towards Art and Culture, to begin with Cultural program is one aspect that is part and parcel of their orientation program. There after every year cultural in the form of Chetfest is organized and students are encouraged to participate in inter collegiate cultural competitions. Similarly Sports meet is organized every year and there is ample provision made in the campus for students towards their physical training. One physical trainer is available who monitors students with their physical training in the in-house Gym, indoor and outdoor sports facilities like cricket field, throw ball, volley ball . An indoor stadium is available in the campus and a swimming pool is available in the hostel.

Empathy is part and parcel in the health care scenario. This is well motivated among our students by their participation in patient care and outreach programs which sensitizes them to the problems and needs of the community

Women empowerment is much appreciated in our institution as women constitute the major work force, most of our Heads of Department are women, and the number of female students out beat the male students in most of the courses offered.

Women's day is always remembered and celebrated and special screening for women's health is organized. In the National conference 2015, organized by Chettinad College of Nursing, a session on Gender Equality and Women empowerment was organized .

2.2.9 Has the institution incorporated the principles of Life Style Modifications for students based on Eastern approaches in their day to day activities?

Yes, to begin with, the orientation program incorporates aspects of healthy lifestyle modification and the students are encouraged to follow the same in their day to day activity.

University provides Gym facility for both boys and girls, facility for indoor and outdoor sports acitivities is made available for the students within the campus. The Nursing students have regular PT scheduled in their timetable, as part of their co- curricular activities as per INC recommendations.

Healthy and balance diet is provided in the hostel

The concept of maintaining a green zone and use of battery operated vehicles and bicycles sensitizes the students to keep the environment clean and green. Strict Adherence to a dress code (Uniform) is also insisted to the students which promotes self discipline and promotes a "we" feeling among students.

2.2.10 Has Yoga/Meditation/any other such techniques been practiced by students regularly as self-discipline?

Yes

The Nursing students have regular yoga classes scheduled twice a week as part of their extracurricular activities.

The Medical students have Yoga and stress management included in their orientation.

NSS also organizes Yoga sessions (a session on surya namaskaram)was presented by a yoga expert.

International Yoga day was celebrated by the University on the 21st of June 2015.

The NSS has co-ordinated with Vyakti Vikas Kendra, India, The Art of Living, to initate the Yogathon in January 2015.

We also have a PG Program in Health and Yoga Therapy.

2.2.11 How does the institution attend to the diverse health issues (physical and mental) of students and staff ?

Physical health is taken care of by encouraging and providing avenues for healthy life style modification

- Hygienic and balanced diet provided in the hostel
- Indoor and out door sports facilities available in campus
- In house Gym facilities available for students with trainer at subsidized rates
- Green zone maintained in the campus ensures a healthy and clean environment with good oxygen and promotes aesthetic feeling among students
- The students undergo a medical checkup after their admission to their respective course, a separate health record is maintained per student, when students are unwell they are attended in the hospital. They are also vaccinated for Hepatitis B

Students Mental Health is taken care of by Stressing on stress management in their orientation program

- Sharing of Feedback and views from senior students and faculty on how to manage life at Chettinad, How to manage time, how to study medicine and so on
- Students are counseled as and when required by their class coordinators and mentors and if required they are referred for counseling with the in-house psychologist.
- A grievance redressal is also functioning for both staff and students

2.2.12 Does the institution cater to the needs of groups / individuals requiring special attention by conducting group classes / special individual trainings / focused group discussion / additional training measures etc.?

Yes,

There is active mentoring of students. While the slow-learners are assisted and guided in solving their learning problems, the advanced learners are encouraged to explore the advantages, and reap the benefits, of self-directed learning.

There is provision for tutorials,

For MBBS course the mode of tutorials: Group discussions, Short review classes, Tests

Nursing students are given additional coaching during vacation for slow learners

Students of all other courses also have regular tutorials in the form of review classes / tests.

2.3 Teaching-Learning Process
2.3.1 How does the institution plan and organize the teaching-learning and evaluation schedules such as
☐ **academic calendar**

The academic calendar consists of information related to the working days, holidays, schedule of fees payment and examinations. The calendar is the part of student

manual and is distributed to all the students at the beginning of the academic year.

☐ **master plan**

The faculty of medicine, nursing and allied health sciences prepare a master plan for the academic year, which provides a road map of teaching and evaluation plan based on the academic calendar.

☐ **teaching plan**

Each department of every faculty prepares the teaching plan for every working day. It includes detailed information of the topic or microtopic covered on a day today basis.

☐ **rotation plan**

The undergraduate and postgraduate students of medicine, nursing and allied health sciences are posted in various clinical and specialty departments on a rotation basis. The rotation plan is prepared by each faculty and postgraduate departments well in advance to encourage the students to attend the rotational postings actively.

☐ **course plan**

Every course run by the University is designed with specific objectives and the course content is planned to teach the students in the most comprehensive way to meet the objectives. The material resources and manpower resources are mobilized to address the specific needs of every course. The course plan defines the key subjects, practical skills and technical areas to be taught to the students. The feedback from students and teaching faculty and the needs of the community and healthcare industry are taken into consideration to suitably modify the course plan.

☐ **unit plan**

The subjects defined in course plan are divided further into multiple units. Each unit will define the specific topics and micro topics. The duration of teaching, practicals and clinical postings are fixed based on the weightage given to specific areas in course curriculum.

☐ **evaluation blue print**

The students of all faculties undergo evaluation in terms of formative and summative assessments. The schedule is drawn in advance for each academic year or semester and students are intimated so that they have adequate time to prepare for the assessments.

☐ **outpatient teaching**

Students of medical and nursing faculties are posted on rotation to the out patient units of various departments. The students get exposed to common outpatient ailments and are taught on clinical skills such as history taking, clinical examination, diagnosis and treatment.

☐ **in-patient teaching**

Similar to outpatient teaching, the students are posted on rotation in in-patient wards. The students observe and examine patients admitted with different types of ailments and the teaching faculty discusses the clinical approach in diagnosis and management of those ailments with the students.

☐ **clinical teaching in other sites**

In addition to the clinical teaching in the hospital premises, the students are posted in rural and urban health centres. They also attend camps conducted in the health centres. Skill lab that houses stat of the art manikins are also used to teach the students on clinical procedures such as basic and advanced life support, blood draw, intubation, administration of injections and suturing.

 teaching in the community

> Community engagement is given importance via the students' posting in rural and urban health centres and primary health centres. The students are motivated to actively participate in camps conducted by the community medicine department. They get exposed to the common community ailments and the approach not only to diagnose and treat individual patients but also to prevent occurrence of disease and strategies adopted to reduce the spread of diseases at community level. In community teaching, students are mostly taught on primary and preventive health care and when the patients should be referred to secondary or tertiary care centres.

2.3.2 Does the institution provide course objectives, outlines and schedules at the commencement of the academic session? If yes, how is the effectiveness of the process ensured?

> Yes. All the courses conducted by the faculty of medicine, nursing and allied health sciences have got individual regulations and syllabus framed by each faculty and board of studies. The course objectives are made available to students through the learning management system for the specific subjects. There are specific course objectives, outlines and schedules defined and provided to the students at the commencement of academic session. The teaching schedule and academic calendar are distributed to the students and exam schedule for both formative and summative assessments are displayed in the notice boards also. The schedules are also displayed in the web pages of learning management system (e-learning tool) for any time reference to the students. The effectiveness of the process is ensured based on the student performance, student and faculty feedback and faculty and university level review meetings.

2.3.3 Does the institution face any challenges in completing the curriculum within the stipulated time frame and calendar ? If yes, elaborate on the challenge encountered and the institutional measures to overcome these.

> Generally there is no difficulty in completing the allotted syllabus within the stipulated time frame and calendar. The institute always schedules extra hours or days for almost all the courses than the teaching hours or days recommended by regulating agencies such as medical council or nursing council. If the syllabus is completed well ahead in the calendar, the extra time is utilized for revision or formative assessments. The extra time is also used to compensate any unanticipated and unscheduled holidays.

2.3.4 How is learning made student-centric ? Give a list of participatory learning activities adopted by the faculty that contributes to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

> – At undergraduate and postgraduate levels, much focus is given for the student centric learning process.
> – The teaching –learning programs conducted in the institute include didactic lectures, small and large groups discussions, tutorials, seminars, symposiums, debates, quiz programs, case studies, case discussions, audio-video aided presentations and simulations. Other than didactic lectures, every other teaching method involves active participation from students. Even in lecture programs, the teaching faculty is encouraged to motivate the active participation of students

making it to be a student centric one.

– The students have access to the e-portal for learning "learning management system" in which the presentations and case discussions are available always. The students can refer to the materials online and post their doubts in a forum which other students or faculty can clarify.

– The students are motivated to participate in seminars and symposiums. They are informed about the topics of presentation well in advance and encouraged to present their views on the topics. The students also participate in conferences, quiz programs and community health initiatives, which raise their standards in communication skills and interpersonal relationships and community networking.

– The students with the guidance of faculty undertake research programs such as ICMR Short Term Studentship (STS) and other stand-alone research projects.

– Postgraduates shall conduct research and submit dissertations of their research outcome, which is mandatory as per the University rules to become eligible for the award of degrees. They also need to do poster and oral presentations in national and international conferences and publish research articles in peer-reviewed journal as a part of their curriculum requirement.

– Library and virtual library are available that provide opportunity for the students to learn subjects from reference books and journals.

– Students of medical and nursing faculty are given ample chance to undergo practical training. Attention is given to every student in making them to independently practice necessary skills when they get graduated. In surgical specialties such as general surgery, orthopedics and obstetrics and gynecology, they are given supervised chances to do essential surgical procedures without affecting patient wellbeing. Ultimately, the learning process is student centric and designed with the objective of holistic development and improved student learning.

2.3.5 What is the institution's policy on inviting experts / people of eminence to augment teaching-learning activities ?

The institute encourages the faculty to organize guest lectures / invited speeches and organize symposiums with invited specialists to augment teaching learning activities. The institute has dedicated funds to facilitate conduct of such programs with experts and people of eminence.

2.3.6 Does the institution formally encourage learning by using e-learning resources ?

– Yes. The institute has launched successfully the in-house developed "learning management system". All the presentations of lecture classes are made available on-line in this web portal. The students at any time within the campus or outside the campus, can log-in to the portal and review the presentations and learn the subjects. Practically oriented presentations, model questions and clinical pathological conference tasks are also available online. The presentations of CME programs are also available to help the students learn the subjects in an advanced manner.

– An interactive forum is also made available in which students can form network with like-minded faculty and students and engage in effective sharing of knowledge among them. Any doubts can be shared and clarifications are possible

through this networking.
- Virtual library with electronic versions of text and reference books and journals are also available to augment e learning activities.

2.3.7 What are the technologies and facilities such as virtual laboratories, e-learning and open educational resources used by the faculty for effective teaching ?
- The faculty of the University have Virtual Library, authorization rights to use e learning web portal "learning management system" and simulation laboratories to use and update themselves and train the students.
- CD and DVD as learning resources are available for student use in the Library as well.
- Every department has computer systems and Internet connectivity. The faculty may browse pubmed, google scholar, nature and other web resources to download materials and use them for teaching and learning.
- The faculties are robustly trained in this regard by the in-house information technology team.
- The clinicians are provided with tablets (compact touchpad enabled handy computer systems). These systems will be used to create patient databases, their disease details, diagnosis and treatment. The Institute is in the process of creating technology oriented paperless digital health records.

2.3.8 Is there any designated group among the faculty to monitor the trends and issues regarding developments in Open Source Community and integrate its benefits in the institution's educational processes ?

Members of the Medical and nursing Education Units constantly monitor the developments in the field of medical and nursing education. They are invited to attend the training programs in recent and newer trends in medical education to the MCI regional center, Christian Medical College. Selected members attend these programs and disseminate the knowledge acquired to other faculty of the institute.

2.3.9What steps has the institution taken to transition from traditional classrooms into an e-learning environment ?

The lecture theatres are state of the art, equipped with modern LCD projectors, laser pointers, power plugs in every seat of the student, wi fi enabled internet connectivity and biometric attendance in place of conventional paper attendance. The presentations are uploaded to the web portal for e learning "learning management system" before the class commences so that the students can download and view the presentation either prior to the class or follow the presentation during the class from their laptops. The entire campus of the institute including lecture theatres, common rooms, food court, library and hostels is having wi fi internet connectivity with access to the lecture presentations and e learning portals. The institute is thus committed to create e-learning environment.

2.3.10 Is there provision for the services of counselors / mentors/ advisors for each class or group of students for academic, personal and psycho-social guidance ? If yes, give details of the process and the number of students who have benefitted.

Yes. There are designated student councilors whom the students can approach in case of problems at academics or at personal or psychosocial levels. The councilors guide, motivate

and encourage the students to come of the problems.

A mentorship program is also in place for all the students starting from 1 year to final year. The students are randomly allocated to mentors who meet their mentees periodically at scheduled and unscheduled time points and track their academic and personal development and try to assist the students who have problems. The approximate ratio of student vs mentor is 5:1. In a year, on an average 50 to 60 students immensely get benefited with the effective mentorship program.

2.3.11 Were any innovative teaching approaches/methods/practices adopted and implemented by the faculty during the last four years ? If yes, did they improve learning ? What were the methods used to evaluate the impact of such practices ?What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching ?

Innovative teaching methodologies adopted in the institute include problem-based learning, objective structured practical and clinical examinations and self directed learning besides other methods. Compared to conventional methods of teaching, these innovative methods improved the learning as evidenced by the academic performance of the students. Student feedback, faculty feedback and academic performance in the formative and summative assessments were used to evaluate the impact of these novel practices.

Faculty who take keen interest in the innovative teaching approaches are recognized and sponsored by the institute for upgrading their teaching skills through the faculty development program at Christian Medical College, Vellore. CMC Vellore is the affiliating regional centre for the University. In addition they are inducted as faculty member of the Medical Education Unit of Chettinad Hospital & Research Institute for in-house faculty development program.

During the annual increment teacher performance based on feedback from students and other sources including the inputs from the head of the department are taken into consideration .

2.3.12 How does the institution create a culture of instilling and nurturing creativity and scientific temper among the learners ?

The students display their creativity in academic and non-academic sectors in the University. There are scientific programs organized for the students to show cause their academic creativity during celebration of important days in field of medicine. World AIDS day, No tobacco day, breast cancer awareness day and other days are celebrated and the students are motivated to present posters, rangoli, essay, slogan, advertisement, collage, etc based on a specific theme.

Cultural and sports events such as Chetfest and Chetfusion are organized to inculcate extracurricular creativity. The students participate in variety of such programs conducted in the campus and participate in programs conducted on other institutes.

To instill scientific temperament, the students are motivated to do independent projects under the supervision of a faculty. They also undertake ICMR STS (Short Term Studentship) projects. They participate in conferences and present oral papers and posters.

2.3.13 Does the institution consider student projects mandatory in the learning program? If yes, for how many programs have they been (percentage of total) made mandatory ?

For students doing post graduation, projects are mandatory and it is incorporated in the

regulations of each course. For undergraduates projects are optional but these students are also motivated to do projects.

☐ **number of projects executed within the institution :**

229 (Data pertains to dissertations submitted to the University)

☐ **names of external institutions for student project work**

- Azidus Laboratories, Rathinamangalam- Vandalur, Chennai- 48
- NRI Hospital , Vijayawada, AP
- Quest life sciences, Chennai
- Vimta lab, Hydrabad
- Micro Therapeutics Ltd, Chennai
- Action cancer hospital, New Delhi
- St.John's Hospital & Research Institute, Bengaluru
- Dr.Rai Memorial cancer hospital, Chennai
- BLK hospital, New Delhi

☐ **role of faculty in facilitating such projects**

The faculty plays the role of a guide or mentor for students who do research projects. They help in selection of topic, design of study, methodology, conduct of the study and analysis of the data. They also sensitize and help the students in obtaining necessary permissions and ethics committee approval of the projects. They train and assist the students in preparing manuscripts for journal publication and abstracts for poster and oral presentations in conferences.

2.3.14 Does the institution have a well qualified pool of human resource to meet the requirements of the curriculum? If there is a shortfall, how is it supplemented ?

The institute has adequate number of well-qualified and experienced faculty to meet the requirements of curriculum. The number, qualification and experience are based on the recommendations of the medical council and nursing council. The institute always complies with these requirements and it never had any shortage of human resource.

2.3.15 How are the faculty enabled to prepare computer-aided teaching/learning materials? What are the facilities available in the institution for such efforts ?

The Information technology department offers training to all the faculty of the University in handling computer systems. They train in preparing power point slides, handling LCD projectors and audio visual aids. Computer systems, LCD projectors, hand mikes, laser pointers and web portal "learning management system" are available to train the faculty in these areas.

2.3.16 Does the institution have a mechanism for the evaluation of teachers by the students / alumni? If yes, how is the evaluation feedback used to improve the quality of the teaching-learning process ?

Yes. The institute has a structured student feedback form. The students provide feedback regarding the teaching-learning methods, which also include the evaluation of teachers by the students. The feed back reports are compiled and analyzed to identify areas for improvement. Based on the analysis, faculty are informed and / or trained to improve the quality of teaching learning process.

The university has also successfully implemented online student evaluation of teachers/departments using Likert Scale. In this method, A questionnaire using a Likert

Scale poses a statement and asks the respondent whether they Strongly Agree - Agree - Undecided - Disagree or Strongly Disagree. The faculty is evaluated for a) teaching technique b) effective planning of lectures c) use of LMS d) student –teacher relationship e) overall performance of the teacher. Each department is evaluated for a) teaching schedule b) quality of examinations c) evaluation of papers d) small group discussions e) quality of practical training & f) overall performance of each department. The data collected are ordinal: they have an inherent order or sequence, but one cannot assume that the respondent means that the difference between agreeing and strongly agreeing is the same as between agreeing and being undecided.

2.3.17 Does the institution use telemedicine facilities for teaching-learning processes ? If yes, cite a few instances.

Yes. The institute has telemedicine facilities. Live surgeries from within the institute and from hospitals in different parts of India are telecasted for the benefit of students and faculty. Conference proceedings in different medical specialties are also broadcasted.

2.3.18 Does the institution utilize any of the following innovations in its teaching-learning processes ?

☐ICT enabled flexible teaching system.

Every lecture hall has facilities to conduct ICT enabled teaching sessions. Learning management system – a web based e learning system – is developed by the in-house IT department and is extensively used to teach students. Video conferencing and teleconferencing is also available and special lectures and live surgeries are broadcasted through this.

☐Reflective learning.

The academic programs offered in the faculty of medicine, nursing and allied health sciences involve reflective learning. In clinical and basic medical sciences, the students are exposed to specific skills by hands on training and practical experiments.

☐Simulations.

State of eh art simulation lab is established for the benefit of students. Basic surgical skills, anesthetic skills and resuscitation skills (advanced and basic) are demonstrated in the simulation lab. The students also get ample chance to practice the procedures in the lab, which will make them to apply similar principles in real time scenario.

☐Evidence based medicine.

Every department in the medical and nursing faculties prepare the students for practice based on evidences. The departments prepare special case scenarios and train the students to arrive evidence-based solutions. Evidence based medicine is given prime importance in the learning process in the institute.

☐Emphasis on development of required skills, adequateknowledge andappropriate attitude to practice medicine.

Theory, practical and clinical skills are given utmost emphasis in the curriculum of medicine and nursing. The class hours are allocated taking this into consideration. The students are posted in all clinical departments on rotation basis and attention is paid in imparting practical skills. The students are evaluated for their skills in university level examinations and it is mandated that the students score at least passing minimum to secure degree.

☐Problem based learning (PBL).

Problem based learning tools are prepared and validated by the faculty of clinical and para clinical departments. These tools are used to educate the students in diagnosing and treating a specific disease. The problems have definite objectives and students learn the problems with much enthusiasm.

☐ **Student assisted teaching (SAT).**

The postgraduate students are given an opportunity to conduct theory, practical and clinical classes for the undergraduate students. This helps the postgraduates to prepare and handle classes independently and the undergraduate students also actively participate in the classes.

☐ **Self directed learning and skills development (SDL).**

Sill laboratory and simulation laboratory are available to facilitate self-directed learning and skills development.

☐ **Narrative based medicine.**

Most of the departments in the constituent colleges of the University display the historical aspects of development of medicine and nursing domains in a narrative manner in the form of posters and charts. These aspects are also included in the lecture presentations and group discussions.

☐ **Medical humanities.**

The University sensitizes the students and faculty regarding this interdisciplinary field of medicine. They are encouraged to interlink medicine with arts, social science, literature, film, drama, psychology, human migration, genetics and genomics. The human migration is explored through genomic studies in the genomics lab of the University. Medical problems related to socially under privileged groups such as construction workers and daily laborers are investigated. Documentary films related to important medical and research aspects are also made.

☐ **Drug and poison information assistance centre.**

The drug and poison information center is run by the Dept. of Pharmacology where information related to drugs and chemicals are provided to the clinical and other departments. Web resources and online materials from regulatory agencies are taken into consideration and validated information is disseminated to the requesting departments.

☐ **Ayurveda practices.**

Department of Pharmacology is actively involved in the research of plants and plant-based products and their application in medical practice. Several postgraduates and few doctoral students have undertaken plant based dissertation and thesis. For some of the diseasesuch as cirrhosis of liver for which there is no significant remedy available in the modern medicine, ayurvedic products are used.

☐ **Yoga practices.**

Qualified yoga physician is available to apply yoga practices in health care. Students are also trained to follow yoga practices. The NSS unit of the University is very active in this regard and propagates the health benefits of Yoga.

International Yoga day was celebrated by the University on the 21st of June 2015.

The NSS has co-ordinated with Vyakti Vikas Kendra, India, The Art of Living, to initate the Yogathon in January 2015.

☐ **Yoga therapy techniques.**

The patients are given the benefit of Yoga therapy through the qualified yoga physician.

☐ **Naturopathy and its practices.**

Naturopathy and its application in modern medicine will be included in future in the

curriculum and awareness to that extent in academics and clinical practice will be created to the faculty and clinicians.

2.3.19 Does the institution have an Electronic Medical Records facility, staffed by trained and qualified personnel ? Is it used for teaching-learning process ?

Yes. The institute has the Electronic Medical Records facility. The people who are trained in medical records and electronic medical records handle it. The facility essentially archives the medical records and retrieves it when demanded. The undergraduate and post graduate students use the data from the medical records facility for research purpose and is used for teaching-learning process. SAGACCPAC ERP has been installed for all hospital record maintenance

2.3.20 Does the institution have well documented procedures for case sheet writing, obtaining informed consent and the discharge process of the patients ?

Yes. The institute has standard operating procedures for writing case sheets, obtaining informed consent and discharge of admitted patients. The interns, residents and faculty are trained in the respective SOPs.

2.3.21 Does the institution produce videos of clinical cases and use them for teaching-learning processes ?

Yes. The institute produces the videos of clinical cases, surgeries and clinical procedures and uses them for teaching-learning process. Facilities are available to record, store and telecast the surgeries and procedures. Live telecast of procedures is also carried out.

2.3.22 Does the institution perform medico legal/post-mortem procedures with a view to train the undergraduate and post-graduate students in medico legal procedures ?

The institution is awaiting permission for post-mortem and autopsy from the government. But presently the government has permitted the students of this university to observe and view the autopsy at Government Chenglepattu Medical College.

2.3.23 Does the institution have drug and poison information and poison detection centres? How are these used to train the students ?

Yes. The institute has the drug and poison information center run by the Dept. of Pharmacology. The department of Biochemistry has the facility to detect the levels of drugs and chemicals in the biological samples. The biological samples of patients with homicidal or suicidal poisoning are sent to the biochemical lab for analysis. The methods of detection and data & trend obtained from analysis are used for teaching-learning process.

2.3.24 Does the institution have a Pharmacovigilance / Toxicology centre /clinical pharmacy facility / drug information centre/Centre for disease surveillance and control/ Prevention through Yoga/Promotion of positive health/Well-equipped Psychology Laboratory/ Naturopathic diagnostic centre, etc. ?

Yes. The institute has pharmacovigilance centre, clinical pharmacy facility, drug information centre, centre for disease surveillance and control. Clinical psychologist with all equipments is available in the Psychiatry department. Yoga is taught only for students and not offered as service at the hospital.

2.3.25 Laboratories / Diagnostics
☐ **How is the student`s learning process in the laboratories / diagnostics monitored? Provide the laboratory time table (for the different courses).**

The respective teacher who is in charge for the specific lab experiment monitors the student's learning process in the laboratories. Their laboratory skills are assessed in the formative and summative assessments and student who lack in skills are trained additionally in special sessions.

The laboratory time table is given in the enclosure. (Annexure 8)

☐ **Student staff ratio in the laboratories / diagnostics.** 20:1 (Medical); 6:1 (AHS); 10:1 (Nursing)

2.3.26 How many procedures / clinical cases / surgeries are observed, assisted, performed with assistance and carried out independently by students in order to fulfill learning objectives?

The number of procedures, clinical cases, surgeries observed, assisted, performed with assistance and carried out independently depend on the course, number of students in each batch and number of teachers. However, the regulations of medical and nursing councils are adhered to in this. The students maintain log books to record the details related to clinical cases, procedures and surgeries they observed, assisted or performed.

2.3.27 Does the institution provide patients with information on complementary and alternative systems of Medicine ?

Yes. Depending upon the disease and the patient requirements, information related to alternative and complementary system of medicine is provided. If the patients are willing to change their treatment from modern medicine to alternate system, they are provided the details of the centers that practice alternate system of medicine. The hospital does not practice alternate systems and hence the treatment is not provided in the alternate system of medicine.

2.3.28.What are the methods used to promote teaching-learning process in the clinical setting ?

The medical students are exposed to clinical setting from second year onwards while nursing students from 1st year onwards. The students have an opportunity to observe patients in outpatient and in-patient departments. They are divided into small groups under various teaching faculty. They are allotted common and uncommon cases and provided time to examine the patients. Then the faculty will attend the students and discuss clinical findings, diagnosis and treatment. They are posted in operation theatres in small groups and have chance to observe how theatres are maintained and surgical procedures are carried out. The students carry out certain procedures in the simulation lab using mannequins.

2.3.29 Do students maintain log books of their teaching-learning activities ?

Yes. The students of medical, nursing stream and allied health sciences should maintain logbooks or records based on the recommendations of the respective governing bodies. They need to update log books on day-to-day basis and get them signed by the respective faculty. During formative and summative assessments, the log books will be evaluated by the examiners.

2.3.30 Is there a structured mechanism for post graduate teaching-learning process ?

Yes. Each postgraduate course has the university regulations and syllabus approved by the respective board of studies and academic council. Each course has defined learning objectives and the teaching methods to fulfill those objectives.

2.3.31 Provide the following details about each of the teaching programs :

☐ **Number of didactic lectures**

Number of didactic lectures varies for students of medicine nursing and allied health sciences. The lecture hours are scheduled based on the guidelines of governing councils of respective streams and are strictly complied with.

Generally all the courses have 1/3rd of their teaching hours as didactic lectures.

☐ **Number of students in each batch**

	I YEAR	II YEAR	III YEAR	IV YEAR
Faculty Of Medicine				
MBBS	150	146	308	-
Medical Postgraduates (MD/MS/DM/MCh/MSc)	40	41	24	-
Faculty of Nursing				
B.Sc Nursing	100	56	44	62
Post Basic B.Sc Nursing	4	8	-	-
Postgraduate Nursing	3	2	-	-
Faculty of AHS				
Undergraduate courses	119	100	53	31
Post graduate courses	39	28	-	-

☐ **Number of rotations**

The students are posted in various clinical departments on rotation and the schedule complies with the rotations recommended by the governing councils of respective streams.

The rotations adopted for MBBS course is given below and for other courses, it is enclosed. (Annexure 9)

☐ **Details of student case study / drug study**

The students evaluate the cases during their clinical postings in outpatient and in-patient departments. The details are recorded in the logbooks and record notes. They are reviewed and signed by the respective faculty and assessed during examinations.

☐ **Nursing Care Conference (NCC)**

The College of Nursing organizes International/National/ Regional Conferences/ workshops once every year , similarly departmental State level conferences are also organized atleast once a year. Regular CNE are organized at least once every month or once in two months. All the national health days are remembered by organizing health talks, role plays, quiz competitions etc

☐**Number of medical / dental procedures that the students get to see**

The number of medical procedures that the students get to see is always more than what the regulatory councils recommend.

☐ **Mannequins / Simulation / skills laboratory for student teaching**

Simulation /skills lab is state of the art. Undergraduates and post graduates use the lab and learn certain skills before they could practice in real time scenario.

 □ **Number of students inside the operation rooms at a given time**

It depends on the number students per batch and it usually 8 to 10 per operation theatre in medical stream. In case of nursing stream it is 4 to 5 per theatre.

 □ **Average number of procedures in the ORs per week, month and year**

Approximately, 20 to 30 procedures per week, month and year.

 □ **Autopsy / Post-mortem facility**

The institution is awaiting permission from the government for conducting post-mortem/ autopsy. Presently the government has permitted the students of this university to observe the autopsy at Government Chenglepattu Medical College.

2.4. Teacher Quality

2.4.1. How does the institution plan and facilitate its faculty to meet the changing requirements of the curriculum?

The medical Education Unit organizes faculty development program for the teaching faculty to update their knowledge on their teaching skills. In addition, CME/CNE programs, seminars, symposia, clinic pathological conferences, nursing care conferences, guest lectures are organized to meet the changing requirements of the curriculum.

2.4.2. Does the institution encourage diversity in its faculty recruitment? Provide the following details (department / school-wise).

Department Faculty of	% of faculty from the same institute	% of faculty from other institutes with in the state	% of faculty from other institutes Outside the state	% of faculty from other countries
Medicine	7	63	30	1
Allied Health Sciences	4	75	18	4
Nursing	2	39	54	6
Total	6	59	33	2

2.4.3   How does the institution ensure that qualified faculty are appointed for new programs / emerging areas of study ? How many faculty members were appointed to teach new programs during the last four years ?

The University strictly follows the eligibility criteria to appoint faculty as prescribed by the statutory authorities and / or UGC. The requirement for faculty is advertised in national newspapers / magazines, interviews are conducted and then the appointments are made. New courses have been introduced under Faculty of Allied Health Sciences and all faculty in the department have been appointed in the last four years.

2.4.4   How many Emeritus / Adjunct Faculty / Visiting Professors are on the rolls of the institution ?

6 (details on the website)

http://www.chettinadhealthcity.com/university/researchcentre_visiting_professors.htm)

2.4.5 What policies/systems are in place to academically recharge and rejuvenate teachers? (e.g. providing research grants, study leave, nomination to

national/international conferences/seminars, in-service training, organizing national/international conferences etc.)

CARE provides an environment for the faculties' academic development by way of,

a. Seed money for research is provided to faculty to conduct short term research

University offers academic leave to faculty to present their research findings at conferences

b. Faculty are nominated for Faculty development program at MCI Regional Centre at CMC Vellore

c. Faculty are nominated from training in ethics to ICMR NIH conducted Postgraduate Diploma in Biomedical Ethics

d. University provides partial sponsorship for conduct of conference/workshops

e. University invites researchers and academician of excellence to deliver lectures and motivate faculty and students. The academic programs organized in this regard are listed below.

	2010	2011	2012	2013	2014	2015
CME	20	22	36	41	55	25
CSM	18	14	26	33	61	27
CNE	6	10	6	13	15	12
Research Seminar	1	9	8	8	6	6
Conferences		2	1	3	4	6
Workshops, CME, etc	5	3	10	16	16	8
Guest lectures		8	18	18	12	1

2.4.6 How many faculty received awards / recognitions for excellence in teaching at the state, national and international level during the last four years ?

	2010-11	2011-12	2012-13	2013-14	2014-15
National	7	11	7	3	-
Internatinal	-	1	2	2	3

(Details in Annexure - 10)

2.4.7 How many faculty underwent professional development programs during the last four years? (add any other program if necessary)

3

Year	Basic Medical Education Training Workshop at CHRI		Basic Medical Education Training Workshop at MCI Regional Centre	
	No. of workshops	No. of Participants	Regional Centre	No. of Participants
2010	1	14	SRMC, Chennai	2
2011	2	26	CMC, Vellore	1
2012	1	With MCI observer from CMC vellore	19	9
2013	1	30	2
2014	1	28	2
Total	6	129	5	16

2.4.8   How often does the institution organize academic development programs (e.g.: curriculum development, teaching-learning methods, examination reforms, content / knowledge management, etc.) for its faculty aimed at enriching the teaching-learning process ?

The Medical Education unit organizes workshop on medical education technologies every year and the faculty attend the program to update their knowledge and skills in this regard. Selected faculty are sent to CMC-Vellore, the regional centre for medical education approved by MCI to attend the similar programs/workshops.

The IQAC of the University conducts seminars/conferences with regard to curriculum development, teaching-learning methods and examination systems and the faculty immensely benefit from these programs.

The medical education unit conducts weekly CME programs and similarly the nursing college organizes CNE programs for the benefit of the faculty.

2.4.9 Does the institution have a mechanism to retain faculty ? What is the annual attrition rate among the faculty ?

Yes. The Institute has implemented the UGC recommended pay scale for the faculty and adopt various welfare measures to attract and retain well experienced and highly qualified faculty. The faculty are provided academic leave and financial support to attend national and international conferences. They are also provided funds to undertake research projects. Attrition rate: 2%

2.4.10 Does the institution have a mechanism to encourage

☐ **mobility of faculty between institutions /universities for teaching/research?**

The Institute encourages the faculty to collaborate with other institutes and universities for sharing and updating the skills and knowledge in teaching and research. Any faculty willing to undergo such activities are welcome and permitted with allowances.

☐ **faculty exchange programs with national and international bodies ?**

The institute is in process of developing structured policies to facilitate exchange of faculty with national and international bodies

If yes, how have these schemes helped in enriching the quality of the faculty ?

2.4.11   Does the institution have well defined career advancement policy for Health Science professionals? If yes, outline the policy.

− Yes. Though there are specific policies for career advancement. The following activities are in place.
− Medical students are guided by faculty for preparation for admission to higher studies in competitive examination both within India and international examinations like USMLE and PLAB. The university is registered under Faimer, IMED and ECFMG portal as well.
− Chettinad college of Nursing periodically conducts campus placement by inviting consultants for job placement.
− Faculty in Allied Health Sciences assists students in their placement opportunities.
− The institution also gives placement opportunities to students from the medical, nursing and allied health sciences program.
− Students interested in research are given opportunity to register as full time research scholars with stipend and free boarding and lodging facilities.

- Students are also guided for NET examination like UGC, CSIR. Details of these examinations are displayed on the notice boards
- The university library is also stocked with study material to enable students prepare for competitive examinations at various levels.
- Programs in communication skills and on challenges in facing interview are also conducted.

2.4.12   How does the institution create synergies with other PG institutes for generating required number of specialists and super specialists ?

The institution advertises for specialist and super specialists on its website and national dailies. They are appointed by the appointment committee after the conduct of interview by a panel. Faculty are also encouraged to upgrade their training by attending various programs

2.4.13   Does the institution conduct capacity building programs/ courses in subspecialties for its faculty ?

Yes. Every department regularly conducts conferences and workshops towards capacity building both for inhouse participants and participants from other institutions. Research section and the Medical Education unit also conduct various wrokshops like Research methodology workshop, Proposal writing workshops, faculty development program, etc. Workshops, Seminar, etc (56), Guest lectures: 40, Conferences 13 (Details are given 3.1.6., 3.1.7, 3.1.12.)

2.5. Evaluation Process and Reforms
2.5.1   How does the institution ensure that all the stakeholders are aware of the evaluation process that are in place?

During the orientation program, various evaluation methods used in the University, and their relative significance, are fully explained to the students. In addition, all the departments, in their introductory session at the start of respective academic year, explain the evaluative methods practiced by the individual departments. All evaluation methods used including continuous assessment throughout the year is stressed and students are amply informed.

