UNIVERSITY OF MADRAS

NAAC RE-ACCREDITATION 2013

SELF STUDY REPORT



SUBMITTED TO

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL [NAAC]

BANGALORE

2013

UNIVERSITY OF MADRAS

(Established under the Act of Incorporation XXVII of 1857 - Madras University Act 1923)
(State University)
Accredited at the "A Grade Level" by NAAC
Conferred with the **"University with Potential for Excellence"** Status by UGC

CHEPAUK, CHENNAI 600 005

Professor R. Thandavan
Vice - Chancellor

From the Desk of the Vice Chancellor

As a sesquicentennial institution, the University of Madras has preserved its tradition and ideals, even while keeping pace with societal and technological advancements. This motto has enabled the University to emerge as one of the strong pillars of the edifice of Indian Higher Education. As a present custodian of this premier institution, it gives me immense pleasure to present the significant contributions made by our University in the last five years.

The University of Madras was accredited with five star rating in 2000 and re-accredited with A grade rating in 2007. The University is one of the few universities to receive the University with Potential for Excellence. It has emerged as a top ranking institution in national level ratings by ***India Today, The Week*** and ***DST's H-index***.

The significant contribution made by the University of Madras is the result of sustained and dedicated efforts of all the stakeholders--members of the Syndicate, the Senate and the Academic Council, faculty, administrative staff, members from affiliated colleges, alumni and our beloved students. Some of our achievements include:

- Launch of new courses, setting up of new departments
- 112% overall increase in student enrolment
- Reaching the unreached through the Institute of Distance Education and formation of constituent colleges
- Promoting equity and access through Free Education Scheme, fee concessions, gender parity in admissions, and student support services

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- Collaborating with national and international institutions through 147 MoUs
- Harnessing technological advancements to offer virtual education, especially the Pan African e-Network project
- Encouraging holistic development of students through extension activities and receiving the Indira Gandhi National Award for the best NSS project
- Establishing benchmarks in research through 478 research projects and 2949 research publications
- Strengthening of physical and IT infrastructure, especially acquisition of scientific equipments to enhance the teaching-learning experience
- Preparing students to excel in the job market through placement activities and internship
- Ensuring transparency through e-governance

The various innovations and best practices outlined in this reaccreditation report bear testimony to the organized, transparent and collaborative functioning of the University.

Place: Chennai - 5
Date: 10.10.2013

(R.Thandavan)
Vice-Chancellor, University of Madras

SELF-STUDY REPORT

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Executive Summary

Established in 1857, the University of Madras is one of the first three universities in India and it has completed 155 years as a leading university and forerunner of Indian higher education. Standing splendid and serene are the red sandstone buildings of the University of Madras facing the aquamarine Bay of Bengal and listening to the ceaseless lullaby from its foamy white waves. This temple of learning has stood out as a beacon of knowledge for generations of the nation's youth who have served their motherland by shaping it from pre-independence to independence and the post-independence years. Starting out from being acclaimed as the Oxford and Cambridge in India, the University of Madras has held steadfast to its leadership in higher education by striving continuously to attain excellence. It is the mother of all universities of South India.

Mission of the University: ***"****Our Mission is to impart quality higher education in consonance with our motto '****learning promotes natural talent'****. We strive to develop citizens with knowledge, skills and character leading to societal transformation and national development. We aim at making our students, men and women who offer their selfless service for the progress of the country and people"*

Vision of the University: The University of Madras strives to achieve the following:

i. To contribute to the advancement of knowledge through teaching, research, publications and dissemination,

ii. To provide leadership in higher education by imparting quality and socially relevant knowledge,

iii. To make our education relevant and excellent,

iv. To promote educational programmes in various disciplines of knowledge with synergistic interaction with society and industry,

v. To develop aptitude and skills of students to equip them to face the challenges and needs of a fast changing society,

vi. To give greater opportunity to women and other weaker and socio-economically backward sections of the society in order to prepare them to be effective leaders,

vii. To make students conscious of their duty to the country and fellow human beings,

viii. To inculcate values of equality, unity and justice.

This renowned institution has distinguished itself by preserving its ancient heritage and simultaneously forging ahead with the changing times to make its presence felt in the globally competitive higher education by synergizing healthy practices with institutional management.

The University is proud to have among its alumni illustrious and eminent scholars like the mathematics genius Shri Srinivasa Ramanujan, two Nobel Laureates Sir C.V. Raman, Dr. S. Chandra Sekar, the first Governor-General of India, Shri C. Rajagopalachari, five former Presidents of Independent India – Shri Sarvepalli Radhakrishnan, Shri V. V. Giri, Shri Neelam Sanjev Reddy, Shri R. Venkataraman, Dr. A.P.J. Abdul Kalam, two former Chief Justices of India, Justices K. Subba Rao and M. Patanjali Sastri and Shri C. Subramaniam, a State and Central Government Minister and one of the three 'Fathers of Green Revolution'.

The University of Madras has been accredited by the NAAC with the celebrated "five star" accreditation status in September 2000 and reaccredited by the NAAC with "A" Grade in March 2007. It has the pride of being one of the first five Universities to be conferred with the status of University with Potential for Excellence by the UGC in the year 2003 and also one of the first few universities to continue the second phase of UPE by the UGC from April 2011. The UGC has also granted recognition to and is supporting the School of Life Sciences and School of Earth Sciences under Centre with Potential of Excellence in a Particular Area (CPEPA). The University has been ranked seventh among all Indian Universities and eighth among State Universities on "H-index", based on the research publications in science disciplines by the DST, Government of India scheme on the 'Promotion of University Research and Scientific Excellence' (PURSE) and funded since 2009-10. The popular magazine *India Today* in two successive years (2010 & 2011) ranked as fifth and the *Week* (July 2013) has ranked the University as seventh among the Universities in India.

The University of Madras is today a liberal arts and science University and has 68 teaching and research departments covering languages, humanities, social sciences, sciences and basic medical sciences. During the last six academic years (2007/8-2012/13), the University has made concerted efforts to enhance its excellence in teaching, research and extension activities. The unique and distinguishing feature of the University of Madras is that there is a separate department for each specialisation in subjects such as Bio-medical, Chemistry, Physics and Life Sciences besides Economics, Philosophy, Tamil and Indian Languages. The University offers postgraduate programmes not only in new and emerging areas such as Nano Science& Nano-Technology, Photonics and Bio-photonics, Bio-informatics, Actuarial Science, Spatial Information Technology, Cyber Forensics & Information Security, Financial Economics, International Business& Finance, International Relations but also continues its traditional courses such as Anthropology, Archaeology, Philosophy and Samskrit.

The University of Madras is one of the pioneers to introduce the Choice Based Credit System (CBCS) as early as in 1996-97. The CBCS has been further refined and improved by introducing soft skill courses, flexibility in elective courses, and mandatory internship. Under the revised scheme introduced in 2007-08, the total credits required for a two-year PG programme has been increased from 72 to 88. Adhering to the recommendations of the Tamil Nadu State Council for Higher Education (TANSCHE), the credit structure has been modified to bring in uniformity across universities, affiliated autonomous and non-autonomous colleges in Tamil Nadu. Under the new scheme, effective from the academic year 2008-09, the PG programmes require a minimum of 91 credits (credits for core 60, elective 21, soft skill courses 08 and internship 02). A student, depending on his/her interest and ability to cope with courses can choose seven electives from among the 400 electives offered by the University departments. Further, a student has to undergo a minimum of four courses (08 credits) from among a buffet of more than 20 courses under the soft skill category. It is mandatory to undergo internship of four weeks during the summer vacation of the first year. Similarly, all the 81 Boards of Studies have restructured and revised the syllabi for all the courses offered in the affiliated colleges adhering to 90 credits for two year PG programmes, 135 credits for three year PG programmes and 144 credits for UG programmes. Now all the courses of the University of Madras follow the semester pattern with CBCS system.