2.5.2 What are the important examination reforms implemented by the institution?
Cite a few examples which have positively impacted the examination system

In the conduct of all examinations and related activities, CARE has implemented the following reforms:-
1. Framing of the examination bye laws which gives the clear instruction regarding the methodology and protocol to be followed at all levels in the conduct of examination.
2. Examination system is completely computerized. A special software "Examinations management system" or EMS has been developed by our programmers based on Visual studio 2008 and SQL Server 2005
for the meticulous execution of the following tasks:
- Registration of students with complete personal details
- Preparation of applications for Examination and Hall Tickets

- Processing of data from entry of marks to preparation of statements of marks & grade system.
- Entry modules for processing of Internal assessment marks, Attendance particulars, written, practical and oral examinations marks
- Conversion of marks scored in examinations into grades.
- Optical Marks Reader (OMR) sheets are used for entry of written, practical & oral marks which are scanned and marks are entered into the database for the computation of results
  The entire examination system is therefore foolproof

3. <u>Double valuation</u> -All answer scripts for PG examinations will be evaluated by two examiners to avoid the subjective assessment of the answer scripts by the examiner.

4. <u>Critical evaluation</u>- This is adopted for UG examination with single evaluation where randomly selected corrected answer scripts of an examiner will be corrected by another examiner to check for subjective assessment of the answer scripts.

5. <u>Choice Based Credit System</u>. has been introduced to many courses offered by Faculty of Allied Health Sciences

2.5.3   What is the average time taken by the University for Declaration of Examination results? In case of delay, what measures have been taken to address them? Indicate the mode adopted by the institution for the publication of examination results (e.g. Website, SMS, email etc)

- Results will be announced within 2 weeks of completion of examinations.
- In case of delay, the reason will be analyzed and rectified within a couple of days.
- Results are published both in the University website and notice boards of the
- Constituent colleges

2.5.4   How does the institution ensure transparency in the evaluation process?

1. Continuous assessment (class tests and assignments) and internal assessments are completely transparent.

A. The students are given prior intimation about topic in which the assessment is to be carried out.

B. The pattern of questioning and the method of evaluation are explained to the students before the tests.

C. After evaluation, the answer scripts are given to the students to verify their performance

At present, final examination is conducted along similar lines except that the answer scripts (or photocopies of answer sheets) are not given to the students after evaluation

2.   Retotaling of answer scripts:

There is no provision for re-evaluation of answer scripts of the candidates. However, retotaling is undertaken on the individual application of a candidate and the result communicated to him/her through the Dean/ Principle

3. The Final University examinations results are attested by the Passing Board.

The Dean/ Principal who is the Chairperson of the respective Board and the other members

(Both internal & external examiners) scrutinize every entry in the Tabulated Marks Register (TMR) with reference to the mark lists and other documents before attesting the same.

2.5.5 What are the rigorous features introduced by the University to ensure confidentiality in the conduct of examination?

1. Question setters are generally external examiners selected by the COE who receive the questions confidentially in sealed envelopes.
2. <u>Safe custody of documents</u>:All documents pertaining to the University Examinations are preserved in strict confidentiality in the safe custody of the Controller for follow up action.
3. The office of the Controller of Examination is well equipped with high tech printers, Scanning equipment and Xerox machines. All confidential work such as printing of question papers, Hall tickets, tabulated mark sheets, statement of marks/grades and degree certificates are done under the personal supervision of COE.
4. The answer scripts are collected and delivered in sealed envelopes to the Controller at the conclusion of each examination.
5. To ensure Confidentiality in keeping the information regarding candidates and marks awarded, answer sheets having OMR sheets with bar code are used.
6. All procedures from the beginning to the preparation of tabulated mark sheets are computerized and done under the direct supervision of COE to ensure confidentiality

2.5.6 Does the institution have an integrated examination platform for the following Procedure

- **Pre-examination processes**
    1. The Schedule of Examinations shall be prepared by the Controller of Examinations and announced by display on the notice boards with the approval of the Vice-Chancellor. This shall be done not less than 60 days for non semester courses and 45 days for semester courses prior to the commencement of the Examinations.
    2. Registration of students with complete personal details, preparation of applications for examination and Hall Tickets are generated by the computers using a software (EMS) developed in the COE's office
    3. The list of invigilators are provided by the Dean/Principal of the constituent colleges and the attendance sheet is prepared in the Examination office
    4. Currently examination fees are collected at the account's section of the university
    5. Online payment gateway and online transmission of questions are yet to be implemented and the work is in progress
    However, work related to online transmission of internal assessment marks & attendance particulars from the Constituent colleges to the office of the controller of examination are completed and likely to be introduced in December 2014 Session
- **Examination process**
    1. All documents of a confidential nature are readied and printed exclusively in the Office of the Controller and preserved in his safe custody and none is outsourced to maintain confidentiality

Some of the items are:
- Question Papers
- Hall Tickets
- Tabulated Marks Registers
- Statements of Marks/Grades
- Provisional and Degree certificates.
- Drafts for communication regarding examination related activities

2. All non-confidential documents and the required stationery are obtained from the approved list of suppliers from outside and kept in readiness in the Office of the Controller for use, as and when needed. Some of the items are

- Optical Mark Reader Sheets.
- Approved formats for Marks/Grades.
- Envelopes.
- Answer Scripts.
- Approved formats of Degree/ Diploma with the Official hologram.

All stationary materials required for the conduct of examinations are supplied by the examination office to the hall superintendent. It is convenient to transport material to examination hall as the halls are located nearer to the Office of the Controller.

- **Post-examination process**
1. Optical Marks Reader (OMR) sheets are used for entry of marks.
OMR sheets are scanned and marks are entered into the database for the computation of Results.
A Software "Examination Management System" has been exclusively developed for the assessment procedure which include auto processing of results and certification

2. Software to calculate and process remuneration for the examiners and its transfer to examiner's account through NEFT are available in the office of the COE

2.5.7 Has the university/institution introduced any reforms in its evaluation process?

Yes, the Office of the Controller of Examination has recently purchased a Optical Mark Reader (OMR)-**SEKONIC –SR-3500 HYBRID** which has versatility to read "Mark" as well as "Image". This machine will be used to capture the image of the OMR sheets with its entry. Captured data can be processed and transferred into a PC at high speed in top accuracy for various purposes viz cross checking the mark entry, Retotalling/Revaluation, Quick retrieval of candidate's examination data etc

2.5.8 What is the mechanism for redressal of grievances with reference to examinations? Give details

The continuous assessment and periodical assessment of students are done regularly. Student's performance and marks are appraised to parents at regular intervals and in addition to motivation by faculties, parents are advised to motivate their wards to perform better.
Answer scripts of assessment examinations are made available to students and parents if requested, to ensure transparency.

At the university level examination, only retotaling of marks is permitted as per bylaws.

2.5.9 Does the institution has a Manual for Examinations and if yes, does it Specifically take cognizance of examination malparactices by students, faculty and non-teaching staff?

Yes. Acts of malpractice on the part of the examinee, examiners and other staff connected with examination-related activities and suggested punishments for such acts are documented in the manual.

2.5.10 What efforts have been made by the University to streamline the operations at the office of the Controller of Examinations? Mention any significant efforts which have improved the process and functioning of the examination division/section

1. All examination related activities are reviewed by the Vice-Chancellor for remedial action as needed and for implementation of strategies for improvement in the methodology and procedures of university examinations
2. The Controller of examination is governed by the rules of the Bye laws framed by the Board of Management in the conduct of all examinations and related activities.
3. The syllabi and regulations formulated by the Board of Studies and approved by the Academic council gives directions to COE in the conduct of examination and related activities
4. Academic audit: The evaluation process and other activities followed in the Controller of Examination office is scrutinized by an academic audit headed by Director/Dean/Principal who gives suggestions for improvement

2.5.11 What are the efforts of the institution in the assessment of educational outcomes of its students? Give examples against the practices indicated below:

- Compatibility of education objectives and learning methods with assessment principles, Methods and practices.
  By suitable modification of the education plan, assessment tools, providing model question paper and adequate information for the question setters and examiners.
- Balance between formative and summative evaluations
  Balance is maintained with more weightage to summative evaluations
- Increasing objectivity in formative evaluations
  Being done using modern techniques like online examination with the LMS facility
- Formative (theory / orals / clinical / practical) internal assessment; choice based credit system; Grading / marking.
  The formative assessments are based on theory, orals, clinical/practical examination. The evaluations are marked for all the courses. The PG courses will use grading system.
- Summative (theory / orals / clinical / practical) – all are followed
- Theory – structure and setting of question papers –
  Essays, long answers, shorts answers and MCQs etc. Questions bank and answer key . Question papers including MCQs are set by both external & internal examiners who are included in the approved panel of examiners
- Objective Structured Clinical Examination (OSCE)

Has been tried and practiced in internal assessment examinations

2.5.12 Describe the methods of prevention of malpractice and mention the number of cases reported and how are they dealt with?

1. To avoid malpractice of any sort, the examination hall is monitored with electronic surveillance maintained by closed circuit television devices.
2. Candidates are checked thoroughly by security personals by metal detectors before their entry into the examination hall and all electronic gadget including cell phones are not allowed inside the hall
3. Cell phone jammer will be switched on during written examination to prevent the use of cell phones in and around examination halls
4. One invigilator is posted to monitor every 25 students
   Till date one candidate was caught by the hall superintendent while "copying from her duppatta on which there was explicit write up" and it was dealt by an enquiry committee constituted by Vice Chancellor which has unanimously decided to punish her as per the nature of malpractice i.e. Non valuation of the particular paper

2.6. Student Performance and Learning Outcomes

2.6.1 Has the institution articulated its Graduate Attributes? If so, how does it facilitate and monitor its implementation and outcome ?

Yes. The institute had articulated the graduate attributes and it is reflected in the mission and vision statements of the University and quality policy. The graduates take pledge during convocation and the medical graduates take Hippocratic oath during their course completions. The courses, curriculum and syllabus are all designed to ensure implementation of these attributes in principle and practice.

2.6.2 Does the institution have clearly stated learning outcomes for its academic programs/departments ? If yes, give details on how the students and staff are made aware of these?

Yes. The institution has clearly defined the learning outcomes in all of the academic programs in medicine, nursing and allied health sciences. These are captured in the regulations and syllabus of every course. The internal faculty and selected external experts are actively involved in preparation and revision of these documents. They are approved in Board of studies and academic council and are made available to every department. The students are also made aware of these outcomes by the respective departmental faculty.

2.6.3 How are the institution's teaching-learning and assessment strategies structured to facilitate the achievement of the intended learning outcomes ?

The teaching – learning and assessment strategies are specifically designed for every course by the respective faculty in collaboration with internal and external faculty members. Care is taken to include recent and well-recognized strategies that are student friendly and high standard. The syllabus is built by keeping the learning objectives as the centre part of the syllabus and course curriculum. Didactic lectures, interactive sessions, integrated teaching, groups discussions, tutorials and audio video aided interactions are adopted to communicate the learning objectives effectively. Practical and clinical postings are given due importance to impart skills to the students.

The learning outcomes are evaluated through formative assessments via internal

assessments conducted by departments and summative assessments via University examinations.

2.6.4 How does the institution ensure that the stated learning outcomes have been achieved ?

The University through its offices of registrar and Controller of Examinations, monitor the student performances. The University makes it mandatory that the students shall secure minimum 50% in the University examinations to be declared successful. The percentage of students who secure less than 50% are considered for reappearance. The reappearance is analyzed for the number of students, subjects, question paper quality, correction quality and any specific trend if found, methodologies are adopted to reverse the trend in reappearance. The University offer special coaching programs for the poor performers to improve their learning and performance.

Criteria - III

Research consultancy & Extension

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

3.1 Promotion of Research

3.1.1 Is there an Institutional Research Committee which monitors and addresses issues related to research ? If yes, what is its composition ? Mention a few recommendations which have been implemented and their impact.

Yes. Research at the University are monitored and guided by the following committees which meet periodically. Most of these committees have external members as well. Details of the committees are available on the website.

Committee	Year of Inception	No. of members	No. of external members	Frequency of meeting
Board of Research studies	2008	12	2	Once in four months
Research Advisory committee	2010	18	10	Once in a year
Internal Review Board	2011	8	Nil	As and when research proposals are submitted for review
Plagiarism Standing Committee	2014	4	Nil	When Synopsis/Thesis / manuscript are submitted for review

Recommendations made by Board of Research Studies:
- PhD guidelines were developed and amended as per UGC guidelines
- Presentation of research findings in research seminar and approval by the institutional review board for submission of the PhD thesis
- Clearance from plagiarism standing committee (Plagiarism software used: Turnitin)
- Institution formally entered into MoU with Inflibnet. E version of PhD thesis would be uploaded on this site

Recommendations made by Research Advisory Committee:
- Thrust areas were identified
- With the vast outreach activities in specialized population like fishermen, - suggestion were made to design community based research
- Review by IRB for all proposals submitted for extramural funding mandatory

3.1.2 Does the institution have an institutional ethics committee to monitor matters related to the ethics of inclusion of humans and animals in research ?

Yes, the ethics committees periodically meet and clear projects which require ethical clearance for conducting studies on human and animals. In addition the University also has a Dissection Monitoring Committee.

Committee	Year of Inception	No. of members	No. of external members	Frequency of meeting
Institutional Ethics Committee	2006	10	5	4
Animal Ethics Committee	2006	10	4	4
Dissection Monitoring Committee	2014	6	1	4

3.1.3 What is the policy of the university to promote research in its affiliated / constituent colleges ?

Following policy/measures have been initiated by the university to promote research in its constituent colleges

- CARE fellowship for 25 full time PhD students (Fellowship, Boarding and Lodging approximately Rs.16,000/pm)
- Institution of seed money for faculty research
- Postdoctoral fellowship instituted by the university as well as application to various agencies encouraged
- Supportive Institutional review board for processing and scrutiny of applications for submission to funding agencies
- Administrative support for executing funded projects including management of project accounts and purchases
- Enhancement of research infrastructure
- Publications have been made mandatory as per the MCI and other regulatory body guidelines. This has further motivated faculty to conduct and also publish their research findings
- Academic leave for attending conferences
- Concession in use of medical equipment for research purpose
- Permission to utilize clinical data from Hospital medical records (after obtaining ethical clearance for the same)
- Recognition of faculty as PhD guides
- MoU with institutions to enhance our research capabilities

3.1.4 What are the proactive mechanisms adopted by the institution to facilitate the smooth implementation of research schemes/projects ?

a. **Externally funded projects (both government and private agencies):**

* advancing funds for sanctioned projects.

- – The University encourages the faculty to apply for external funding agencies. In order to regulate and guide the principal investigator, Internal Review Board with experts in diverse field has been constituted.
- – Administrative support towards submission of the proposal including legal are provided.
- – Execution of the funded project is streamlined through the Finance and Purchase section offering their support in handling the money as well as procurement of equipment and consumables for the successful conduct of the project.

- In case of delay in the release of funds in sanctioned projects, there is provision in the university to fund the project till the grant is released to facilitate the project meet its proposed deadlines as per the grant application submitted.
- Audit of the project accounts and issue of utilization certificate are also facilitated by the finance section of the university.
- A start up grant is provided by the CARE to faculty members in all disciplines.

* providing seed money.

University provides seed money to the young Scientists for short proposals. Success in this projects motivates the faculty to submit proposal to external funding agencies. Faculty are encouraged to submit results of their work for publication in indexed journals.

* simplification of procedures related to sanctions / purchases to be made by the investigators.

The procedure for purchase is regulated and simplified by the purchase section of the University which is a single window system hence avoids delay in procurements.

* autonomy to the principal investigator/coordinator for utilizing overhead charges.

Though the University does not give the money from the overhead charges of the funded projects, all necessary basic facilities required for the project is provided by the institute via the utilization of the overhead charges. Overhead charges are also utilized for the administrative and infrastructural support and maintenance for hassle free conduct of the project

* timely release of grants.

Grants once received are maintained in independent project account. However upon the sanction of the project the PI is encouraged to initiate all the processes like advertisement and appointment of project staff, etc. In case of delay in release of grant for subsequent installments, there is provision in the university to advance finance for project expenses till receipt of the grant to facilitate smooth progress of the project.

* timely auditing.

Finance department of the university facilitates in auditing of the project accounts with external auditors (if required by the funding agency). As all accounting are maintained using accounting software linked to the various departments including purchase, it facilitates as a single window process for the entire financial audit and also avoids time delay.

* submission of utilization certificate to the funding authorities.

Finance section assists the PI with external auditors for auditing the project accounts and utilization certificate are prepared as per the funding agency and submitted without delay.

* writing proposals for funding.

The Institution encourages and assists the faculty to get extramural research grants from the various funding agencies; Sensitizing workshops are regularly conducted for

faculty. Appropriate departments are appraised of any specific call for proposals by funding agencies. The institution review board with experts also gives valuable inputs to the PI in modifying the proposal to suit the funding agency requirement. They also give valuable assistance for presentation to the funding agency when it is based on in-person interview.

Undergraduate medical students too are encouraged and trained to write and submit proposals to Indian Council of Medical Research under the short term studentship (ICMR-STS) program.

*   any training given for writing proposals.

Yes, Sensitization workshops are regularly conducted for faculty and research scholars in proposal writing both with internal members and external experts.

S.No	Date	Theme	Resource Persons
2015			
1	21.01.2015 and 22.01.2015	Research Methodology Made easy	Dr. Ilavazhagan – Director research, Hindustan Univ. Dr. Viashwanath Rao – Prof.&HOD Physiology, Madha medical college Dr. Padmavathy - Prof.&HOD Physiology, SRMC Dr. Pankaj Shah – Prof. of community medicine, SRMC Dr. Sheela devi – HOD physiology , PGIBMS Dr. Srinivasan – CARE Dr. Govindaraju – Prof. of statistics CARE Dr. Pandiyan – Prof. & HOD Reproductive medicine Dr. Rukmani – Prof. & HOD Pharmacology 4 CME Credit points awarded by Tamil Nadu Dr.MGR university
2014			
2	15.03.2014	How to write a grant proposal for various funding agencies.	Dr. D.C.Mathangi, Professor of Physiology, CHRI
3	22.01.2014 and 23.01.2014	Sensitization of Faculty and Students on scope and Potential for Extramural Research Funding	1.Dr. T. Balasubramanian, Professor, CAS in Marine Biology, Annamalai University 2.Dr. D. Chandramohan, Senior Scientific Consultant, National Centre for Sustainable Coastal Management Ministry of

			Environment and Forest, Government of India, Anna University Campus, Chennai 3. Prof. Dr. T.J. Pandian, Former National Professor, Madurai Kamaraj University, (Animal Sciences & Fish Genetics)
2013			
4	16.08.2013 & 17.08.2013	Basic Research Methodology Course –"Writing a study protocol" & "Dissertation Writing"	Dr.R.Raveendran, Professor of Pharmacology, JIPMER, Pondicherry.
2012			
5	10.02.2012	How to write a grant proposal for various funding agencies.	Mr.Subbia Arunachalam

b. Institution sponsored projects :
*   Proportion of funds dedicated for research in the annual budget.
   2.5% of the total expenditure budget is allocated to research expenditure
*   Availability of funding for research /training/resources.
   1. CARE funding has been instituted to provide financial assistance to young first time researchers – to encourage them to handle independent research projects. Under this scheme, funding is being provided for short term (1 year) research projects. So far 11 of our faculty members have benefited through this scheme.
   2. The institution grants academic leave for the faculty members enabling them to participate and present their research work in national and international conferences.
   3. In order to promote research activity among the faculty and students, the Institution has established a Central Research Facility with sophisticated instruments. There is no charge for utilization of equipment for research purpose.
   4. Institution promotes and encourages full time PhD Scholar by providing them stipend (Rs.8000 – 1st year; Rs.9000 – II year, Rs.10,000 III year) In addition full time PhD students are provided free boarding and lodging facility in the university hostel. Expenditure on consumables is also met by the university.
   5. CPCSEA approved animal house facility to house small and large animals is available with trained technician and veterinarian. Faculty and students are not charged for the animals that are utilized for research purpose. PI bears the cost of animals in case of funded projects alone.
   6. Free periodic workshops related to research and publications are conducted in the university.
   7. Plagiarism detection software – Turnitin, has been procured and is available for faculty and students for use both in dissertation/thesis preparation and manuscript for submission. Sensitization and training for faculty on how to use the report from the software were also conducted. Plagiarism standing

committee also guides the students on methods to be adopted to avoid plagiarism.

*   Availability of access to online data bases.

Computers with internet connections are available in all the departments.

In addition we have 40 computers in the library

A dedicated bioinformatics lab for computational biology and drug discovery has also been established.

The campus is Wi-fi enabled for secured internet access on personal laptops too

Online data bases are also available in the library which includes

International Journals – 154

National Journals – 92

Online journals : Gale Periodical Data base

3.1.5 How is multidisciplinary/ interdisciplinary/ transdisciplinary research promoted within the institution ?

* between/among different departments

The University encourages multidisciplinary/ interdisciplinary/ transdisciplinary research by encouraging faculty of Allied Health Sciences and faculty of medicine to interact with each other and solve problems using interdisciplinary approach. Doctors from faculty of medicine identify problems from their side and discuss with other faculty members for diagnostic solutions

The main objective has been "from Bench to Bedside" research with the allied and basic sciences faculty working on issues identified by the clinical departments and developing simple cost effective solutions.eg. Development of cost effective DNA technology and their application in septic shock and pneumonitis process and treatment

Facilitating in this process is the development of Central Research Facility encompassing specialty labs like

S. No.	Instrument	Amount	Funding source
1	**In vivo animal imaging laboratory**		
i	Small Animal Imaging System with anesthetic chamber & monitor	75,00,000.00	CARE
2	**Bionanotechnology and high through-put screening laboratory**		
i	FT-IR Spectrometer with accessories	9,00,820.00	CARE
ii	Particle Size Analyzer with Zeta Potential	17,91,500.00	CARE
iii	Fluorescence Spectrometer	18,50,000.00	CARE
iv	UV Vis Spectrophotometer (Double Beam)	3,50,000.00	CARE
v	Revolutionary High Speed Centrifuge (cooling)	2,48,527.00	CARE
vi	Electronic balance	3,50,000.00	CARE
vii	Sonicator	65,000.00	CARE
3	**High performance computing lab for biomarker discovery & drug designing**		
i	Work station Dell Precision T3610 and nodes	2,45,000.00	CARE

4	**Tissue culture laboratory**		
i	Inverted Microscope - Olympus CKX41	2,19,879.00	CARE
ii	Biosafety Cabinet	2,75,000.00	CARE
iii	CO_2 Incubator	4,50,000.00	CARE
iv	Deep freezer (20° C -- 80° C)	3,22,000.00	CARE
v	Hot Air Oven	1,50,352.00	CARE
vi	Autoclave - digital	1,00,000.00	CARE
5	**Molecular Diagnostics laboratory**		
i	Fluroscent Microscope with cytovision software	17,21,142.00	CARE
ii	Trinocular Phase contrast Microscope with camera	2,38,522.00	CARE
iii	Laminar Air Flow – 4Ft	1,05,239.81	CARE
iv	Incubator	1,63,890.00	CARE
v	Gradient Thermocycler (PCR)	3,25,892.00	CARE
vi	Gel Documentation System	3,30,000.00	CARE
6	**Microbial Genomics Laboratory**		
i	Refrigerated Centrifuge -5430 R	3,86,694.00	CARE
ii	Research Microscope - CH20i	1,12,984.00	CARE
iii	Laminar Air flow-Biosafety Chamber	2, 75,000.00	CARE
iv	Autoclave	55,000.00	CARE
v	BOD incubator	1,20,000.00	CARE
vi	Microfuge - spinwin	1,11,230.00	
	Magnus stereo zoom binocular microscope, Bottom Heater Hot Air Oven, Oil free vacuum pump, Centrifuge with 50 ml rotor R8C, Centrifuge with 15 ml rotor R8C, Deep Freezer -20^{0}C, Water bath 28 L Capacity, Olympus Compound microscope, Magnetic stirrer		
7	**Genographic Laboratory**		
I	Class II Biosafety cabinet	3,18,330.00	
Ii	AB Real Time PCR	70,00,000.00	Geno
Iii	AB Thermocyclers (2 no.s)	8,39,400.00	Geno
Iv	Plate Centrifuge Eppendorf	3,83,860.00	Geno
	ABI 3130Genetic Analyser, Class II Biosafety cabinet, Deep Freezer -20^{0}C, Proline Bio Hit Multichannel Pipette 0.5-10µl, 96 well micro plates F Bottom, Deep Freezer -80^{0}C, Plate sealer (263 kg)		
8	**Preclinical laboratory (Neuropharmacology,**		
	Extraction unit, clinical Pharmacology, Assay equipments, neuropharmacology, etc)		
	HPLC	10,00,000	

*   collaboration with national/international institutes / industries.

Inter disciplinary approach in solving or aiding medical issues has culminated in MoU with Engineering universities too in the development of indigenous cost effective software and equipment for our medical requirements.

S.No.	Agreement / MoU	Purpose	Date of MOU
1	MoU between CARE and Azidus Laboratories Limited	Clinical trial agreement with Sigma Pharm Laboratories USA as sponsor	15.07.2009
2	MoU between CHRI and Hindustan College of Arts and Science	To impart training to the students of Hindustan community college - Health assistant course with HOD Biochemistry as coordinator for the clinical training in Biochemistry related subjects	11.11.2009
3	MoA between NICHE Malaysia and CARE	NICHe desires to use the expertise and facilities in CARE to prepare its students for the students future, ambition and career in health sector as well as produce a remarkable breed of nurses or healthcare personnel and CARE agreed to train the students.	28.02.2012
4	MoU by ActavisPharma Mfg. Pvt. Ltd and CSSH - Validity from 01.08.2012 to 31.07.2013	MoU signed between CSSH and Actavispharma for the purpose of providing medical services to the employees of actavis for the benefit of their employees working in Alathur	01.08.2012
5	The National Geographic Society - Regional Site Agreement between CARE	A research project between National Geographic Society to evolve information regarding the origin and migration humans using genetic evidence.	28.08.2012
6	MoU between CARE and Cavinkare Pvt. Ltd. from 15.04.2013 to 14.04.2018	Mou signed for exchange of staff / deputation by CKPL as visiting faculty at CARE to teach any of the courses or specialized topics, industrial visits by students, seminar / workshop and related research projects	15.04.2013

7	MoU between CARE and The India Cements Ltd.	Mou signed with the objective of designing innovative industry oriented programmes, inplant training / internship of CARE students at ICL, joint guidance of students projects / thesis in industrial safety facilities sharing, sponsoring academic activities, offering guest lectures and placement of students of CARE	05.06.2013
8	MoU between CARE and Chettinad Cement Corp. Ltd.	Mou signed with the objective of designing industrial innovative oriental programmes, hazards of industrialization, health risk etc exchange of executive faculty for teaching and conduct of community development programmes.	09.07.2013
9	Operating Type Lease Agreement between Piramal Healthcare Ltd and CHRI	Operating Type Lease Agreement - A portable diagnostic device specially designed to perform 20 parameters and deliver and quantitative results within 3-15 minutes to be installed at Dept. of Microbiology, CHRI	2013
10	MoU by Madras Diabetes Research Foundation and CARE from 25.10.2013 till date	MoU signed between CHRI and Madras Diabetes Research Foundation for the purpose of mutual collaborative research in the area of human genomics	25.10.2013
11	MoU between CARE and Emory Vaccine Centre, Emory University, Atlanta, USA	The purpose of agreement is to establish a general frame work for programmes of exchange of students and faculty collaboration on research programmes within the field of patho genesis and vaccine development	02.05.2014
12	MoU_by Hindustan Institute of Technology & Science and CARE from 10.09.2014 to 09.09.2017	MoU signed between CARE and Hindustan Institute of Technology & Science for the purpose of academic collaboration	10.09.2014

13	MoU between CARE and Orchid Chemicals and Pharmaceuticals Ltd, Chennai	MoU signed between CARE and Orchid Chemicals and Pharmaceuticals Ltd,for the purpose of academic collaboration	02.03.2015
14	MoU between CARE and Vellore Institute of Technology, Vellore	Purpose of the MoU is to facilitate joint teaching and research initiatives in basic and applied medical and engineering fields	22.05.2015
15	MoU between CARE and Vellore Institute of Technology, Vellore	Purpose of the MoU is to provide primary health care services for VIT students, staff and their dependents at the Vellore campus of the institute	22.05.2015
16	MoU between CARE and Aditya Jyot Institute of Vision Sciences &Research (an academic R & D unit of Aditya Jyot Eye Hospital Pvt. Ltd), Mumbai	Purpose of this MoU is to facilitate Joint research and academic, faculty and student exchange programs	03.07.2015

- Development of predictor equation using craniofacial anthropometry in the predilection of Obstructive sleep apnea (Dr.Mathangi PI)
  A software has been developed for the measurement of the craniofacial anthropometry from the digital photographs of patients. This software tool has been developed in collaboration with Hindustan University.
  Status: Digital Images collected, Software tool is being validated

- Development of indigenous cost effective goniometer to measure range of movements of the digits. (Dr.Mathangi PI)
  This will help us in the identification of musculoskeletal disorders especially those working in the software company. This instrument is being developed in collaboration with Hindustan University.
  Status: Instrument developed and calibrated. It is currently being modified / improvised further to suit our requirement.

  The University collaborates with industries in various areas of biomedical research towards drug designing and development.

3.1.6 Give details of workshops/ training programs/sensitization programs conducted by the institution to promote a research culture in the institution.

From 2010 till date the University has conducted several programs to promote research culture of the institution. These workshops or programs have been mainly on Techniques, Ethics, Research methodology, proposal writing, publication and plagiarism. In addition researchers with eminence have been invited to the campus and have delivered guest

lectures highlighting their research achievements which were not only informative but motivational too.

	2010	2011	2012	2013	2014	2015
Seminar, Workshop, CME organized	8	3	11	21	31	9

(For details refer Annexure - 11)

3.1.7 How does the institution facilitate researchers of eminence to visit the campus ? What is the impact of such efforts on the research activities of the institution?

The University regularly invites researchers and scientists of eminence in all three faculty, viz., Medicine, Nursing and Allied Health Sciences to deliver lectures in the modern areas of Science and Technology, Medicine, Current diagnostic procedures, etc. The university has had over 40 speakers who have delivered erudite lectures which has enthused the faculty and students in the area of research.

(For details refer Annexure - 12)

The University also has eminent professors in their Faculty visiting Professorships (http://www.chettinadhealthcity.com/university/researchcentre_visiting_professors.htm).

3.1.8 What percentage of the total budget is earmarked for research ? Give details of heads of expenditure, financial allocation and actual utilization.

2.5-3% of the total budget is earmarked for research. Details are provided in the financial statement

3.1.9   In its budget, does the university earmark funds for promoting research in its affiliated colleges ? If yes, provide details.

Not applicable as a deemed university, there are no affiliated colleges.

3.1.10 Does the institution encourage research by awarding Postdoctoral Fellowships/Research Associateships ? If yes, provide details like number of students registered, funding by the institution and other sources.

Yes. The institution awards post doctoral fellowships which are advertised on the university website and in scientific journal. The university has earmarked 2 PDF positions. Currently we have 2 post doctoral fellows working in Genomics. The source of funding is from the University.

S.No.	Number of Post doctoral fellow	Department	Period
1	Ms.A.Syama	Genomics	1.9.2012-31.7.2014
2	Ms.Meera	Genomics	28.9.2012-20.10.2013
3	Dr.Ramakrishnan	Genomics	9.10.2014 -3.3.2015
4	Dr.Subburaj	Genomics	8.10.2014 – till date
5	Dr.Vani	Genomics	27.8.2015 – till date

3.1.11 What percentage of faculty have utilized facilities like sabbatical leave for pursuit of higher research in premier institutions within the country and abroad? How does the institution monitor the output of these scholars?

Being a 6 year old institution no faculty is eligible for sabbatical leave. However few faculty have been given sabbatical leave in the past few years. Rules for sabbatical leave are being framed and would be instituted in the future.

3.1.12 Provide details of national and international conferences organized by the institution highlighting the names of eminent scientists/scholars who participated in these events.

The University has conducted conferences regularly inviting eminent scientists. In the last 5 years 26 programs have been conducted. Details of this are given in the annexure – 13.

	2010	2011	2012	2013	2014	2015
Conferences organized	1	5	2	5	7	6

3.1.13 Mention the initiatives of the institution to facilitate a research culture in the below mentioned areas:
* Training programs of Research Methodology, Research ethics and Biostatistics
- The University has taken various initiatives to facilitate a research among faculty and students.
- Invited lectures are arranged regularly in the advanced areas of medicine and Science & technology.
- Research Methodology workshop is conducted annually for PhD, PG students and faculty
- Periodically workshops are conducted on Biostatistics, Bioethics, Biosafety, Plagiarism and IPR as well.
- Faculty are also encouraged to participate in similar workshops organized by other educational & research institutions within the city.
- Ethics committees of the University have been constituted as per the guidelines of ICMR (Institutional Human Ethics Committee) and CPCSEA guidelines (Animal Ethics Committee). Institutional Human Ethics Committee has been registered under the DCGI (Registration No ECR/212 /Inst/TN /2013).
- Video modules have been developed by the ethics committee on how to obtain consent from research and clinical trial participants. This video was telecast to all faculty and PG, PhD students.
- Ethics committee meets periodically for review of all the proposals.

Name of the committee	Year of establishment	Number of proposals reviewed (approved)						
			2010	2011	2012	2013	2014	2015 (till sep)
Institutional Human Ethics Committee	03.10.2006	No. of Meetings	5	5	4	4	8	3
		Reviewed	28	51	42	66	189	173
		Approved	23	43	40	61	162	163
		Resubmissio	5	8	2	5	27	10

Animal Ethics Committee	12.01.2010	No. of Meetings	1	3	2	4	1	3
		Reviewed	7	24	17	16	7	14
		Approved	7	22	16	15	7	14
		Resubmission	0	2	1	1	0	3

* Development of scientific temperament.

The University instills and encourages research acumen in the young students and faculty by conducting periodic scientific programs. Undergraduate medical students are facilitated and encouraged to write and submit proposals under the ICMR STS scheme. In addition dissertation is mandatory for all the post graduate students as per their syllabus as well.

Sl.No	Name of the Student	Name of the Guide	Department	Title
ICMR STS - 2015				
1	Damini Gunasekar	Dr.Vijayashree R	Pathology	Hematological parameters in obese women with or without metabolic syndrome.
2	Bhavana murali	Dr.Uma Mageswari SSM	Microbilogy	Bacteriological assessment of stethoscope in a tertiary care hospital as n implication for hospital acquired infection control.
3	Nivedita S	Dr.Sarah Subhashini	General medicine	Vitamin B12 deficiency in patients with clinically diagnosed diabetic neuropathy.
ICMR STS - 2014				
1	Abishek	Dr.Arun Kumar	Pharmacology	Influence of Statin Therapy on Vitamin D
2	Sneha Aramandla	Dr.G.Murali Mohan Reddy	Community Medicine	Incidence and factors Influencing falls in elderly, A Hospital based cross sectional study
3	Preethi Ravi	Dr.Devi S	Pathology	Predicitve value of Platelet indices in the spectrum of ischemic heart disease.
4	V.R.Abhirami	Dr.R.Vijayashree	Pathology	Red cell distribution width as a prognostic marker in patients with stroke
5	K.Hemanth Kumar	Dr.S.Balamurugan	Pathology	Self-Directed learning readiness (SDLR) among Medical Students - A

				questionnire - Based study
6	P.Arularasu	Ms.R.Alice Peace Selvabai	Microbiology	Detection of high and Low level mupirocin resistance among clinical isolates of staphylococus aureus in tertiary care hospital in the outskirts of chennai.
7	R.Kamalesh	Dr.DC.Mathangi	Physiology	Prevalence of Obstructive Sleep Apnea among Drivers of commercial vehicles in Chennai
8	Sridhar Karthikeyan	Dr.Sanjay Andrew Rajaratnam	Physiology	Craniometry versus learning preference
ICMR STS - 2013				
1	Mr.Shyam Prashad K	Dr.Vidyendaran Rudhran	Psychiatry	Prevalence and Correlates of depression and suicidal intention in patients suffering from psoriasis and acne vulgaris : A Hospital Based Study
2	Mr.Rishab Bhurat	Dr.E.Malligai	Biochemistry	HDL Cholesterol in Sepsis as a diagnostic and a prognostic marker
3	Mr.R.Srinivasa Muthukaruppan	Dr.G.Murali Mohan Reddy	Community Medicine	Prevalence and determinants of respiratory morbidity among sculptors. A community based retrospective cohort study
4	Ms.B.R.Bageerathi	Dr.Sushma Nayar	Pathology	Risk Factors for coronary artery disease in a semi - urban population of Tamil Nadu Especially pertaining to Tobacco Use
5	Dr.Swathikaa	Dr.Vijay Amritraj.J	Pathology	Effects of thyroid dysfunction on prothrombin time and activated partial thromboplasin time
6	Ms.Gayathri.M	Dr.M.Jeya	Microbiology	Comparative study of carrier state of oral candidal species and pH of saliva in normal Healthy individuals and individuals with type - 2 diabetics mellitus

7	Ms.R. Santhiya	Dr. Asha P Dass	Pharmacology	Effect of a Ginger extract on pregnancy induced nausea and vomiting
8	Tejashvee	Vijayashree	Pathology	Relation between Lung function & Red cell distribution width in a population based study
9	Nithiyalakshmi	Ruckmani	Pharmacology	Anticancer activity of grifeofulgin – in vivo and in vitro
ICMR STS - 2011				
1	Anish Sundhar Narayanan	Dr.Chidambaram	Pathology	Effect of adjusted and non adjusted citrate concentration on coagulation test results in patients with high hematocrit values - breaking the unproven leap of faith
2	Anjana Vasudevan	Dr. Arul Varman	Psychiatry	second to fourth digit ratio and attention deficit hyperactivity disorder
3	Mathangi Krishnakumar	Dr.Shweta Athishwar	Ophthalmology	Myopia, Non-verbal IQ and Laterality among Medical college students
4	Mithra Sampathkumar	Dr.Mita Sarkar	Physiology	Effect of Altered photoperiod on Macro molecular damage in rats
5	Sreeteja Yerlagadda	Dr.Mathangi	Physiology	Prevalence of Sleep Apnoea in Middle Aged it Professionals
6	Treshul Kumar	Dr.Balamurugan	Pathology	Automated Measurement of Immature Granulocytes: Performance Characteristics and Utility in Routine Clinical Practice
7	Valli	Dr. Rajesh Khana	Pathology	Relation between diabetes mellitus Type - 2 and cognitive impairment a predictor of Alzheimer's disease.
ICMR STS - 2010				
1	Anjana Vasudevan	Dr.Mathangi	Physiology	Ratio of 2nd and 4th digit length -A predictor of learning and memory deficit in children

2	Karthik Raj	Dr.Malligai	Biochemistry	Comparative study between oral Glucose Tolerance Test(OGTT) and Homeostatic Model Assessment of Insulin Resistance (HOMA – IR) index as indicators of Gestational Diabetes Mellitus.
3	Kavipriya	Dr.Ruckmani	Pharmacology	effect of honey on serum cholesterol and blood sugar in human
ICMR STS - 2009				
1	Mathangi Krishnakumar	Dr.Mathangi	Physiology	2D:4D Ratio - A Tool to Assess Motor skill in children
2	Chaitanya Shah	Dr.Balamurugan	Pathology	Reagent Strip Testing (RST) For Asymptomatic Bacteriuria (ASB) in Pregnant Women: A Cost-effective Screening Tool in Under-resourced Settings
ICMR STS - 2008				
1	Jenifer	Dr.Amita Mukopadyay	Community Medicine	Study of poor oral health as a risk factor for preterm low birth weight

Dissertations submitted to University

	2010	2011	2012	2013	2014	2015
M.Sc. 2yrs	10	32	38	16	22	14
M.Sc. 3 yrs	-	-	23	19	15	2
MD/MS	-	-	-	-	8	25
PhD Thesis	-	-	-	-	2	5
PGDCE	6	2	3	2	5	5

Students are encouraged to present their findings in appropriate scientific forums and are given on duty permission to attend the same.

	2010	2011	2012	2013	2014	2015	Total
Conference Presentation by students	3	13	42	43	103	50	254

In order to encourage full time PhD scholars, the University initiated CARE fellowship

to full time students. These students are also given free boarding and lodging facilities. Consumables and animals required for their research are also provided by the university free of cost.

Faculty research is encouraged by CARE funding as seed money for first time researchers.

Committees involved in promotions and appointments of faculty give due weightage to the research and publications of faculty. In addition as MCI has made research publications mandatory for promotions it is also followed.

MoU with other institutions and industries to provide appropriate additional facilities for research

Faculty recognized as PhD guides in the clinical departments, has enabled us initiate collaborative research between medical and allied health sciences departments

Developing the research instrumentation infrastructure and encouraging their use free of cost has helped faculty and students do quality research.

Monthly research seminars are conducted where research scholars as well as faculty share their research findings.

* Presence of Medical / Bio Ethics Committee.

There are two ethics committees:
- Human ethics committee (HEC)
- Animal ethics committee (IAEC)

The ethics committee meets periodically to discuss the ethical issues involved in various research projects and ensures that all the research conducted in the institute fulfill ethical requirement.

* Research linkages with other institutions, universities and centers of excellence. (national and international).

Research linkages are established with other Universities

Refer collaborations 3.1.5

* Research programs in Basic Sciences, Clinical, Operational Research, Epidemiology, Health Economics, etc.

All departments under the 3 faculty (Medicine, Allied Health Sciences and Nursing) have post graduate programs and research dissertation is part of the curriculum.

Apart from this Faculty in these departments also conduct independent research.

The university has Clinical Epidemiological Unit. We have six IndiaCLEN members as well

Director of Clinical epidemiological Unit: Prof.Dr.Ravivarman (life member & Secretary of IndiaCLEN)

Core members include: Prof.Dr.Pandian, Prof.Dr.PradeepNair, Prof.Dr.A.Ruckmani, Prof.Dr.Mathangi, and Prof.Dr.Govindaraju.

Undergraduate medical students have been conducting successfully their ICMR Short term student ship projects in the departments of Basic medical sciences and clinical departments

	2010	2011	2012	2013	2014
No. of proposals submitted for funding agencies	2	7	7	2	1
No. of ICMR – STS proposals sanctioned	3	7	2	7	8
No. of institution funded projects	5	-	3	4	-

* Promotional avenues for multi-disciplinary, inter-disciplinary research.

Yes, the University encourages multi-disciplinary, inter-disciplinary research. Towards this end doctors from faculty of medicine and Allied health Science are encouraged to interact, identify and conduct collaborative research projects.

* Promotional avenues for translational research.

Towards, translational research, B2B strategy is followed in the institution. For example, the diseases are identified by bed side are investigated in the Bench side for developing new the diagnostic tools and the bench side research can be tested on patents after proper ethical clearance. A few of these are mentioned here.

S.No.	Investigators	Topic	Departments
1.	Mr. Esdan Basha SK Dr. Pandiyan, Dr. RM. Pitchappan & Dr. Radha Pandiyan	Genetic predisposition and infections in reproductive failures in Indian population	AHS and Reproductive Medicine
2.	Ms. Kurunchi Divya, Dr.RM Pitchappan, Wards and OTs	Studies on development of cost effective state of the art DNA tools for environmental pollutions and hospital infection surveillance	AHS and Hospital services
3.	Mr. Sreekanth MS, Dr. Pradeep G Nayar & Dr. RM. Pitchappan	Studies on genetic predisposition to cardiovascular disease (CVDs) in Indian Population	AHS and Cardiology
4.	Mr. V. Alexandar, Dr. Pradeep G Nayar & Dr. R. Murugesan	Studies on Correlation of *eNO*s, NO, hsCRP and VCAM levels with Cardiovascular Risk Factors in Patients with or without Documented CVD	AHS and Cardiology

* Instilling a culture of research among undergraduate students.

During the orientation program at the entry into the institution, sensitization to research is given. They are also primed on ethical aspects in the conduct of research.

Undergraduate students are encouraged to work on small research topics under the guidance of faculty and also present in scientific conferences. And number of students have won best paper awards at scientific forums.

Students are encouraged and motivated to submit proposals under the ICMR STS scheme. Many students have been successful in getting their projects and also completing their

study on time to submit reports to ICMR which have also been approved by ICMR.
Besides, seminars and guest lectures are arranged in the emerging areas to instill a culture of research in the young minds.

* Publication-based promotion/incentives.
> Both during appointment and promotion of faculty, publications are given due importance. Research publications are mandatory for promotions for the entire faculty in Medicine and Allied Health Sciences.

* Providing travel grant for attending national/international conference and workshops.
> Faculty are provided Academic leave for presenting paper at conference and delivering lectures at conferences and workshops.

3.1.14 Does the institution facilitate

* R&D for capacity building and analytical skills in product development like diagnostic kits, biomedical products, etc. for the national / international market
> The institution has invested on developing research manpower and infrastructure to facilitate product development. Research in this line are in process

	Scientific Research Achievements	Status
Petent Applied	Lyophyllization Of human spermatozoa.	Awaiting first information report
Software tool	A software tool for craniofacial anthropometry: For use in sleep apnoea diagnosis	Validation in Process
Drug Discovery	Bioequivalence of Dofetilide in healthy human volunteers	Collaboration : Azidus Laboratoriess – Feb 2014
	Drugs for Neurological disorder from marine sources:	In progress
	Drugs from Earthworm to treat neurological disorders	Under test
System Biology	System biology in colonic cancer: to evaluate state – specific driver genes.	
	System biology for Biomarker Identification: In cardiovascular and Neurological disease diagnosis	Validation
Nanotechnology	Manganese ferrite nanoparticles for dual contrast in MRI for use in magnetic resonance imaging to get accurate image of biological targets.	Completed for publication
	Liposomal Nanoformulation for Anti Cancer Drug targeting: to reduce toxicity, increase halflife and sustained release to the targeted cells	Completed
Improvement in	Zebra fish model for nanotoxicity evaluation	Completed paper

existing products		published IF=3.08
	Goniometer to assess musculoskeletal disorders in software professionals:- Indigenous cost effective. Collaboration Hindustan University	Instrument developed & calibrated. Soft ware interfacing & validation in progress
Linkage with industries	Design Delvac pump for lyophyllization – Advisors to: (i)VIT Chennai on their DST project on – Indigenous low cost ICSI equipment (ii) SIDCO Industrial estate – Manufacturers of freeze driers, Chennai	

Genebank Data Base

S.No	Accession Number	Date of submission	Title	Authors
1	KC243783	19-Jan -2013	Staphylococcus aureus strain TN/CN/1/12 MecA (mecA) gene, complete cds	Kurunchi Divya,C., Hemakumar,E.,Jayanthi, S.
2	KF415244	18-NOV-2013	Staphylococcus epidermidis strain TN/CN/KSE/1/13MecA (mecA) gene, complete cds	Kurunchi Divya,C., Sathish,G. and Arunkumar,G.
3	KF415245	18-NOV-2013	Pseudomonas aeruginosa strain TN/CN/1/13 beta-lactamase (ampC) gene, partial cds	Kurunchi Divya,C., Gunavathy M, Arunkumar,G.
4	KM505038 to KM505044	07-NOV-2014	Staphylococcus aureus strain TN/CN/2-8/14 MecA (mecA) gene, complete cds	Kurinchi Divya.C., Murugesan R., Pitchappan R.M.

* **Development of entrepreneur skills in health care**
    Successful entrepreneurs are invited to deliver guest lectures and motivate students to make career in less treaded path and how to face challenges in this process.

* **Taking leadership role for stem cell research, organ transplantation and harvesting,** NIL

3.1.15 Are students encouraged to conduct any experimental research in Yoga and / or Naturopathy ?
    Yes. The University also offers M.Sc. program in Health & Yoga.
    Faculty in this department do research in yoga and have also submitted research proposals for funding to AYUSH in this area of research.

3.2 Resource Mobilization for Research

3.2.1 How many departments of the institution have been recognized for their

research activities by national / international agencies (ICMR, DST, DBT, WHO, UNESCO, AYUSH, CSIR, AICTE, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthroughs achieved by this recognition.

S.No	1	2
PI	Prof.RM. Pitchappan	Prof.D.C. Mathangi
Recognizing body	National Geographic Society, IBM, Tedd Waitt Foundation, USA	Defence Research and Development Organization
Purpose	Study of poor oral health as a risk factor for preterm low birth weight	<u>Task force project:</u> Acute toxicity of cyanide and organophosphorous co-exposure in rats and its response to treatment of alpha-ketoglutarate and atropine.
Period	2011-12	2010-12
Amount	US$ 60,000	Rs.9.00 Lakhs
Publications		2 International Publications

3.2.2   Provide the following details of ongoing research projects of faculty:

	Year wise	Number of project	Name of the funding agency	Total grant received
Minor Project				
	2010-11	101	University sponsored Project	
	2011-12	56		
	2012-13	108		
	2013-14	125		
Major Project				
	2010-11	24		
	2011-12	10		
	2012-13	37		
	2013-14	45		
Other Agencies – National and International (specify)				
Minor Project				
	2010-11	7	ICMR - STS	Rs.70,000/-
	2011-12	2	ICMR - STS	Rs.20,000/-
	2012-13	7	ICMR - STS	Rs.70,000/-
	2013-14	8	ICMR - STS	Rs.80,000/-
Major Project				
	2010-12	1	DRDO	Rs.9.0 Lakhs
	2011-12	1	The National Geographic Society, The Waitt Family	US $ 60,000

			Foundation	
	2012-13	1	Resmed (India)	Rs.6.75 Lakhs

3.2.3 Does the institution have an Intellectual Property Rights (IPR) Cell ?

We have appointed a faculty to teach and deal with al IPR related issues in the University. Currently the Legal officer assists in this process. IPR cell will be started soon.

3.2.4 Has the institution taken any special efforts to encourage its faculty to file for patents? If so, how many have been registered and accepted?

Yes, a faculty with IPR expertise is appointed to sensitize the IPR issues among faculty and students and deal with all IPR related issues in the University

Patent filed for Lyophyllization of human spermatozoa (Ref. No. Appln No.5239/CHE/2014, Docket No. 29995, dt.20.20.2014)

3.2.5 Does the institution have any projects sponsored by the industry / corporate houses? If yes, give details such as the name of the project, funding agency and grants received.

S.No	Title	PI	Sponsor	Status of the trial	Grant Received
1	Prevalence of sleep apnea among software professionals in Chennai India Potential application to work related sleep disorder	Prof.D.C.Mathangi	Resmed (India)	Completed	Rs.6.75 Lakhs
2	A double bind multicentric placebo controlled stratified randomized trial to determine the effectiveness, safety and tolerability of bovine bone collagen peptide as add on nutritional supplement in management of subjects with stage II & stage III pressure ulcer	Dr.Ruckmani, Prof & Head,Department of Pharmacology, CHRI	Auroville health care R& D Pvt ltd, Chennai	Completed- June 2011	0.20 Lakhs
3	A randomized, multicentre, prospective, parallel group, double blind, comparative study to compare the efficacy and safety of	Dr.Manoj Vasudevan, Dept of Opthalmology, CHRI	Cipla Ltd	In process	

	brinzolamide 1% ophthalmic suspension of cila ltd., India against Azopt manufactured by Alcon Pharma Ltd., US and Placebo in subjects with primary open angle glaucoma or ocular hypertension				
4	The clinical trial protocol titled "An open label, randomized, two treatment, two sequence, two period, multi-center, single dose, crossover, oral bioequivalence study of Dofetilide Capsule 0.5 mg of Sigma pharm Laboratories, LLC, USA and TIKOSYN (Dofetilide) Capsule 0.5 mg of Pfizer Pharmaceuticals LLC, USA in 12 healthy, adult, human subjects, under fasting conditions" (Protocol no. AZ/P/11/13/21, version no. 00, dt. 28-Nov-2013)	Dr.Ruckmani, Prof & Head Department of Pharmacology, CHRI	Sigma pharm Laboratories – Through Azidus lab CRO	Completed March 2014	
5	A randomized, open label, comparative five arm, controlled study evaluating the benefit and tolerability of oral capsule Sodox (Superoxide Dismutase combined with Gliadin) along with topical triple combination cream in patients with Melasma	Dr.Mayavedamurthy, RSV skin clinic and Laser centre, Chennai (External project)	Ranbaxy	In process	

(Copy of Clinical Trials Registry-India : Annexure 14)

3.2.6 List details of

a. Research projects completed and grants received during the last four years (funded by National/International agencies).

Sl. No.	Project Leader	Title of the project	Sponsoring Agency if any	Amount INR (lakhs)	Remarks
1.	Prof. RM. Pitchappan	Study of poor oral health as a risk factor for preterm low birth weight	National Geographic Society, IBM, Tedd Waitt Foundation, USA	US$ 60,000	Completed
2.	Prof.D.C.Mathangi	Acute toxicity of cyanide and organophosphorous co-exposure in rats and its response to treatment of alpha-ketoglutarate and atropine.	Defense Research and Development Establishment	9.00	Completed
3.	Prof.D.C.Mathangi	Prevalence of sleep apnea among software professionals in Chennai India Potential application to work related sleep disorder	Resmed (India)	6.75	Completed
4.	Prof.D.C.Mathangi	Neurochemical and Behavioural alterations following chronic cyanide exposure and its possible recovery by alpha ketoglutarate	Defense Research and Development Establishment	3.75	Completed
5.	Prof.D.C.Mathangi	Antioxidant status and Oxidative stress during Pregnancy and Labor	Department of Science & Technology	6.40	Completed
6.	Prof.A.Ruckmani	Clinical Trials	Auroville	0.20	Completed

b. Inter-institutional collaborative projects and grants received
   i)   National collaborations
   ii) International collaborations

Sl. No.	Project Leader	Title of the project	Sponsoring Agency if any	Amount INR (lakhs)	Remarks
1.	Prof. RM. Pitchappan	Study of poor oral health as a risk factor for preterm low birth weight	National Geographic Society, IBM, Tedd Waitt Foundation, USA	US$ 60,000	Completed
2.	Prof. RM.Pitchappan	The Genographic Project	The National Geographic Society The Waitt Family foundation	64.00	Concept note accepted Proposal Submitted
3.	Prof.D.C.Mathangi	Development of Craniotool – for the prediction of OSA	In collaboration with Hindustan University		Validation in process
4.	Prof.D.C.Mathangi	Development of cost effective goniometer	In collaboration with Hindustan University		In process

3.2.7 What are the financial provisions made in the institution budget for supporting students' research projects ?

- The University provides fellowship with free boarding and lodging facilities to full time PhD scholars.

	2010	2011	2012	2013	2014	2015
No. of CARE JRF admitted	4	3	1	2	7	4

- Consumables and animal charges are met by the university for all student research (PG & PhD)
- Entire campus is wi-fi enabled, giving the facility to access online data base for research
- Students are not charged for utilizing the facilities / instruments available in the central research facilities
- Subsidy of charges are provided for all student research involving utilization of clinical service department
- Training in research methodology, publication etc are given periodically to all the students without any charge
- Specific research infrastructure have been upgraded in the departments with postgraduate course to facilitate their research
- Permission is provided for access to medical record data for student research after obtaining proper ethical clearance
- Undergraduate students are guided and motivated for submission of research proposals under the ICMR STS scheme
- All students are granted on-duty permission to present and participate in conferences and workshops related to their specialization

3.3 Research Facilities

3.3.1 What efforts have been made by the institution to improve its infrastructure requirements to facilitate research? What strategies have been evolved to meet the needs of researchers in emerging disciplines ?

Central Research Facility with sophisticated equipment have been procured to create laboratories for specialized work

- Genomics Laboratory
- Nanotechnology Laboratory
- Tissue Culture Facility
- Bioinformatics & Computational Biology lab
- High throughput Computing for drug Discovery
- In-vitro Fertilization Lab

CARE has been proactive in establishing state of the art facilities in the campus. Equipment worth Rs. ~ 2 crores have been procured to improve the infrastructure and work in emerging areas of research. Some of the major equipment procured.

Departments offering postgraduate courses have been upgraded with instrumentation facility to cater to the needs of their PG students

The animal house of the institution is approved by CPCSEA. All animals used for research are procured from CPCSEA approved breeders by the university purchase department for use in the research.

3.3.2 Does the institution have an Advanced Central Research facility? If yes, have the facilities been made available to research scholars? What is the funding allocated to the facility ?

Yes

Details as given in 3.1.5

Student utilizing these facilities are not charged for their usage. However they need to book the time of use prior with the faculty in charge of the equipment for hassle free utilization.

Creation and maintenance have been by the University completely.

A few of the equipment have been procured through the Genographic project.

3.3.3 Does the institution have a Drug Information Centre to cater to the needs of researchers? If yes, provide details of the facility.

The Drug Information is provided by the Department of Pharmacology at the request of the clinical / research departments. Quality testing of parenteral fluids are periodically assessed.

3.3.4 Does the institution provide residential facilities (with computer and internet facilities) for research scholars, post-doctoral fellows, research associates, summer fellows of various academies and visiting scientists (national/international) ?

Yes. All full time PhD scholars are provided free boarding and lodging facility in the hostel.

Entire campus is wi-fi enabled and secured internet access is provided to all research scholars, post-doctoral fellow and visiting scientists.

Comfortable accommodation is provided by the institution to visiting scientists both

national and International.

3.3.5 Does the institution have centres of national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

National Geographic society sponsored genographic project had been conducted in the university and also completed successfully.

Genographic Project

The Genographic Project is a global initiative that aims at sampling 100,000 individuals to trace the migratory history of our species around the globe. The National Geographic Society, The Waitt Family Foundation and IBM fund it. It is a multi-centric study involving eleven regional centres including India (at CARE, Chennai). Each of 10 regional centers focuses on its own localized sampling and research agenda, with the overarching goal of reaching as wide a range of populations as possible.

The Indian center headed by Prof.RM. Pitchappan as the Regional Director. Already ~12,000 individuals have been sampled across India. These individuals are genotyped for various Y Chromosomal SNPs and STRs. In addition mitochondrial DNA SNPs and Control region sequencing have all been completed on all these samples. The data is analyzed for the population structure, history of migration and many other anthropological questions pertaining to Indian populations.

As this project officially ended wef 31st June 2013, the second phase of the project is envisaged. This aims at studying 200 individuals for 0.2million GenoChip - SNPs across the genome designed to follow migratory pathway. C0ncept note in this direction has been approved and final proposal to the tune of $60,000/- has been submitted. The funding agency now wants the project to be changed to whole NRY genome sequencing.

The personnel working under The Genographic and also in the Genomic laboratory have left to get married. Hence application will be made once new PDFs have been appointed in the Genomics laboratory: necessary steps have been taken in this direction. .

In the meantime, since the Genographic is officially completed at our site, we have signed an MoU with National Geograpic society as per the original sanction letters. Accordingly the host institution has the moral responsibility of maintaining these samples for another 5 year period. And make use of them for such research as approved by NGS, PI, Prof Pitchappan and with due clearance by IRB. The samples and the Genomics laboratory thus generated under The Genographic Lab of CARE.

Emory Vaccine Centre:

An MoU between CARE and Emory Vaccine Centre, Atlanta, USA has been signed to facilitate faculty exchange and collaborative research.

3.3.6 Clinical trials and research
* Are all the clinical trials registered with CTRI (Clinical Trials Research of India)?

Yes (Annexure – 14)

* List a few major clinical trials conducted with their outcomes.

S.No	Date of IEC meeting	Title	PI	Sponsor	Status of the trial
1	4.05.10	A double bind multicentric placebo controlled stratified randomized trial to determine the effectiveness, safety and tolerability of bovine bone collagen peptide as add on nutritional supplement in management of subjects with stage II & stage III pressure ulcer	Dr.Ruckmani, Prof & Head,Department of Pharmacology, CHRI	Auroville health care R& D Pvt ltd, Chennai	Completed-June 2011
2	18.10.13	A randomized, multicentre, prospective, parallel group, double blind, comparative study to compare the efficacy and safety of brinzolamide 1% ophthalmic suspension of cila ltd., India against Azopt manufactured by Alcon Pharma Ltd., US and Placebo in subjects with primary open angle glaucoma or ocular hypertension	Dr.Manoj Vasudevan, Dept of Opthalmology, CHRI	Cipla Ltd	In process
3	17.01.14	The clinical trial protocol titled "An open label, randomized, two treatment, two sequence, two period, multi-center, single dose, crossover, oral bioequivalence study of Dofetilide Capsule 0.5 mg of Sigma pharm Laboratories, LLC, USA and TIKOSYN (Dofetilide) Capsule 0.5 mg of Pfizer Pharmaceuticals LLC, USA in 12 healthy, adult, human subjects, under fasting conditions" (Protocol no. AZ/P/11/13/21, version no. 00, dt. 28-Nov-2013)	Dr.Ruckmani, Prof & Head Department of Pharmacology, CHRI	Sigma pharm Laboratories – Through Azidus lab CRO	Completed March 2014
4	22.12.14	A randomized, open label, comparative five arm, controlled study evaluating	Dr.Mayaveda murthy, RSV skin	Ranbaxy	In process

		the benefit and tolerability of oral capsule Sodox (Superoxide Dismutase combined with Gliadin) along with topical triple combination cream in patients with Melasma	clinic and Laser centre, Chennai (External project)		

3.4 Research Publications and Awards

3.4.1 Does the institution publish any research journal(s)? If yes, indicate the composition of the editorial board, editorial policies and state whether it/they is/are listed in any international database.

Yes

Chettinad Health City Medical Journal is a quarterly, international, peer reviewed scientific journal published by the Chettinad Academy of Research and Education. The journal publishes original articles, reviews, opinions, hypothesis, case studies, and interviews with eminent medical personalities. Interesting ECG's along with a host of classroom discussions and medical tidbits from around the world makes the journal an interesting read. The journal is edited by a host of eminent medical personalities in various fields from national and international universities/organizations. The journal has its dedicated website (http://chcmj.ac.in/) and servers were all articles are provided in an open access downloadable pdf format. Accompanying every issue of the journal is a very interesting podcast that summates the essence of the articles in the journal. Over the recent two issues the journal also broadcasts a video cast which contains a synchronized audio/video and power-point presentation highlighting key points of the articles in the said issue. Close to 1000 copies are in distribution regularly on a quarterly basis.

The journal receives numerous articles from eminent practitioners from all fields of medicine; besides articles from basic science research. The journal also publishes special issues on medical specialties like Neurosurgery, Dentistry, Sleep apnea, Diabetes and Infertility. These special issues have tremendously helped practitioners in their respective fields to stay up to date with current evidence based practice.

Prof.N.Pandiyan functions as Editor in Chief for the journal, supported by a team of dedicated faculty drawn from various specialties from the Institute. The Editorial board has distinguished International (4) and National (7) experts apart from sectional editors for peer review process (details available at the journal website).

All articles submitted to the journal are also put through a plagiarism check before publishing. The journal tries it's best to give full consideration to all articles for publication.

The journal is currently indexed in Index Copernicus, Genamics Journal Seek, Google Scholar, Research Bible, Directory of Research Journal Indexing, Directory of Science, Journal index and CiteFactor. Active efforts are being taken by the editorial team of the journal to get the journal indexed in the Science citation index and Pubmed.

3.4.2 Give details of publications by the faculty and students:

	2010 – till date
Number of papers published in peer reviewed journals (national/international)	523
Monographs	5
Chapters in Books	5
Books edited	
Books with ISBN with details of publishers	Refer publication detail
Citation Index - range /average	
Number listed in International Database Scopus,(Scopus citation)	540
Google scholar Citation (listing)	786 (195)
Impact Factor - range	0.17-14.3
Source Normalized Impact per Paper (SNIP)	
SCImago Journal Rank (SJR)	
h-index (Google Scholar)	12
h-index (Scopus)	10

List of publications enclosed (Annexure – 15)

3.4.3 Does the institution publish any reports/compilations/clinical round-ups as a part of clinical research to enrich knowledge, skills and attitudes ?

Weakly CME programs are also organized by the Medical Education Unit where in current topics relevant to clinical practices are shared. These materials (power point slides) are made available through the institution web site for faculty and students.

	2010	2011	2012	2013	2014	2015
CME	20	22	36	41	55	25
CSM	18	14	26	33	61	27
CNE	6	10	6	13	15	12
Research Seminar	1	9	8	8	6	2

3.4.4 Give details of

☐ **faculty serving on the editorial boards of national and international journals**

Number of faculty are serving on the editorial board of National and International Journals apart from several Regional Speciality Journals and Chettinad Health City Medical Journal. To mention a few of them are the following.

S. No.	Department	Name & Designation	Name of the Journal	National/ International/ Regional	Period
1.	Faculty of Allied Health Sciences	Dr. Ashok Palaniappan	Section Editor, Chettinad Helath City Medical Journal	Regional	2012 onwards
2.	Faculty of Allied Health Sciences	Dr. Kumar Ebenezar K	Member – Editorial Board, International Journal of Nutrition, Pharmacology and	National	2010 onwards

			Neurological diseases, Medknow Publishers, India		
3.	Faculty of Allied Health Sciences	Dr. Kumar Ebenezar K	Technical Editor, Science Alert Journals, Academic Journals Inc. NY, USA	International	2011 onwards
4.	Faculty of Allied Health Sciences	Dr. V. Ramakrishnan	Editorial Board Member in CIBTech Journal of Biotechnology	National	2013 onwards
5.	Faculty of Allied Health Sciences	Dr. R. Saravanan	Editorial Board Member in Journal of Pediatric Biochemistry	International	2011 onwards
6.	Anatomy	Dr.Balaji	Editorial member, Chettinad Health City Journal	National	2012-13
7.	Reproductive Medicine	Dr.N.Pandiyan-HOD Chief Editor	Chettinad Health City Medical Journal	National	2008 till date
8.	Reproductive Medicine	Dr.Shah Dupesh Khan Student-Fellowship in Andrlogy-Assistant Editor	Chettinad Health City Medical Journal	National	2013 till date
9.	Reproductive Medicine	Ms.Prathima.T,Embryologist,-Associate Editor	Chettinad Health City Medical Journal	National	2013 till date
10.	Dermatology	Dr.M.S Sreenivasan	Chettinad Health City Medical Journal	National	Till date
11.	General Surgery	Prof Dr.R.Ganesan,	Section editor in Chettinad HealthCity Medical Journal	National	
12.	General Surgery	Dr.K.Senthil Kumar	Chettinad HealthCity Medical Journal	National	
13.	Microbiology	Dr. Shameem Banu A.S., Professor and Head of Microbiology	Member of the Editorial Board of Chettinad Health City journal	National	
14.	Pharmacology	Dr.Ruckmani.A	Chettinad Health City Medical journal	International	2012 till date
15.	Physiology	Dr.Shyamala, Prof & HOD	1. Editorial board Chettinad health city medical journal	Regional	2010 – till date
16.	Physiology	Dr. Mathangi	1. Editor in Bulletin of	Regional	2007 -

		Professor	association of physiologists		2008
			2. Member of core committee Chettinad health city medical journal	Regional	2010 – till date
			3. Editorial board of Biomedicine	National	2008 – till date
			4. Editorial member National Journal of Physiology		2008 – till date
17.	Physiology	Dr. Prince Professor	Editor in Bulletin of association of physiologists	Regional	2008 – 2009
18.	Physiology	Dr.Basha			
19.	Respiratory Medicine	Dr.Meenakshi.N	Chettinad Health City Medical Journal	National	2014-Till date
20.	Cardiology	Dr. Pradeep Nayar	executive editor in Chettinad health city Medical Journal	National	
21.	Cardiology	Prof.V.G.Ramesh	1.Journal of Pediatric Neurosciences 2.Chettinad Health City Medical Journal 3. Neurology India		
22.	Community Health Nursing	Prof. L.Lakshmi	Editorial Advisor – Chettinad Health City Medical Journal Midwives Council Journal of Community Health Nursing		2010-2014 2010-2014
23.	Community Health Nursing	Mrs.Vinili Simpson	1. Member of Outreach committee, CARE 2. Member of Examination panel- 3. Chettinad Academy of Research and Education 4. Member of Nursing Board of Studies, CARE		2011 – 2014 2012 - 2014 2012 - 2014
24.	OBG Nursing	Prof. Veena M. Joseph	1. Section Editor – Chettinad Health City Medical Journal		2010-2014

☐ **faculty serving as members of steering committees of national and international conferences recognized by reputed organizations / societies**

Pitchappan: member of the committee on stem cell therapeutics, convened by Director General of Health Services, Govt of India – Central drug standard control organization, Biological Division 2012 – till date.

3.4.5 Provide details for the last four years
☐ **Research awards received by the faculty and students :**
   Faculty Awards : Refer Annexure - 10
   Student Awards: Refer Annexure - 16
☐ **National and International recognition received by the faculty from reputed professional bodies and agencies : Refer Annexure - 16**

3.4.6 Indicate the average number of post graduate and doctoral scholars guided by each faculty during the last four years.

As per the PhD regulations of the University only 8 students are permitted per faculty in the capacity of guide and co-guide. As per the PhD student and recognized guide available, the ratio is 1:1

Year	Recognized PG guide	Number of PG students guided	Recognized PhD guides	Number of PhD students
2010-2011	25	25	9 (as on 2010)	21 (as on 2010)
2011-2012	34	34	16	9
2012-2013	64	64	1	1
2013-2014	37	37	5	10
2014-2015	52	52	8	6

3.4.7 What is the official policy of the institution to check malpractices and plagiarism in research ? Mention the number of plagiarism cases reported and action taken.

- The Institution has purchased Turnitin plagiarism detection software. Plagiarism detection is mandatory for submission of all PG Dissertation and PhD Thesis.
- Clearance certificate from the Plagiarism standing committee is mandatory for submission of the dissertation and thesis.
- Faculty are encouraged to run their manuscript using the software before submission of their article to any journal.
- Publications of faculty submitted for consideration of promotion are also run through the software to verify the genuinely of the publication.
- The Internal quality assurance cell of the university conducted seminar and hands on training for faculty, PG and PhD students on Plagiarism and plagiarism detection tools
- During Research Methodology workshop conducted annually to PG and PhD students a session is exclusively conducted on plagiarism
- The institute has faced one case on plagiarism. A committee was formed to scrutinize and verify the validity of the complaint. The concerned faculty was warned of severe action if this was repeated.

- Malpractice by Research scholars are prevented by periodic review / monitoring of their progress by the doctoral committee, presentation in Research seminar and review by the IRB before the submission of the synopsis/thesis.

3.4.8 Does the institution promote multi/interdisciplinary research ? If yes, how many such research projects have been undertaken and mention the number of departments involved in such endeavors ?

The institution promotes interdisciplinary research both among the departments with the institution and with other institutions.

1	Detection of antibiotic resistant genes of nosocomial pathogens using multiplex PCR	Ms. Kurunchi C Divya	AHS & Microbiology
2	Immunogenetic predisposition to oncogenic HPV infection among cytologically (Cervical) normal women from Tamilnadu, India	Dr. G. Arun Kumar	AHS & OBG
3	Studies on Correlation of *eNO*s, NO, hsCRP and VCAM levels with Cardiovascular Risk Factors in Patients with or without Documented CVD	Mr. V. Alexandar	AHS & Cardiology
4	Studies on genetic predisposition to cardiovascular disease (CVDs) in Indian Population	Mr. Sreekanth MS	AHS & Cardiology
5	Genetic predisposition and infections in reproductive failures in Indian population	Mr. Esdan Basha SK	AHS & Reproductive Medicine
6	Development of predictor equation using craniofacial anthropometry in the predilection of Obstructive sleep apnea.	Dr.Mathangi	Physiology & Hindustan University
7	Development of indigenous cost effective goniometer to measure range of movements of the digits.	Dr.Mathangi	Physiology & Hindustan University

3.4.9 Has the university instituted any research awards ? If yes, list the awards.

Faculty / Students will be given Cash award for

- "Best paper published" during the year in refereed journals with Thomson Reuter impact factor equal to or above 3.00.
- Maximum Cited paper in a year
- Generated Patent from this institute
- Receiving National award like: BC Roy Award, Bhatnagar Award, HariOm Ashram Alembic award, Padmashree, Padmabushan, etc.,

3.4.10 What are the incentives given to the faculty and students for receiving state, national and international recognition for research contributions ?

Faculty receiving recognition for their research contributions are felicitated by the Vice Chancellor and the management with a citation and cash award.

These recognitions are given due weightage during promotions and increments to the faculty.