The University offers a total of 200 programmes through its departments, which includes 53 M.Phil, 90 PG (including one 5 year Integrated programme), 23 PG Diploma, 14 Diploma and 20 Certificate programmes. During the period under assessment, the University has introduced 64 new or updated programmes in emerging areas which include 05 M.Phil, 24 PG, 10 PG Diploma, 12 Diploma and 13 Certificate programmes. The University has a total of 194 approved programmes (19 M.Phil, 77 PG, 76 UG and 22 Diploma and Certificate programmes) from which the affiliated colleges can choose to offer. To enhance the employability skills of students, curriculum innovations have been made by restructuring all the 81 Boards of Studies which were reconstituted with experts from industries and non-academic sectors representing one third of the members. As per the ordinance, the Boards meet twice a year to transact academic work. The Chairperson is empowered to co-opt two student representatives from the University departments or from the affiliated colleges offering PG courses during specific meetings as and when necessary with the prior permission of the Vice Chancellor. The revised curricula for affiliated colleges enables the teachers to carry out continuous internal assessment, ensures flexibility in choosing courses, mobility and compatibility across institutions and provides opportunity for students to choose elective courses. The Institute of Distance Education has 28 Boards of Studies and it offers 29 UG, 25 PG, 19 Professional and 31 Diploma/Certificate programmes. The Internal Quality Assessment Cell (IQAC) has a well-tested instrument to get feedback about the courses/ programmes and the feedback is used to introduce new ones and modify the existing ones.

The University has also initiated several steps to attract foreign students. The foreign applicants are exempted from appearing for entrance examinations and are admitted under 15% supernumerary seats of the permitted intake. The University Centre for International Relations (UCIR) has widened the academic spectrum and internationalised higher education, and also facilitated MoUs with 127 foreign Universities/Institutions and several Indian universities to facilitate transfer of credits.

The student admission at the University of Madras is based purely on merit and the University scrupulously implements the reservation rules of the State Government. The demand ratio for PG programmes has increased from 1.2 to 1.6 during the assessment period. The number of students enrolled in PG programmes of the University departments has increased by 40%, that is, from 972 in 2007-08 to 1356 in 2012-13. The men to women enrolment ratio has reverted from 1:0.91 to 1:1.05. Another important change in enrolment trend is the entry of more students from marginalised groups (SC/ST, OBC) and many of them are rural and first graduates of the family. The courses are designed so as to cater to the student diversity and their ability to cope with the programmes. The faculty members adopt innovative teaching methods combined with the ICT and digital technology.

To enhance the teacher quality, the University offers Orientation and Refresher courses through the Academic Staff College, supports faculty in organising Seminars and conferences, provides travel support for attending conferences within and outside the country and has introduced annual self-appraisal system. The number of faculty members who received honours and awards has increased from eight in 2007-08 to 22 in 2012-13. The examination and evaluation system has also improved. To ensure transparency in examination, the course faculty is given the full responsibility for designing the courses, teaching and evaluating the student performance in the examinations.

The University has been making concerted efforts to support high quality research among its faculty members and students. The state-of-the art infrastructure facilities are available for students and faculty members to carry out research in cutting edge areas. A testimony to this is the approval of the UGC-UPE phase II programme with a sanction of upto Rs. 50 crores and recognition accorded to the School of Life Sciences and Earth Sciences with a grant of Rs. 5.5 crores under the UGC-CPEPA and support extended to 29 departments under UGC DRS/DSA programmes of CAS, SAP, ASIST, ASIHSS and Innovative Programme and 11 departments under the FIST programme of the DST, Government of India. A total of 478 individual research projects were sanctioned and the total research grant received during the assessment period is Rs. 95.42 crores. The University also succeeded in attracting about 48 consultancy projects with a total budget of Rs. 1.91 crores.

The University's record of publications is quite impressive. The number of publications has increased from 372 in 2007 to 524 in 2012. With a total of 3048 publications reported over the past six years, 1187 were in refereed national and international journals. The average impact factor of top 100 articles is 2.5 and 15 articles are published with high impact factor of 4 and above. 14 patents were filed during the assessment period. According to the DST H-index based on the publications of the science departments, the University's score has increased from 44 to 59. The University departments conducted 1046 conferences / seminars and workshops mainly with funding support from the University and the faculty and students presented over 4,000 papers including keynote addresses in national and international conferences.

The physical and IT infrastructure of the University has expanded to match the requirements of curriculum, pedagogy, research, extension and student related services. The five buildings under construction during the earlier assessment period have been completed and a total of 15 construction works at an estimated cost of Rs. 127 crores are now at various stages of construction. This includes three hostels (for women, research scholars, and international students), five academic blocks, an animal house, entrance arch, compound walls and indoor stadium. The University has established Wi-Max connectivity for Virtual University programmes and online learning system for Pan-African network with funding support from MHRD. Language labs and Video-conferencing facilities have been created with financial support from the Government of Tamil Nadu. The University has considerably enhanced its IT resources and lab equipments by investing Rs. 15.51 crores, besides additional amount by way of replacing and maintenance of the infrastructure for the past six years. The annual budget for the purchase of books and journals has increased from Rs. 1.2 to Rs.1.4 crores. The University has also established two constituent colleges to reach the remote communities.

The University provides several student support programmes such as Earn While You Learn, University Research Fellowship, travel support to present papers in conferences/seminars, Free Education scheme, campus interviews and job fairs, coaching for UGC-NET and other competitive examinations. Besides e-learning resources, internet access, library resources, hostels, sports facilities, NCC, NSS etc. enable the students make best use of their time. The number of students finding jobs through campus placements has considerably increased. During 2011-12, 593 candidates were recruited by various leading companies.

The University's governance structure has been improved with 'checks and balances' in functioning and by utilising the collective wisdom in decision making. The University receipts witnessed a threefold increase from Rs. 250 crores in 2005-06 to Rs. 863 crores in 2011-12. It is noteworthy that the corpus fund increased form Rs. 109 crores in 2007-08 to Rs. 313 crores which is an indicator of efficient management of the University finances. The Information and Communication Technology (ICT) tools have been increasingly deployed to enhance the e-governance benefits. The examination process starting with registration to submission of marks by faculty members have been brought under the e-governance. The Planning and Development Board, consisting of

eminent persons from outside and also from within the University plays an active role in drawing up long term plans. The decision making process is further decentralised by establishing two campus offices (at Chepauk and Marina) with statutory powers on similar lines to that in Guindy and Taramani Campuses. The University has an effective financial audit, grievance redressal system, staff training programmes, Academic Staff College and welfare schemes for staffs and students.

The University has been adhering to best practices such as rule of law, merit, discipline, professional ethics, excellence in teaching and research, selflessness, integrity, objectivity, openness, honesty etc. which are part of its long tradition and culture. The re-emergence of the University of Madras as a model Indian University has been due to institutionalizing healthy practices by the University at faculty, students and administrative staff levels. Some of the new practices include eco-friendly campus (Energy conservation, renewable energy, rain water harvesting, carbon neutrality, plantation and e-waste management), grievance redressal systems (women sexual harassment redressal cell, anti-ragging committee, green box and VC email), student safety insurance, group insurance for the staff of the Madras University, free education scheme, single window admission in the IDE, provision for soft skill courses, industry internship, travel grants, facilities for the differently abled, reservation in Ph.D admission, and increase in intake in all PG programmes to benefit women and minorities besides, Placement Cell, student representation in BoS and IQAC. It is to be noted that no incident of ragging has been reported in the University campuses.

The University of Madras is successfully marching ahead into the competitive globalised era to transform educated youth as employable youth and to provide leaders in academic and research arena. With the primary objective of converting talents in higher education into resources, the University of Madras, based on its accrued strength, is emerging as one of the pillars of the edifice of Indian Higher Education.

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(Established under the Act of Incorporation XXVII of 1857 – Madras University Act 1923) (State University)
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CHEPAUK CAMPUS, CHENNAI – 600 005

Profile of the University

1. Name and Address of the University

Name:	**UNIVERSITY OF MADRAS** **Centenary Building, Kamarajar Salai, Chepauk**	
Address:		
City : **CHENNAI**	Pin: **600 005**	State: **TAMIL NADU**
Website: www.unom.ac.in		

2. For communication

Designation	**Name**	**Telephone with STD code**	**Mobile**	**Fax**	**Email**
Vice Chancellor	Prof. R. Thandavan	O:044-25399401 R:044-22351311	+919444060770	+914425367654	vchome@gmail.com
Registrar-in-charge	Prof. G. Koteswara Prasad	O:044-25361055 R:044-24758484	+918939221199	+914425360749	registrar@unom.ac.in
Steering Committee / Coordinator	Prof. P. Duraisamy	O: 044-25399639	+919600177609	+914425360749	pduraisamy@hotmail.com
IQAC Director	Prof. R Jaganathan	O: 044-25399661	+919444917006	+914425360749	rjnathan@gmail.com

3. Status of the University

State University	✓
State Private University	
Central University	
University under Section 3 of UGC (Deemed University)	
Institution of National Importance	

4. Type of University

Unitary	
Affiliating	✓

5. Source of funding

Central Government	
State Government	✓
Self-financing	
Any other (please specify)	

6. a. **Date of establishment of the University**: 05.09.1857 by an Act of Legislative Council of India

b. **Prior to the establishment of the university, was it a/an**

I.	PG Centre	Yes		No	
II.	Affiliated College	Yes		No	
III.	Constituent College	Yes		No	
IV.	Autonomous College	Yes		No	
V.	Any other (please specify)	***			

*** The University Board was constituted in January 1840 with Mr. George Norton as its President. The High School [Department of University] was established in 1841. This was the precursor of the present Presidency College. However, a systematic education policy for India was formulated only after 14 years by the historic dispatch of 1854[Wood's Education Despatch], which pointed out the rationale for "Creating a properly articulated system of education from the primary school to the University." The Despatch recommended the establishment in the Universities of Professorships for the purposes of the delivery of lectures in various branches of learning including vernacular as well as classical Languages." As a sequel, the University of Madras organized on the model of London University, was incorporated on 5th September 1857.