3.4.11 Give details of the postgraduate and research guides of the institution during the last four years.

Faculty recognized as PhD Guides by the Board of Research Studies as per University PhD regulations

Sl.No	Name	Designation	Department	Qualification
1	Dr.Agnishwar Girigoswami	Associate Professor	Medical Bionanotechnology	M.Sc. Ph.D.
2	Dr. Anoop Sreevalsan	Associate Professor	OBG	MBBS, DGO, DNB
3	Dr.Ashok Palaniappan	Assistant Professor	Computational Biology	Ph.D.
4	Dr.Balaji.TK	Professor	Anatomy	M.Sc. Ph.D.
5	Dr.Ganesan.V	Professor & HOD	General surgery	MS
6	Dr. Karunanithi.R.	Assistant Professor	Bio nanotechnology	Ph.D.
7	Dr. Koyeli Girigoswami	Assistant Professor	Bio Physics	M.Sc., Ph.D.
8	Dr. Kumar Ebenezer	Assistant Professor	Medical Bionanotechnology	M.Sc. Ph.D.
9	Dr.Lailu Mathew	Professor & HOD	Anesthesiology	MBBS, MD
10	Dr .Malligai.E	Professor & HOD	Biochemistry	MD
11	Dr. Manohar.C	Professor & HOD	Forensic Medicine	MBBS, MD, MA(Psy) DCL, BGL
12	Dr. Mathangi.DC	Professor	Physiology	M.Sc., Ph.D. MBA
13	Dr. Murali.R	Professor & HOD	Community Medicine	MD
	Dr. Murugesan.R	Director AHS	Medical Bionanotechnology	M.Sc. Ph.D.
14	Dr. Narayana Reddy	Professor & HOD	Orthopedics	MBBS, DNB, MS(Ortho)
15	Dr. Palanivelu.P	Professor	Biotechnology	M.Sc., Ph.D.
16	Dr. Pandiyan.N	Professor & HOD	Reproductive Medicine	MBBS, DGO, MD, MNAMS
18	Dr. Pitchappan.RM	Director Research	Immunology, Immuno genetics, Human Genomics, infectious	M.Sc., Ph.D., F.A.Sc., F.A.M.S.,

			diseases	
19	Dr. Pradeep G Nayar	Professor & HOD	Cardiology	MBBS, MD, Dip, NB
20	Dr. Radha pandiyan	Associate Professor	Reproductive Medicine	MBBS, DGO, MD
21	Dr. Rajasekaran.D	Professor & HOD	General Medicine	MD, DTCD
22	Dr. Raghupathy	Professor & HOD	Cardio Vascular and Thoracic Surgery	M.S., M.Ch.(Cardio Thoracic)
23	Dr. Ramakrishnan.V	Assistant Professor	Genetics	M.Sc., M.Phill, Ph.D.
25	Dr. Ramesh Rao.K	Professor & HOD	Pathology	MBBS, DCP, MD
26	Dr. Ramesh.VG	Professor & HOD	Neuro surgery	MCH (Neuro), D.N.B (Gen. Surg.), DNB (Neuro Surgery), FICS.
27	Dr. Ruckmani.A	Professor & HOD	Pharmacology	MBBS, MD, D.D
	Dr. Sakunthala.SR	Professor	General Medicine	MD
28	Dr. Saravanan.R	Assistant Professor	Pharmaceutical chemistry	M.Sc., M.Phill., Ph.D.
29	Dr. Shameem Banu.AS	Professor & HOD	Microbiology	MBBS, MD.
30	Dr. Shiek Fareeth Ahamed	Assistant Professor	Computational Biology	M.Sc., Ph.D.
31	Dr. Shiv Bhushan sharma	Assistant Professor	Physiology	MBBS, Ph.D.
32	Dr. Srinivasan.N.	Professor	Tissue Engineering and Regenerative Medicine	M.Sc., M.Phill., Ph.D.
33	Dr.Srinivasan.MS	Professor & HOD	Dermatology	M.B.B.S., M.D. (Derm),D.D.
34	Dr. Thangavel.M	Associate Professor	Tissue Engineering	M.Sc., Ph.D.
35	Dr. Uma Mageshwari.RB	Associate Professor	Pharmaceutical Chemistry	M.Pharm., Ph.D.
36	Dr. Vasantha Subbaih	Professor & HOD	OBG	DGO, MD

There are over 212 recognized PG guides under various faculty who have been guiding students for their dissertation. These guides are as per the guidelines of regulatory bodies.

- As per MCI Guidelines, faculty with 8 years of teaching experience out of which 5 years after obtaining PG degree are eligible as guides.
- Nursing faculty/Nursing expert in the same specialty holding PhD/M.Phil/ M.Sc. Nursing with a minimum of 3 year experience in teaching in the postgraduate program in nursing.

- Faculty at Assistant Professor level with PG teaching experience of 2 years post PhD
- or 3 years with NET SLET Qualification.

3.5 Consultancy
3.5.1 What are the official policy/rules of the institution for structured consultancy ?
List a few important consultancies undertaken by the institution during the last four years.

Policy regarding consultancy is under development as we have only clinical and investigational consultancy offered by the doctors.

3.5.2 Does the university have an industry institution partnership cell ? If yes, what is its scope and range of activities ?

Yes. This is headed by Prof.R.Murugesan, Director, Allied Health Sciences.
Scope: To facilitate collaborative initiatives and MoU with Industry partners

3.5.3 What is the mode of publicizing the expertise of the institution for consultancy services? Which are the departments from whom consultancy has been sought ?

The clinical consultancy offered by specialists are made available on the website of the institute. We do not commercially advertise this service.

3.5.4 How does the institution utilize the expertise of its faculty with regard to consultancy services ?

Clinical consultancies offered as per the hospital guidelines. With regards to other consultancies, policies are still under development

3.5.5 Give details regarding the consultancy services provided by the institution for secondary and tertiary health care centers and medical / dental practitioners.

The hospital offers consultancy services in OP, IP and Occupational health check up to various organizations in and around Kelambakkam and OMR area.

3.5.6 List the broad areas of consultancy services provided by the institution and the revenue generated during the last four years.

Consultancy services ranges from routine health check up for selection to annual check up General Health care needs and Speciality care including Cardiology

Sl No	Corporate Name
1	Anabond Ltd
2	Nuray Chemicals Pvt Ltd
3	Shasun Pharmeceuticals Ltd
4	Vellore Institute of Technology (VIT)
5	Shobha Limited
6	Virgo Valves & Controls Ltd
7	Indus Ind Bank
8	Fourth Estate Limited
9	Soft Gel Healthcare Private Limited

10	Sharpoorji Pallonji Company Ltd
11	Tractors and Farm Equipment Limited
12	P.S Apparels (India) Companies
13	NAPC
14	Rialto Enterprises Private Limited
15	Indian Institute of Information Technology, Design & Manufacturing
16	Inter Globe Hotels Private Limited
17	Ascent Hotels Private Limited
18	Preeti Kitchen Appliances Private Ltd
19	BBL Daido Private Limited
20	Dhanalakshmi Sreenivasan College of Engineering Technology
21	FLSmidth Private Limited
22	Baxter India Private Limited
23	Anjan Drug India Private Limited
24	Mahindra @ Mahindra Ltd
25	Sri Ramanujar Engineer College
26	GE Capital Business Process Management Services Pvt Ltd
27	Life Cell International Pvt Ltd
28	Turbo Energy Ltd
29	Employees State Insurance Corporation
30	MJ Ambulance Service
31	SPCL C/O Akshaya ABOV Project
32	Tata Consultancy Service
33	SPCL C/O Hexaware Project
34	Alstom India Ltd
35	Ashok Leyland

3.6 Extension Activities and Institutional Social Responsibility (ISR)
3.6.1   How does the institution sensitize its faculty and students on its Institutional Social Responsibilities ? List the social outreach programs which have created an impact on students' campus experience during the last four years.

During the last four years, various health screening, health check-up and specialty camps are being conducted by CHRI with doctors involving CRRIs, and students of Medical, Nursing and AHS.
The year wise details of the camps conducted in and around the areas of the Institution is given in the table.

Year	No of camps	No of persons of who attended the camp	Referrals	Patients who attended Hospital
2010	154	25,278	2987	2289
	121 (KKT camps)	2159	119	106
2011	227	29,7617	4237	2022
2012	227	47,437	7688	4605
2013	203	37158	4890	1477
2014	280	19987	5250	3750

3.6.2　How does the institution promote university-neighborhood network and student engagement, contributing to the holistic development of students and sustained community development ?

The University encourages faculty to identify appropriate collaborators and facilitates the linkages through the assistance of the legal cell of the University. Post graduate students too are motivated to carry out their dissertation projects in industries and the institute facilitates in this process by offering timely guidance and administrative support. Such project works have also earned the students job prospects in these industries too.

Memorandum of Understanding has been made with the following N.G.O.s / Companies / Industries by Chettinad Hospital and Research Institute for conducting medical camps, Awareness Campaigns etc.

S.No.	Agency/Company	Purpose	Period
1	L&T Siruseri Project-	any emergencies for Project laborers	From 2007 – till date
2	XANSA (now CETIRIA)	school health camps	From 2007 – till date
3	Sri Ganapathy Satichidanander Charitable Ltd	Adaption of Nadupalani (covering a population of 30000: Sunday camp)	2009 - 2012
4		Cardiology camp every month at Velacheri	
5	Equitas Micho Finances	Women health checkup.	2009 – till date
6	SSN, HIET, Hindustan Arts & Sciences College, Dhanalaxmi Srinivasan Engineering College, VIT	Medical assistance in their NSS activities	2009 - till date
7	Rotary Club	In the villages adopted by Rotary	2009 – till date

8	Lions club	Health needs of Balavadi Children	2009 – till date
9	Tamil Nadu Arya Vysaya Maha Sabha group	Vysya community health needs (Madurai, Trichy, Dindugul, Thiruvannamalai, Karur, Chennai)	2009 – till date
10	Migrant laborers (TI Migrants, DAPCU)	For AIDS Control, Kanchipuram district	2014 – till date
11	Michilien Tyres	Covering over 32 villages in North Madras	2010 – till date
12	Adie at Action	Health needs of Migrant population	2014 – till date
13	Varum mun Kaapom Thittam	TN Govt Preventive camps	2007 – 2012
14	Government Insurance Scheme	For Congenital anomalies and cardiovascular diseases	2007 – till date

(row above "8" continues from previous page): club (Kanchipuram, Thiruvalloor, Vellore)

3.6.3 How does the institution promote the participation of the students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International programs ?

Extension activities: All the extension activities are co-ordinated by the Medical superintendent of the hospital. There is a dedicated Public Relations Officer and her team who identify the various community needs based on their interactions with the community heads and institutional heads and charts out the month long activities. We also have an active Outreach Committee headed by Professor of Community Medicine with a committed team to oversee and monitor the extension activities.

Information regarding the camps are circulated to all the Heads of the clinical departments and College of Nursing to depute faculty and interns for the various programs. They are also displayed on the hospital notice board.

Outreach camps are also conducted in collaboration with NGO and corporates.

CARE has a registered NSS unit.

Students and faculty are encouraged to participate in these outreach and extension activities of the institute and over the years we have seen an increase in the number of students participating in these programs with a lot of enthusiasm.

All logistic and financial support for these camps and programs are offered by the institute completely.

3.6.4   Give details of social surveys, research or extension work, if any, undertaken by the institution to ensure social justice and empower the underprivileged and the most vulnerable sections of society ?

- The health and educational camps in urban slums of Chennai Corporation, Kannagi Nagar, in Narikuravar colony at Poonjeri, patients started coming to O.P, Rural Health Centre for health check-up and treatment.

- Periodically general health camps are conducted for migrant population especially construction workers and they are been screened for oral cancer and follow up services at the institution.

- CHRI has signed MOU with Michelin tyres and adopted 32 villages near Periyapalayam, North Chennai. Since 2010 medical camps are conducted monthly. Awareness campaigns also conducted.

- Screening camps are conducted for anemia control among women in reproductive age group in Kannagi Nagar - a settlement for slum people.

- Students of Chettinad College of Nursing have been maintaining family health cards since 2009 for the families in and around Poonjeri, Amoor, Kadambadi, Manamai, Payyanoor. During their periodic visits physical assessment, screening for various diseases, Immunization, antenatal care, etc are done along with importance of physical activity and nutrition as well. Any cases identified are referred to the Rural Health Centre of the institution at Poonjeri. Students and faculty actively participate in monthly school health camps in these villages

- Schools (8) in and around Poonjeri has been adopted by Danish NGO, "Schools of India" and CHRI offers Health care needs through this NGO to these 8 Government schools.

- Through the Urban Health Centre (at Semmancheri) health care needs of the population in the Tsunami nagar are provided.

- Following are the ongoing research activities based on community conducted at the villages in and around our Rural Health Centre

S. No	Title of the study	Status
1	Risk and determinants of Respiratory Morbidity among stone sculptors, A community based retrospective cohort study	Funded by ICMR Completed and presented in OCCUCON – 2014 and won the young scientist award, manuscript under preparation for publication
2	Morbidity profile, health seeking behavior of immigrant construction workers, a community based cross sectional study	Data collection completed, manuscript under preparation
3	Incidence and factors affecting falls in elderly Indian population, a hospital based cross sectional study	Funded by ICMR Completed and report submitted to ICMR

		and accepted
4	Musculoskeletal morbidity among construction workers, a community bases cross sectional survey	Completed and presented in OCCUCON – 2015, manuscript under preparation
5	Self care practices of rural diabetic patients. A community based cross sectional survey	PG thesis, Submitted to the University
6	Maternal Knowledge, Attitude and Practices regarding childhood immunization	Completed and presented in recently concluded PEDICON , won the best oral presentation award
7	Morbidity profile and health care seeking behavior of immigrant construction workers	Ongoing
8	Undiagnosed burden of refractory errors in school children, findings from a school health programme	Ongoing
9	Impact of community based health education intervention on uptake of cervical cancer screening services, a cluster randomized trial	PILOT testing of the data collection tools is being done
10	Conditional Cash Transfer & It's Utilisation: Tamil Nadu's Experience with Dr.Muthulakshmi Reddy Maternity Benefit Scheme	Data collection ongoing

3.6.5 Does the institution have a mechanism to track the students' involvement in various social movements / activities that promote citizenship roles ?

Active, spontaneous involvement of students of all discipline of CHRI and CCN has been observed over the years especially during their internship period.

As part of community medicine and community health nursing training, the undergraduate students do routine visits to villages and families and document data completely. They take active part in awareness and educational programs organized by the university.

The institute celebrates most of the health days declared by WHO. During these days activities are organized for the students like poster competitions, quiz, photography, debating etc., This mode of self learning process has been well received by the students and they take active part and lot of initiatives in making these programs successful.

Through the NSS unit of the institute students have taken active part in various activities

S No.	Date	Event	Venue
1.	06.09.2014	Medical Surveillance	Gumudipundi,

			Kollanur, Tiruvallur District.
2.	20.09.2014	Orientation of NSS to NSS volunteers	Lecture Hall- 2
3.	24.09.2014	NSS Day Celebration	Lecture Hall- 3
4.	09.10.2104	Swachh Bharat Swasth Bharat	CARE University Campus
5.	15.10.2014	Safe Diwali & Swachh Bharat	Maharishi Vidyamandir School, Polachery.
6.	31.10.2014	National Unity Day	Lecture Hall- 3
7.	01.11.2014	Awareness on Hygiene for Canteen Staffs	CARE, Kelambakkam
8.	14.11.2014	Children's day	Padma Adarsh School, Vaniyanchavadi
9.	13.12.2014	Helmet Awareness	OMR road & Vandaloor road, Kelambakkam
10.	15.12.2014	Disaster Management by IQAC, CARE	CARE, Kelambakkam
11.	10.01.2015	Yogathon	CARE, Kelambakkam
12.	12.01.2015	National Youth Day	CARE, Kelambakkam
13.	26.01.2015	Republic Day from Chettinad Hospital	CARE University Campus
14.	20.02.2015	Personality Development Training Programme for Youth-2015 by Tamilnadu State NSS Cell	Jawaharlal Nehru Stadium, Chennai.
15.	23.02.2015	International Language Day organized by FAHS, CHRI	CARE University Campus
16.	28.02.2015	PEDICON organized by Pediatrics Department, CHRI (NSS volunteers participated for guiding the delegates)	CARE University Campus
17.	15.03.2015	Inauguration of Special Camp	Thiruvadisulam and Srikundram. Kacheepuram (D) TN.
18.	16.03.2015	School Health survey (Primary School)	Thiruvadisulam and Srikundram. Kacheepuram (D) TN.
19.	17.03.2015	Awareness on health and hygiene and Health Camp	Thiruvadisulam and Srikundram. Kacheepuram (D) TN.
20.	18.03.2015	Awareness on Nutrition, common symptoms of malnutrition, Health Camp and Visit to Balwari, Thiruvadisulam	Thiruvadisulam and Srikundram. Kacheepuram (D) TN.
21.	19.03.2015	Dental Camp for school children (Primary School, and for villagers.	Thiruvadisulam and Srikundram. Kacheepuram (D) TN.
22.	20.03.2015	Temple Cleaning (Shivan Temple)	Thiruvadisulam and

23.	21.03.2015	Valedictory function	Thiruvadisulam and Srikundram. Kacheepuram (D) TN.
24.	09.04.2015 -11.04.2015	Fusion Chettinad (NSS volunteers participated for guiding the outside the students)	CARE University Campus
25.	05.06.2015	World Environment Day	CARE University Campus
26.	21.06.2015	International Yoga Day	CARE University Campus
27.	26.06.2015	International Day against Drug Abuse and Illicit Trafficking	CARE University Campus
28.	22.06.2015 -26.06.2015	Cleanliness Drive-week	CARE University Campus

3.6.6 How does the institution ensure the involvement of the community in its outreach activities and contribute to community development ? Give details of the initiatives of the institution that have encouraged community participation in its activities.

Years of dedicated service through the rural health centre of the institute at Ponjeri village 25 km from the institute has helped us instill confidence in the minds of the villagers and village heads around the Rural Health Centre.

Dedicated team headed by the public relations officer of the institute has helped us in establishing a good rapport with the people and enabled us identify their needs.

Need based camps and camps conducted specifically on the request of the various village / School heads has enabled us serve the community better.

NGO and corporates have also joined hands with us in our endeavor to make a healthy India.

Regular family visits by Medical, AHS and Nursing students in the catchment villages motivated the community and NGOs and encouraged their participation in all medical camps organized.

Awareness and educative camps have also been well received in these villages.

3.6.7 Give details of awards received by the institution for extension activities and/contributions to social/community development during the last four years.

The details of Awards received by the Institution for extension activities and contributions to social / community development during the last 4 years are as given below:

	Authority	Award received for	DATE
1	TN Arya vysya Maha Sabha, Broadway	Speciality camp	1/3/2010
2	Lion's Club	School health camp	1/12/2010

3	Dhanalakshmi Srinivasan Engineering college & Technology	Rural health camp-Community based camp	2/23/2010
4	Rotary club of East RA puram & Saidapet varthaga sangam	Urban Health Camp	2/10/2010 & 2/10/2011
5	Youth red cross camp	Rural health camp- (opthal & Dental)	2/23/2010
6	Rotary club of velacherry	School health camp for urban children	22/11/2011 & 23/11/2011
7	NGO camp	General health camp(Women & Elders)	12/28/2011
8	NSS, Triplicane	Rural health camp	12/19/2012
9	Vivekanand School	Urban Health Camp	2/10/2013
10	Rotary club of Chennai, Ambattur	Construction workers	9/1/2014
11	Vasavi club	General health camp for vendors	5/7/2014

3.6.8 What intervention strategies have been adopted by the institution to promote the overall development of students from rural/ tribal backgrounds ?

- All students have been exposed to rural health delivery system from grass-root level of ICDS centre, health sub-centre, primary health centre, Taluk hospital upto various referral centres thereby promoting their development.
- Students from rural areas and economically lower class are given fee waivers.
- After appropriate training in nursing and allied health sciences programs, they are given appointment in the institute itself.
- Training on personality development, spoken English, facing interviews, etc are also conducted to give them self-confidence to face the world.
- The institute also conducts campus placement services in the faculty of nursing in assisting them get placed through consultants too.

3.6.9 What initiatives have been taken by the institution to promote social-justice and good citizenship amongst its students and staff ? How have such initiatives reached out to the community ?

- Social justice and good citizenship have been instilled in the minds of the students through
- Various committees like Anti ragging committee, Equal opportunity cell and the NSS unit.
- Active participation of students through their training in the community medicine and community health nursing postings
- Student involvement in the outreach activities of the institute. The table below highlights the activities of the Nursing students in the community based activities

S.NO	HEALH SITUATION	FREQUENCY OF VISITS
1	Normal Pregnant Mother	Once a month till 7th month, then once in two weeks.
2	High Risk Pregnant Mother	Weekly or often until problem settled
3	Normal Home Delivery	First visit 12 to 24 hours, if possible 3,5,12 days. once in 2 weeks upto 6th week after delivery
4	Abnormal Delivery	First visit 12 to 24 hours ,if possible once a week till 6th week after delivery
5	Normal Infants	Once in a month
6	High Risk Infants	Depends on the risk factor ,need to visit
7	Preschool Children	Once in 3 months till 3 years, then once in 6 months
8	School Children	Once in a month in school through school health programme
9	Acute Communicable Disease	Depends on patient condition(four visit)
10	Chronic Communicable Disease	Depends on patient condition(1 visit every month)
11	Non Communicable Disease	
12	Aged and Handicapped	

3.6.10 How does the institution align itself with the annual themes/programs of WHO/ICMR ?

The list of Health programs/ days conducted/ celebrated at RHC Poonjeri

S.No	Date	Health Programme
1	09.10.10	World Health Day
2	19.04.11	Mass Health Programme on Environmental Sanitation at kadambadi
3	05.12.11	AIDs Day
4	09.12.11	Mass Health Education Programme on Prevention & Management of Diabetic Mellitus
5	1/10/2011	World Elders Day
6	30-01-2012	OG Camp
7	8/3/2012	International Women's Day
8	7/4/2012	World Health Day
9	25.04.12	Mass Health Programme on Prevention of PEM at Manamai
10	13-06-2012	Awareness Programme on Diabetic
11	7/8/2012	Breast feeding week at kadambadi
12	4/9/2012	Diabetic Camp
13	19.11.12	World Diabetic Day
14	12/12/2012	World AIDS day with Dhanalakshmi college students

15	30-11-2012	Awareness programme on Dengue Fever
16	20.12.12	Health Education cum Exhibition on Antenatal Care
17	6/3/2013	H.E Programme on Anemia at Manamai
18	8/3/2013	World Women's Day
19	9/4/2013	World Health Day Camp
20	19-11-2013	World Diabetic Day
21	09.12.13	Mass Education Programme on Diabetic Mellitus
22	18.12.13	Mass Education Programme on Prevention of Communicable Disease After Disaster at Kokilamedu
23	7/4/2014	WHO day by CRRI & Nursing students
24	29-05-2014	Dental Camp
25	4/9/2014	Health Check up at Devaneri village (96 People screened)
26	15/10/2014	Global Hand Washing Day at Kuzhipanthandalam
27	16/10/2014	World Food Day at Kuzhipanthandalam
28	31 – 10- 2014	Mass Health Education Programme on Prevention of water Borne Diseases
29	31 – 10- 2014	National Unity Day
30	10/11/2014	World Immunization Day at Kuzhipanthandalam
31	14-11-2014	Diabetic Camp at KuzhipanthandalamVillage.
32	19-11-2014	Bio – medical Management by nursing students at Vadakadambadi, Enlighten Community College.
33	5/12/2014	Disaster Management – Fire at IID Community College, Poonjeri.
34	27/01/2015	School Health Programme at Govt Middle School, Kokilamedu.
35	31/3/2015	Training of Health Workers on "Biomedical Waste Management"
36	27/02/2015	School Health Programme at Govt Primary School, Manamai.

All these national and WHO days are celebrated in various formats by the respective departments at the Hospital OP and IP (Quiz, Poster competitions and display, Debates, Awareness program, CME, etc)

Besides the short ICMR Projects by students are carried out in the CHRI and field practice areas of RHC, Poonjeri and UHC at Karapakkam.

3.6.11 What is the role of the institution in the following extension activities ?

Community outreach health programs for prevention, detection, screening, management of diseases and rehabilitation by cost effective	The Institution has conducted over 1212 camps surveying 4,29,636 population. Students of all three faculty are involved in these camps in various capacities (providing diagnostic, therapeutic, preventive & educative services).

interventions.	
Awareness creation regarding potable water supply, sanitation and nutrition.	Students during their posting in community medicine and community health nursing create an awareness to the house hold by means of simple charts/ discussion/ group activities, models etc
Awareness creation regarding water-borne and air-borne communicable diseases.	
Awareness creation regarding non-communicable diseases - cardiovascular diseases, diabetes, cancer, mental health, accident and trauma, etc.	Regular health check up and camps are conducted in selected areas including corporate houses to create awareness on non-communicable diseases. During cardiac camps, onsite echo by the cardiologists are also done and appropriate consultations are given. Active participation by means of health education videos, etc during the Safety week / month by the industries near the hospital. NSS volunteers have recently also conducted importance on wearing helmet by 2-wheeler users. Epidemiological Study on Mental Health Morbidity in South India: Adult Population Study in the Village Of Ponjeri. The Study has been presented at the World Psychiatric Association's (WPA) 15th World Congress of Psychiatry in Buenos Aires, 18-22 September, 2011.
Awareness creation regarding the role of healthy life styles and physical exercise for promotion of health and prevention of diseases.	Regularly conducted in schools as well as corporate houses (IT companies) on the importance of physical activity and healthy nutrition and to avoid junk foods. Importance of Balanced diet is also brought out by various student activities in the hospital and rural and urban health centres as well.
Awareness creation regarding AYUSH Systems of medicines in general and / or any system of medicine in particular.	Nil
Complementary and alternative medicine.	
Pharmaco economic evaluation in drug utilization.	Students during their posting in the community medicine and community health nursing are sensitized on Pharmaco economics and ideal prescription and importance of knowledge on the socio economic status while prescription writing
Participation in national programs like Family Welfare, Mother and Child Welfare, Population Control, Immunization, HIVAIDS, Blindness control, Malaria, Tuberculosis, School Health, anti tobacco campaigns, oral	The institute has been an active partner in all the National programs organized by Governmental and Non governmental organization as evidenced by the camps conducted. The institute also has in house DOTS, DBCS, Pulse polio, etc.

health care, etc.	
Promotion of mental health and prevention of substance abuse.	Faculty give periodic lectures in academic institutions near the university on substance abuse as well as antibiotic abuse
Adoption of population in the geographical area for total health care.	Health care needs of the villages in and around the Rural and Urban health centers of the institute are met through the medical and paramedicalteam stationed at these centres. They not only offer services to patients who visit these centers but regularly conduct health check up and camps ranging from educational to preventive in nature.

Field Practice area of RHC, Poonjeri.

Sl.No	Name of the village	Population
1	MAMALLAPURAM	13276
2	KOKKILAMEDU	1059
3	POONJERI	2263
4	KADAMBADI	1830
5	MANAMAI	2771
6	KUNNATHUR	1750
7	NALLUR	1624
8	PERUMALERI	523
9	KARANAI	1874
10	KUNNAPATTU	780
11	KULIPANTHANDALAM	2995
12	PAIYANOOR	4181
	Total	**34866**

Field Practice area of UHC, Karapakkam

Sl. No	Name of the village	Population
1	SHOLINGANALLUR	15557
2	KARAPAKKAM	3795
3	OKKIAM THORAIPAKKAM	25952
4	JALLADAMPAKKAM	7240
5	PERUMPAKKAM	2630
6	SITHALAPAKKAM	3298
7	UTHANDI	15423
8	OTTIAMPAKKAM	811
9	SEMMANCHERI	2564
10	INJAMPAKKAM	10117
	TOTAL	**87387**

Health needs and health care education to 32 villages in North Madras with a population of about 3,44,850 is provided through the MoU with Micheline Tyres

In addition the institute has adopted the following villages and provides all the health care needs:

S.no	Areas name	Distance in kms	Population
01	Sholinganallur	14	15557
02	Semmancheri	13	2564
03	Karapakkam	18	3795
04	Injampakkam	22	10117
05	Okkiam thoraipakkam	21	25952
06	Jalladampettai	19	7240
07	Perumpakkam	18	2630
08	Sithalapakkam	22	3298
09	Uthandi	20	15423
10	Ottiampakkam	22	811
	Total		**87387**

The NSS unit of the institution has adopted Thiruvadisoolam and Sirigundram falling under the Thiruvadisoolam panchayat, Kancheepuram district. Periodic camps by the NSS unit in these villages cater to the basic health needs. (Annexure-17)

Research or extension work to reach out to marginalized populations.	We have played active role in certain marginalized population like Irulas at Chennari (approx. 20 km from CARE) Fishermen community : Kadaloor Kalpakkam, Kokilamedu Migrant population

During Internship the fresh medical graduates, Nurses and doctors can benefit professionally and academically by taking active part in the extension activity and gain useful hands-on experience in treating common illnesses.

The one year internship program of AHS is of immense help for the students to acquire hands on experiences in handling equipment and patient care.

☐ **On-the-job training**

The curriculum has the inbuilt options for MBBS and B.Sc. Nursing and Allied Health sciences programs have clinical posting and duties, which gives them training during the course itself and placements. Participation in Health camps and Outreach programs further enhance their skills and also inculcates a sense of commitment and builds citizenship.

☐ **Faculty exchange and development**

Collaboration with international institutions offers faculty improvement & update research in current areas in clinical research. The present international collaborations (MOU) are one way. In short time from now faculty and student exchange program will be initiated.

☐ **Research**

Outreach programs are planned regularly for epidemiological study and research initiatives. The current research based on our outreach with the community have been listed (refer question 3.6.4)

☐ **Publication**

The number of publications by the faculty of the various departments of this university is on the rise. With the initiation of the PhD program and involvement of

the faculty in various funded research activity, increase in the number of publications in high impact journals.

☐ **Consultancy**

Consultancy services offered by the University doctors especially in specialty services help the under privileged population as well as the corporate houses with occupation related health issues.

☐ **Extension**

Chettinad hospital aims at affordable medical facilities for all. This has been mainly possible with the vast extension and outreach programs of the university. Towards this end it has created an impact on the community it serves.

☐ **Student placement**

MBBS and Nursing program are self employment courses. The student placement cell Conducts training programs on how to attend interview, communication skills etc. Campus interviews are conducted regularly for Nursing students. Students in faculty of allied health sciences are recommended to various industries. So far there has been 100% placement. Students from AHS, nursing and medical postgraduate and graduate students have been appointed under various capacities at the University and the Hospital itself. Postgraduate medical students have also been positioned in reputed medical institutions and few of them have been absorbed for service in our institution as well.

Placement support offered includes:

- **Resume Writing**
  - Emphasis on education, projects executed
  - Highlight on technical skills
  - Cogent uniform format
- **Soft Skills Training**
  - Need for language improvement
    - Communication skills
  - Interview tips: Interpersonal skills
- **Guidance for National Level Tests**
  - CSIR-UGC NET exam for JRF and SRF
  - NET/ SLET exam for Lectureships
  - Review of recent question papers
- **Aptitude Tests-Training**
- **Interaction with Successful Alumni**
    - Feedback on the MSc programmes
- **Interfacing with potential industrial/R&D recruiters**

3.6.12 Do the faculty members participate in community health awareness programs ? If yes, give details.

Yes, In all the health camps, faculty members including doctors from the super specialty departments participate in conducting awareness among the community and schools. Health camps are regularly conducted on all National Health days mentioned.

3.6.13 How does the institution align itself and participate in National program for prevention and control of diseases ?

By conducting family health survey during their community health posting at Rural health centre, Poonjeri and Urban health centre at Karapakkam and identifying the target cases, in the field practice villages, CRRIs, medical and CCN students counsel them on prevention and control of preventable diseases like Nutritional Anaemia, hypertension, diabetes, pulmonary tuberculosis, blindness control programs, pulse polio, heart surgery, chief minister health insurance programs etc.+

We have been very active partner in all the National health programs with the involvement of faculty and students.

3.7 Collaborations

3.7.1 How has the institution's collaboration with other agencies impacted the visibility, identity and diversity of campus activities ? To what extent has the institution benefitted academically and financially because of collaborations?

- The institutions has entered into Memorandum of understanding with various academic institutions both National and abroad to strengthen its research capabilities.
- Collaborations have also been initiated with industries to facilitate training in real life scenario and conduct of student projects in the post graduate courses in emerging areas.
- To a certain extent our facilities have been utilized for training of students from nearby institutions (eg. Nursing and Engineering students)

3.7.2 Mention specific examples of how these linkages promote

☐ **Curriculum development**

Industrial collaboration has helped to modify the syllabus to meet the requirement of the industry for the post graduate courses in the post graduate programs in emerging areas. Eg. M.Sc. in Clinical Research and Experimental Medicine, Tissue engineering & regenerative medicine, Medical Genetics and Molecular Diagnostics offered under the faculty of allied health sciences.

More over the information derived from the extension activities are utilized to update the MBBS curriculum

☐ **Internship**

Industrial training is part of the curriculum in certain courses offered under faculty of allied health sciences. Students of Nursing and Medicine are regularly posted in various Government and private specialty hospital for additional hands on training.

3.7.3 Has the institution signed MoUs or filed patents with institutions of national/international importance/other universities/industries/corporate houses etc.? If yes, how have they enhanced the research and development activities of the institution ?

Yes, The institution has signed MoU with Universities & Pharma industries. It has signed MoU with Hindustan University, Orchid biopharama. Such MoUs have enhanced the research potential of the University in the areas of nanotechnology, Drug development, Cell culture technology, etc.

Refer 3.1.4 : Collaboration with national/international institutes / industries.

3.7.4 Have the institution-industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities ?

Yes, ILLUMINA Photoimaging system has been installed for drug delivery and monitoring, Tumor progression, etc

3.7.5 Give details of the collaborative activities of the institution with the following:
- **Local bodies/ community :** community survey and home visit by students. Organizing mass health education program in villages. Research projects in community
- **State government / Central government /NGOs :** participating in health service projects of corporation of Chennai.
- **National bodies :** participating in national health programs. Observing national health days.
- **International agencies :** Outreach activities with Dutch agencies is being conducted for school children. Genographic research project is funded by the National Geographic society and Director Research, is part of the Genographic consortium.
- **Health Care Industry - Biomedical, Pharmaceutical, Herbal, Clinical Research Organization (CRO) :** MoU has been entered with Pharmaceutical industry (refer Q.No.3.1.5 Collaboration with National / International institutes) for both training and research collaborations.
- **Service sector**
- **NGO:** collaboration with NGO and participate in health promotion and preventive services.

3.7.6. Give details of the activities of the institution under public-private partnership.
The Institute has an MoU with Michelin tyres and has been conducting health camps and serving the underprivileged and those in need of health care facilities in over 32 villages of North Madras covering a population of 3,44,850.

Criteria - IV

Infrastructure & Learning Resource

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical Facilities

4.1.1   How does the institution plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

As the built-up area at present forms only 30% of the 33.45 acre campus, there is enormous scope for future expansion. To keep abreast of the Institutional developments, infrastructural facilities are continually monitored and upgraded to meet the present/future needs of the Institution. Each upgrade is planned and implemented in such a way as to meet not only the present needs but also the anticipated future needs five years hence.

The university through its committees envisions its future expansion plans for the next few years and accordingly tries to build upon their expansion activities with regard to academics, teaching and learning facilities, sports infrastructure, hostel facilities etc. The growing need of classroom, auditoria, laboratories, conference halls, panel room and sports facilities are assessed at the end of each academic year and requirements. Once the expansion plans are decided upon, then a separate budget is allocated for such expansions by the finance committee. All such facilities are put into maximum use by the different stakeholders in a shared basis. Separate authorities are appointed to ensure such facilities are maintained, shared on a scheduled time basis, and thereby ensuring that the facilities are optimally utilized.

4.1.2. Does the institution have a policy for the creation and enhancement of infrastructure in order to promote a good teaching-learning environment? If yes, mention a few recent initiatives.

The university has stated in its mission statement "to provide state of the art infrastructure" and making the institution as a global centre for learning, teaching, research, health care and service to the community. True to its mission statement the university which was established in the year 2008 has created a huge infrastructure within a short span of time and has been continuing expanding the infrastructure facilities to keep pace with growth of the university.