7. Date of recognition as a university by UGC or any other national agency

Under Section	dd	mm	yyyy	Remarks
i. 2f of UGC*	-	-	-	Since 1956 from the inception of UGC
ii. 12B of UGC *	-	-	-	
iii. 3 of UGC #				
iv. Any other ^ (specify)				

8. Has the university been recognized

a. **By UGC as a University with Potential for Excellence**?

Yes [✓] No [ ]

If yes, date of recognition: 10.02.2003

b. For its performance by any other governmental agency?

Yes [✓] No [ ]

If yes, date of recognition: DST - PURSE – October 2009

9. Does the university have off-campus centres?

Yes [ ] No [✓]

10. Does the university have off-shore campuses?

Yes [ ] No [✓]

11.Location of the campus and area

	Location (Urban)	**Campus area in acres**	**Built up area in sq. mts.**
i.Main campus area	Chepauk	18.07 acres	64069.52 M^2
ii.Other campuses in the University	Marina Campus	02.61 acres	05573.75 M^2
	Ramanujam Institute Campus	01.95 acres	05910.00 M^2
	Chetpet Campus	09.30 acres	03347.50 M^2
	Maduravoyal Campus	04.47 acres	00871.56 M^2
	Taramani Campus	48.28 acres	08450.58 M^2
	Guindy Campus	41.63 acres	33190.73 M^2
Total		**126.31 acres**	**121413.64 M^2**

12. Provide information on the following: In case of multi-campus University, please provide campus-wise information.

- **Auditorium/seminar Hall complex with infrastructural facilities:**

Chepauk Campus

Centenary Auditorium	3500 seats
F50 (Senate hall)	250 seats
G.33 hall	400 seats

Marina Campus

Platinum Jubilee Auditorium	140 seats

Guindy Campus

Chemical Science Auditorium 180 seats

Taramani Campus

Dr A.Venugopal Auditorium 75 seats

- **Sports facilities**
  - Playground - Available
  - Swimming pool Not Available
  - Gymnasium Available
  - Any other: The University maintains a separate Sports Union at Chetpet with facilities for playing Cricket, Foot Ball, Track and Field [400 mtrs] Volley Ball, Basket Ball, Kabaddi and Hockey.

- **Hostel**
  - Boys' hostel
    i. Number of hostels : 3
    ii. Number of inmates : 150
    iii. Facilities: Basic amenities needed are provided viz. canteen, water, reading room, TV, dailies, internet and computer access
  - Girls' hostel
    i. Number of hostels : 3
    ii. Number of inmates : 326
    iii. Facilities Basic amenities needed are provided viz. canteen, water, reading room, TV, dailies, internet and computer access
  - Working women's hostel : Nil

Residential facilities for faculty and non-teaching

The University of Madras has been allocating necessary funds in the Budget Estimate for each financial year to provide housing loans to Teaching / Non-Teaching Staff Members. Earlier the University has acquired 48.0 acres of land in Palavakkam, ECR, Chennai and developed 313 allotted constructed Home/Plots to the administrative employees.

- **Cafeteria:** Available in all 4 campuses. In addition, new canteen to the tune of 5000 Sq. ft. is under construction at the Chepauk campus.

- **Health Centre** – Nature of facilities available – inpatient, outpatient, ambulance, emergency care facility, etc.:

  The University Medical Centre is functioning in the premises of the library Annex complex. The staff and students of the Madras University visit the centre for various ailments like Diabetes, Hypertension, Heart disease, fever and any medical emergency. The Medical centre also provides medications for the employees for various diseases, and is managed by a senior physician. The centre has facilities for computerized E.C.G. and Emergency blood glucose monitoring. About 5000 patients visit the Medical Centre every year. The Medical Centre is supported by technicians who dispenses medicines and has the knowledge to take E.C.G. and determines blood glucose by glucometer. The Medical Centre also has an experienced Staff Nurse who manages patients during emergencies especially if the patient is female. The Centre also has a bed for temporary monitoring of BP/Chest pain and other emergencies before shifting to other hospitals.

- **Facilities like Banking, Post Office, Book Shops.**

  Banks, Post office, SBI, Indian Bank ATMs and University Publications Division are located in the campus.

- Transport facilities to cater to the needs of the students and staff:

  Two buses to transport students and staff across the campuses.

- Facilities for persons with disabilities:

  Lifts, Ramps, Wheel chairs. Toilets for differently abled are available.

- Animal house : Available [Two]
- Incinerator for laboratories : Available
- Power house : Available
- Waste management facility : Available

13. Number of institutions affiliated to the university

Type of colleges	Total	Permanent	Temporary
Arts, Science and Commerce	108	38	70
Law	NIL		
Medicine	NIL		
Engineering	NIL		
Education	NIL		
Management (Stand alone)	16		16
Others (specify and provide details) - Approved institutions	08		08

14. Does the University Act provide for conferment of autonomy (as recognized by the UGC) to its affiliated institutions? If yes, give the number of autonomous colleges under the jurisdiction of the University

Yes [✓] No [ ] Number [21]

15. Furnish the following information

Particulars	Number	Number of Students
University Departments Undergraduate Post graduate Research centres on the campus	 NIL 68 04	 I Yr-1361, II Yr-1413
Constituent colleges	02	371
Affiliated colleges	106	74,961
Colleges under 2(f)	36	45,873
Colleges under 2(f) and 12B	32	41,565
NAAC accredited colleges	27	38,755
Colleges with Potential for Excellence (UGC)	02	4,898
Autonomous colleges	21	31,715
Colleges with Postgraduate Departments	82	10,420
Colleges with Research Departments	42	
University recognized Research Institutes/Centres	48	1272
Institute of Distance Education	-	1,29,506

16. Does the university conform to the specification of Degrees as enlisted by the UGC?

Yes [✓] No [ ]

If the university uses any other nomenclatures, please specify – Not applicable

17. Academic programmes offered by the university departments at present(2012-13), under the following categories: (Enclose the list of academic programmes offered)

Programmes	Number
UG	-
PG	89
Integrated Masters	01
M.Phil.	53
Ph.D.	68
Integrated Ph.D.	-
Certificate	20
Diploma	14
PG Diploma	23
Institute of Distance Education	80
Any other (please specify)	
Total	348

List of Programmes offered is given in Table 1, Page 6 to 15 of the SSR

18. Number of working days during the last academic year 2012-13 208

19. Number of teaching days during the past four academic years. (2008-09 to 2011-12)

180	182	181	184

('Teaching days' means days on which classes were engaged.

Examination days are not to be included)

20. Does the university have a department of Teacher Education?

Yes ✓ No

If yes,

a. Year of establishment …1976
The department was established prior to the formation of NCTE. However, the University of Madras has obtained necessary recognition from the National Council for Teacher Education for its PG. course

b. NCTE recognition details (if applicable)
Notification No:F.TN/SRO/NCTE/2004-04/7213 Dated: 13.09.2004

c. Is the department opting for assessment and accreditation separately?

Yes No ✓

21. Does the university have a teaching department of Physical Education?

Yes ✓ No

If yes,

a. Year of establishment 1932

b. NCTE recognition details (if applicable) : **Not applicable**

Notification No.: **Not applicable**

22. In the case of Private and Deemed Universities, please indicate whether professional programmes are being offered?
Not applicable

23. Has the university been reviewed by any regulatory authority? If so, furnish a copy of the report and action taken there upon.
University has been reviewed periodically by the UGC for funding UPE Schemes apart from reviewing of the performance of the University during the plan period.

24. Number of positions in the university

Positions	Teaching faculty			Non-teaching staff	Technical staff
	Professor	Associate Professor	Assistant Professor		
Sanctioned by the UGC / University / State Government	94	129	284	1113	196
Recruited	55	20	146	657	87
Yet to recruit	39	109	138	456	109
Number of persons working on contract basis	-	-	-	34	

25. Qualifications of the teaching staff

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.	02	-	-	-	-	-	02
Ph.D.	64	18	14	04	83	23	206
M.Phil.	-	-	-	-	05	04	09
PG	-	-	-	-	03	01	04
Temporary teachers[Teaching Research Fellow/Guest Lecturers]							
Ph.D.	-	-	-	-	-	-	61
M.Phil.	-	-	-	-	-	-	00
PG	-	-	-	-	-	-	50
Part-time teachers							
Ph.D.	-	-	-	-	-	-	81
M.Phil.	-	-	-	-	-	-	00
PG	-	-	-	-	-	-	32

26. Emeritus, Adjunct and Visiting Professors. NIL

	Emeritus	Adjunct	Visiting
Number	-	-	-

27. Chairs instituted by the university: Nil

28. Students enrolled in the university departments during the current academic year, with the following details: 2012-13

Students	UG	PG	Integrated Masters	M.Phil.	Ph.D.	Integrated Ph.D.	D.Litt. / D.Sc.	Certificate	Diploma	PG Diploma
	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F
From the state where the university is located		M-543 F - 542		M-172 F-193	**F.T.** M-83 F-85 **P.T.** M-16 F-12			M-2 F-0	M-6 F-10	M-31 F-32
From other states of India		M-112 F- 153								
Foreign students		M-2 F-9								
Total		1361		365	196			0	16	63

*M-Male *F-Female

29. 'Unit cost' of education

(Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

(a) Including the salary component = Rs. 2,40,110/-

(b) Excluding the salary component = Rs.1,35,289/-

30. Academic Staff College

- Year of establishment : 1987
- Number of programmes conducted (with duration) during 2012-2013
  - * UGC Orientation : 05 [28 days duration]
  - * UGC Refresher : 15 [21 days duration]
  - * University's own programmes
    Short term courses/Training Programmes : 07 [2-6 days duration]
    Special Summer School : 01 [21 days duration]

Total Number of Participants : 1143

31. Does the university offer Distance Education Programmes (DEP)?

Yes [✓] No [ ]

If yes, indicate the number of programmes offered 105

Are they recognized by the Distance Education Council? Yes

32. Does the university have a provision for external registration of students?

Yes ☐ No ☑

Is the university applying for Accreditation or Re-Assessment? If Accreditation, name the cycle.

Accreditation: Cycle 1 ☐ Cycle 2 ☐ Cycle 3 ☑

Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)

Cycle 1: 20.09.2000, Accreditation outcome/Result: FIVE STAR
Cycle 2: 31.07.2007, Accreditation outcome/Result: 'A' GRADE

33. 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

COLLEGES	NAAC Accredited
Constituent	Nil
Affiliated	24
a. Autonomous	15
b. Non-autonomous	09

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

IQAC July 2005

AQAR (i) 2007 - 2008 submitted
(ii) 2008 - 2009 submitted
(iii) 2009 - 2010 submitted
(iv) 2010 - 2011 submitted
(v) 2011 - 2012 submitted

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

The academic performance and achievements of the University during the current accreditation period (2007-2008 to 2012-2013) are given in detail in the self study report (SSR).

CRITERION I
CURRICULAR ASPECTS

CRITERION I

CURRICULAR ASPECTS

1.1 Introduction

The University of Madras, one of the first three Universities established in the year 1857, is an affiliating University with 132 affiliated/approved colleges and 48 research institutions. As a sesquicentennial institution, the University of Madras has to ensure the continuation of its long tradition even while taking cognizance of major changes in the national Higher Education policy, global developments, scientific and technological advancements and skills required/demanded by the industry and society at large. The curriculum design, development, implementation and enrichment processes ensure that global needs are met while taking care of the local, regional and national manpower requirements. The University strives to balance this spectrum of needs by constantly revamping the syllabi and re-designing the course structures. Expansion, Inclusion and Excellence are the core elements that reflect the University's Mission and Vision.

Through constant innovations, consistent quality enhancement and persistent value addition, the University strives to fulfil the mission and vision. Over the years, the University has created a system which ensures democratic decision making and flexibility to introduce innovations and changes to meet the current needs as well as to achieve the overall goals of the University.

The University of Madras not only offers conventional face to face education but also distance mode of education through the Institute of Distance Education (IDE) and virtual mode through Virtual University Programme which strives to light the beacon of education to learners who are not covered by the face to face mode of education.

1.2 Curriculum Design and Development

The curriculum design and development is the responsibility of the School Committee for the University departments and the Board of Studies (BoS) for the affiliated non-autonomous colleges. There are separate Boards of Studies for the programmes offered through the IDE.

Curriculum design under CBCS system

The Choice Based Credit System (CBCS) was introduced at the University of Madras way back in 1996-97. The CBCS system provides flexibility for both teachers and students. It permits the students to choose the courses of their choice, learn at their own pace, undergo additional courses, and adopt an inter-disciplinary approach to learning. The departments and the teachers have the flexibility to introduce new programmes and courses, improve and modify the existing course content and syllabus in tune with the changing needs of the industry and society.

The CBCS system has improved over a period of time based on the experiences of and feedback from the University departments. The programme/course is defined in terms of credits which in turn reflects the quantum of syllabus and determines the number of hours of teaching required per week for over 15 weeks of instruction in a semester. The courses are divided into core, elective, soft skill and self-study courses. The credit requirements and the structure of credit system have improved over the years. In the beginning (1996-97), the minimum number of credits required to qualify for a two year master's degree programme was fixed at 72 credits (54 credits in core courses and 18 credits in elective courses). Subsequently, the University wanted to train its students in soft skills such as spoken English, communication skills, computer applications, personality development and knowledge of foreign languages. The course structure has been modified to provide greater flexibility in electives and include courses on soft skills and internship as part of the curriculum with effect from the academic year 2007-08. Accordingly the credit requirement has been increased to a minimum of 88 credits (60 in core courses, 18 in electives and 08 in soft skills and 02 credits for summer internship of 04 weeks). The Tamil Nadu State Council for Higher Education (TANSCHE) has recommended a uniform credit structure for all UG and PG programmes offered in all universities and autonomous colleges in Tamil Nadu to facilitate student mobility across universities and colleges and make the quantum of study more or less the same across the Universities in Tamil Nadu. Based on that criterion, the following curriculum structure is followed with effect from the academic year 2008-09.

Table 1.1: Course Structure for PG Programmes with effect from 2008-09

Programme	Minimum Credits Required			Total Minimum Credits required
	Core	Elective	Soft skill and Internship	
PG (2- year)	60	21	8+2	91
PG (3-year)	90	30	12+3	135

The credit requirements for other courses are as follows: 36 credits for M.Phil / PG Diploma (one year programme), 18 for Diploma and 09 for Certificate courses.

The 68 teaching and research departments of the University are grouped into 19 Schools (Table 1.2). The School Committee plays the role of the Board of Studies (BoS) for the University Departments. All faculty members of all the departments within the school are members of the BoS. In addition, there is a provision to include nominees from the industry /society and student representatives. The Chairperson is nominated from among the heads of the departments of the respective Schools on rotation for a period of two years.

The curriculum based on the CBCS is designed by the respective Boards of Studies (BoS) for affiliated colleges. The constitution of the BoS follows the statutes of the University. The BoS designs, develops, and makes changes in the existing curriculum and syllabi. The BoS also prescribes the eligibility for a programme and recommends the teacher qualification based on the UGC norms to teach the courses. The chairperson of the UG BoS in a subject is one of the senior-most faculty in that subject from the affiliated colleges with the head of the department of the University department as an ex-officio member besides external subject experts and industry experts. The head of the department is the chairperson of the PG BoS. It also includes faculty members of the University departments, affiliated colleges, experts from other universities and from industry/government/society experts. The chairperson of the UG and PG BoS of the IDE is the head of the concerned department in the IDE or from the regular teaching department if no faculty is available at the IDE for that subject. In all, there are 81 Boards of Studies of which 50 are common boards and 17 are PG boards and 14 are UG boards. 185 meetings of BoS for colleges were held during the last six years. There are 29 BoS for the IDE programmes. The autonomous colleges have their own BoS with nominees from the University.