The University has a full-fledged Maintenance Department with required Technical Support Staff. Timely Maintenance of all the buildings, electrical appliances and equipment and A.C. Equipment are carried out as and when required to avoid breakdown and minimize down time of equipment.

Laboratories of constituent units are fully equipped with sophisticated equipment and the hospitals are equipped with state of the art facilities that are required for primary to tertiary health care facilities.

Class rooms are provided with OH LCD projectors with PCs and seminar halls are equipped with AV equipment.

Teaching – learning friendly environment has been achieved within the campus as follows: The whole campus is enabled with LAN (intranet) and Wi-Fi. All the lecture halls are equipped with multimedia projectors and desktops. The lecturers and students can access teaching material from LMS using unique user ID and pass word.

4.1.3. Has the institution provided all its departments with facilities like office room, common room and separate rest rooms for women students and staff?

Administrative Office Rooms have been provided both in the College and in the Teaching Hospital. Besides, individual rooms for the Departmental Head and the Teaching faculty of each Department have been provided. Floor-wise rest rooms have been provided for both men and women separately (also provided separately for faculty and students). common room and separate rest rooms for girl students are available.

4.1.4 How does the institution ensure that the infrastructure facilities are barrier free for providing easy access to college and hospital for the differently-abled persons?

Barrier-free features have been fundamentally incorporated into all design concepts with effective implementation of access pathways, entrances and utility rooms to break barriers and open doors for an inclusive society. Ramps in almost all the entrances, grab pipes in rest rooms and access ways free from protrusion hazards, dropped kerbs, non-steep ramps, doors or doorways designed without protrusions to allow free passage of a wheelchair, are some of the ways with which easy, barrier free access to persons with a disability has been ensured. Special toilet has been provided with a wash basin mounted with the rim not higher than 750 mm above the finished floor level with a clearance of 550 mm from the finished floor level to the bottom of the apron. Taps for wash basin are automatic or of lever control type without spring loading.

4.1.5. What special Facilities are available on campus to promote students' interest in Sports and cultural events/activities?

- Facilities that promote sports and extra-curricular activities are being continually added and the existing ones are being expanded depending on the needs of the students and staff.
- A Gymnasium for the use of Students and Staff has been ~~is~~ established in a separate complex within the campus.
- A Gymnasium for the use of Girl students has been provided within the Hostel premises.
- A Swimming Pool capable of accommodating 10 persons at a time has been built in Boys' Hostel.
- An indoor stadium that accommodates 4 shuttle courts and a Basket Ball playing area is available within the campus.
- A Cricket Ground of 45000 s.ft.
- A 400 m track for track and field events which can be used for Foot Ball and Cricket
- A kho-kho and throw ball practicing ground
- A Tennis court, outdoor Basket Ball court and a Ball Badminton Court.
- A 1200 seating capacity Auditorium and a 375 seating capacity mini auditorium and 100 – 200 seating capacity Lecture Halls provide enough facility for the students to hold cultural programs and Workshops.

4.1.6. What measures do the institution take to ensure campus safety and security?

- The entire campus has 4 main entrances – 1 on the eastern side and 3 entrances on the southern side. Normally only 1 entrance on the southern side is kept open with both the entrances on eastern and southern side under security.
- The entire campus is kept under surveillance with nearly 400 cameras installed at all strategic points. .
- The College area is cordoned off with installation of controlled electronic access to students and staff to the college area.

- Nearly 100 security personnel have been deployed to patrol the entire campus and to check incoming and outgoing vehicles at check points.
- Separate space to park visitors' vehicles has been provided.
- Fire Hydrant system that can be used at times of emergencies is in place, besides Fire Alarms and Fire Extinguishers to notify and prevent local fire hazards. Frequent Fire Safety Programs with drills to cope up with an emergency is being conducted in liaison with the Fire and Rescue Services Department.

4.1.7. Facility of Animal House
* Is animal house maintained as per CPCSEA guidelines ?
>   Yes, All norms laid down by CPCSEA are strictly adhered to.
* Whether records of animal house are maintained for learning and research activities ?
- Details of laboratory animals procured from authorized breeding and selling centres are maintained.   The Principal Investigator also submits form D on their animal usage.
- Issue and usage register of animals are maintained and periodically verified by the Animal Ethics committee and Dissection monitoring committee
- Feed and water and frequently analyzed and the results are recorded in a register as per the guidelines of CPCSEA. These are monitored by the IAEC.

* Does the animal house have approval for breeding and selling experimental animals as per CPCSEA guidelines ?
>   No, the Institution does not possess a breeding license. Efforts are on for establishing infrastructure for breeding, as per CPCSEA.

4.1.8.Provide the following details on the use of laboratories / museums as learning resources:
*   Number :
Museum :   6 no.s (Anatomy, Microbiology, Pathology, Forensic Medicine, Community Medicine and Pharmacology)
Laboratories: 26 no.s [Anatomy(1), Physiology(4), Biochemisty(1), Pharmacology(2), Pathology(2), Microbiology(1), Forensic Medicine(1), Community Medicine(2), College of Nursing (6), Faculty of Allied Health Science(6)]
* Maintenance and up-gradation - The respective departments maintain and upgrade the museum resources periodically.
* Descriptive catalogues in museums – Available (for individual specimen and also as a catalogue)
*   Usage of the above by the UG/PG students – all the museums are open to students

4.1.9 Dentistry –
>   The university has entered into an MoU with Chettinad Dental College and Research Institute which is available within the campus and facilities available in this teaching hospital is utilized.
☐ Dental chairs in clinic - specialty wise
Prosthodontics   –   34
Conservative dentistry   –   34
Periodontics   –   34

Oral medicine   –   12
Oral Surgery   –   30
Orthodontics   –   18
Public health dentistry   –   16
Pedodontics   –   20
Oral pathology   –   02

☐ Total dental chairs   -   232

☐ Schedule of chair side teaching in clinics - specialty wise
   The clinical postings for the students are scheduled and the patient case quotas are allotted as per the Dental Council of India norms. The students are divided into units and are instructed to follow the Rooster postings

☐ Number of procedures in clinics per month and year

Oral Medicine and Diagnostic Radiology /OMFP	2080
Oral and Maxillofacial Surgery	1158
Pedodontics	1136
Prosthodontics	649
Periodontics	1075
Orthodontics	302
Conservative and Endodontics	1146
Public Health Dentistry	780
Total	8326

☐ Mobile dental care unit

☐ Facilities for dental and maxillofacial procedures
   Minor operation theaters apart from major operation theaters are available within each clinical department. The operation theaters are provided with adequate equipment and kits to manage emergencies.

☐ Dental laboratories
   They are available in the Department of Dental Anatomy and Oral Histology, Department of Prosthodontics, Conservative Dentistry, Pedodontics and Orthodontics for pre clinical training and to perform clinical patient's laboratory procedures.

4.1.10. Pharmacy

Pharmaceutical Science Laboratories	Not Available
Museum for drug formulations	Available
Machine room	
Herbarium / crude drug museum	
Balance room	
Chemical store	
Instrumentation facilities	
Pilot plant	
Computer aided laboratory	

4.1.11 Yoga and Naturopathy : Available

Demonstration hall with teaching facility to cater to the needs of the students	Available
Diet Service Management Department	
Yoga cum multipurpose hall for meditation and prayer	
Solarium compatible for multimedia presentation	
Outdoor Facilities - Walking track with reflexology segment	
Swimming Pool	
Mud Storage Unit	Not Available
Naturopathy blocks	

4.1.12. Homoeopathy: The university does not offer any academic program or patient service in alternative system of medicine. Hence these facilities are not available.

☐ **Museum and demonstration room (Homoeopathic Pharmacy Laboratory, Pathology Laboratory, Community Medicine, Homoeopathic Materia Medica, Organon of Medicine including History of Medicine)**

☐ **Repertory with Computer Laboratory and Demonstration Room**

The University does not offer Homeopathy, hence this facility has not been developed

4.1.13 Nursing

The College of Nursing is located at the 3rd Floor of the College Block. The overall carpet area of the college is more than 54000 Sq. ft.

Nursing Foundation Laboratory	Available
Medical Surgical Laboratory	Available at 2500 Sq. ft.
Community Health Nursing Laboratory	Available at 2500 Sq. ft.
Maternal and Child Health Laboratory	Available at 2500 Sq. ft.
Nutrition Laboratory	Available at 2500 Sq. ft.

☐ **Pre clinical Laboratories**

Anatomy, Physiology and Biochemistry Laboratories available as per MCI guidelines
Available as per MCI Norms

☐ **Specimens, Models and Mannequins**

Specimens of all kind with racks for displaying the specimen are available.
Models such as Articulated skeleton, Dis-articulated skeleton, Human body showing muscular system, Human Torso, Major Systems, Heart, Eye are available.
Available in the respective departments
In addition skills lab for clinical skill training is also available and utilized by the clinical departments for imparting skill training to students

4.1.14 Ayurveda : Not Applicable

* Herbal Gardens
* Museum Herbarium
* Panchakarma Facility
* Eye Exercises Clinic

* Kshara Sutra and Agni Karma Setup
* Ayurveda Pharmacy

4.1.15.Does the institution have the following facilities ? If so, indicate its special features, if any.

☐ **Meditation Hall :**

   Yes. Well ventilated, quite room with mats for yoga training and medication

☐ **Naturopathy blocks: Not available**

4.1.16Provide details of sophisticated equipment procured during the last four years.

   Enclosed (Annexure – 18)

4.2.Clinical Learning Resources

4.2.1. Teaching Hospital

Year of establishment	2005
Hospital institution distance	In the same campus (less than 50m)
Whether owned by the college or affiliated to any other institution?	The Hospital is owned by the university with both the college and the hospital coming under single management.
Are the teaching hospitals and laboratories accredited by NABH, NABL or any other national or international accrediting agency?	The laboratories of the teaching hospital is accredited by NABL.
Number of beds	1200
Number of specialty services	21
Clinical	14
Number of super-specialty services	7
Number of beds in ICU / ICCU / PICU / NICU, etc.	200
Number of operation theatres	Surgery - 4 Eye - 1 ENT - 1 Orthopedics - 2 OBG - 3 Others - 3 Total - 14
Number of Diagnostic Service Departments	5 (Radiology, EEG & Other Neuro services, Echo, TMT, PMR))
Clinical Laboratories	3 (Pathology, Biochemistry & Microbiology)
Service areas viz. laundry, kitchen, CSSD, Backup power supply, AC plant, Manifold Rooms, pharmacy services	Available
Blood Bank services	Available with a valid License.
Ambulance services :	5 Ambulance vehicles are available with Emergency Call No. of 105757
Hospital Pharmacy services	Available within the campus with 24/7 working hours.

Drug poison information service	Yes
Pharmacovigilance	Yes
Mortuary, cold storage facility	Yes
Does the teaching hospital display the services provided free of cost ?	Yes

*   **What is the mechanism for effective redressal of complaints made by patients?**
Patient complaints are obtained personally or through suggestion /complaint box.
Feedback from both OP and IP departments are also obtained using structured feedback forms (Available in English and Vernacular language)
The Medical Superintendent along with Dean is primarily responsible for addressing such complaints.

*   **Give four years statistics of inpatient and outpatient services provided.**
Out patient statistics

Year	New	Review	Total
2011	189634	304511	494145
2012	151581	300997	452578
2013	190642	307632	498274
2014	190072	317807	507879
Grand Total	**721929**	**1230947**	**1952876**
Daily Average	602	1026	1627

Inpatient Statistics

Year	Gen. Medicine		Total Number of Patients Treated	Bed Occupancy Rate (In Percentage)
	Admission	Discharge		
2011	22862	22957	236792	86%
2012	24813	24816	248080	87%
2013	34934	34779	253713	88%
2014	34223	33559	253413	87%
Grand Total	116832	116111	991998	87%

*   **Does the hospital display charges levied for the paid services ?**
Yes

*   **Are the names of the faculty and their field of specialization displayed prominently in the hospital ?**
Yes.

*   **Is pictorial representation of the various areas of the hospital displayed in a manner to be understood by illiterate patients ?**
Yes, proper signages are displayed in English and Tamil along with location maps, for patients to navigate within the hospital.

*   **Is there a prominent display of ante-natal, mother and child health Care facilities?**
Yes

*   **How does the hospital ensure dissemination of factual information regarding rights, responsibilities and the health care costs to patient and the relatives /attendants ?**

The patient's rights and responsibilities are clearly displayed at the patient waiting areas. Apart from that, nursing staff and faculty are made aware of the same, so that the information is clearly passed on to them. Whenever there is a violation of such patient's rights there is adequate number of suggestion /complaint boxes, where they can air their grievances. There is a public relations officer to take care of such complaints.

*   **How does the hospital ensure that proper informed consent is obtained ?**

Consent form is designed for general admission and individual procedures and is available in Tamil and English.

Whenever it is obtained from the patient, the treating physician/staff clearly explains the procedure in a language the patient can understand get their consent.

The physician and technical staff have been trained to obtain consent and adherence to this process is monitored by the Medical Superintendent.

*   **Does the hospital have well-defined policies for prevention of hospital-acquired infections ?**

Yes, a detailed SOP for hospital infection is available. There is a hospital infection control committee with designated Hospital infection control nurse and an officer who monitors such infection rates.

*   **Does the hospital have good clinical practice guidelines and standard operating procedures ?**

Yes. Each department has a Standard Operative Protocol (SOP) for their functions and practices

*   **Does the hospital have effective systems for disposal of bio-hazardous waste** ?

Yes. As per the protocol laid down by the Tamil Nadu Pollution Control Board (TNPCB), disposal of bio-hazardous waste is being done through an agency recognized by the TNPCB.

*   **How does the hospital ensure the safety of the patients, students, doctors and the health care workers especially in emergency department, critical care unit and operation theatres? Are the safety measures displayed in the relevant areas** ?

There are posters, charts, signage displayed for Biomedical waste handling, management of spills, pre and post exposure prophylaxis, hand washing techniques etc.

Apart from the posters, the staff and faculty are trained frequently on such safety aspects by external and internal experts. The compliances are monitored for effective preventive measures. Fire safety drill is conducted periodically for faculty and students.

*   **How are the Casualty services/Accident and Emergency Services organized and effectively managed** ?

There is attending medical officer posted in the casualty 24x7 for immediate triage and resuscitation. In addition the respective speciality consultants are intimated after initial assessment for point of care management. A team of healthcare providers trained in Basic life support and advanced cardiac life support are available in event of any adverse events. The nursing and paramedical staffs are well trained in identifying and notifying emergencies.

Management Protocol in ICU:

The Protocols appear to be a useful tool for improving processes of medical care in the ICU and patient outcomes. Although the overall quality of evidence supporting the efficacy of protocols may be less than ideal, the reported success following their implementation provides justification for expanded use of these tools for the management of critically ill patients. Complex diseases such as acute respiratory failure and severe sepsis often require multiple therapies and interventions to optimize clinical outcomes. Protocols appear to consistently improve the delivery of recommended therapies and as a result may improve patient outcomes. The well-designed protocols generally expose patients to no additional risks and are associated with relatively little acquisition cost, their implementation should become more standard in the management of complex disease processed like acute respiratory failure and severe sepsis.

Protocol of trauma care in the emergency service:

Trauma is the principal cause of young people's death. Care should be appropriate to the severity of the injuries and involves a multidisciplinary team around the clock. We examine a protocol of care based on ATLS (Advanced Trauma Life Support) recommendations, including advances in imaging technology, which have greatly increased quality care in our institution. The protocol is based on patient stability and on injury mechanisms. The challenge is to avoid wasting time in the definitive treatment of lesions. Multi-detector computed tomography (MDCT) has brought complete and rapid imaging in stable traumas but it shouldn't delay immediate surgical operations. When patients are unstable despite reanimation, three important x-rays are taken right on the stretcher (pelvis, neck, and chest) before going into surgery. The head of the trauma team makes a decision on the pertinence of such procedure.

* **Whether the hospital provides patient friendly help-desks at various places.**
  Yes
* **Does the hospital have medical insurance help desk** ?
  Yes
* **What are the other measures taken to make the hospital patient friendly**?
  Easy accessibility, transport mobility for internal mobility, Wheel chair and gurney at all hospital entry points, multilingual help desk manpower, modern equipment, safe and healthy environment, competent faculty and staff, internal quality mechanisms for better outcomes are some of the measures in aid of better patient related activities.
* **How does the hospital achieve continuous quality improvement in patientcare and safety ?**
  Continuous training, quality control checks, compliance monitoring, patient feedback mechanisms, and inter departmental meetings helps the institution's hospital to achieve continuous quality improvement in patient care and safety.
  Monthly morbidity and mortality audits, Hospital infection control committee reports, safety and risk assessment further ensures quality in health care provided by the hospital.
* **What are the measures available for collecting feedback information frompatients and for remedial actions based on such information** ?
  Complaint and suggestion box are available in various locations in the hospital

Structured feedback forms are made available in all the outpatient and inpatient departments in English and vernacular medium.

These feedback are analyzed by the concerned Heads of the Department with the Medical Superintendent of the hospital.

Suitable corrective and preventive measures are adopted based on the complaints.

* **How does the institution ensure uniformity in treatment administered by the therapists?**

Standard operating protocols are designed by every department. Adherence to these protocols are ensured by the Heads of the Department and the Medical Superintendent.

* **Does the institution conduct any orientation training program for AYUSH-based para-medical staff ?**

Not applicable. The hospital offers treatment only in allopathic stream.

4.2.2   What specific features have been included for clinical learning in the out-patient, bedside, community and other clinical teaching sites ?

- Students are divided into small groups of 10-15 per bed per instructor to ensure efficient learning process in the Bedside clinics
- Student grouping for clinical posting are made well ahead to give appropriate time and posting in all the clinics for specified durations as per the MCI prescribed norms
- Students are posted in Block posting for training in Rural and urban Health centers for Family visits -Disease surveillance- MCH training
- CRRI's are posted to Tondiarpet and other urban centers for training into participate in surveillance in active and passive surveillance program for IDSP diseases.

4.3 Library as a Learning Resource

4.3.1   Does the library have an Advisory Committee ? Specify the composition of the committee. What significant initiatives have been implemented by the committee to render the library student/user friendly ?

Chettinad Hospital and Research Institute have a Library advisory committee involving 12 Library Committee Members

1. Dr. T. Kathir Subramaniyam, Professor, Pediatrics   - Convener
2. Dr. A. Ruckmani, Professor & HOD, Pharmacology   - Member
3. Dr. S.R. Sakunthala, Professor, General Medicine   - Member
4. Dr. S. Subramanian, Associate Professor, TB&Respiratory Medicine- Member
5. Dr. M. Thangavel, Associate Professor, AHS   - Member
6. Dr. P. Thirunavukkarasu, Associate Professor, ENT   - Member
7. Dr. S. Jayanthi, Assoc. Professor, Microbiology   - Member
8. Dr. R. Saravanan, Asst. Professor, Marine Pharmacology   - Member
9. Mrs. D. Revathy, Asst. Professor, Obstetrics & Gynecological Nursing, CCN

                                                                                   - Member
10. Mr. M. Yuvaraj, Librarian   - Member
11. Mr. Edwin Arun, AGM (Purchase)   - Member
12. Dr. P. Anisha Mohan , PG Student Rep. M.D. Community Mediciine

                                                                                   - Member
13. Mr. Pushkar Palani – UG student Rep. MBBS III Year   - Member

14. Ms. S. Nandhini - AHS student Rep. – B.Sc. Medical Biotechnology II Year
               - Member

15. Mr. U. Sathish - Nursing student Rep. (B.Sc. Nursing III Year)   - Member

The Library committee members meets periodically once in two months and discuss issues regarding measures and way to make the central Library Access user friendly. To improve the functioning of the Library effectively, reviews and feedbacks from the Library users are document in the feedback register. The remarks given by the users are analysed by the Library committee members.

4.3.2 Provide details of the following:

☐ **Total area of the library (in Sq. Mts.)** ☐ **Total seating capacity**

- The library is located in the First and Second Floor of the main building of the College with the Administration Offices in the Ground Floor. The Total area of the Library is 32000 Sq. ft. with 24,000 Sq. ft. area used by the Medical and Allied Science and 8000 Sq. ft. area used by Nursing section.
- Seating capacity of the library is 400 at a time.

☐ **Working hours (on working days, on holidays, before examination, during examination, during vacation)**

Effective functioning of our Library on working days and during Examination from 8.00 a.m. to 10.00p.m, on holidays from 9.00 a.m. to 04.00 p.m.

☐ **Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)**

- The North wing of the First Floor of the College has a Help Desk, Book Issue / Return Counter, Reference Books Section, Reading Hall, Journal Reading Room, Photocopying Room, Computer Room with Virtual Library, Video and Cassette Room and Binding Room
- The South Wing of the First Floor has Journals Section, Reading Hall, Staff Reading Room, Librarian Room and Library Staff Room.
- The North wing of the Second Floor has Reading Room, Binding Room, Audio Video Room, Reprographic Room and Periodical Reading Room
- The South wing of the Second Floor has Reference Section, Virtual Library, Staff Reading Room and Reading Hall.

☐ **Clear and prominent display of floor plan; adequate sign boards; fire alarm; access to differently-abled users and mode of access to collection**

- Overall plan of the entire block is displayed at the ground floor of the College Block. Direction signage to various departments and places are kept on each floor at the start and end of the stairs.
- Location and Directional Signage for Lifts, Stairs, Exit points, Rest Rooms etc., have been placed at conspicuous locations all over the College campus.

☐ **List of library staff with their qualifications**

Librarian H.O.D.	Mr.A.Kumaran M.A. (His), M.L.I.Sc., M.Phil
Librarian	Mr. V.Uvaraj B.com, (M.com), M.L.I.Sc.
	Ms. M.DeviB.Lit. (Tamil), M.L.I.Sc. M.Phil.
	Mr.M.Palani Bsc. (phy), B.Ed., (M.A),

Asst.librarian	M.L.I.Sc., M.Phil
	Ms.T.Jayanthi M.A. (Tamil), M.L.I.Sc.
	Ms. A.Sathiya M.A. (Eco), M.L.I.Sc.,
Documentalist	Mr. S.Rajagopal B.B.A. (MSc.IT), M.L.I.Sc.,
Library assistant	Mr.D.Raghu C.L.I.Sc.

4.3.3   Give details of the library holdings :

Print (books, back volumes, theses, journals)	18674 books are available National & International journals: 271 Back Volumes: 1258 Thesis : 218
Average number of books added during the last three years	2013-2014 : 137 2012-2013 : 270 2011-2012 : 1909
Non Print (Microfiche, AV)	Available
Electronic (e-books, e-journals)	CD & DVD: 1050 833 in Medical and Allied Science section and 217 in Nursing section E Books: 135 e-journals: 3171 (Gale Infortrac.galegroup.com)
Special collections (e.g. text books, reference books, standards, patents)	13869 Textbooks are available with 10869 in Medical and Allied Science section and 3000 in Nursing section Reference Books: 4805 (4305 Medical and Allied health Sciences & 500 for Nursing)
Book bank	Not available
Question bank	Available

4.3.4. To what extent is ICT deployed in the library? Give details with regard to

Library automation	Autolib software is being used to manage library operation
Total number of computers for general access	50
Total numbers of printers for general access	4
Internet band width speed	100 mbps
Institutional Repository	Learning management System (LMS) is being used to collaborate and share information
Content management system for e-learning	LMS is used for this purpose.
Participation in resource sharing networks/consortia (like INFLIBNET)	Available

4.3.5.   Give details of specialized services provided by the library with regard to

Manuscripts	Not available
Reference	available
Reprography / scanning	available
Inter-library Loan Service	available

Information Deployment and Notification	available
OPACS	available
Internet Access	450 Computer Terminals with Internet facility with 100 mbps Broadband facility is available. Besides, Wi fi is enabled to access internet and LMS in Library
Downloads	available
Printouts	available
Reading list/ Bibliography compilation □ In-house/remote access to e-resources □ User Orientation	available
Assistance in searching Databases	available
INFLIBNET/HELINET	available

4.3.6 Provide details of the annual library budget and the amount spent for purchasing new books and journals.

    0.5% of the annual budget is allotted for library towards purchase of books and journals.

4.3.7 What are the strategies used by the library to collect feedback from its users? How is the feedback analyzed and used for the improvement of the library services

    To improve the functioning of the Library effectively, reviews and feedbacks from the Library users are document in the feedback register. The remarks given by the users are analysed by the Library committee members.

4.3.8 List the efforts made towards the infrastructural development of the library in the last four years.

    To advance and provide excellence in health care and promote research during the past 4 years infrastructure development of our Library have created the ambience for effective learning by centralized A/C supply in the Library, CCU (Camera Control Unit)fixed in I and II floor of the Library. Advisory committee have suggested for increase in Library functioning timing from 8.30 a.m. to 10.00p.m. as well as increase in Library staff members, books and Journal resources for the users .

4.4 IT Infrastructure

4.4.1 Does the institution have a comprehensive IT policy with regard to:

□ IT Service Management:

    Yes. IT Information Service management is handled by the IT department. Dedicated Service agreement are made with Service providers to provide maintenance and support service for all the IT assets like Desktops, Tablets, Printers and other IT assets. They are governed through Service Level Agreements (SLA) and periodic reporting of Service level and performance monitoring is done. ITIL based help desk and Service management agreements are in place to manage service availability and performance.

□ Information Security:

    Information Security is given top most priority to protect organizational information and records. User based access level and role based rights are analyzed and given to allow or deny access to information. Regular backups and maintenance are done for IT

systems to avoid any loss of information. IT policies are in place to make user aware of information security and various access level controls are practiced to strengthen data security.

☐ **Network Security:**

The entire campus is wifi enabled and LAN connectivity is used within campuses. Fire optic connectivity along with redundancy is maintained along with adequate Level 3 switches, routers and firewall. Mac based authentication is given for each and every connection to the network and the network traffic is controlled and monitored by Internet proxy servers and firewall policies.

☐ **Risk Management:**

Risk based approach is followed are major IT initiatives and each IT services are assessed with potential risks and impact. Mitigation plan is prepared after thorough analysis of risks and suitable actions are taken. Network resilience is practiced and all business critical applications are assessed and equipped with suitable disaster recovery plans to meet unforeseen events.

☐ **Software Asset Management:**

Software inventory is managed as part of information asset management and all the licenses procured are maintained and updated as and when needed.

☐ **Open Source Resources:**

Yes we use open source resources and programming tools and the applications developed are documented through application documents specific to each application.

☐ **Green Computing:**

LCD monitors are used to avoid and reduce pollution and all the PCS and servers are procured with suitable green awareness and reduced power consumption. E waste disposal is undertaken with caution and authorized e-waste disposer are identified and engaged to handle e-waste materials.

4.4.2 How does the institution maintain and update the following services?

☐ **Hospital Management Information System (HMIS)**

SAGE ACCPAC ERP and its HIS modules are implemented and maintained through annual support agreement. Dedicated internal IT team members are available to support and resolve issues and to maintain patch management and trouble shoot.

☐ **Electronic Medical Records System (EMR)**

Sage Accpac EHR module is implemented and accessible through desktop as well as Tablets. Wifi enabled network access is been given for connectivity. Doctors are provided with Tablets to access EHR application and they can diagnose and record patient details on the fly. Patient's history will be displayed in the EHR application and multiple visits of the patients can be called for correct diagnosis and history.

☐ **Digital diagnostic and imaging systems including PACS:**

PACS is implemented and major medical equipment are connected to the PACS server. Records and images can be shared online and accessible from all the locations.

4.4.3 Give details of the institution's computing facilities i.e., hardware and software.

☐ **Number of systems with individual configurations:**

There were 350 PCs are available within the premises with the standard base line configuration as Intel 3.00Ghz processor, 2 GB RAM, 500GB HDD. Computers with lower configurations are periodically maintained and upgraded to latest minimum

configuration standard so that they are matching the current day requirements in computation.

☐ **Computer-student ratio**

1:1 – All the students are provided with Laptop and wifi connectivity. Apart from that there are computers available inside the library to be used by students for further studies and reference.

☐ **Dedicated computing facilities:**

Computing facilities are available at all locations like departments, libraries, consulting rooms, lecture hall, conference rooms, auditoriums etc and facilities to present and share like projectors, Podiums, large display screen and digital display boards/TVs are available for use.

☐ **LAN facility:**

The entire campus is connected through LAN and there were as many as 1500 LAN ports are available.

☐ **Wi-Fi facility:**

The whole campus is provided with secured Wi-Fi connectivity there are as many as 1000 and odd users are using internet and other web based applications using wifi facility. Even students hostel areas are Wi-Fi enabled and constant efforts are taken to maintain support and resolve performance related issues.

☐ **Proprietary software**

Windows, Autolib, SAGAAPAC, Tally, Chettinad Learning Management system, ERP, Biometric attendance system, SMS communication system

☐ **Number of nodes/ computers with internet facility ☐ any other (specify)**

All the students are given Laptop computers in addition to the general purpose computers available in library and class rooms.

4.4.4 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

Periodic Review in the Management Meetings initiates projects based on needs.

4.4.5 Give details on access to 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.

This is being practiced through learning management system (LMS) and internet is used for uncovered areas from LMS.

4.4.6 What are the new technologies deployed by the institution in enhancing student learning and evaluation during the last four years and how do they meet new / future challenges ?

LMS handles all these requirements comprehensively complemented by Internet and Library.

4.4.7 What are the IT facilities available to individual teachers for effective teaching and quality research?

Computer/Laptops and Internet access thro WIFI enables wide range of research and information reach.

4.4.8   Give details of ICT-enabled classrooms/learning spaces available within the Learning?

     All the lecture halls are equipped with Computers with AV facility and Internet thro wifi.

4.4.9 How are the faculty assisted in preparing computer-aided teaching-learning materials? What are the facilities available in the institution for such initiatives?

     Faculties are provided with adequate facilities and IT resources that can assist those preparing Contents and materials and LMS is used for publishing and sharing.

4.4.10 Does the institution have annual maintenance contract for the computers and its accessories?

     This is being managed using combination of service agreements as well as in-house team with accessories supplied by Stores.

4.4.11 Does the institution avail of the National Knowledge Network (NKN) Connectivity? If so, what are the services availed of?

     No.

4.4.12 Does the institution avail of web resources such as Wikipedia, dictionary and other education enhancing resources? What are its policies in this regard ?

     Yes. Valid and permitted contents are allowed thro web filtering policies configured in firewall. Dedicated team is available for monitoring and troubleshooting.

4.4.13 Provide details on the provision made in the annual budget for the update, deployment and maintenance of computers in the institution.

     Budget is prepared every year and suitable provision is made under this category depends on the size and importance of the inventory.

4.4.14 What plans have been envisioned for the transfer of teaching and learning from closed institution information network to open environment?

     The entire LMS can be accessed from internet but individual user name is required to access the resources.

4.5   Maintenance of Campus Facilities

4.5.1   Does the institution have an estate office / designated officer for overseeing the maintenance of buildings, class-rooms and laboratories ? If yes, mention a few campus specific initiatives undertaken to improve the physical ambience.

- The overall infrastructure of the Institution is monitored by a team of trained Engineers who take care of maintenance Activity.
- Infrastructural developments like building of new structures, buildings, facilities to the staff and students of the college and to the patients and their visitors in the hospital block are being taken care of by the Infrastructure Team.
- Engineering Department - Civil, Electrical and Air Conditioning disciplines work round the clock to carry out construction, providing back-up power during power failure and to manage air conditioning in critical areas.
- A separate horticulture team monitors the green zone of the campus by maintaining of the lawns and plants and cleanliness of the exterior and interior garden areas.

- Facilities Department encompasses House-keeping and Ward Attendants to maintain the interior of the buildings and to provide care to the patients.
- Transport department of the Institution manages commutation of staff and students from various places to the Institution and Hospital.
- Mobility of patients within the campus is ensured by Maine and mini vans from entry gate to the various blocks.
- Lighting of campus with 30' street lights and local lighting with 100' High Masts.
- Separate Parking lots for Staff, Visitors and Buses.
- Controlled access to and from the Institution
- 24 Nos. 500 lpd Solar Water Heaters have been installed in the Hostels for the use of Girls and Boys. Heat pumps as a source of Hot water – 2 Nos. have been installed, one each in both the hostels.

4.5.2   How are the infrastructure facilities, services and equipment maintained ? Give details.
- Maintenance of Equipment and Services find prime place in the Daily Schedule of the Maintenance Team.
- Separate Revenue budget is projected to the Management for maintenance of equipment by way of Maintenance Contract and day-to-day maintenance activities carried out by the maintenance personnel.
- Preventive and Predictive Maintenance schedules are pre-planned and is charted out for every electrical and air conditioning equipment. Accordingly maintenance of those equipment will be carried out in a systematic manner, wherein, change of spares, painting, cleaning, chemical washing, choke removing etc., will be done on the equipment.
- Similarly critical areas have been identified and are kept on vigil with periodic monitoring and maintenance.
- In this way breakdown of equipment is avoided, besides increasing its longevity and service without interruption can be ensured.

4.5.3   Has the institution insured its equipment and buildings ?
Critical equipment of the hospital, Research laboratory and lifts have been insured and most of the instruments have been vested with Annual / Comprehensive Maintenance Contracts.

4.5.4. Any other information regarding Infrastructure and Learning Resources which the institution would like to include.
- Sigappi Aachi auditorium : 1200 capacity auditorium with Audiovisual support is a pride of our Institute.
- This auditorium is also attached with a big Kitchen and a banquet hall for a capacity of over 1000 members at any single time.
- It is totally air conditioned and adequate green room facilities are available
- Lift facility is available for the stage & auditorium directly from the drive way
- Conferences, Convocation, intra and inter collegiet cultural competitions have been organized in this auditorium

- Screening of Movies in this auditorium for Hostel students on a monthly basis has been a regular feature
- Awards conferred to Sigapi Achi convention centre
    - <u>Anchor Award 2011:For Best Interior</u> - Conferred by Indian Institute of Interior Designs : The geometric pattern false ceiling in the banquet area won the IIID award for the design. The Project also delivered on the desired parameters to meet acoustic requirements as well as the pattern on the auditorium walls and ceilings.
    - <u>AIT Award 2012 : Global Award for the Very Best in Interior and Architecture</u> Conferred by AIT (An independent Organisation) at Frankfurt: **New Delhi:** New Delhi-based architectural and design firm morphogenesis wins 1st prize at AIT Award 2012, Germany for Chettinad Health City Auditorium, Chennai in the Public Buildings (Interior) category. The project was selected amongst 1,600 entries from 42 countries. The AIT Award has emerged as one of the largest competitions for architecture and interior design worldwide. The Architectural Magazine AIT, by Stuttgart-based Verlagsanstalt Alexander Koch ranks among Europe's most renowned architectural magazines and, at the age of 122 years, is also one of the oldest. The award ceremony took place in the Congress Centre at Frankfurter Messe. The project also won the 8th Saint-Gobain Gypsum International Trophy, London. The Saint-Gobain Gypsum International Trophy is a unique gypsum industry event and, is one of the largest international competitions.
    - <u>Gyproc Award 2012:International Trophy for Best Interior</u> - Conferred by Saint Gobain

Criteria - V

Student Support & Progression

CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the institution have a system for student support and mentoring? If yes, what are its structural and functional features?

Yes. The institution has a system for student support and mentoring.

- The students' support system comprises of mentor, programme coordinators, HODs, Vice principals, principal, Dean and Members of various committees.
  Structural features:

PRINCIPAL/DEAN/ CHAIRPERSONS

VICE PRINCIPAL/MEMBERS OF VARIOUS COMMITTEES/HOD

PROGRAMME COORDINATORS/FACULTY
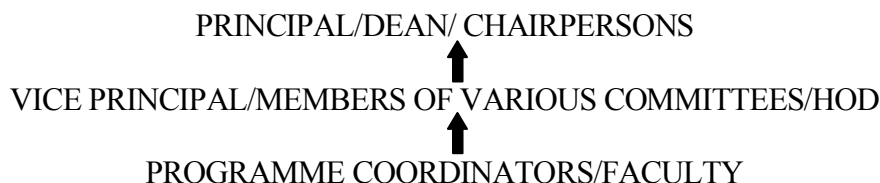
- The mentorship programme is conducted periodically and whenever need arises each faculty is allotted with 4-10 students and they are taken care in improving academic performance as well as providing support in mental, social and spiritual development
- Parent-teacher meetings are conducted twice in a year where the programme coordinators, mentors will discuss with the parents about the academic performance and other problems of their wards and seek help in alleviating those problems
  Functional features;
- Disseminating information on students' rights and privileges, anti ragging and sexual harassment policies and other students support committees
  - Career guidance for students.
  - Feedbacks in the form of course and teachers' feedback for quality enhancements
  - Follow up on regular inputs from Guidance and Counseling Cell, Placement and Career Guidance Cell, Grievance Redressal Cell, and Committees for all extra-curricular activities. These committees include staff and student representatives and carry out the activities under the supervision of the Principal/Dean
  - A separate register is kept for each student to maintain the record of personal details, financial status and academic achievements. the grievance redressal cell, equal opportunities cell.
  - Following organal flow chart for student counseling cell which will help the students in solving their problems of learning immediately

5.1.2 Apart from classroom interaction, what are the provisions available for Academic Mentoring?

- tutorial classes are conducted for poor learners and unsuccessful candidates in examinations
- special coaching classes for those students are arranged out of working hours
- apart from regular assignments/seminars/presentations , the students are given extra coaching in these areas to improve their academic weightage.
- 'Personality development programme' is conducted to improve their academic performance

- Separate classes are taken to emphasize on ' must know,' aspects in each subject
- Senior students are conducting coaching sessions to junior students in the hostel premises and in the class room setting out of college hours.
- Each faculty is assigned to give coaching to the poor learners and unsuccessful candidates

5.1.3 Does the institution have any personal enhancement and developmentschemes ?

Yes. Such as career counseling, soft skills development, career-path-identification, and orientation to well-being for its students? Give details of such schemes.

Yes, the College provides personal enhancement and development schemes for students.

A.Placement and Career Guidance Cell

Placement and Career Guidance Cell with a team of faculty members has been functioning since 2010. Final UG students are divided into groups and Soft Skill programme is offered by training them with skills, interview techniques and resume writing to enable them to take part in on-campus and off-campus interviews and to clear competitive examinations.

A teaching programme on Spoken English has been given Since 2010 for the fresher's and a one day programme is organized on how to improve their communication skills.

For technical skills development, the students are posted in the English lab.

Educational visits are arranged in tie up with other institutions to develop knowledge on functioning skills in different settings.

Hands on skills training was given for one year to post basic diploma in nursing courses to update their knowledge and to become practically sound.

B.Skill Development

The institution offers communicative skills through the regular curriculum as Communication and Educational Technology in II year BSc Nursing course. Functional English are offered by the Department of English to cater to the need for language development skills.

The students are motivated to visit British Council Library to equip themselves in spoken English, listening skills which will further help them in becoming internationally trained personnel.

Orientation programme as a bridge course for the first year students and orientation course for other students, organized in the beginning of every academic year help to develop the overall personality of the students.

C.Students' Service and welfare programme

This aims at developing the entrepreneurial skills of the students through various programmes such as orientation on 'Career Prospects for the students' and recruitment strategies.

D.Women empowerment programme

"Empowerment of women" is the motto of the program and it is realized through special lectures on Women's rights, Role of Women in Society, conduct of competitions and organizing rally on issues related to women. Women's day is also celebrated every year by offering free medical checkups and treatment

E.Academic Counseling

The academic performance of each student is monitored by the course teacher and the register is maintained by the mentor who imparts personal and academic guidance. Academic guidance is given for both the poor learners and meritorious students by the course coordinators and subject teachers

Their performance in curricular, co-curricular and extra-curricular activities is brought to the notice of the parents through SMS and in the PTA Meetings and through the Progress Report sent to them after each IA exams and revision exams both theory and practical. The students are motivated and guided for pursuing higher education according to their choice and capabilities.

F.Guidance and Counseling Cell

The students are encouraged to approach the clinical psychologist at the scheduled period for counseling.

G.Equal Opportunity Cell

The cell functions with an intension of promoting SC/ST students in the minority community. The cell conducts guest lectures on how to overcome exam fear?

Also a programme on Time management is conducted for the most backward group and minority group of students.

❖ Conducting Coaching classes for NET & GATE examination: Students under the Faculty of Allied Health Sciences are given guidance to prepare for the NET and GATE examinations. Though students have been writing, there have been no successful candidate so fare except for one CSIR fellow.

❖ To appraise the students(Especially the final year students) about developing and designing their CV, Organizing mock interviews, conducting guest lectures on interview techniques, leadership qualities, communication skills etc.,

❖ To coordinate with other institutions/industries for conducting campus interviews for successful placement of the students.

5.1.4 Does the institution have facilities for psycho social counseling for students?

Yes. The students with psychological stress with social problems are counseled with the clinical psychologist and medical practitioner. The students are referred to the students' counseling cell which is available in the institution by the mentors in case of language problems, status problems, adjustment problems, etc.

5.1.5 Does the institution provide assistance to students for obtaining educational loans from banks and other financial institutions?

Yes. The institution provides assistance to students in the form of issuing bonafide certificate, copies of recognition order obtained from statutory bodies.

Number of loan facilities	No. of students benefitted 71	Details of banks Indian bank, IOB, State Bank of India, Canara bank, Federal Bank, State Bank of Travancore, Syndicate Bank, Union Bank, Catholic Cyrian Bank, Bank of India,

5.1.6 Does the institution publish its updated prospectus and handbook annually?If yes, what are the main issues / activities / information included / provided to students through these documents? Is there a provision for online access?

Yes. Periodical annual publication of prospectus is done. It is also available in Online – www.chettinadhealthcity.com .

Click here to medical/nursing college icon, and click on to 'courses offered' for which application and the prospectus can be downloaded

The following information are included:

- Courses offered – scope and eligibility for admission
- How to apply for the courses
- Pictorial representation of the infrastructure- facilities available in the campus
- List of Departments and faculty, etc.
- Prize examination and awards details,
- Anti ragging notice
- Location map – to access the institution
  Yes. Students' handbook is also published annually by the constituent colleges of the University.

It includes:

- Accessibility and infrastructure – address, specialty departments
- Facilities available in the institution – lecture halls, labs, examination hall, auditorium, internet access, hostel, health care facilities, recreational facilities, food court, travel desk, bank ATM, students' stores, fitness gym, green trends.
- Rules and regulations:
  Rules and regulations of the University
  Anti-Ragging squad, students' declaration, undertaking by the parents
  Hostel rules and regulations
  Library rules
- List of University higher officials
- List of faculty members
- List of books suggested and desirable to have ,for each subject
- Awards and prizes
- Academic calendar- calendar of events
- Notes – to be maintained by each student

5.1.7 Specify the type and number of institution scholarships / freeships given to the students during the last four years. Was financial aid given to them on time? Give details. (in a tabular form)

Endowments	Number	1. Adhi Dhravidar Scholarship
Freeships	**nil**	2. Airforce Association
Scholarship (Govt)	**21**	3. Shree Vijayalakshmi Charitable Trust
Scholarship (Institution)	**27**	
Number of loan facilities	**71**	4. Namachivayam Naidu Trust
Any other student financial Support schemes, specify-employee scholarships SC / ST	**no. of students benefitted** 1. 19 2. 1 3. 2 4.– 1	5. Ulavar Kappeedu Thittam 6. Neyveli Lignite Corporation scholarship 7. Ministry of Human Resource Devt 8.Tamil Nadu Educational Trust

CBSE	5.– 4	9.Tamil Nadu Teacher Association
	6.– 1	10. BC SCHOLARSHIP
	7. -1	11. Carmel Ministry-
	8. -2	12. Leadership development
	9. -3	programme-
	10.1	
	11.-1	
	12.-1	

5.1.8 What percentage of students receive financial assistance from state government, central government and other national agencies

	No. of students	%
Financial support from institution	27	2 %
Financial support from government	21	1.6 %
Financial support from other sources	27	2%
Number of students who received International/ National recognitions	-	-

5.1.9 Does the institution have an International Student Cell to attract foreign Students and cater to their needs?

Yes. The institution has an international student's cell. It comprises of the following member

5.1.10 what types of support services are available for Overseas students

A separate hostel for overseas students. Also helping the students in seeking accommodation. An international student's cell is functioning in the university. The Public Relations Officer is looking after immigration requirements, opening of bank account, money transfer, and visa requirements. The faculty members and the classmates help them in learning tamil for collecting history from the patients in the clinical and field settings in case of language problems.

- They are oriented with dress code, cultural diversity,
- ❖ Physically challenged / differently-abled students.
  - The physically challenged students are provided with barrier free reach to almost all the areas in the campus in the form of ramps, elevators, modified toilet facilities for the free flow of the disabled students
  - Special guidance for physically challenged students is provided by conducting special classes and special training in the clinical setting out of working hours.
  - Medicare, Periodical medical checkup and Insurance coverage are available for them
  - They are encouraged in improving their self confidence level by conducting special guest lecturers during 'world disabled day'

  No. of students benefitted -2
- ❖ SC/ST, OBC and economically weaker sections - all the students are equally treated

in the University. The admission policies for SC/ST students i.e., 5% relaxation in the aggregate marks is given by Indian Nursing Council for all the nursing programmes which is being followed .The administrative staff makes the SC/ST students aware of the various scholarships available for them and also facilitates in applying for them.

- ❖ Students participating in various competitions/conferences in India and abroad
  Active participation of students in conferences, academic competitions like quiz, debate etc, Cultural and sports activities are encouraged. Students have participated in these and also won several awards.

	2010	2011	2012	2013	2014	2015	Total
Conference Presentation by students	3	13	42	43	103	50	254

Health centre, health insurance etc – Subsidized medical care and
  o Oriental group insurance for the students

- ❖ Skill development (spoken English, computer literacy, etc.) – skills lab for improvising spoken English, virtual library facilities, WI-FI in the campus, Yoga and sports classes, Extracurricular development by providing Musical instruments room to practice and participate in the competition.
- ❖ Performance enhancement for slow learners – Identified them based on their performance by mentors. Apart from their regular requirements tutorial classes for slow learners, and additional seminars, presentations are conducted.
- ❖ **Exposure of students to other institutions of higher learning/** corporate/business houses, etc. – as a part of the curriculum providing educational visit to the students to various institutions of higher learning. Permitting them to do projects in coordination with other institutions.
- ❖ **Publications** of student magazines, newsletters are displayed on the notice board. Students' projects are published in Chettinad Health City magazine.

5.1.11 Does the institution provide guidance and/or conduct coaching classes for students appearing for competitive examinations (such as USMLE, PLAB, GPAT, NCLEX, CGFNS, IELTS)? If yes, what is the outcome? - Yes

- Students are counseled by appropriate faculty for NET, GATE, USMLE and Others.
- An expert comes from US consulate and gives motivational lectures periodically.
- Institution is register under ECFMG.
- Students are guided on WEB PORT through online.

5.1.12 Mention the policies of the institution for enhancing student participation in sports and extracurricular activities through strategies / schemes such as

- ❖ Additional academic support and academic flexibility in examinations – providing attendance to the students who participate in sports. Conducting special classes to those who missed the classes due to sports.
- ❖ Special dietary requirements, sports uniform and materials- providing sports uniform and materials to the students; distributing special diet in the hostel for those who participate in sports. to the students.
- ❖ any other (specify) The institution provides suitable opportunities by infrastructure support like fitness gym, transportation, play grounds, staff to accompany etc, to pursue such activities by the students.

❖ Physical instructor and sports Medicine unit are available in the institution special guest lecture is arranged on cope of sports medicine to encourage the students to participate in sports activities.

❖ The students of this institute have participated in number of such inter collegiate cultural competition and sports competitions and also organized intra (Chet fest) and inter collegiate cultural even (Fusion Chettinad 2008, 2009).

❖ Expenses for the cultural activities are sponsored by the Institution, Musical Instruments are provided for practice, Sports t-shirts are provided, and Latest Movies in Tamil, English and Hindi are played in 15 days once in the Auditorium.

5.1.13 Does the institution have an institutionalized mechanism for student placement? What are the services provided to help students identify job opportunities, prepare themselves for interviews, and develop entrepreneurship skills?

Yes. With the help of active placement cell, campus interview is conducted by in house placement and external agencies. Displaying the job opportunities provided by other institutions/companies/ hospitals on the notice boards, Conducting CNE programmes on how to appear for the interview, how to prepare a CV, etc.

Details of Placement support includes:
- **Resume Writing**
  - Emphasis on education, projects executed
  - Highlight on technical skills
  - Cogent uniform format
- **Soft Skills Training**
  - Need for language improvement
    - Communication skills
  - Interview tips: Interpersonal skills
- **Guidance for National Level Tests**
  - CSIR-UGC NET exam for JRF and SRF
  - NET/ SLET exam for Lectureships
  - Review of recent question papers
- **Aptitude Tests-Training**
- **Interaction with Successful Alumni**
    - Feedback on the MSc programmes
- **Interfacing with potential industrial/R&D recruiters**

5.1.14 how does the institution provide an enriched academic ambience for advanced learners – admitting them in the digital library for advanced learning materials, research journals , provisions of conducting home projects.

The talented and advanced learners are encouraged with the following positive reinforcement
- Awards and medals for the best out going students
- The honorable Dr. Rosaiya Endowment award is given every year for the rank student in prize examination conducted in community health nursing subject

- Their photos with the details of their awards are displayed in the desktop throughout the campus
- Financial assistance is provided for the poster and charts preparation to participate in competitions

5.1.15 what percentages of students drop-out annually? Has any study been conducted to ascertain the reasons and take remedial measures? -

Yes. The institutions have effective mentorship program under which the faculty take responsibility to counsel the student and to identify his/her problem areas and rectify the same thereby reducing the dropout rate (0.42% dropout rate for last academic year).

An exit interview is conducted to find out the reasons.

Studies are conducted and few reasons identified include inability to pay the fees in time for which they are permitted to pay the fees in installments. Marriage due to family situations and those married candidates are also permitted to continue their study. This is allowed by the Indian Nursing Council itself.

Regular parent teacher meeting further facilitates this process by sensitizing the parents about their son/daughter's problems

Student counseling centre with a clinical psychologist is also available for further assistance

5.1.16 Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus during the last four years).

❖ Details of campus placement

campus Placement	44 (in)
	120(on)
Off campus placement	153

No. of students benefitted -164
The following companies visited the campus:
1. Medanta-The Medicity Hospital, Gurgaon
Nursing
1. Details of on Campus placement
   a. No. of organization visited – One (Medanta-The Medicity Hospital, Gurgaon)

   b. No of student participated – 65
      B.Sc Nursing – 54
      Post Basic B.Sc Nursing – 8
      M.Sc Nursing – 3

   c. No of students placed – 47
      B.Sc Nursing – 28
      Post Basic B.Sc Nursing – 8
      M.Sc Nursing - 3

2. Details of off Campus placement

No of students placed - 32
B.Sc Nursing –29
Post Basic B.Sc Nursing – 3

5.1.17 Does the institution have a registered Alumni Association? If yes, what are its activities and contributions to the development of the institution?

Yes. The activities include conducting CME/CNE on the special themes relating to their educational upliftment. Convocation is conducted and lunch is provided to all the alumni and their family members. Corpus fund is created for the alumni activities.

5.1.18 List a few prominent alumni of the institution.

Only two batches of students have graduated. Among them 2 **'inspire fellow'in Allied Health Science department.**

PLACEMENT DETAILS - CHETTINAD HOSPITAL AND RESEARCH INSTITUTE

Sl.No	M.Sc – Batch	Name of the Student	Working in
1	2009-Pharmacology	Dr.Arul Raja	Kirupanandhavariyar Medical College, Karaikal
2	2009-Pharmacology	Karthikeyan G	Annapoorna Medical College, Salem
3	2009-Pharmacology	Dr.Venkataramanan	Annapoorna Medical College, Salem
4	2009-Anatomy	Balaji K	RVS Dental College & Hospital, Coimbatre
5	2009-Anatomy	Dr.Narayanan G	Sivaraj Medical College, Salem
6	2009-anatomy	ParvathaPriya M	Oxford Medical college & Hospital res.centre, Bangalore
7	2009-Anatomy	Dr.ShivaPriya NR	RVS Dental College &Hosp, Coimbatore
8	2009-Anatomy	Dr.Vidhya R	Ms.Ramaiah International School of Medicine, Bangalore
9	2009-Anatomy	Yuvaraj M	Ragas Dental College & Hospital, Chennai
10	2009-Anatomy	AswinPrakash S	Fathima Institute of Medical Sciences, Kadappah
11	2009-Anatomy	Dr.KhizerHussainAfroze	FathimaInstiute of Medical Sciences, Kadappah
12	2009-Anatomy	Dr.Ramesh P	IQ City Medical college & Hospital, Durgapur
13	2009-Anatomy	Sakthivel KM	Rajas Dental College, Kavalankinaru, Kanyakumaridist
14	2009-Anatomy	Dr.Sakthivel M	BKL Walawakar rural Medical College
15	2009-Anatomy	SwathiPriyadharshini C	BKL Walawakar rural Medical College
16	2009-Microbiology	BhabuVignesh RN	Quality Assurance Manager, Pasteur Institute, Coonur

17	2009-Microbiology	Karthikeyan D	Tutor in Microbiology, Vinayaka Mission Medical College, Kaaikal
18	2009-Microbiology	Linda Susan	Microbiologist in a private Lab, Coimbatore
19	2009-Microbiology	Ranjith Kumar	Junior Microbiologist, Madras Medical Misssion, Chennai.
20	2009-Microbiology	Vysakh PR	Tutor in Microbiology, karpagam Medical College, Coimbatore
21	2009-Microbiology	Pothini J	Tutor in SankaraNethralaya, Chennai
22	2009-Microbiology	Santhi J	Junior Microbiologist, Madras Medicla Mission, Chennnai
23	2009-Microbiology	Suja C	Rajas Dental College, Kavalankinaru, Kanyakumaridist
24	2009-Physiology	ArkansuAtha	MVJ Medical College, Bangalore
25	2009-Physiology	Dr.Brindha	Ramakrishna Dental college, Coimbatore
26	2009-Physiology	Jenny	MVJ Medical College, Bangalore
27	2009-Physiology	Raghuvaran S	Dhanalakshmi Medical College, Perambalur
28	2009-Physiology	Valarmathi C	Dhanalakshmi Medical collge, Perambalur
29	2009-Physiology	Dr.Neelamegam U	WalaWalkar Rural Medical College
30	2009-Physiology	Srihari R	Madha Medical College, Kunrathur
31	2011-Anatomy	Dr.Janani	CHRI
32	2011-Microbiology	Dr.Janani	CHRI
33	2011-Community Medicine	Dr.RajeshKhanna	CHRI
34	2011-Pharmacology	Dr.Meignanakumar	CHRI
35	2011-Pharmacology	Dr.Saradha	CHRI

AHS – PLACEMENT DETAILS

S. No.	Year / Batch	Course Name	Name of the student	Organization where placed	Recommended by the staff or students own effort
1	2008-09/I	M.Sc. Medical Bionanotechnology	N. Surya	Research Scholar Centre for Nanotechnology and Advanced Biomaterials SASTRA University, Tanjore	Off campus by faculty guidance
2	2008-09/ I	M.Sc. Medical Bionanotechnology	M. Ravichandran	Research Scholar Cinvestav University,	Off campus by faculty

				Mexico	guidance
3	2008-09/ I	M.Sc. Medical Bionanotechnology	B. Aparnna	M.Phil. (Nanotechnology) Nanotechnology Department, Madurai Kamraj University	Off campus by faculty guidance
4	2008-09/ I	M.Sc. Medical Bionanotechnology	Ashok Raja C	Research Scholar Nano Centre, University of Madras, Chennai	Off campus by faculty guidance
5	2008-09/ I	M.Sc. Medical Bionanotechnology	R. Deepika	Opted for Higher studies	Off campus by faculty guidance
6	2008-09/ I	M.Sc. Medical Bionanotechnology	R. Guna	Opted for Higher studies	Off campus by faculty guidance
7	2008-09/ I	M.Sc. Medical Bionanotechnology	Surender	Administrative Job , Pondicherry	Recommended by the staff
8	2008-09/I	M.Sc. Medical Bionanotechnology	Muniyaswamy	Opted for Higher studies	Off campus by faculty guidance
9	2008-09/I	M.Sc. Medical Bionanotechnology	S. anbarasu	Opted for Higher studies	Off campus by faculty guidance
10	2008-09/I	M.Sc. Medical Bionanotechnology	K. Udhaya Ruby	Opted for Higher studies	Off campus by faculty guidance
11	2009-10/II	M.Sc. Medical Bionanotechnology	N. Ananthi	Coding Trainee, E4e, Chennai	Off campus by faculty guidance
12	2009-10/II	M.Sc. Medical Bionanotechnology	T. Jai Ganesh	Cognizant Technology Solutions, Chennai	Off campus by faculty guidance
13	2009-10/II	M.Sc. Medical Bionanotechnology	R. Satya	(House wife) Not opted for placement	Student's own option
14	2009-10/II	M.Sc. Medical Bionanotechnology	Shakila Banu	Research Scholar, Sastra University, Tanjore	Off campus by faculty guidance
15	2011-12/IV	M.Sc. Medical Bionanotechnology	J.Archana Sangameswari	ACE Industries, Coimbatore,	Enterpreneaur
16	2011-12/IV	M.Sc. Medical Bionanotechnology	V. Haribabu	Clinical Instructor, Chettinad Academy of Research and	Off campus by faculty guidance

				Education	
17	2011-12/IV	M.Sc. Medical Bionanotechnology	T. Joshna	Opted for Higher studies	Off campus by faculty guidance
18	2009-10/I	M.Sc. Medical Biotechnology	A.Anand Kumar	SPI Global, CRM Incorporation, Chennai	Off campus by faculty guidance
19	2009-10/I	M.Sc. Medical Biotechnology	Haseena Yasmin	SPI Global, CRM Incorporation, Chennai	Off campus by faculty guidance
20	2009-10/I	M.Sc. Medical Biotechnology	K. S. Jagruti	Not opted for placement	Student's own option
21	2009-10/I	M.Sc. Medical Biotechnology	K. Shalini	Junior Research Fellow CCMB, Hyderabad	Off campus by faculty guidance
22	2009-10/I	M.Sc. Medical Biotechnology	R. Kiruthika	Not opted for placement	Student's own option
23	2009-10/I	M.Sc. Medical Biotechnology	Manisha Soni	Teacher, Narayana E-School, Hyderabad	Off campus by faculty guidance
24	2009-10/I	M.Sc. Medical Biotechnology	M. Nagalakshmi	Not opted for placement	Student's own option
25	2009-10/I	M.Sc. Medical Biotechnology	B. Pranita	Teacher, Hyderabad	Off campus by faculty guidance
26	2009-10/I	M.Sc. Medical Biotechnology	M. Sudha	Cipla phramaceuticals	Off campus by faculty guidance
27	2009-10/I	M.Sc. Medical Biotechnology	Vimala Devi S	Research Scholar Chettinad Academy of Research and Education	Off campus by faculty guidance
27	2009-10/I	M.Sc. Medical Biotechnology	Yogesh Kumar	Apollo Hospital, Chennai	Off campus by faculty guidance
28	2010-11/II	M.Sc. Medical Biotechnology	Kavya J.C.	Opted for Higher studies	Off campus by faculty guidance
29	2010-11/II	M.Sc. Medical Biotechnology	Bijaya Shrestha	Good Neighbors International (South Korean Pharma company), Nepal	Off campus by faculty guidance
30	2010-	M.Sc. Medical	E.Hema	Opted for Higher	Off campus by

	11/II	Biotechnology	Kumar	studies	faculty guidance
31	2010-11/II	M.Sc. Medical Biotechnology	B. Sarath Chandu	Research Scholar, Dept of Oncology, Endocare Hospital, Guntur, Andhra Pradesh.	Off campus by faculty guidance
32	2011-12/III	M.Sc. Medical Biotechnology	Agrima Nair	Opted for Higher studies	Off campus by faculty guidance
33	2011-12/III	M.Sc. Medical Biotechnology	Alu Alphonsa Thomas	Opted for Higher studies	Off campus by faculty guidance
34	2011-12/III	M.Sc. Medical Biotechnology	Gunavathy M.	Working as a reporter for Puthiya thalaimurai, Tanjore	Off campus by faculty guidance

5.1.19 In what ways does the institution respond to alumni requirements-
- By placing them in the parent institutions as first priority given to them and also placement to other agencies.
- By providing references
- Separate office room for alumni is provided to plan for the other activities and programmes to be organized by them.
- Alumni web portal is available
- Validation of transcripts is provided by the institution
- Internship p[projects for the alumni is promoted. Collaborative research projects are conducted. Placement cell is functioning effectively.

5.1.20 Does the institution have a student grievance redressal cell? Give details of the nature of grievances reported. How were they redressed?
Yes, there is a grievance redressal cell. The nature of grievances reported was
- Inability to pay their tuition fees by few economically poor students. It was redressed by providing additional support in the form of scholarships, payment of fees on installment basis.
- Hike in hostel fees- the management considering the economic status , reduced the hostel fees into 50%
- Inability to concentrate on studies due to language problem. It was redressed by arranging for spoken English classes, giving special exercises in improving English , couching classes during summer and winter vacation
- Adjustment problems in the hostel. It was redressed by putting few students from the same locality to get oriented by themselves counseling to the students is also given to mingle with each other.

It is got a three-tier set up to take care of the issues of the students.
  i. First Level: The college council including the functional heads (HODs and wardens of the hostel) is attending to the individual grievances relating to the concerned departments. A decision if necessary, in consultation with others, and the grieved party is being communicated in 48 hours of time.

ii.   Second level: the recommendations of the college council members in case of punishments/ arranging for counseling sessions are being forwarded to the GRIEVANCE REDRESSAL CELL for its opinion. The committee considers the matter in detail and record the observation in seven days time. A unanimous recommendation of the cell is being implemented expeditiously. The management has given representation to all the functional departments including hostels and library and student representatives shall constitute the Grievance Redressal Cell. The number of students is minimum two.

iii.   Third Level: Recommendations and observations of the cell isplaced before the university higher officials.. Major decisions involve the board of management as well.

MAJOR GRIEVANCES during the last 2 years – inability to pay the fees in time, language problem and adjustment problem in the hostel

5.1.21 Does the institution promote a gender-sensitive environment by (i) conducting gender related programs (ii) establishing a cell and mechanism to deal with issues related to sexual harassment ? Give details.

(i) Conducted gender related programme as instructed by the UGC

❖ Gender sensitization is part of the orientation given to the students as well as faculty on their entry into the university campus
❖ Display of this information all around the campus
❖ Committee formed as per Visaka guidelines
❖ Conducted a national level nursing conference on gender equality as part of Millennium Development Goals
❖ A circular on the prevention of sexual harassment is displayed on the desktop throughout the campus.

(ii) Compliance cell for prevention of sexual harassment is functioning- a student representative is present

5.1.22 Is there an anti-ragging committee? How many instances, if any, have been reported during the last four years and what action has been taken in these cases?

Yes. No instances. As the university has anti ragging committee in which the student representative and the parent are the members.
The members list with their phone numbers are displayed throughout the campus.
In the parent teachers meeting a police inspector is made to address the students with regard to legal action taken to be for the students if involved in ragging.

5.1.23 how does the institution elicit the cooperation of all its stakeholders to ensure the overall development of its students ?

Faculty as stakeholders:
• The faculty members are encouraged to carry out the academic and co curricular activities of the students periodically and effectively through mentorship programmes
•   They carry the role not only as mentors but also counselor, advocate in helping the students in taking decisions, etc

Parents as stake holders:
• The parents are given orientation about the rules and regulations of the university
• Periodical intimation about the academic performance with attendance % of their

wards
- Involving them in taking decisions in case of disciplinary issues of their wards
- Intimation about co-curricular and extra curricular activities as chet fest, fusion Chettinad, sports competitions, world health day celebrations, yoga classes, blood donation camps and other health camps.
- Information about significance of IQAC in the institution

Other institutions as stakeholders:
- By allowing them in the campus in conducting placement interview, guest lectures, orientation programmes on new advancement in their products.

Rural and urban community as stakeholders:
- By seeking cooperation and coordination with the community leaders, non-governmental agencies to implement health services in the community
- Conducting outreach programmes
- Conducting health awareness programmes
- Celebrating national health days in rural and urban community
- Identifying the homes of the special groups and providing health services

5.1.24 How does the institution ensure the participation of women students in intra- and inter-institutional sports competitions and cultural activities? Provide details of sports and cultural activities where such efforts were made.

The women students are ensured their participation in throw ball, basket ball,volley ball, table tennis, carom, chess, cricket, tennikoit

They have participated in classical and western dances, orchestra, rangoli, face painting, pot painting, etc

5.1.25 Does the institution enhance the student learning experience by providing for rotation from the teaching hospital to the community and district hospital during the internship period ?

As part of the curriculum, the students have clinical rotation from the hospital to the rural and urban community and primary health centre during their internship.

They have to carry out mass health education programmes, national health day's celebrations/awareness programmes, research projects.

5.1.26 Does the institution have immunization policy for its students and staff?

Yes. Before entering into the clinical setting for training the students are immunized with Hep-B vaccine. In case of epidemic outbreak the students are also immunized with such vaccines pertaining to the diseases prevention and control.

5.1.27 Does the institution give thrust on students growth in terms of :
- ❖ Physical development-regular medical checkup, physical fitness centre
- ❖ Emotional control- provision of yoga and meditation classes , CNE programmes on personality development programmes
- ❖ Social dimension – by posting them in the community settings to understand about the societal needs and problems and mold them in developing social behaviour

Spiritual growth – by celebrating the festivals of all religions, conducting chanting sessions like 'brahma kumari' sangam, etc.

5.2 Student Progression
5.2.1 What is the student strength of the institution for the current academic year? Analyze the Program-wise data and provide the trends (UG to PG, PG to further studies) for the last four years.

Registered Students Details

S.NO	COURSE NAME	SANCTIONED STRENGTH	Year of starting	STUDENTS ADMITTED in						
				2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Medical PG Super Speciality - D.M./ M.CH Courses										
1	D.M. (Cardiology)	1	2013 - 14	-	-	-	-	-	1	
2	D.M. (Neurology)	1	2013 - 14	-	-	-	-	-	-	
3	D.M. (Neonatology)	1	2013 - 14	-	-	-	-	-	1	
4	M.Ch. (Cardio Vascular & Thoracic Surgery)	2	2013 - 14	-	-	-	-	-	-	
5	M.Ch. (Neuro Surgery)	1	2013 - 14	-	-	-	-	-	1	
6	M.Ch. (Urology)	1	2013 - 14	-	-	-	-	-	1	
TOTAL		**7**		**0**	**0**	**0**	**0**	**0**	**4**	**5**
Medical PG - M.D. Pre & Para Clinical and M.D. / M.S. Clinical Courses										
7	M.D. Anatomy	2	2011-12	-	-	-	1	-	1	
8	M.D. Physiology	4	2011-12	-	-	-	2	2	2	
9	M.D. Biochemistry	2	2011-12	-	-	-	1	1	2	
10	M.D. Pharmacology	4	2011-12	-	-	-	2	2	4	
11	M.D. Pathology	1	2011-12	-	-	-	1	1	1	

12	M.D. Microbiology	3	2011-12	-	-	-	2	1	3	
13	M.D. Community Medicine	2	2011-12	-	-	-	2	2	2	
14	M.D. General Medicine	4	2012-13	-	-	-	-	4	4	
15	M.D. Anesthesiology	4	2012-13	-	-	-	-	4	4	
16	M.D. Dermatology, Venerology &Leprosy	2	2012-13	-	-	-	-	2	2	
17	M.D. Respiratory Medicine	2	2012-13	-	-	-	-	2	2	
18	M.S. Orthopedics	2	2012-13	-	-	-	-	2	2	
19	M.S. Ophthalmology	1	2012-13	-	-	-	-	1	1	
20	M.D. Paediatrics	2	2013 - 14	-	-	-	-	-	2	
21	M.D. Psychiatry	1	2013 - 14	-	-	-	-	-	1	
22	M.D. Radio - Diagnosis	2	2013 - 14	-	-	-	-	-	2	
23	M.S. Oto Rhino Laringology	1	2013 - 14	-	-	-	-	-	1	
TOTAL		**39**		**0**	**0**	**0**	**11**	**24**	**36**	**36**
Medical UG										
24	MBBS	**50**	2008-09	**150**	**150**	**150**	**150**	**150**	**150**	**150**
M.Sc. 3 years										
25	M.Sc. Medical Anatomy	0	2009-10	-	7	9	5	-	-	
26	M.Sc. Medical Physiology	0	2009-10	-	7	3	**0**	1	-	

27	M.Sc. Medical Biochemistry	0	20 09-10	-	2	3	3	1	3	
28	M.Sc. Medical Microbiology	0	20 09-10	-	7	8	4	1	9	
29	M.Sc. Medical Pharmacology	0	20 09-10	-	5	1	4	-	-	
TOTAL		**50**		**0**	**28**	**24**	**16**	**3**	**12**	
1 Year PG Diploma Course										
30	PG Diploma in Clinical Embryology		20 08-09	**3**	**3**	**3**	**3**	**2**	**5**	**5**
M.Sc. 2 years										
31	M.Sc. Medical Bionanotechnology	20	20 08-09	10	5	-	3	1	2	
32	M.Sc. Occupational Health & Industrial Safety	20	20 08-09	1	-	1	-	1	-	
33	M.Sc. Marine Pharmacology	20	20 08-09	-	-	1	-	-	-	
34	M.Sc. Medical Biotechnology	20	20 09-10	-	11	4	3	5	3	
35	M.Sc. Clinical Research & Experimental Medicine	20	20 08-09	19	17	10	8	10	4	
36	M.Sc. Computational Biology	10	20 11-12	-	-	-	-	-	-	
37	M.Sc. Bioinformatics	10	20 11-12	-	-	-	-	-	-	
38	M.Sc. Pharmaceutical Chemistry	10	20 11-12	-	-	-	-	-	-	
39	M.Sc. Health & Yoga Theraphy	10	20 11-12	-	-	-	1	-	-	
40	M.Sc. Counselling	10	20 11-12	-	-	-	1	-	-	

	Psychology									
41	M.Sc. Radiology & Imaging Science Technology	3	20 13 - 14	-	-	-	-	-	3	
TOTAL		**153**		**30**	**33**	**16**	**16**	**17**	**12**	**28**
UG - A.H.S										
42	B.Sc. Allied Health Sciences	**0**	20 08-09	3	4	12	30	31	48	
43	B.Sc. Medical Biotechnology	**0**	20 13 -14	-	-	-	-	-	5	
TOTAL		**60**		**3**	**4**	**12**	**30**	**31**	**53**	**72**
Nursing										
44	M.Sc. Nursing	0	20 09-10	-	8	18	3	6	2	
45	B.Sc. Nursing	100	20 08-09	49	60	27	62	44	56	
46	Post Basic B.Sc. Nursing	0	20 09-10	-	24	21	11	2	10	
47	Post Basic Diploma in Neonatal Nursing	5	20 09-10	-	1	-	-	-	-	
48	Post Basic Diploma in Critical Care Nursing	5	20 09-10	-	1	-	-	-	-	
49	Post Basic Diploma in Operation room Nursing	5	20 09-10	-	2	-	-	-	-	
50	Post Basic Diploma in Cardiothoracic Nursing	0	20 09-10	-	1	-	1	-	-	
51	Post Basic Diploma in Neuro Science Nursing	5	20 09-10	-	-	-	-	-	-	

52	Post Basic Diploma in Emergency & Disaster Nursing	5	20 09-10	-	-	-	-	-	-	
53	Post Basic Diploma in Nurse Practitioner & Midwifery	5	20 09-10	-	-	-	-	-	-	
TOTAL		**260**		**49**	**97**	**66**	**77**	**52**	**68**	**107**
Ph.D. (full time & part time)										
54	Ph.D.		20 08-09	**15**	**7**	**6**	**15**	**1**	**17**	**8**
		724		**250**	**322**	**277**	**318**	**280**	**357**	**448**
GRAND TOTAL		**2252**								

5.2.2 What is the number and percentage of students who appeared/qualified in examinations for Central / State services, Defense, Civil Services, etc.?

Students joined for Defense service: 2

5.2.3 Provide category-wise details regarding the number of post graduate dissertations, Ph.D. and D.Sc. theses submitted/accepted/ rejected in the last four years.