Approval of new programmes/Modification of existing programmes

One of the hallmarks of the CBCS system is the flexibility to introduce new programmes. The departments have the freedom to modify existing programmes and propose new programmes. There is a well established academic cycle, which the University departments and schools follow. New programmes are designed and developed by a department with inputs from external experts following the CBCS regulations in the months of October/November and are then discussed and approved at the departmental committee. Next, the accepted programmes are placed in the School Committee for discussion, revision before the end of December. The Dean (Academic) consolidates the new or revised programmes/courses received from the chairpersons of all the schools and the same are forwarded to the University for approval. These changes are placed in the Syndicate meeting and in the Academic Council meeting which is usually held in February every year. The Senate ratifies them in its meeting usually held in the month of March every year. Based on the decision of the Academic Council/Senate, the Dean (Academic) brings out a CBCS Handbook which contains the course regulations; programme-semester-wise list of core and elective courses and other information such as student facilities, conduct rules, scholarships and university academic calendar**.** The approved programmes are implemented in the following academic year.

CBCS for affiliated colleges

The CBCS was extended first to affiliated autonomous colleges and then to all PG programmes of the non-autonomous colleges with effect from

the academic year 2007-08 and to all UG programmes since 2008-09. The CBCS has been well received by all stakeholders because of its potential for multi skill development. In addition to subject knowledge, attention is given to skill development like computer, language, communication and oral and written presentation skills in seminars, assignments, etc. Courses on women's issues, ecology and environmental issues, human resource management etc. are some of the areas that the University focuses upon in the national interest. Besides, the add-on courses are a boon for multi skill development.

At present, all regular courses offered in the University departments and affiliated colleges are under the CBCS system. The courses for autonomous colleges are designed by the respective Boards of Studies.

Curriculum focus: Employability, innovation and research

The University modifies the existing courses, introduces new courses in tune with the changing labour market, industry and societal needs and requirements to carry out research in emerging and new areas. The University has taken special efforts during the last six years to structure the postgraduate programmes to make them more specialized, relevant and job oriented. The University is committed to bring in socially relevant courses into the gamut of courses offered by affiliated colleges.

The University encourages colleges to apply for UGC add on/ vocational programmes and also for autonomous status so that the respective colleges can design their own curriculum suited to the local needs and demands.

Members from the industry and organizations are inducted in the Board of Studies of each subject and their inputs are incorporated into the curriculum design. Feedback of the alumni and employers are also taken into consideration while designing the syllabus. Employability is given the major attention in designing and developing the curriculum. The curriculum development emphasizes application/practical orientation, in addition to soft skill development and communication skills.

In view of employability, the design and development process ensures need based curriculum. Internships in industries, use of laboratories and libraries for better exposure and experience are mandatory. Innovation is encouraged by the University through curriculum upgradation, introducing value added programmes and courses.

Curriculum design based on the recommendations of the regulatory bodies

The UGC model curriculum is used as basis for many of the programmes in liberal arts and science courses. The curriculum also adheres to

requirements of funding agencies like DST, DBT, CSIR, etc. and prepares students to take up UPSC, UGC-NET and SLET examinations.

Flexibility to introduce new programmes in affiliated colleges

The College Development Council at the University guides the affiliated colleges in the introduction of new programmes based on the requirements. The University insists on feasibility report and justification before considering new programmes if it is not instituted already in the University. To introduce a new programme in an emerging area or inter-disciplinary subjects, an adhoc BoS is constituted by the Syndicate to design the programme, formulate regulations and prescribe eligibility norms and teacher qualification. Subsequently, the adhoc BoS is replaced by a regular BoS.

The programmes proposed to be offered by the autonomous colleges are placed before the Syndicate sub-committee "Courses, Curriculum Development Committee". The committee recommends the new programmes for the Syndicate's approval. The programmes approved by the Syndicate are placed before the Academic Council for approval and reported to the Senate.

The Academic Council is the supreme body for courses and curriculum and it can approve or reject or recommend the BoS for reconsideration. All the approved courses are available for colleges to offer. However, the colleges have to follow the procedure to get the University recognition to offer a programme. This requires the colleges to apply for a new programme or additional seats in the existing programme before the last date. The University initiates the process of inspection. The inspection team as constituted by the University visits the institution and ensures the availability of required faculty and infrastructure. Based on the report of the inspection team, the University authorities either approve or reject or recommend to rectify shortcomings and report to the University for approval.

Additional skill based courses in affiliated colleges

In a pioneering effort, the University has introduced soft skill courses and internship as part of the curriculum in all PG Courses with effect from the academic year 2007-08. Subsequently, this has been extended to all PG courses offered in affiliated colleges with effect from 2008-2009 and to all UG courses with effect from the academic year 2010-11. Besides these, the colleges are encouraged to introduce add-on courses with funding support from the UGC. The affiliated autonomous colleges have introduced add-on courses with funding support from the UGC during the period 2007-2012 and the University facilitated by instituting these courses.

1.3 Academic Flexibility

Programmes offered

The University offered a total of 200 programmes during the academic year 2012-13 through its departments [List of programmes given in Table 1.2]. This includes 53 M.Phil, 90 PG, 23 PG Diploma, 14 Diploma and 20 Certificate programmes. The PG programmes are mainly of two years duration except M.Ed which is a one year programme and MCA, M.Sc Anatomy, M.Sc Physiology and M.Sc Medical Microbiology 03 year programme and M.A Post Modern Development Administration is a five year integrated programme. The University offers 68 Ph.D programmes (both pure and interdisciplinary) and these are offered on full-time and part-time basis in all its teaching and research departments. The University introduced 64 new programmes during the last six years which included five M.Phil, 24 PG, 10 PG Diploma, 12 Diploma and 13 Certificate programmes. [Table 1.3]

Table 1.2 Programmmes offered in 2012-13

A. **List of PG & M.Phil. programmes offered in the University departments**

Sl.No.	Name of the Department	Post Graduate	M.Phil.
		1. School of Historical Studies	
1.	Ancient History and Archaeology	1. M.A. Ancient History and Archaeology	1. Ancient History & Archaeology
2.	Indian History	2. M.A. Historical Studies	2. Historical Studies
		2. School of Social Studies	
3.	Anthropology	3. M.A. Anthropology	---
4.	Criminology	4. M.A. Criminology and Criminal Justice Administration	---
		5. M.Sc. Cyber Forensics & Information Security	---
5.	Psychology	6. M.Sc.HRD Psychology (Regular & Self Supportive)	3. Psychology
6.	Education	7. M.Ed. (Regular & Self Supportive) (One Year)	4. Education
7.	Adult and Continuing Education	8. M.A. Continuing Education Management	5. Continuing Education Management (Inter-disciplinary)
		9. M.A. Human Resource Management	6. Human Resource Management
8.	Sociology	10. M.A. Sociology	

3. School of Political and International Studies			
9.	Anna Centre for Public Affairs	11. M.A. Public Administration	7. Public Affairs
		12. M.A. Post Modern Development Administration(5 Year Integrated Course)	
10.	Politics and Public Administration	13. M.A. Public Administration	8. Public Administration
		14. M.A. Political Science	9. Political Science
		15. M.A. International Relations	10. International Relations
11.	Centre for South & Southeast Asian Studies	16. M.A. South & Southeast Asian Studies	11. South and Southeast Asian Studies
12.	Defence and Strategic Studies	17. M.A. Defence and Strategic Studies	12. Defence and Strategic Studies
13.	Legal Studies	18. M.L. (i) International Law and Organization	
		19. M.L. (ii) Constitutional Law and Legal Order	
4. School of Economics			
14.	Economics	20. M.A. Indian Economics	13. Economics
15.	Econometrics	21. M.A. Econometrics	14. Applied Economics
		22. M.A. Financial Economics	
16.	Dr.Ambedkar Centre for Economic Studies	---	15. Development Economics
5. School of Information and Communication Studies			
17.	Journalism and Communication	23. M.A. Journalism & Communication	16. Communication
		24. Master in Journalism- Online Media (Self-Supportive)	
18.	Library and Information Science	25. M. Sc. Library and Information Science	
6. School of Philosophy and Religious Thought			
19.	Philosophy	26. M.A. Indian Philosophy	17. Philosophy
20.	Saiva Siddhanta	27. M.A. Comparative Religion and Philosophy with Specialization in Saiva Siddhanta Studies.	18. Saiva Siddhanta
		28. M.A. Saiva Siddhanta, Saiva Agamas & Pannirutirumurai Classics	

21.	Vaishnavism	29. M.A. Comparative Religion and Philosophy with Specialization in Vaishnava Studies	19. Vaishnavism
		30. M.A. Divyaprabhandham	
22.	Jainology	31. M.A. Jaina Studies	
23.	Christian Studies	32. M.A. Comparative Religion and Philosophy with Specialization in Christian Studies	20. Christian Studies
		33. M.A. Christian Scriptures	
24.	JBAS Centre for Islamic Studies	34. M.A. Islamic Studies	21. Islamic Studies
7. School of Fine and Performing Arts			
25.	Indian Music	35. M.A. Indian Music	22. Indian Music (F.T. & P.T.)
		36. M.A. Bharathanatyam (Self-Supportive)	
		37. M.A. Folk Music	
		38. M.A. Rhythmology	
8. School of English and Foreign Languages			
26.	English	39. M.A. English	23. English
27.	French	40. M.A. French	24. French
9. School of Tamil and other Dravidian Languages			
28	Tamil Language	41. M.A. Tamil Studies	25. Tamil Studies
29	Tamil Literature	42. M.A. Tamil Literature and Culture	26. Tamil Literature and Culture
30	Telugu	43. M.A. Telugu	27. Telugu (F.T. & P.T.)
31	Malayalam	44. M.A. Malayalam	28. Malayalam
32	Kannada	45. M.A .Kannada	29. Kannada
10. School of Samskrit and other Indian Languages			
33	Samskrit	46. M.A. Samskrit	30. Samskrit
		47. M.A. Applied Samskrit	31. Applied Samskrit
34	Hindi	48. M.A. Hindi	32. Hindi
35	Arabic, Persian and Urdu	49. M.A .Arabic	33. Arabic
		50. M.A. Urdu	34. Urdu
11. School of Management Studies			
36	Commerce	51. M.Com. International Business & Finance	35. Commerce
37	Management Studies	52. M.B.A. (Regular & Self Supportive)	---

12. School of Mathematics, Statistics and Computer Science			
38	RIAS in Mathematics	53. M. Sc. Mathematics (Regular & Self Supportive)	36. Mathematics
39	Statistics	54. M. Sc. Statistics	
		55. M.Sc. Actuarial Science (Self-Supportive)	
40	Computer Science	56. M.C. A. (Three years)	37. Computer Science
13. School of Earth and Atmospheric Science			
41	Geography	57. M. Sc. Applied Geography	
		58. M. Sc. Spatial Information Technology	
		59. M.Tech. Geoinformatics	
42	Geology	60. M. Sc. Geology	38. Geology
43	Applied Geology	61. M. Sc. Applied Geology	39. Applied Geology
14. School of Chemical Sciences			
44	Analytical Chemistry	62. M. Sc. Analytical Chemistry	40. Analytical Chemistry
45	Inorganic Chemistry	63. M. Sc. Inorganic Chemistry	41. Inorganic Chemistry
46	Organic Chemistry	64. M. Sc. Organic Chemistry	42. Organic Chemistry
47	Physical Chemistry	65. M. Sc. Physical Chemistry	43. Physical Chemistry
48	Energy	66. M.Sc. Energy and Materials Science	
49	Polymer Science	67. M.Sc. Polymer Chemistry	
15. School of Physical Sciences			
50	CAS in Crystallography and Biophysics	68. M. Sc. Biophysics	
51	Nuclear Physics	69. M. Sc. Physics	44. Physics
		70. M. Sc. Electronics Science	
52	Theoretical Physics	71. M. Sc. Physics	45. Theoretical Physics
53	Scientific Instrumentation and Research Lab.		46. Scientific Instrumentation
16. School of Life Sciences			
54	CAS in Botany	72. M. Sc. Applied Plant Science	47. Botany
		73. M. Sc. Industrial Microbiology	
55	Zoology	74. M. Sc. Zoology (Special)	48. Zoology
56	Biochemistry	75. M. Sc. Advanced Biochemistry	49. Biochemistry
		76. M. Sc. Bio-informatics (Self-Supportive)	
57	Biotechnology	77. M. Sc. Biotechnology (Regular & Self Supportive)	

17. School of Basic Medical Sciences			
58	Endocrinology	78. M.Sc. Bio Medical Sciences	50. Endocrinology
59	Anatomy	79. M. Sc. Anatomy (Three years)	
		80. M. Sc. M.S.Neuroscience (Self-Supportive)	
60	Medical Biochemistry	81. M. Sc. Medical Biochemistry	
61	Genetics	82. M. Sc. Biomedical Genetics	
		83. M. Sc. Molecular Biology (Self-Supportive)	
62	Microbiology	84. M. Sc. Medical Microbiology (Three years)	
63	Pharmacology & Environmental Toxicology	85. M. Sc. Toxicology	51. Environmental Toxicology
		---	52. Neuro and Nanotoxicology
64	Physiology	86. M. Sc. Physiology (Three years)	
65	Pathology	87. M.Sc. Medical Laboratory Technology (Pathology)	
18. School of Nano Science and Photonics			
66	National Centre for Ultrafast Processes	88. M. Sc. Photonics and Bio-Photonics	
67	Centre for Nanoscience & Nanotechnology	89. M. Sc. Nanoscience & Nanotechnology	
68	Physical Education and Sports	90. M.Sc. Yoga	53. Physical Education & Yoga

B. List of PG Diploma programmes offered in the University departments

S. No.	Department	Programmes
1. School of Social Sciences		
1.	Psychology	Counselling Psychology
2.		Organizational Development and Management of Change
3.	Education	Parent Counseling (for School Principals and Teachers)
4.	Lifelong Learning	Extension & Development Administration
5.	Sociology	Sociology of Development (Three Semester) [Part-time] (Self-supportive)
2. School of Economics		
6.	Dr.Ambedkar Centre for Economic Studies	Ambedkar Thoughts
3. School of Information & Communication		
7.	Library & Information Science	Digital Library Management
4. School of Philosophy and Religions Thought		
8.	Philosophy	Peace and Communal Harmony
9.	Saiva Siddhanta	Saiva Siddhanta
10.	Christian Studies	Ethics and Biotechnology
11.		Christian Spirituality and Counselling
12.		Ethics and Human Resource Management (Self-Supportive)
5. School of English and Foreign Languages		
13.	English	Technical Writing
6. School of Tamil and other Dravidian Languages		
14.	Tamil Literature	Manuscriptology and Editing
15.		Folkloristics and Mass Media
16.		Inscription and Culture
17.		Linguistics
7. School of Samskrit and other Indian Languages		
18.	Samskrit	Yoga Therapy (Part-Time)
19.	Hindi	Functional Hindi and Translation
8. School of Life Sciences		
20.	CAS in Botany	Taxonomy of Algae
21.	CAS in Botany	Taxonomy of Fungi
22.	Zoology	Molecular Cell Biology & Stem Cell Technology
23.		Immunotechnology

C. **List of Diploma programmes offered in the University departments**

S.No	Department	Programmes
1. School of Social Sciences		
1.	Criminology	Diploma in Cyber crime and information security
2.	Lifelong Learning	Diploma in Travel & Tourism Management (SS)
2. School of Philosophy and Religious Thought		
3.	Centre for Buddhist Studies	Diploma in Buddhist Studies
3. School of English and Foreign Languages		
4.	French	Diploma in French
5.		Diploma in German
6.		Diploma in Italian
7.		Diploma in Spanish
4. School of Tamil and other Dravidian Languages		
8.	Telugu	Diploma in Telugu
9.	Malayalam	Diploma in Malayalam
10.	Kannada	Diploma in Kannada
5. School of Sanskrit and other Indian Languages		
11.	Sanskrit	Diploma in Manuscriptology (P.T.)
12.	Hindi	Diploma in Hindi
13.	Arabic, Persian and Urdu	Diploma in Arabic
14.		Diploma in Urdu

2008-2009

D. List of Certificate programmes offered in the University departments

S.No	Department	Programmes
1. School of Social Sciences		
1.	Lifelong Learning	Certificate in Blogging (SS)
2.		Certificate in TV News Reading Comparing (SS)
3.		Certificate in Web-Page Design (SS)
4.		Certificate in Pre-Primary Education (SS)
5.		Certificate in NGO Management (SS)
6.		Certificate in Hospitality Management (SS)
7.		Certificate in Skin Care and Beauty Therapy (SS)
8.		Certificate in Women's Studies (SS)
9.		Certificate in Functional English and Public Speaking (SS)
2. School of Philosophy and Religious Thought		
10.	Jainology	Certificate in Buddhist Studies
3. School of English and Foreign Languages		
11.	French	Certificate in French
12.		Certificate in German
13.		Certificate in Italian
14.		Certificate in Spanish
4. School of Tamil and other Dravidian Languages		
15.	Malayalam	Certificate in Malayalam
16.	Kannada	Certificate in Kannada
5. School of Samskrit and other Indian Languages		
17.	Samskrit	Certificate in Yoga (P.T.)
18.	Hindi	Certificate in Hindi
19.	Arabic, Persian and Urdu	Certificate in Arabic
20.		Certificate in Urdu