So far there have been no rejection of dissertation of PG disseretation of PhD thesis. There have been minor revisions recommended by examiners which have been suitability attended to. Details of number of dissertation/thesis submitted year wise is given below

	2010	2011	2012	2013	2014	2015
M.Sc. 2yrs	10	32	38	16	22	14
M.Sc. 3 yrs	-	-	23	19	15	2
MD/MS	-	-	-	-	8	25
PhD Thesis	-	-	-	-	2	5
PGDCE	6	2	3	2	5	5

5.2.4 What is the percentage of students under AYUSH Program employed in the following

❖ AYUSH departments/Hospitals-
❖ Multinational companies
❖ Health clubs & Spa
❖ Yoga wellness centers
❖ Yoga studio
❖ Own Yoga cubes/studios

Not applicable. CARE does not offer any program under AYUSH

5.3 Student Participation and Activities
5.3.1 List the range of sports, cultural and extracurricular activities available to students. Furnish the program calendar and provide details of students' participation

Sports and cultural activities:
- Inter , intra sports competitions are periodically conducted
- Regular sports classes are conducted on first and third Saturdays of every month
- Chet fest and fusion Chettinad cultural competitions are conducted
- Students are permitted toparticipate in cultural competitions in other institutions

Extracurricular activities:
- Yoga sessions are arranged on first and third Saturdays
- Swimming
- Gim provision is made
- Aerobic exercises sessions are provided
- NSS activity

5.3.2 Give details of the achievements of students in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. during the last four years.

Sports Events

Awards & Medals obtained by the students of
Chettinad Academy of Research and Education, Kelambakkam**.**

S.No.	Tournament	Date	Venue	Participants	Achievement
1	Inter Medical College Tournament	03.05.2010 to 07.05.2010	Stanley Medical College, Chennai	Four Students	Men Badminton Team won the Winner's Trophy (Stanlea 2010)
2	Inter Medical College Tournament	03.05.2010 to 07.05.2010	Stanley Medical College, Chennai	Ten Students	Women Basket ball team won the Runners Trophy (Stanlea 2010)
3	Inter Medical College Tournament	05.05.2010 to 06.05.2010	Stanley Medical College, Chennai	Eight Students	Men and Women Athletics Team won the overall second place (Stanlea 2010)
4	Inter Medical College Tournament	30.06.2010 to 02.07.2010	Pondicherry Institute of Medical Science, Pondicherry	Two Students	Tennis (men) Runners Trophy (PIMS 2010)
5	South Zone Inter University Cricket Tournament	25.10.2010 to 30.10.2010	Warangal, Andhra Pradesh	Five Students	Participated and played for the Tamilnadu Dr.MGR Medical University, Cricket Team, Chennai

S.No.	Tournament	Date	Venue	Participants	Achievement
6	Inter College Open Tournament	09.02.2011 to 10.02.2011	Sri Ramakrishna Mission Vivekananda College, Chennai	Two Students	Men Tennis team won the 4th place
7	Inter College Medical Tournament	13.09.2011 to 17.09.2011	Madras Medical College, Chennai	Twelve Students	Women Basketball team won the 2nd place
8	Inter College Medical Tournament	13.09.2011 to 17.09.2011	Madras Medical College, Chennai	Twelve Students	Women Throw ball team won the 2nd place
9	Inter College Medical Tournament	13.09.2011 to 17.09.2011	Madras Medical College, Chennai	Two Students	Women Chess team won the 2nd place
10	Inter College Open Tournament	10.02.2012	Sri Ramakrishna Mission Vivekananda College, Chennai	Three Students	Men Tennis team won the 4th place
11	Inter College Nursing Tournament	25.02.2012 to 28.02.2012	Venkateswara Nursing College, Thalambur, Chennai.	Fifteen Students	Men Cricket team won the 1st place
12	Inter College Nursing Tournament	25.02.2012 to 28.02.2012	Venkateswara Nursing College, Thalambur, Chennai.	Fifteen Students	Men Foot ball team won the 1st place
13	Inter College Nursing Tournament	25.02.2012 to 28.02.2012	Venkateswara Nursing College, Thalambur, Chennai.	Two Students	Women Tennikoit team won the 1st place
14	Inter College Nursing Tournament	25.02.2012 to 28.02.2012	Venkateswara Nursing College, Thalambur, Chennai.	Ten Students	Volley ball (Men) won the 2nd place
15	Inter Nursing College, Athletics Tournament	25.02.2012 to 28.02.2012	Venkateswara Nursing College, Thalambur, Chennai.	Fourteen Students	Men and Women Athletics Team won the overall 1st place
16	Inter College Medical Tournament	15.03.2012 to 17.03.2012	Pondicherry Institute of Medical Science, Pondicherry	Three Students	Men Tennis team won the 2nd place
17	Inter College Medical Tournament	17.07.2012 to 21.07.2012	Christian Medical College, Vellore	Ten Students	Volley ball (Men) won the 2nd place

S.No.	Tournament	Date	Venue	Participants	Achievement
18	Inter College Medical Tournament	21.09.2012 to 26.09.2012	Kilpauk Medical College, Chennai	Ten Students	Basket ball (Women) won the 2nd place (Aadukalam 12)
19	Inter Medical College Tournament	25.09.2012 to 26.09.2012	Kilpauk Medical College, Chennai.	Thirteen Students	Men Athletics Team won the overall second place (Aadukalam 12)
20	Inter Medical College Tournament	13.03.2013 to 16.03.2013	Pondicherry Institute of Medical Science, Pondicherry	Eight students	Futsal (men) Team won the 2nd place
21	Inter Medical College Tournament	13.03.2013 to 16.03.2013	Pondicherry Institute of Medical Science, Pondicherry	One student	Shot put won the 2nd place
22	Inter Medical College Tournament	30.04.2013 to 04.05.2013	Stanley Medical College, Chennai	Four students	Men Badminton Team won the Winner's Trophy (Stanlea 2013)
23	Inter Medical College Tournament	24.07.13 to 27.07.13	Christian Medical College, Vellore	Ten Students	Basket ball (Men) won the 2nd place
24	Inter Medical College Tournament	04.07.2013 to 09.07.2013	Kilpauk Medical College, Chennai	Three students	Badminton (Women) Team won the Winner's Trophy
25	Inter Medical College Tournament	04.07.2013 to 09.07.2013	Kilpauk Medical College, Chennai	Ten Students	Basket ball (Men) won the 2nd place
26	Inter Medical College Tournament	04.07.2013 to 09.07.2013	Kilpauk Medical College, Chennai	Eight students	Futsal (men) Team won the 2nd place
27	Inter Medical College Tournament	04.07.2013 to 09.07.2013	Kilpauk Medical College, Chennai	Eight students	Men Athletics Team Javelin throw 1st place Discus throw 2nd place Long jump 1st place
28	Tamil Nadu State Level Inter Deemed University Badminton tournament	24.01.2014 & 25.01.2014	Chettinad Academy of Research and Education	Five Students	Badminton (Women) won the 3rd place
29	Inter Medical College Tournament	17.03.2014 to 21.03.2014	Pondicherry Institute of Medical Science, Pondicherry	Three Students	Table Tennis (men) Team won the 2nd place

S.No.	Tournament	Date	Venue	Participants	Achievement
30	Inter Medical College Tournament	17.03.2014 to 21.03.2014	Pondicherry Institute of Medical Science, Pondicherry	Three Students	Tennis (men) Team won the 2nd place
31	Inter Medical College Tournament	29.04.2014 to 03.05.2014	Stanley Medical College, Chennai	Four Students	Badminton (women) Team won the Winner's Trophy (Stanlea 2014)
32	Inter Medical College Tournament	29.04.2014 to 03.05.2014	Stanley Medical College, Chennai	Ten Students	Basket ball (women) team won the Runners Trophy (Stanlea 2014)
33	Inter Medical College Tournament	29.04.2014 to 03.05.2014	Stanley Medical College, Chennai	Fifteen Students	Foot ball (men) team won the Runners Trophy (Stanlea 2014)
34	Inter Medical College Tournament	29.04.2014 to 03.05.2014	Stanley Medical College, Chennai	Four Students	Basket ball 3S (men) team won the Runners Trophy (Stanlea 2014)
35	Inter Medical College Tournament	29.04.2014 to 03.05.2014	Stanley Medical College, Chennai	Six Students	Athletics Men Team Javelin throw 1st place Triple Jump 2nd place Long jump 2nd place
36	Inter Medical College Tournament	29.04.2014 to 03.05.2014	Sri Venkateswara Medical College Hospital & Research centre, Pondicherry.	Four Students	Badminton(women) Singles – 1st Place Doubles - 1st Place
37	Inter Medical College Tournament	29.04.2014 to 03.05.2014	Sri Venkateswara Medical College Hospital & Research centre, Pondicherry.	Four Students	Table Tennis (women) Singles – 2nd Place Doubles – 2nd Place Mixed Doubles – 2nd Place
38	South Zone Inter Universities Tournament	26.12.14 To 29.12.14	Bharathiar University, Coimbatore.	Five Students	Badminton Men - Participated
39	Tamilnadu State Inter Deemed University Tournament	20.02.2015 To 21.02.15	Chettinad Academy of Research & Education, Kelambakkam.	Five Students	Table Tennis Women – 2nd Place Men – 4th Place

S.No.	Tournament	Date	Venue	Participants	Achievement
40	Tamilnadu State Inter Deemed University Tournament	21.02.2015 To 22.02.15	Sathyabama University, Chennai.	Five Students	Badminton Women – 4th Place
41	Tamilnadu State Inter Deemed University Athletics Meet	28.02.2015	SRM University, Chennai.	Alfred Sam	Athletics High Jump – 3rd Place
42	Tamilnadu State Roll ball Championship	03.07.2015 to 05.07.2015	ORANGE International School, Arni, Thiruvannamalai district.	Karthikeyan. M	Roll ball Senior Category won the 1st Place
43	Inter Medical College Tournament	04.08.2015 to 08.08.2015	Pondicherry Institute of Medical Science, Pondicherry	Fifteen Students	Foot ball (men) Team won the 1st place
44	Inter Medical College Tournament	04.08.2015 to 08.08.2015	Pondicherry Institute of Medical Science, Pondicherry	Four Students	Tennis (men) Team won the 1st place

5.3.3 Does the institution provide incentives for students who participate in national / regional levels in sports and cultural events?

- Yes. Travel support and grand, dearness allowances, are provided.
- Free jerkins, T shirts, sports materials,
- Musical instruments to practice,
- Provision of snacks and tea/coffee

5.3.4 How does the institution involve and encourage its students to publish materials like catalogues, wall magazines, college magazine, and other material? List the major publications/ materials brought out by the students during the last four academic sessions.

The students are encouraged for publishing in Chettinad health city medical journal and other journals. Details of publications are given in the Research section.

5.3.5 Does the institution have a Student Council or any other similar body? Give details on its constitution, activities and funding.

There is no student council, However student representatives are there in various committees of the university. Students are given atmost liberty to address their issues as group/individual to the Dean/Director/Principal of their college. Student also address their issues through the grievance redressal cell.

5.3.6 Give details of various academic and administrative bodies that have student representatives in them. Also provide details of their activities.

1. **Students Grievance Redressal Cell**
    Ms. Anisha Sunil - UG Student Rep.(MBBS – Pre final year)   - Member
    Mr. R. Tamil Amudhan - UG Student Rep.(MBBS – II year)   - Member
    Mr. Ajith Subramanian -B.Sc. AHS II Year   - Member
    Ms. R. Abirami, UG Student Rep. (B.Sc. Nursing III year)   - Member
2. **Library Committee**
    Dr. P. Anisha Mohan, PG Student Rep. M.D. Community Medicine   - Member
    Mr. Pushkar Palani – UG student Rep. MBBS III Year   - Member
    Ms. S. Nandhini - B.Sc. Medical Biotechnology II Year   - Member
    Mr. U. Sathish - Nursing student Rep. (B.Sc. Nursing III Year)   - Member
3. **IQAC Meeting**
    Srinivasa Muthukaruppan, Student Rep   -   Member
    R.Bakkialakshmi, Student Rep   -   Member

Students' activities:

- Participating in the committee meetings and put forth the complaints/ issues to the committee members
- Providing suggestions and recommendations to resolve those problems
- Gathering data from the students population with regard to library books and journals, IQAC information
- class wise the student representatives are selected who will bring the issues or matters to the HODs and other teachers concerned,

Criteria - VI

Governance, Leadership And Management

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership
6.1.1 State the vision and the mission of the institution.

Vision :

A global center for excellence in learning, Teaching, Research, Health Care and Service to the community.

Mission :

- Create a nurturing and supportive environment to ensure students a fulfilling, demanding and intellectually stimulating experience.
- Enable students to imbibe values, cultivate a desire for life long learning and maximize their potential.
- Prepare students for employment in the global arena.
- To establish a team of well-qualified faculty that will enable the institution to grow holistically.
- Provide the best in state of the art infrastructure.
- Offer quality health services to all strata of society.
- To facilitate independent innovative research and share knowledge and understanding with the society.
- To contribute to the social, economical and national development.

6.1.2 Does the mission statement define the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, the institution's tradition and value orientations, its vision for the future, etc. ?

Yes. The mission statement clearly defines the objective of the university to various stakeholders. The university aims at offering healthcare education and services to individuals from all strata of society with equal opportunity to everyone. The university focuses not only on overall growth of students but growth of the institute as a whole in all the aspects – teaching, research, community orientation and infrastructure.

The Board of Management, Planning and monitoring board, Finance committee, Research Advisory committee, and other committees of the university helps in guiding the university to define its annual plans and strategic initiatives.

Adoption of villages in the vicinities in providing comprehensive health care and health education by involving by involving the students from medical, nursing and allied health sciences stream.

Impact of nuclear power producing units on environment and health.

Integrating clinical research with nanotechnology in drug delivery, development of nanoparticles.

Genetically inherited diseases and research done on gene modifications and genetic counseling in those potentially endangered people.

Develop the institution as a hub of research activities by collaborating with international universities.

Twinning program, student exchange program

6.1.3 How is the leadership involved in
☐ **developing E-Governance strategies for the institution ?**

Right from the inception of the University use of ICT had been implemented in all the

functioning of the University. With the development activities of the university, these initiatives have been upgraded. Introduction of new software are done with appropriate training to the faculty and staff.

The institute has been pioneer in the introduction of comprehensive learning management system in providing all the learning material online to the students through secured portal system. This system is regularly updated based on the needs of both students and faculty.

End to end solutions are in place for students (from admission, payment of fees, learning, assessment, evaluation and declaration of results), faculty (online advertisement, software for complete HR management from leave, IT declaration to feedback) and Patients (admissions to discharge). Before implementation, inputs from end users are obtained and appropriate trainings are given to the users for its successful implementation. Presence of in house IT department complements these initiatives.

Patient information system is in place to document every patient detail for easy retrival with the availability of computers and tablets to the physician.

1	Administrative procedures, including Finance, Purchase, Inventory, Human Resource Information System	Available
2	Student Admission & Student Records	Available
4	Evaluation and Examination Procedures	Available
5	Research Administration	Available
6	Hospital and Diagnostics	Available

☐ **ensuring the organization's management system development, implementation and continuous improvement ?**

The university is established under the section 3 of UGC act 1956. All university rules are guided by UGC and other regulatory body guidelines with inbuilt dynamism and flexibility as permissible under these guidelines. Developmental initiatives of the institution occur in a bidirectional way both on the needs of the stakeholders and the developmental initiatives.

Inputs from various statutory committees of the university like the Board of Management, Planning and monitoring board, Finance committee, Research Advisory committee, and Board of studies are given due credence. University authorities are committed to development, implementation and continuous improvement in various academic and administrative initiatives with participatory governance.

☐ **interacting with its stakeholders ?**

Students	Through formal and informal feedback and inputs through mentors and teachers
Faculty	Through Heads of the department in departmental meetings. College council meetings
Patients	Feedback and suggestion box
Parents	Parent teacher meetings and other informal meetings
Community	Through community heads and NGO working in the community. Public relations officer and marketing team

	constantly interact with community leaders to learn about their requirements and feedbacks.
Experts from academia and industry	During meetings in various boards as well as feedback from examiners and visitors to the university. From campus interview agents and educational exhibition organizers as well. Through the medical education unit, monthly meetings are held in various departments with external resource persons. Chettinad Lecture series has also been introduced to invite eminent academician/researcher of excellence to deliver lecture periodically.
Interaction among stakeholders (clinicians, support departments and students)	Clinical society meetings, Death audit, Interesting clinical cases, Journal clubs, Interdepartmental meetings

☐ **reinforcing a culture of excellence ?**

The culture of excellence and commitment trickles down from the top management down under. The university has not only developed state of art infrastructure but has also attracted student and faculty with commitment and thirst for excellence from across the country. Academic freedom has enabled the institution retain the faculty. Output and significant contributions from faculty, staff and students are rewarded adequately, giving them opportunity to exhibit and utilize their expertise in the various committees and activities of the university, increments, promotions for faculty and staff. Students are given certificate of merit and medals for their academic excellence.

☐ **identifying organizational needs and striving to fulfill them ?**

Administrative heads of the university have experience in governance and update themselves with latest in academic and health care set up globally. The university received inputs through formal and informal interactions with students, faculty, staff and community. Further openness to criticism for the benefit of the organization has helped us in meeting the requirements of all the stake holders. Need assessment are done before the introduction of any new steps in the university. This includes infrastructure, equipment and manpower.

6.1.4 Were any of the top leadership positions of the institution vacant for more than a year? If so, state the reasons.

No

6.1.5 Does the institution ensure that all positions in its various statutory bodies are filled and meetings conducted regularly ?

Yes. All positions are filled as per the guidelines of the UGC and MHRD. Efforts are taken to induct new members in the various statutory bodies of the University as the terms of the members draws close to their last date. The number of meetings conducted are as per the statutory body guidelines.

Sl. No.	Various Statutory Body Meeting	Meeting Dates	
1.	Board of Management	01.11.2012	31.01.2014
		28.02.2013	17.04.2014
		25.06.2013	25.08.2014
		20.08.2013	30.12.2014
		26.09.2013	
2.	Finance Committee	16.01.2013	09.08.2014
		09.06.2013	24.12.2014
		30.01.2014	-
3.	Planning & Monitoring Board	26.07.2013	30.08.2014
4.	Academic Council	12.10.2012	06.02.2014
		24.01.2013	15.04.2014
		08.05.2013	30.10.2014
		23.09.2013	
5.	Research Committee	11.01.2013	-
		17.09.2013	-
6.	Research Advisory Committee	08.01.2013	27.12.2014
		20.11.2013	-
7.	Internal Review Board	24.07.2013	09.12.2014
		27.03.2014	-

Sl. No.	Board of Studies for	2012-13	2013-14	2014-15
1.	Preclinical MBBS	07.09.2012	07.08.2013	10.09.2014
		08.03.2013	06.11.2013	04.02.2015
2.	Paraclinical MBBS	12.09.2012	14.08.2013	10.09.2014
		08.03.2013	15.11.2013	05.11.2014
3.	Clinical MBBS	17.09.2012	21.08.2013	17.09.2014
		17.10.2012	27.12.2013	11.02.2015
4.	UG & PG Nursing Courses	21.09.2012	10.09.2013	09.10.2014
		19.03.2013	26.11.2013	21.01.2015

Sl. No.	Board of Studies for	2012-13	2013-14	2014-15
			05.04.2014	-
5.	B.Sc. Allied Health Sciences	27.09.2012	18.09.2013	28.04.2014
			27.01.2014	16.10.2014
6.	B.Sc. Medical Genetics	-	-	25.04.2014
7.	M.Sc. Clinical Research and Experimental Medicine	05.10.2012	18.09.2013	13.10.2014
			01.04.2014	-
8.	M.Sc. Occupational Health and Industrial Safety	05.10.2012	18.09.2013	15.10.2014
			01.04.2014	-
9.	M.Sc. Medical Biotechnology	05.10.2012	18.09.2013	14.10.2014
			01.04.2014	-
10.	M.Sc. Medical Bionanotechnology	05.10.2012	18.09.2013	14.10.2014
			01.04.2014	-
11.	M.Sc. Marine Pharmacology	05.10.2012	18.09.2013	13.10.2014
			01.04.2014	-
12.	M.Sc. Computational Biology	-	18.09.2013	14.10.2014
			01.04.2014	-
13.	M.Sc. Bioinformatics	-	18.09.2013	14.10.2014
			01.04.2014	-
14.	M.Sc. Pharmaceutical Chemistry	-	18.09.2013	13.10.2014
			01.04.2014	-
15.	M.Sc. Health & Yoga Therapy	-	18.09.2013	15.10.2014
			01.04.2014	-
16.	M.Sc. Counseling Psychology	-	18.09.2013	15.10.2014
			01.04.2014	-
17.	M.Sc. Human Nutrition	-	25.04.2014	13.10.2014
18.	M.Sc. Tissue Engineering & Regenerative Medicine	-	25.04.2014	14.10.2014
19.	M.Sc. Medical Genetics & Molecular Diagnostics	-	25.04.2014	14.10.2014

Sl. No.	Board of Studies for	2012-13	2013-14	2014-15
20.	Post Graduate Diploma in Clinical Embryology	01.10.2012	11.09.2013	11.08.2014
			30.01.2014	29.01.2015
21.	M.Sc. Medical Anatomy	07.11.2012	09.10.2013	-
22.	M.Sc. Medical Physiology	07.11.2012	09.10.2013	-
23.	M.Sc. Medical Biochemistry	07.11.2012	09.10.2013	-
24.	M.Sc. Medical Microbiology	07.11.2012	09.10.2013	-
25.	M.Sc. Medical Pharmacology	07.11.2012	09.10.2013	-
26.	Board of Research Studies	04.01.2013	29.08.2013	-
		19.04.2013	31.12.2013	17.09.2014
			29.03.2014	09.12.2014
27.	M.D. Pre and Para Clinical Courses	-	21.10.2013	12.11.2014
			05.02.2014	-
28.	M.D. Clinical Courses	12.12.2012	23.10.2013	19.11.2014
			12.02.2014	-
29.	M.S. Clinical Courses	12.12.2012	23.10.2013	19.11.2014
			12.02.2014	-
30.	D.M. Courses	-	19.09.2013	08.10.2014
			04.04.2014	18.02.2015
31.	M.Ch. Courses	-	19.09.2013	08.10.2014
			04.04.2014	18.02.2015

6.1.6 Does the institution promote a culture of participative management ? If yes, indicate the levels of participative management.

Participative governance is practiced in the University with members from the both the constituent colleges, faculty from various levels Professors to Assistant professors, administrators, and students. Approximately 150 of the total faculty of the university participate in these committees (40% of the total faculty).

6.1.7 Give details of the academic and administrative leadership provided by the university to its affiliated colleges/constituent units and the support and encouragement given to them to become autonomous.

The university provides autonomy to the constituent colleges under the three faculties as permissible by the UGC.

Dean, Chettinad Hospital and Research Institute	Prof.K.Ramesh Rao
Medical Superintendent, Chettinad Hospital and Research Institute	Prof.R.Ganesan
Principal, Chettinad College of Nursing	Prof.L.Lakshmi
Director, Faculty of Allied Health Sciences	Prof.R.Murugesan
Director of Research	Prof.R.M.Pitchappan

6.1.8 Have any provisions been incorporated / introduced in the University Act and Statutes to provide for conferment of degrees by autonomous colleges?

Chettinad Academy of Research and Education offers degrees to all successful candidates in their University examinations from its two constituent colleges.

6.1.9 How does the institution groom leadership at various levels? Give details.

Faculty and staff are encouraged to attend appropriate Leadership training programs conducted outside the institution like Quality control in laboratories, Internal quality assurance cell, UGC, Faculty development program at MCI regional centre (CMC Vellore), in house Faculty development program by the Medical Education Unit, Ethics committee, etc.

Inclusion of faculty and staff as members in various committees and young faculty are as member secretary/secretary for these committees.

Registrars of various departments are made on rotation.

6.1.10 Has the institution evolved a knowledge management strategy which encompasses the following aspects such as access to

- Information Technology,
- National Knowledge Network (NKN),
- Data Bank,
- Other open access resources along with effective intranet facilities with unrestricted access to learners.

If yes, give details.

Learning management system of the University is constantly upgraded. Teaching material are made available to the students both of the current as well as archives from the earlier years.

This inhouse Chettinad Learning Management has been developed by a dedicated IT department of the university with inputs from the various stake holders.

Students are provided laptops to facilitate them to use these resources effectively.

This is further facilitated by high speed internet facility (100mbps), Wi-fi campus and LAN connectivity.

Lecture theatres of the university are equipped with e-learning and telemedicine facility.

In addition these lecture theatres are equipped for the conduct of online examination as well.

6.1.11 How are the following values reflected in the functioning of the institution?
* Contributing to National development

- Being health sciences university Chettinad Academy of Research and

Education has contributed to the health care needs of the villages and society in this semi urban part of Tamil Nadu.

- The rural and urban health care centres of the institute also provides health care needs of the villages at these centres.
- Subsidized medical service offered by the hospital of the university and further catering to the individuals in the below poverty line.
- Outreach programs and camps conducted by the institute makes health care available at the door step of the society and the less privileged population.
- Working in health initiatives of the Central and state government have given a sense of belonging and commitment to the faculty and students.
- NSS Unit of the university further instills citizenship in the young minds of the students.
- The institute has been contributing to the health care personnel requirement of the country by producing manpower with high academic caliber, humane attitude and committed Doctors, Nurses and allied health care professionals.

* Fostering global competencies among students

- Initiation of courses in innovative and emerging areas with curriculum designed to meet industry and international needs.
- Students encouraged to conduct short term research projects even at undergraduate level and present their findings in scientific conferences.
- Grooming them to compete with global competitive examination like USMLE and PLAB.

* Inculcating a sound value system among students

- Active participation of students in the outreach and NSS activities of the university instills values in these young minds
- Faculty of the university act as role models to instill in the minds of the students various values which is better learnt by examples than formal education
- Post graduate and PhD research students of the university are guided and trained in the conduct of research as per the ethical principles and publication ethics
- Mentorship program of the University and good interaction between faculty, students and parents makes the student respect and regard the teachers as their guiding spirit.
- Single mentor from entry to exit from the University has been initiated recently making this more of a paternalistic model with the mentor acting as a foster parent. This enables to keep track of the students throughout his academic program.

* Promoting use of technology

Judicious use of technology has facilitated and augmented the university initiatives

- Chettinad Learning management system in the teaching learning process
- Softwares in the management of various university departments

Department	Software system used
Finance & Accounts	SAGE ACCPAC
Purchase, Stores &	SAGE ACCPAC

Inventory	
HRD	Human Resource Infomration systems
Hospital & Laboratory	IDEMSYS / SAGE ACCPAC being used for capturing data from patient registration, admission, Patient care to Discharge.
Imaging services	PACS system - MEDDIFF (Archival & Retrieval of Radiology Images- Internet Accessible)
Library	AUTOLIB with barcoding system for management, issues, inventory for effective traceability being in place
Teaching & Learning	Chettinad Learning Management System
Examination	Examination Management System

- Use of sophisticated equipment in research and patient care
- Skills lab with mannequins for basic and specialized teaching including training in Basic and Advanced life support

* Quest for excellence
- Within a year of inception the university subjected itself to NAAC Accreditation
- Regularly subject ourselves for accreditation of the central laboratories by NABL
- Energy Audit of the entire campus conducted by external agency
- The Sigappi Aachi Auditorium of the University has received number of awards for the architecture, interior design and facilities from various agencies
- The University has been identified as scientific and industrial research organization by the Government of India and periodically submits its reports to the Department of Scientific and Industrial research
- Registered with INFLIBNET
- Member of the Asia Pacific Quality Network
- DCGI registration of Institutional Ethics Committee
- Conduct of periodic academic audit
- The deemed to be university functions within the framework of the norms of statutory bodies
- Active partnership in State government health care initiatives. We were also awarded the best hospital in the Varum mun kaapom thittam, Kalaignar kaapeedu thittam and all the initiative of the State government
- The institute has received number of awards for its selfless and committed outreach programs from various governmental, NGO and private agencies

6.1.12. Has the institution been indicted / given any adverse reports by National Regulatory bodies? If so, provide details.

NIL

6.1.13 What are the projected budgetary provisions towards teaching, health care services, research, faculty development, etc.?

Budgetary provisions are maintained for various heads of expenditure and is placed for approval by finance committee each financial year.

6.2 Strategy Development and Deployment

6.2.1 Does the institution have a perspective plan for development? If yes, what aspects of the following are considered in the development of policies and strategies?

□ **Vision and mission**

    The institute has well defined vision and mission. The Planning and Monitoring board, Finance committee and the various other committees of the university guide and direct the institute in all its developmental initiatives.

□ **Teaching and learning**

    Board of studies has academia drawn from both the university and other academic institutions. This helps us in updating of the syllabus to cater to the needs of the students and the society.

□ **Research and development**

    Research advisory committee Comprises of National experts and guides who are members of the board of research studies and directs the research initiatives of the university. This committee constantly review and help identify the thrust areas for the university and development of research infrastructure to meet the societal and national needs keeping in pace with the international arena.

□ **Community engagement / outreach activities**

    Community engagements of the university are well organized through the outreach committee with adequate support from the clinical departments and active participation of students and faculty.

    Success of these activities stems from the constant interactions and the joint planning with the community heads (Panchayat heads), Government agencies and non-government organization. Liaising with corporates has also helped us reach the unreached.

□ **Human resource planning and development**

    The need assessment done before the initiation of new activities with approval from the finance committee help meet the manpower needs. To keep in pace with developments across the nation, training of faculty and staff with both in-house and external trainings are conducted.
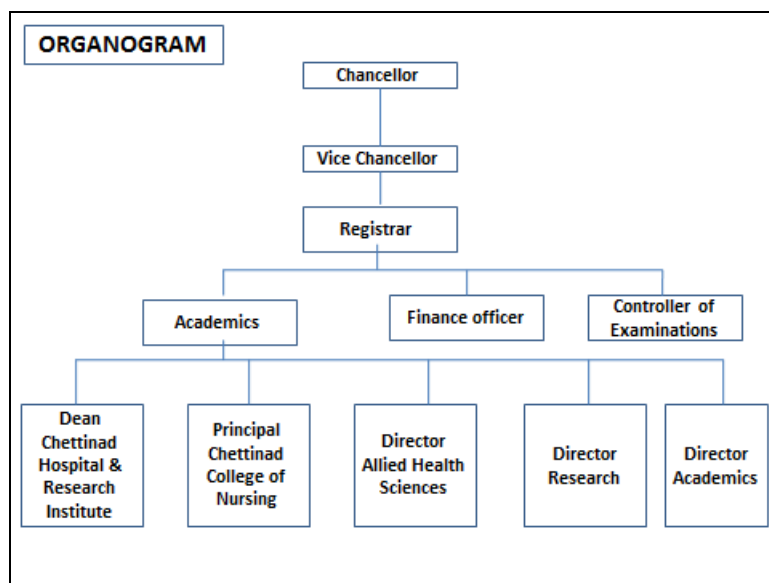
□ **Industry interaction**

    Inputs from industry have helped us modify the curriculum in the emerging areas offered by the university. Industrial training / in plant Trainings are designed in these programs and students are encouraged to take up industry oriented dissertation topics and execute the same in industry to provide insights & scientific support to Industry challenges with assistance from experienced faculty from the university. Industry experts are also involved in various boards of the university.

□ **Internalization**

    The management is commitment to continuous quality and improvement measures, successfully helped in rapid internalization of these initiatives with total involvement from all the stakeholders.

6.2.2 Describe the institution's internal organizational structure (preferably through an organogram) and decision making processes and their effectiveness.

ORGANOGRAM

```
                        Chancellor
                            |
                      Vice Chancellor
                            |
                        Registrar
              _____|_____
             |              |               |
        Academics     Finance officer   Controller of
                                         Examinations
    _____|_____
   |          |            |             |            |
  Dean     Principal    Director      Director     Director
Chettinad  Chettinad   Allied Health  Research     Academics
Hospital & College of   Sciences
Research    Nursing
Institute
```

Committees involved in the decision making processes

* Is there a system for auditing health care quality and patient safety? If yes, describe.

The institution subjects itself to periodic audit by the National Accreditation Board of Laboratories to all its clinical labs

Regular audit of the clinical department further maintains the quality of patient care. Death audit meetings, Hospital infections control committee, feedback from patients and corporate clients of the institute further helps us in maintain standards.

These initiatives have helped us in reducing the morbidity and mortality of patients.

* How often are these review meetings held with the administrative staff?

Medical Superintendent and the Dean of Chettinad Hospital and Research Institute attend all the Death Audit meetings which are conducted on a monthly basis.

6.2.3 Does the institution conduct regular meetings of its various Authorities and Statutory bodies? Provide details.

Please refer Data given in Question 6.1.5

6.2.4 Does the institution have a formal policy to ensure quality? How is it designed, driven, deployed and reviewed?

Internal Quality Assurance Cell, NABL, and other committees of the university formulated quality principles for the institution. These are conveyed through the institution heads for its implementation and internalization.

6.2.5 Does the institution encourage its academic departments to function independently and autonomously and how does it ensure accountability?

Academic department heads are given autonomy within the statutory and regulatory body guidelines in their academic initiatives. Periodic department report and audit of the department ensures accountability from the departments. Thread bear analysis of these audits eg.death audit, has helped in departmental interactions, work co-operatively and helped us improve the service provided.

6.2.6 During the last four years, have there been any instances of court cases filed by and / or against the institution? What were the critical issues and verdicts of the courts on these issues?

There have been no registered court cases on the university. However there have been a few complaints from the patients on the service provided, which have been resolved at the institutional level through the legal officer of the university with inputs from the senior clinicians.

6.2.7 How does the institution ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyze the nature of grievances for promoting better stakeholder-relationship?

The institution has two separate committees for staff and student grievance redressal. Grievances are resolved by these committees which meets periodically. In case these committees fail to resolve any issues administrators get involved in the redressal mechanism.

Feedbacks are also obtained through suggestion boxes placed at various places in the campus.

Inputs area also obtained from parents during the parent teacher meetings conducted regularly.

Mentorship also helps the students to share their grievances with the teachers.

6.2.8 Does the institution have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

Every department obtains feedback from the students on various aspects of teaching learning and evaluation. Based on these feedbacks departments modify their strategies to meet the students needs.

Students share inputs informally with their mentors which are also conveyed to the heads of the departments. Feedbacks are obtained from parents too.

Informal feedback from the passed out students and organizations were they are employed also helps us in the performance of the organization.

6.2.9 Does the institution conduct performance audit of the various departments ?

All departments submit department progress to the university. Audit on these reports are conducted annually. Academic audit is also conducted by the IQAC.

Performance audit of faculty of the department are obtained annually both as self appraisal and from the heads of the department.

6.2.10 What mechanisms have been evolved by the institution to identify the developmental needs of its affiliated / constituent institutions?

Need assessment are conducted before any new academic program or service is planned through a department.

Periodic update as per the revisions from the regulatory bodies are also utilized to develop the departments.

Inputs from experts (academia and industrial) are given priority in the development of departments.

6.2.11 Does the institution and hospital have their own updated websites ? If so, is the

information regarding faculty and their areas of specialization, days of availability, timings, consultation charges available on the website ?

The inhouse IT department periodically updates the website of the University and the hospital. Information regarding faculty and their specializations are available on the website.

6.2.12 What are the feedback mechanisms and documentations to evaluate the outcomes of these exercises ?

Students	Through formal and informal feedback and inputs through mentors and teachers
Faculty	Through Heads of the department in departmental meetings. College council meetings
Patients	Feedback and suggestion box
Parents	Parent teacher meetings and other informal meetings
Community	Through community heads and NGO working in the community. Public relations officer and marketing team constantly interact with community leaders to learn about their requirements and feedbacks.
Experts from academia and industry	During meetings in various boards as well as feedback from examiners and visitors to the university. From campus interview agents and educational exhibition organizers as well. Through the medical education unit, monthly meetings are held in various departments with external resource persons. Chettinad Lecture series has also been introduced to invite eminent academician/researcher of excellence to deliver lecture periodically.
Interaction among stakeholders (clinicians, support departments and students)	Clinical society meetings, Death audit, Interesting clinical cases, Journal clubs, Interdepartmental meetings

6.3. Faculty Empowerment Strategies

6.3.1 What efforts have been made to enhance the professional development of teaching and non-teaching staff ? What is the impact of Continuing Professional Development Programs in enhancing the competencies of the university faculty?

- Medical Education Unit of Chettinad Hospital and Research Institute conducts Faculty development program annually under the ageis of Christian Medical College Vellore, the MCI regional centre for medical education with which the institute has been aligned with.
- Faculty are also periodically deputed for training from the MCI regional chapter, CMC, Vellore, these faculty act as resource person for inhouse training program.
- Research methodology workshops are also conducted periodically in

the campus and faculty interested attend the same.
- Seed money is given to faculty to carry our research
- All administration support are provided for faculty to submit and conduct their proposals for extramural funding
- Support in the form of consumables, utilization of hospital instruments at subsidized cost, use of instruments at central research facility with nil charges are also provided for faculty interested in research.
- Faculty are encouraged to register for part time PhD program under the university.
- Academic recharge programs like Continuing Medical Education, Continuing Nursing Education, Clinical Society meetings, Research Seminars are also conducted periodically.
-

	2010	2011	2012	2013	2014	2015
CME	20	22	36	41	55	25
CSM	18	14	26	33	61	27
CNE	6	10	6	13	15	12
Research Seminar	1	9	8	8	6	6

Non-teaching staff too have development programs conducted regularly

Event	2011-12	2012-13	2013-14	2014-15
Programs for Non-teaching staff (Admin, Nurses, Technicians)	10	74	45	4

- Apart from this before the introduction of new technologies both academic and administrative, faculty and staff are trained in these processes.
- Other programs conducted including Fire safety, Disaster awareness program, etc.,
- These programs have made the faculty not only enrich themselves but also provide them with opportunity to put them to effective use. This has helped in the overall growth of the institution and develop a sense of belongingness with the organization among the employees.

6.3.2. What is the outcome of the review of various appraisal methods used by the institution? List the important decisions.

Faculty and Staff clearly define their Key Result Area (KRA) in the beginning of the year in consultation with their heads. Annual appraisal both self and from the heads are utilized for increment and promotions. Identification of the KRA gives the faculty/staff a sense of direction and also motivation to work towards the set goal in a time bound manner.

6.3.3. What are the welfare schemes available for teaching and non-teaching staff ? What percentage of staff have benefitted from these schemes in the last four years? Give details.

Teaching	▪ Group Insurance
Non teaching	▪ Subsidized medical care
Students	▪ Air conditioned subsidized transport facility
	▪ Earn while you learn
	▪ Fee concession
	▪ Support for physically challenged
	▪ Research scholarship for students
	▪ Career counseling, Carrier guidance & Placement cell
	▪ Entertainment – Free movie screening every fortnight

- Financial support are given to departments for hosting conferences / seminars
- Chettinad Lecture series enables departments to invite eminent personality to deliver lectures
- Fellowships with free boarding and lodging facility and consumables provided for full time PhD Scholars
- Staff quarters and Nurses quarters are also provided within the campus

6.3.4 What are the measures taken by the institution for attracting and retaining eminent faculty ?

Eminent faculty are identified both by the concerned department heads and the institution head and invited to join the organization. Senior faculty with years of experience from Governmental institutions have joined Chettinad Academy of Research and Education for the facilities, autonomy provided to them in the field of teaching, research and patient care. Most of the faculty of the institution have been right from its inception. The other important criteria for any individual would be timely disbursement of monthly salary and this institution has been on time with payment of salary to all its employee.

Eminent faculty are also invited as Visiting faculty of the University. These visiting faculty visit the institute periodically, deliver lectures and also train faculty and students in their area of expertise.

Guest lectures are delivered by eminent faculty from other institutions regularly.

6.3.5 Has the institution conducted a gender audit during the last four years ? If yes, mention a few salient findings.

Though the institution has not conducted gender audit, the proportion of female sex in all the sections of the university is higher than male. Women are members in various committee of the University. Women's day is celebrated annually. On this day women specific health check up like pap smear tests are offered free to all female employees of the university and of the community.

6.3.6 Does the institution conduct any gender sensitization programs for its faculty ?

Yes

6.3.7 How does the institution train its support staff in better communication skills with patients ?

Hospital support staff are given training in communication skills periodically.

On job correction are also made by peers and department heads.
Professional development programs organized in 2014-15:

S.No.	Date	Theme of the program	No. of beneficiaries
1	21.02.2014	NABH Awareness programme	19
2	13.02.2014	Nurses Role, Patient Safety, Quality	59
3	27.05.2014	Leadership in Nursing	43
4	05.01.2015	NAAC Awareness Programme	27
5	25th Feb to 28th Feb 2015	Workshop on "Internal Audit & Quality Management System" as per ISO 15189:2012" in association with Foundation for Quality India, Bangalore Module 1: Refresher course Module 2: Certificate Course At Chettinad hospital & research institute, Chennai.	33

6.3.8. Whether the research interests of teaching faculty are displayed in the respective Departments ?

Yes. Research activities in every department are displayed in the departments

6.3.9. Do faculty members mentor junior faculty and students ?

Senior faculty members act as resource person in Faculty development program and Research methodology workshops organized in the department to mentor junior faculty.

Heads of the department and colleagues mentor junior faculty on a one to one and is mostly need based in their teaching and evaluation methodologies and in the conduct of small group teaching and mentorship programs of the department. They are also mentored on their roles in clinical practice.

Mentorship program is available for all undergraduate programs in the university. Each faculty is assigned a fixed number of students to cater to their academic and other needs. This has been found to be very effective among the first year students to have a smooth transition from school to professional stream education.

6.3.10. Does the institution offer incentives for faculty empowerment?

Yes, The institution encourages faculty to empower them academically and clinically by attending various conferences and workshops by providing Academic leave. Faculty are sponsored for attending faculty development program organized by the MCI nodal centre, CMC,Vellore. In house faculty development programs are regularly conducted. All inhouse programs organized to empower faculty in various spheres do not have any registration charges.

6.4. Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism available to monitor the effective and efficient use of financial resources ?

Budgets are drawn at the commencement of each financial year and placed before the finance committee for approval. Actuals are drawn for each quarter and variance plotted against each budget and again placed before finance committee.

6.4.2 Does the institution have a mechanism for internal and external audit? Give details.

Yes Internal audits done on a regular frequency/concurrent basis by the internal audit team by Trust head office. External/ statutory audit handled by the independent statutory auditors.

6.4.3 Are the institution's accounts audited regularly ? Have there been any audit objections, if so, how were they addressed ?

Yes, Audit is done regularly. There has been no audit objection so far. Every audit query is addressed to auditors to the best of their satisfaction. Independent auditors report attached to the financials of each year (Annexure – 19)

6.4.4 Provide the audited statement of accounts with details of expenses for academic, research and administrative activities of the last four years.

(refer Annexure – 19)

6.4.5 Narrate the efforts taken by the institution for resource mobilization.

Internal resource mobilization in the form of college fees, consultancy, training and diagnostic services and voluntary contribution by donors. No external resource funding so far. Donations are received for scientific research activities.

6.4.6 Is there any provision for the institution to create a corpus fund? If yes, give details.

Yes, The Trust has created a corpus fund of Rs.5 crores.

6.4.7 What are the free / subsidized services provided to the patients in the hospital ?

Hospital tariff is free in most of the cases and subsidized in some of the cases. Free food is provided to patients. Outreach health camps are conducted free of cost.

6.4.8 Does the institutions receive fund from philanthropic organizations/ individuals towards patient care ? If yes, give details.

Yes, Very minimal upon specific request from the philanthropic organizations treatment to patients are rendered first, later such philanthropic organizations reimburse cost of such treatment.

6.4.9 Do patients from other states / abroad come for treatment, reflecting the unique quality health care provided by the institution?

Yes,

We have international patient from IRAQ, Sudan, UK, London, Kenya, Nigerian, Uganda, Germany, South Africa, Australia.

We have patients from maximum North and North-East states for different departments.

States like Odisha, West Bengal, Tripura, Assam, Jharkhand, Bihar And Uttar Pradesh. Other than those states we are also receiving patients from Andhra Pradesh, Karnataka, Kerala, Delhi and Maharashtra because lots of college students, migrant workers and IT professionals are staying around our hospital.

Departments like, General Surgery, OBG, Cardio, Cardio Vascular, Vascular Surgery, Medical Gastroenterology, Surgical Gastroenterology, Ortho Surgery, Neuro Surgery, Neurology, Urology, Nephrology, Dermatology, ENT, Dialectology, Pediatric, Pediatric Surgery and also for Preventive health checkups (MHC). We have all international quality health care & Services providing to them.

6.5. Internal Quality Assurance System
6.5.1 Does the institution conduct regular academic and administrative audits? If yes, give details.

Yes

Goals

1. To develop and implement a quality system to improve the academic and administrative standards of the University and Constituent colleges of Chettinad Academy of Research and Education.

2. To design and execute procedures that will assist institutional functioning towards constant quality improvement.

Plan of Action:

o Development and application of quality benchmarks/parameters for the various academic and administrative activities of the University.
o Conduct of periodical audit of academic and administrative activities of the University.
o Obtaining and analyzing of feedback from various stake holders towards improvement in quality.
o Dissemination of information on the various quality parameters of higher education.
o Organization of workshops, seminars on quality related themes.
o In terms of UGC Regulations 2010, IQAC shall act as the Documentation and Record-Keeping cell of the University.
o Preparation of Annual Quality Assurance Report (AQAR) to be submitted to National Assessment and Accreditation Council.
o Conduct of regular meeting of IQAC members.

The institution conducts periodically academic and administrative audit

Year	Dates of Audit
2013	March
2014	June
2015	March

- Academic audits are also conducted at departmental levels by the heads of the department
- Audit of the constituent colleges are conducted by the Dean at the college

council

- Research advisory committee and the institutional review board monitor the research activities
- Ethics committee and the plagiarism standing committee oversee the ethical conduct of research
- Medical education unit conducts periodic faculty development program to update and enhance the quality of teaching faculty of the institute
- Anti-ragging committee of the university monitors and controls any ragging issues among the students of the campus.
- External experts in the various statutory committees (RAC, BoS, BoRS, etc) of the university offer valuable inputs for the development of institution
- Subjecting the departments of both the colleges to statutory council inspection helps in adhering to the guidelines of these councils
- Academic initiatives of the university are monitored by the Board of management, planning and monitoring board, Academic council and finance committee.
- All financial data of the university are audited by External auditors.
- In-house IT department ensures all quality standards are maintained in the use of ICT in all the academic and administrative initiatives of the campus.

6.5.2 Based on the recommendations of the Academic Audit, what specific follow up measures have been taken by the institution to improve its academic and administrative performance ?

- Documentation of departmental activities and achievements improved
- Feedback process streamlined
- Use of student centered teaching methodology emphasized
- Research based on available clinical data emphasized

6.5.3. Is there a central unit within the institution to review the teaching-learning process in an ongoing manner ? Give details of its structure, methodologies of operations and outcome?

The University has an active medical education unit. This unit has a co-ordinator to take care of all strategies to ensure that all faculty of the institute are trained in Faculty Development Program, either in the in-house programs or at the MCI Regional Centre (CMC, Vellore).

We also have a CME co-ordinator to oversee the weekly CME activities of the Institute.

6.5.4. How has IQAC contributed to institutionalizing quality assurance strategies and processes?

IQAC has been in place from 1.06.2010 and plays active role in the quality initiatives of the university. Members of IQAC are given in the institution website. (http://www.chettinadhealthcity.com/iqac/iqac_members.htm)

- Bench marking of quality indicators for various departments
- Conducted programs to sensitize and strengthen research potential of faculty and students
- Academic audit carried out for the year 2013-14

- Comparative data analysis on various parameters of the university has been carried out right from the date of inception of the University
- Obtaining feedback from various stakeholders and analysis of the same
- Suggestions on initiation of academic programs
- Streamlining of Outreach programs of the university

IQAC regularly organizes internal seminars and facilitate Academic Audit to help introduce and internalize quality initiatives of the university

Sl.N	Date	Theme	Resource Persons
1	05.09.2012	Choice Based Credit System	Dr.R.Murugesan, Director- AHS, CHRI.
		MCI Vision 2020	Dr.Balamurugan, Professor, Dept. of Pathology, CHRI.
		Curricular reforms in Nursing Education	Mrs.Stella, (Professor cum Programme co-ordinator for M.Sc. Nursing in the branch of Medical Surgical Nursing in the sub speciality of Cardio Vascular and Thoracic Nursing) Nursing, CHRI.
2	"Outreach - A Catalyst towards Improved Educational Outcomes" - A NAAC sponsored national seminar		
	28.09.2012	Tapping potential at source – Towards Quality in Higher Education	Prof. Dr.K.Nirmala, Prasad, Principal, MOP Vishnav College, Chennai
		Quality Indicators for Effective Outreach Activities	Prof. Dr.MG.Sethuraman, Director – IQAC, Gandhigraqm Rural Institute, DU.
	29.09.2012	Corporate Social Responsibility – Towards Quality in Higher Education	Ms.Vidya Shankar, Trustee, Shriram Foundations.
		Relevance of Outreach in Enhancing Quality in Health Science Institutions	Dr.Dr.N.Pandiyan, Head Reproductive Medicine, CARE.
3	Examination Reforms & Evaluation Tools		
	16.07.2013	Examination system: Yesterday, Today & } Tomorrow	Dr.E.Malligai, Professor & HOD, Dept. of Biochemistry, CHRI.
		Formative Vs Summative assessment: Need of the hour	Dr.R.Shyamala, Professor & HOD, Dept. of Physiology, CHRI.
4	March 2013	Academic and Administrative Audit	
5	16.08.2013 &	Basic Research	Dr.R.Raveendran, Professor of

	17.08.2013	Methodology Course – "Writing a study protocol" & "Dissertation Writing"	Pharmacology, JIPMER, Pondicherry.
6	07.09.2013	IQAC, MEU, Dept. of Pharmacology conduct one day workshop on "How to read a paper in a journal"	Dr.R.Raveendran, Professor of Pharmacology, JIPMER, Pondicherry.
			Dr.B Gitanjali, Professor of Pharmacology, JIPMER, Pudhucherry – 605006
7	22.01.2014 to 23.01.2014	Sensitization of Faculty and Students on scope and Potential for Extramural Research Funding	Dr. T. Balasubramanian,M.Sc., Ph.D., DMPC (UK) (Marine Biology) Professor, CAS in Marine Biology,Annamalai University, Parangipettai-608502
			Dr. D. Chandramohan, Ph.D., (Marine Micro biology) Senior Scientific Consultant, National Centre for Sustainable Coastal Management Ministry of Environment and Forest, Government of India, Anna University Campus, Chennai.
			Prof. Dr. T.J. Pandian, Ph.D, Dr.rer.nat., FASC,FNA, FTWAS Former National Professor, Madurai Kamaraj University, (Animal Sciences & Fish Genetics) Madurai-625014
8	June 2014	Academic and Administrative Audit	
9	28.8.2014	Seminar cum workshop on Plagiarism	Prof.R.Murugesan, Director, Allied Health Sciences, Chettinad Academy of Research and Education
			Prof.R.Padmavathi, Professor and Head, Dept of Physiology, Sri Ramachandra Univesity
10	20.11.2014	Seminar on Effective Mentorship Program	Prof.K.Ravindran, Vice Chancellor, Chettinad Academy of Research and Education
11	15.12.2014	Disaster awareness program	NDRF, Arakkonam, Team headed by Commandant, M.K.Verma
12	9 & 20.03 2015	Academic and Administrative Audit	
13	23.3.2015	Examination And	Prof.Dr.A. Nalini M.D Director -

		Evaluation Reforms In Health Sciences	Education Saveetha University
			Dr.E.Malligai, HoD-Biochemistry, CHRI
			Prof.Dr. Vijayalakshmi Thanasekaraan M.D Controller of Examination Sri Ramachandra University
14	23.7.2015	Practicing the uncertain art Teaching and Learning	Dr.S.Rangaswami, Professor of Eminence in Medical Education & Former Vice Chancellor, Sri Ramachandra University, Porur, Chennai – 600116. Category: Teaching and learning

6.5.5 How many decisions of the IQAC have been placed before the statutory authorities of the institution for implementation ?

The AQAR prepared by the university are regularly placed before the board of management for updating the quality initiatives of the university and approval of the report for submission to NAAC.

6.5.6 Are external members represented in the IQAC? If so, mention the significant contribution made by such members.

Yes. There are three external members in the IQAC

Dr.Anita Rajesh, Professor, CDCRI

Mr.Chanramouleeswaran, President CMSCM Private Limited

Mr.Ramesh, Legal Expert

External members have contributed in the following

- Inputs in the design of the IQAC website
- Organization of IQAC National seminar (Theme, resource person identification etc)
- Quality audits and feed back

6.5.7 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?

Data on students from disadvantaged sections of society is available with the University administrative office.

Incremental academic growth of these students is proposed to be conducted by the end of the 2014-15 academic year.

6.5.8 Are there effective mechanisms to conduct regular clinical audit of the teaching hospital? Give details.

Yes. Clinical audit are comducted at monthly intervals.

6.5.9 Has the institution or hospital been accredited by any other national/international body?

The clinical service laboratories are accredited by National accreditation of laboratories. (2009, 2011, 2013). Inspection for the year 2015 has been recently

completed.

6.5.10 Does the hospital have institutional and individual insurance schemes to cover indemnity claims?

Yes, (Available: Institutional and Students).

Criteria - VII

Innovations & Best Practices

CRITERION VII: INNOVATIONS AND BEST PRACTICES
7.1 Environment Consciousness

7.1.1 Does the institution conduct a Green Audit of its campus ?
Green Audit was conducted in the month of June 2014 in 2 phases. Exnora Green Pammal joined hands with UVK Rao Associates for conducting the Green Audit for the hospital. UVKA suggested a two phase study. The Phase-1of the study will include tips for saving energy in each area of work in the campus – Hospitals, Colleges, Hostels, Residential Quarters, Offices and Phase-2 being implementation.
The objectives of the Green Audit was
1. To identify ways to reduce waste and enhance its recycling efforts
2. To determine the potential for cost savings.
3. To create a baseline data to monitor the subsequent waste minimization activities
Proposals put forth by the Audit Team
1. Recovery of Recyclables
2. Food waste for biogas generation
3. Vermi composting and Windrow composting
4. STP Bio Gas plant for power generation
5. Briquette preparation from organic waste
6. Incineration of waste by swatch machine
7. Dump-yard management
Suggestions were also made in the following topics
Source Reduction: Methods or supplies that are less wasteful or generate less hazardous waste
Recyclable products : use of recyclable materials
Good management and control practices: In use of chemicals and pharmaceuticals
Waste Minimization: Reducing costs of purchase of goods and for waste treatment and disposal
Material usage reduction: Use of physical work rather than chemical / mechanical cleaning methods

7.1.2 What are the initiatives taken by the institution to make the campus eco-friendly ?
* Energy conservation
1. Lighting energy savers for lighting circuit installed
2. Replaced existing motors with EE(IE3) motors
3. Capacitors in load end to improve PF & reduce line losses installed
4. Installation of solar street lighting system under consideration

* Use of renewable energy
Proposal for establishing a 100 KW Solar Power Generation Unit has been put forward to the Management, which is under study.

*Water Harvesting:
Rain water harvesting has been implemented in all the buildings of the campus. Storm water drains have been constructed to collect all the rain water from others surfaces too. All these collected rain water are collected in the Lily pond at the north

east corner of the campus. Water thus collected during each rainy season fulfulls the water need of the campus for 3 – 4 months.

For the air condition requirement of the total campus, including operation theatres, ICUs, emergency services, lecture theatres, auditoriums etc 100% make up water for condensation is utilized from the STP treated soft water.

The Auditing Team had suggested for the following too
1. Install Condensate recovery in laundry and CSSD areas to save water
2. Optimize RO reject by matching RO high pressure flow to RO membrane design flow
3. Utilize STP treated water for cooling tower make up to save soft water consumption: in process, will be implemented in August.

*Solar Panels:
Solar power utilization is made in the form of Evacuated Tube Collectors (ETCs) which transfer heat from solar to water - circulating in the tubes of Solar Water Heaters (SWH). A total of 24 Nos. SWHs of 500 LPD capacity have been installed in 6 blocks (4 in Girls' Hostel and 2 in boys' Hostel) to meet the hot water requirement. In addition to this Heat Pumps of 6 Nos. of 2000 LPD capacity have been installed in the hostels.

*Efforts for Carbon Neutrality:
Wind mill generation is the main non-conventional method of power generation done by our Trust, on behalf of our Hospital. 9 Nos. 225 KW WTGs and 8 Nos. 230 KW WTGs are the main power generators for our hospital use. These WTGs correspond to 80 - 90 % of our Power Consumption.

*Bio-Hazardous Waste Management:
Generated Bio-hazards are being segregated and dumped in the dump-yard, which is being effectively cleared by a third party agency M/s. G.J. Multiclave, an approved agency by Tamil Nadu Pollution Control Board, upon an agreement with CHC.

*E-Waste Management:
Sources of E-waste in our campus are used batteries and PC Boards (mainly from Computers). These two are mainly given back (as buy back) from the suppliers of the respective items. Hence generation of E-waste is too low a quantity in our campus.

*Effluent Treatment and Re-cycling Plant:
Sewage Treatment Plant of 2 x 600 KL / day capacity plants are available at the western end of our campus. The treated water is maintained within the standards set by TNPCB – which carry out monthly testing. Our campus makes use of this treated water for the purpose of Gardening and also for condensing circuit of chillers.

*Recognition / Certification for Environment Friendliness:
In order to improvise our services and to fulfill the statutory requirements of the health services we are in line with meeting the requirements to get the ISO – 50001

certification. ISO 50001 gives organizations the requirements for energy management systems (EnMS). ISO 50001 provides benefits for organizations large and small, in both public and private sectors, in manufacturing and services, in all regions of the world. ISO 50001 will establish a framework for the entire organizations to manage energy. This standard could influence up to 60 % of the Institution's energy use.

*Any others:

- Heat recovery: From the AC plants, the condensation water will be recovered and with this, the hot water requirements of hostels, college, hospital will be fully met. The system is orderd and will be put to service from September 2015. With this installation energy will be saved, i.e. only minimal units will be spent or hot water generation in the campus.
- Within the campus pollution free zones have been identified were use of motorized vehicles is prohibited.
- In these areas bicycles and Battery Operated Cars (Maini) are provided for use of all to have free mobility within the campus.
- Cycles – 750 nos. have been provided with specific parking slots within the green zones for the students, staff and patients' visitors to commute.
- Entire campus is Cigarette smoke free zone
- The greenery of the campus has been established with a plantation of 7000 trees with nearly 16 varieties and more than 40 varieties of plants. Most of these plants require minimal water and offer good shade and greenery to the campus.
- The building structures have been made in such a way that departments and wards are well ventilated with the availability of natural light too.

7.1.3 How does the institution ensure that robust infection control and radiation safety measures are effectively implemented on campus ?

The hospital has Infection Control Committee. Roles of this committee includes the following

1. Monitoring of infections based on culture positivity in order to identify organisms causing infections among patients attending the hospital and to monitor the anti-microbial resistance pattern. The Antibiogram pattern is used to develop the antibiotic policy
2. Continuous surveillance of infections in order to identify outbreaks for which, appropriate control measures are undertaken.
3. Surveillance and reporting of notifiable diseases like Dengue, Typhoid, cholera.
4. Infection control manual development for the entire hospital
5. Infection control rounds to Operating rooms, ICUs, wards to check for compliance to the hospital infection prevention measures and to Biomedical waste disposal norms
6. Surveillance testing of Operating room, ICU, Wards
7. Drinking water surveillance
8. Educating personnel about the Principles of Infection Control and stressing individual responsibility for Infection Control.

9. Collaborating with the infection control nurse in monitoring and investigating potentially harmful infectious exposures and outbreaks among personnel & in Post Exposure Prophylaxis (PEP).

10. Continuous training and on going education is carried out for freshly recruited residents, nurses and housekeeping staff.

The institution has clearly defined radiation control policy. (Details provided in the Annexure - 20)

- AERB Guidelines are followed.
- Digital Radiography is used by the institute.
- Regular Calibration and maintenance of the equipments done.
- TLD Badges for the Technicians.

7.1.4 Has the institution been audited / accredited by any other agency such as NABL, NABH, etc. ?

The clinical laboratories of the Hospital are accredited by NABL(2009, 2011, 2013). Inspection for the year 2015 has been recently completed.

7.2 Innovations

7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the institution.

- Introduction of courses in emerging areas of health sciences at affordable fees. Students of these academic programs have found suitable job placements too.
- In-house developed Learning Management system for delivering learning 24X7
- Outreach activities – Corporate social responsibility – providing health care needs at the door step of villagers near and far from the institute.
- Eco-friendly Green campus

7.3 Best Practices

7.3.1 Give details of any two best practices that have contributed to better academic and administrative functioning of the institution.
Format for Presentation of Best Practices

I.   **Learning Management System – IT put to effective use in learning process**

1. **Title of the practice**
   Chettinad's Learning Management System.
2. **Objective of the practice**
   The objective of this Learning Management System is to deliver content to all students from a centralized location which would be available online 24/7. It would be a centralized location for the faculty, student and parents to monitor the progress of attendance, marks and educational content downloads. It would help the institution to maintain records of the students which would be easily track able.

3. **The context that required initiation of the practice**

The learning management system was developed to provide course materials to students from a central location. The idea was also to provide the sudents with these materials anywhere as long as they are connected to the internet. The enhancements would make course ware distribution, maintenance of records and management of students' records effective. Apart from the above, the necessity to measure the students progress, schedules was also one of the main requirement which initiated this system.

4. **The Practice**

Ever-improving technology, new rules and regulations, increased student demands, and a changing workforce are all factors that create an environment where professors must efficiently and effectively deliver and manage learning experiences for their students. These experiences must be easily accessible and easily tracked.

5. **Evidence of Success**

Centralized Learning Environment has Ensured Consistency

The LMS ensures consistency in delivery and evaluation since each user sees the exact same material in the exact same manner and can be evaluated through common pre-testing and/or post-testing methods.

An LMS allows users to easily design and deploy customized course-ware. This feature is especially important when hard topics are in for exams, previous years materials to be made available, or keeping track of students progress are significant. This feature also applies to updates to circulars and new rules. Students can no longer say, "no one told me that…" or "no one ever gave it to me…" and make education very transparent.

Tracking and Reporting for Enhanced Performance

The LMS allows students to view all required learning path, track progress against the learning path, review records of examinations and attendance, and ask doubts online. Teachers can offer this material through various media including instructor-led videos, slide shows, or video conferencing. Institution can access the same records of success and can also analyze the records data to determine areas of success and areas for needed improvement.

Immediate Capabilities Evaluation

The LMS allows users to be evaluated prior to taking an assignment, while participating in the course, and upon topic completion. Teachers can evaluate retention by periodically administering scheduled assessments via the LMS. They can review the records of results to determine success levels and actual time taken to complete each course and its components. Apart from the above the student usage of this facility is also measured for its effectiveness.

Continuous Product and Service Proficiency for Employees who Interact with Customers and Clients

The LMS provides a central point for the institution to change information, specifications, requirements, forms, and to allow easy uploading of new content or assignments. Students will access the same training courses and the same evaluation materials. Teachers set predetermined course completion dates and monitor the number of students downloading the course at any given

point in time. The LMS also allows Teachers to administer updates and evaluations online and assess knowledge levels and abilities.

6. **Obstacles faced if any**

The learning management system had limited features as common to those distributed around the world. The commercially available learning management system does not have modules like Attendance, Shopping Cart and Searches. To overcome these obstacles, we custom developed our own Learning Management System which could integrate any kind of module on demand.

7. **Resources Required :**

A computer with any operating system which has a browser Internet connectivity with a minimum speed of 128 kbps

One server with basic features

Software-Visual basic run time

Manpower – 4 (for ppt preparation)

II. **Commitment to society: Chettinad Academy of Research and Education Outreach program**

1. **Title of the Practice:**

Chettinad Academy of Research and Education, Outreach Program

2. **Objectives of the Practice:**

- To provide the under privileged rural population with cutting edge health technology in good health practices preventive, palliative, curative and promotive services.
- To make Health care accessible to the rural population.
- To enable students of CHRI, CCN & AHS to gain experience of health care set up at the primary health care / grassroots level
- To enable students to have a first hand glimpse into the way of life of rural masses, and thus develop a holistic outlook on medical and nursing practice.
- To create the foundation of an efficient health management information system using data collected in outreach services.
- To enable the logistical infrastructure for community based research projects.

3. **The context that required initiation of the practice**

Patient needs - Service gap:

The Chettinad Health City is located in a rural area. The villages here are mainly served by primary Health Centers, which are not equipped to offer good health care with high health technology. The outreach programs thus fill this service gap which is created and allows the rural population to avail of cutting edge health technology at affordable cost without having to travel long distances.

Research/Teaching/Academic needs:

Chettinad Academy of Research and Education students are exposed to the rural health set up. They get a glimpse of life of the Indian masses, and have developed a more holistic outlook towards the practice of medicine and

nursing in community settings. They are thus able to empathize with patients and build confidence in their patients.

The information collected in various outreach programs helps to build up a data base of health statistics for the area. This is the need of the hour as far as operations and maintenance of rural health information and management systems are concerned.

The outreach programs will also aid in conducting community based research studies.

4. **The Practice:**

Since 2010, the institute has conducted 2878 camps focusing on various problems pertaining to various health care.

5. **Evidence of success:**

Since 2010, the health camps conducted by Chettinad Academy of Research and Education is as follows –

Sl. No	Year	No. of Camps	Population covered
1	2010	380	38370
2	2011	574	44394
3	2012	514	52357
4	2013	580	57562
5	2014	520	58496
6	2015 (Till June)	310	36791
Total		**2878**	**2,87,970**

- Development of self reliance in the community by involving the self help groups village counselors.
- Preventive Health and general health awareness
- Awareness creation on Health and Hygiene
- School Health Program: Creating awareness of health and hygiene among school children.
- Care of underprivileged/Marginalized groups like the Irulas, Fishermen and construction workers.
- Progress in corporate social responsibility by involving various companies in our outreach programs.

6. **Obstacles faced if any**

- Poor awareness levels in the community: Tackled by active participation in all health camps, tie up with NGOs in spreading and creating awareness regarding health and hygiene
- Resource restrains: Various MOUs signed with corporate bodies, enabling the industries to discharge their Corporate Social Responsibility (CSR) duties and provides additional resources to the institute.
- Chettinad Academy of Research and Education, Kelembakkam is a central area, with patients coming from Chengalpet, Kalpakkam, Thirukazalikundram and Mahabalipuram. They face the hurdles of long distance travel.
- Strategy:
o The institute has developed two urban Health Centers (Karapakkam) catering to the needs of the population in these areas. Rural Health Center

is also maintained at Poonjeri which caters to a population of around 10,000.

- Affordability constraints for patients strategy
- o Free treatment packages.
- o Free treatment for senior citizens and physically challenged

7. Resources Required :

- Finance
- Transportation
- Manpower
- Equipment
- Training for doctors
- Allocation of Doctors/ Faculty for going to camp without affecting Out Patient / In Patient services
- Miscellaneous-for the camp beneficiaries mementoes and certificates for participants

III. **Eco Friendly Green Campus – Green Campus makes for a safer and healthier place to live and learn**

1. **Title of the practice**
   Eco Friendly Green Campus
2. **Objective of the practice**
   The objective of the green campus is to create a conducive ambience where environmentally responsible practice and education go hand in hand. This experimentation of the green campus concept offers the institution and its stakeholders an opportunity to take the lead in rethinking its environmental culture and developing new strategies for solving problems that are local, national and global in nature, such as reduction in energy consumption, reducing the carbon footprint and disposal of wastages.
3. **The context that required initiation of the practice**
   To build an effective environmental management system :
   - To create environmental accountability and responsibility
   - To reduce energy consumption and conservation
   - Better Water quality / use / conservation
   - Improve air quality
   - Safety and reduction in waste disposal
4. **The Practice**
   Greening the campus called for a thorough review of all our administrative and operational functions from the standpoint of human health and the environment. The following area of concern factor pertaining to our campus activities was taken into consideration and respective steps to enhance efficiency, reduce consumption, generation of wastage and process for creating a healthier environment is being implemented.
   Apart from those answered earlier we wish to add the following too in relation to this practice
   1. Green zone campus
   2. Pedestrian friendly pathways

3.   Bicycle friendly campus
4.   Pollution free battery operated vehicles for all
5.   Recycled water for gardens
6.   Usage of Solar energy
7.   Well ventilated (air and light) building structures
8.   Maintenance of noise limits within 75 db
9.   Optimal length of chimney stacks in DG Room and Kitchen

5.   Evidence of Success

In this initiative to support community-based vision of environmental justice and sustainable development, we have approached a state of lessening pollution with improved land-use decisions like suitably providing infrastructure for Patients' Visitors' waiting area, Students' Assembly area, Kids' Centre, Play grounds, Auditorium, Water and Sewage Treatment Plants etc.,). Proximity of patients and visitors to environmental hazards and exposure to risk have been kept well under control. Green campus with suitable pedestrian walking has also benefitted human health in terms of recreation, increased physical activity, reduced risk of obesity and health care and stress reduction.

In support to Nature herself, green space areas of our campus can reduce runoff-induced soil erosion, besides increase in water infiltration into the soil.

6.   Obstacles faced if any

Intentional and ignorant littering by visitors / attenders of patient, non-segregation of garbage – at source by semi trained attenders.

7.   Resources Required :

Formulation of an accomplished team to design and implement a landmark study that could serve a platform for the next generation of litter prevention. To develop methodologies for the general public towards creating awareness in preventing littering.

Enforcement of signage's, sketches and pictures to inculcate positive attitude in the public to prevent nuisance and to uphold cleanliness in the campus.

CHETTINAD ACADEMY OF RESEARCH AND EDUCATION

NAAC SELF STUDY REPORT

VOLUME I

LIST OF ANNEXURES

Annexure No	Details
1	Recognition from UGC Section 3 of UGC Act confirming the university status
2	Certificates of approval/recognition from statutory / regulatory bodies other than UGC (MCI, INC)
3	SIRO status by DST for research and development
4	Recognition from DSIR for grants and custom duty exception
5	Copies of the reports of Regulatory authorities (UGC, MCI & INC) and action taken there upon (last four years).
6	NAAC Accreditation certificate
7	NAAC peer team report
8	Laboratory time table
9	Rotation adopted for MBBS students
10	Awards received by faculty
11	Seminar, Workshop, CME organized
12	Lectures delivered by faculty of repute both nationally and internationally
13	Conferences organized by CARE
14	ICMR certificate for clinical trial registry
15	Publications and citations
16	Awards received by students
17	Details on the NSS of CARE
18	List of equipments
19	Audited income and expenditure statement of the University
20	Radiation safety Manual

STATEMENT OF COMPLIANCE (DEEMED UNIVERSITIES)

This is to certify that **CHETTINAD ACADEMY OF RESEARCH AND EDUCATION** has complied with all the provisions of the following Regulations governing it:

- UGC (Institutions Deemed-to-be-Universities) Regulations 2010 and further amendments, if any, notified by the UGC.
- DEC approval for distance education programme. (Not Applicable)
- Approval by the UGC and MHRD for main campus, off-campus and off-shore – as applicable. (Not Applicable)

Any false or misleading information provided by the institution, will be viewed seriously by NAAC and the accreditation given is liable to be withdrawn.

(K. RAVINDRAN)

Name and signature
with seal of the Vice Chancellor

VICE CHANCELLOR
Chettinad Academy of Research & Education

Date: 10/09/2015

DECLARATION BY HEAD OF THE INSTITUTION

This is to certify that the data included in the Self Study Report one true to the best of my knowledge.

This SSR is prepared by the institution after thorough internal discussion and no part of thereof has been out sourced.

I am aware that the peer team will validate the information given in the SSR during the peer team visit to the institution.

(Dr K. RAVINDRAN)

Name and signature
with seal of the Vice Chancellor

Date: 10|09|2015

Chettinad
Academy of Research & Education
(Deemed to be University Under Section 3 of the UGC Act 1956)

Accredited by NAAC

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