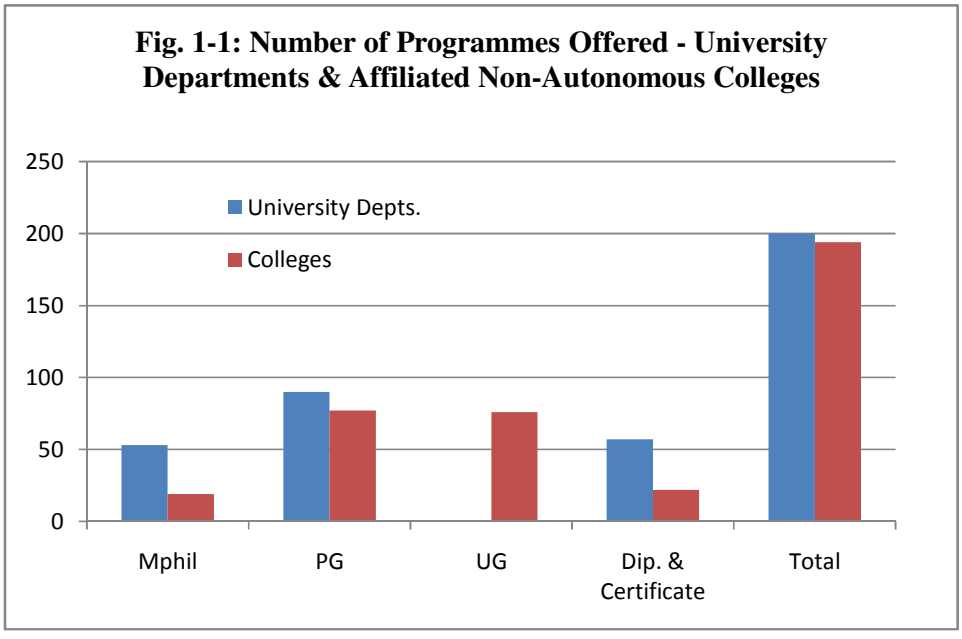
Table 1.3 New programmes introduced during the assessment period

Sl.No	Degree	Name of the Programme
2007-2008		
1.	Diploma	French
2.		German
3.		Italian
4.		Korean
5.		Spanish
6.		Cyber Crime and Information Security
7.	Certificate	French
8.		Italian

1.	Diploma	Malayala
2.		Arabic
3.		Urdu
4.	Certificate	Persian
2009-2010		
1.	M.A	Public Administration (Tamil Medium)
2.	M.Sc	Ocean Science & Technology
3.		Environmental Science
4.	M.A. (5 year Integrated)	Anthropology
5.		Post Modern Development Administration
6.		French Studies
7.	M.Sc (5 year integrated)	Life Sciences
8.	M.Phil	Vaishnavism
9.		Zoology
10.	Diploma	Travel and Tourism Management (Self-supportive)
11.	Certificate	Blogging (Self-supportive)
12		T.V.News Reading Comparing (Self-supportive)
13.		Web-Page Design (Self-supportive)
14.		Pre-Primary Education (Self-supportive)
15.		NGO Management (Self-supportive)
2010-2011		
1.	M.Com	International Business and Finance
2.	M.Sc	Nanoscience & Nanotechnology
3.		Laboratory Technology (Medical) (Self-supportive)
4.		Energy and Materials Science
5.		Environmental Toxicology
6.	M.A	Divyaprabandham
7.	M.Phil	Commerce
8.		Neuro and Nanotechnology
9.		Islamic Studies
10.	PGDiploma	Counselling Psychology
11.		Organizational Development and Management of Change
12.		Abmedkar thoughts
13.		Digital Library Management
14.		Technical Writing
15.		Manuscriptology and Editing
16.		Folkloristic and Mass Media
17.		Inscription and Culture
18.		Functional Hindi and Translation

19.	Diploma	Hindi
20.		Laboratory Technology (Self-supportive)
21.	Certificate	Hospitality Management (Self-supportive)
22.		Skin Care and Beauty Therapy (Self-supportive)
23.		Women's Studies
24.		Functional English and Public Speaking
2011-2012		
1.	M.A	Human Resource Management
2.		Public Administration
3.		International Relations
4.		Financial Economics
5.		South and Southeast Asian Studies
6.	M.J	Online Media
7.	M.Sc	Physics (Nuclear Physics)
8.		Physics (Theoretical Physics)
9.		Toxicology
10.		Yoga
11.	M.Tech	Geoinformatics
12.	PGDiploma	Peace and Communal harmony
13.	Certificate	Buddhist Studies

Fig. 1-1: Number of Programmes Offered - University Departments & Affiliated Non-Autonomous Colleges



During the academic year 2012-13 the University has 194 programmes which are available for the affiliated (autonomous, non-autonomous and constituent) colleges to choose to offer (Table 1.4). This consists of 76 UG, 77 PG, 19 M.Phil and 22 Diploma and Certificate programmes.

Table 1.4 List of programmes approved for affiliated non autonomous colleges 2012 – 2013

Degree	Name of the Faculty	Subject
Under graduate (76)	Arts (33)	Applied Samskrit, Arabic, Business Economics, Corporate Economics, Christian Studies, Defense and Strategic studies, Economics, English, French, Historical studies, History and Tourism, Industrial Organization, Kannada, Labour Management, Linguistics, Malayalam, Philosophy, Political Science, Public Administration, Saiva Siddhanta, Samskrit, Sociology, Tamil, Telugu, Tourism and Travel Management, Urdu, Vaishnavism, Music, Social Work, Journalism, Criminology and Police Administration, Performing Arts, B.Litt (Tamil).
	Commerce(8)	Commerce, Accounting and Finance, Bank Management, Marketing Management, , corporate secretaryship Cooperation, computer application, Commerce (Hons)
	Management(2)	Business Administration, Information system and management
	Science(33)	Advanced Zoology and Biotechnology , Biochemistry, Bio Technology, Botany, Chemistry, Computer Science, Electronics and Communication Science, Geography, Geography tourism and travel management, Geoinformatics, Geophysics, Hotel and Catering Management, Home Science Clinical Nutrition and Dietetics, Hotel and catering management, clinical nutrition and Dietician, Home Science Interior design and décor, Home Science Nutrition food service management and dietician, Industrial Geology, Marine Science, Mathematics, Microbiology, Nautical Science, Physical Education, Health Educat… plant t… Software application, Zoology, Computer Application, Electronic media, Visual Communication, Physics with computer application, Mathematics with computer

NAAC Reaccreditation – SELF STUDY REPORT

		applications, Statistics.
Post graduate (77)	Arts (31)	Applied History, Applied Sanskrit, Communication, Corporate sociology, Christian Studies, English, Economics, Business Economics, Environmental Economics, Indian Economics, Historical studies, Human Resources Management, Human rights and duties education, International Studies, Labour Management, Modern Arabic, Natya, Philosophy, Political Science, Public Administration, Public Relations, Sanskrit, Sociology, Sociology of Development, Medical Sociology, Tourism and Travel Management, Tamizhial, Urdu, Vaishnavism, Social work, Music.
	Commerce(7)	Commerce, Accounting and Finance, Corporate Secretaryship, Bank Management, Entrepreneurship, International Business, Insurance and Financial Services.
	Management(3)	Business Administration (Full time/ Part time), Applied Management.
	Science(36)	Applied Electronics, Applied Microbiology, Biochemistry, Bioinformatics and clinical trial management (Non medical), Biotechnology, Biotechnology and Management, Plant Biology and Plant Biotechnology, Botany, Chemistry, Computer Science, Computer Science and Technology, Electronic Media, Food science nutrition and dietetics, food service management and dietetics, General Genetics, Hotel and Catering Management, Industrial Chemistry and Management, Defence and Strategic Studies, Geography, Applied Geography, Geography and Tourism Administration, Family Resource Management, Textile Science and Fashion Designing, Human Development and Family Studies, Information Technology, Mathematics, Applicable Mathematics, Medical Laboratory Technology, Physics, Visual Communication, Zoology, Advanced Organizational Behaviour, Psychology, Aquaculture, Biomedical Instrumentation Science, Computer Applications.
M.Phil(19)		Commerce, Defence & Strategic studies, Economics, English, History, Tourism & Travel Management, Public Administration, Biochemistry, Microbiology, Biotechnology, Philosop[illegible] Zoology Oncology.
PG Diploma (6)		Medic[illegible] Lab Technology, Computer Science (PGD[illegible], Jainology, Special Education,

		Developmental Therapy, Management and Public Relations,
Diploma(2)		Medical Laboratory Technology, Sanskrit.
Certificate (14)		Computer Assembling, Quantitative Methods with Computer Applications, Medical Lab Technology, Quantitive Techniques & Computer Assembly & Servicing, Herbal Therapy and Beauty Care, Entrepreneurship Development Programme, Medical Biotechnology, Documentation and Multimedia, Human Relations, Computerized Accounting, Office Suite & Web Application Development, Web Application Development, Samskrit, French.

Academic flexibility in choosing the courses

The academic programmes are well structured in terms number of credits required. A programme consists of three types of courses – core, elective and soft skill and a student has to earn a minimum number of credits in each type under the broad category as mentioned in the previous section. Every student is assigned a student advisor who is a faculty member of the department. The students can consult the faculty advisor to choose the elective and soft skill courses and also get advice on all academic matters.

An academic year consists of two semesters. Odd semester (I and III semesters): July to November and Even semester (II and IV semesters): December to April. A semester normally extends over a period of 15 weeks. Each week has 30 working hours spread over a 5 day week.

The curriculum includes industrial/field training as part of the programme. Further, students are expected to carry out mandatory project work in the IV semester. There are about 400 electives and the student can choose any elective depending upon his/her interest, related to main course and student's ability to cope with the course. The curriculum allows lateral and vertical mobility within elective options across programmes, courses and disciplines.

The PG Diploma, Diploma and Certificate programmes are offered as add-on programmes for enriching the students further with relevant specializations and learn additional foreign languages. Under this system the University provides an opportunity to get one PG degree and two PG Diplomas / Certificates within a period of two years of stay at the University. Courses are offered as electives and soft core courses by way of advanced Certificate/Diploma programmes in Language and Communication, Spoken and Presentation Skills, Managerial Skills, Computing Skills, French, Italian, German, Translation and Communication, Contemporary Awareness, Technical Writing and Presentation, Quantitative Aptitude and Personality Enrichment.

A MoU has been signed with the e of Chartered Accountants of India (ICAI) for furtherance of Commerce and Management education and to

provide an opportunity to members/ students of ICAI to acquire undergraduate/postgraduate degree through the IDE. Any student who has passed the entry level exam in CA can take admission either in B.Com. or BBA. A student who has passed the inter-level PCE/IPCE is eligible for exemption of seven papers in B.Com. and five papers in BBA. Any intermediate level ICAI student can join M.Com. / MBA at the University of Madras. At the final year of CA four papers of M.Com. and six papers of MBA are exempted. The same MoU also promotes research leading to M.Phil. and Ph.D. programmes.

Catering to the needs of international students

Overseas programmes offered on campus include exchange, twinning and networking programmes based on MoUs and research programmes for foreign students as joint programmes offered through the University of Madras and concerned foreign Universities. The University has set up the International Centre of the Madras University (ICOM) in 2003 in consonance with UGC's X Plan programme on Promotion of Indian Higher Education Abroad (PIHEAD) and in fulfilment of its policy evolved to promote the free flow of students from other nations to India, as well as allow Indian students to get educated in other nations. The ICOM is renamed as the University Centre for International Relations (UCIR) in 2011. The primary activities of the UCIR are as follows:

- Promoting international exchange through MOU
- Coordinating visits of delegations from abroad
- Coordinating student exchange to and from UNOM
- Publicizing scholarships, helping students obtain aid and administering the corpus fund of UNOM
- Facilitating researchers from abroad to work for limited period under casual research
- Promoting joint/dual PG degree and joint Ph.D programmes with Universities abroad;
- Credit transfer facilities at the graduate and post graduate levels and Helping design short term, need-based courses for overseas students

The University has signed MoU with over 100 foreign universities and institutions. The joint online PG degree programme by the Department of Geography and Staffordshire University has been conducted for more than five years.

Foreign nationals including NRIs with valid passports and visa issued by the Government of India, and refugees will be considered for admission subject to the conditions prescribed by the Government and meeting the eligibility requirements. 15% supernumerary seats are available in all the PG courses (Regular programmes only) for foreign nationals including NRIs. They need not appear for an entrance test. The foreign students' admission is

processed by the UCIR. The UCIR also provides support for housing and facilitates the students to have a comfortable stay and study.

The curriculum is designed to attract international students. The demand from international students for admission to the University has been increasing over the years. During the last five years, 107 UG students, 48 PG students and six Ph.D. scholars from foreign countries have pursued their studies in the University.

Under the MoU, students from abroad spend a semester or two in the University campus and attend classes along with regular students. Likewise students from the University of Madras are encouraged to visit foreign institutions and eligible students are guided and mentored by University's Centre for International Relations. During the last five years 16 UG students, eight PG students and 12 Ph.D. scholars have visited foreign universities under the exchange programmes.

Self-financing programmes

The University offers the following six Post Graduate programmes under self financing stream: (i) M.A. Bharatanatyam (ii) M.Sc. Actuarial Science (iii) M.Sc. Bio-informatics (iv) M.Sc. Biotechnology (v) M.Sc. Molecular Biology (vi) M.Sc. Neuroscience and three programmes are under both regular and self supportive mode: (i) MBA (ii) M.Sc. HRD Psychology (iii) M.Sc. Mathematics.

The following Certificate programmes are offered on self supporting basis by the University Students Advisory Bureau (USAB): (i) Blogging (ii) TV News Reading & Compering (iii) Web-Page Design (iv) Pre-Primary Education (v) NGO Management (v) Hospitality Management (vi) Skin Care and Beauty Therapy (vii) Women's Studies (viii) Functional English and Public Speaking.

The curricula and syllabi of the distance education programmes offered by the University are framed differently with a separate BoS for each IDE programme. Hence face-to-face mode and distance education mode are dealt with separately. However, a UG/PG student in regular programme is allowed to take another programme through distance mode and any student can move from regular/formal to non-formal steam if he/she decides to do so.

CBCS and inter-disciplinary programmes

The School of Nano Science and Photonics conducts inter-disciplinary M.Sc. Programme on Photonics and Bio-Photonics. Photonics is a multi disciplinary subject that combines [illegible]ed electronics, optical technologies and photonic technology. The outcome of the programme forms basis for the development of future technologies in telecommunications, health care, aerospace etc. Bio-Photonics is the interface of Photonics and Biological

sciences offering tremendous prospects for optical diagnostics, light activated therapy, surgery, bio-sensing and restoration of biological functions. The Nano-Science and Nano-Technology course is totally an inter-disciplinary course involving physicists, chemists, biologists and medical scientists. The Centre is a nodal point for collaborative research and teaching with all the four schools of sciences viz., Physical Sciences, Chemical Sciences; Life Sciences and Basic Medical Sciences.

The CBCS is adopted in all the PG courses by permitting the students to choose elective subjects from across the departments. The University strongly advocates all the affiliated colleges, including autonomous colleges to follow the same. A buffet with a platter of courses with wide choice is made available. With full freedom and flexibility students can avail themselves of inter-disciplinary approach with a good mix of Arts, Science and Humanities subjects.

The University extends library and laboratory facilities to affiliated colleges for research. The College Development Council also provides supportive services to colleges by liaising between the college and UGC for availing funds and other facilities from the UGC.

Curriculum development process

The process of design and development of curriculum involves three major steps: Review, Revision and Ratification. Curriculum revision and /or introduction of new courses are undertaken based on the feedback/inputs received from students, faculty, alumni and employers. The University of Madras has been a pioneer in initiating courses in Nano-Science & Nanotechnology an area of great practical relevance to the society, industry and national development. The existing PG programmes take into account the future needs of the society. The MBA and MCA programmes have a contemporary thrust of internationalization, globalization and human resource development. At the same time, Sciences, Bio-medical Sciences, Cyber Forensics, Electronic Media, Tamil Journalism etc. cater to the contemporary needs of the society. Language, Art and Culture are of perennial relevance for the society. The University offers Certificate, PG and Research Programmes in major Indian and foreign languages such as Tamil, Samskrit, Hindi, English and French. The language laboratories constituted in each campus focus on computer-aided multi-media instruction for language learning. The laboratory acts as a platform for learning, practicing and producing language skills through interactive lessons and communicative mode of teaching.

Notable highlights in this curricular area in the period of reaccreditation are:

i) Introduction of CBCS in UG/PG courses in all the affiliated colleges of the University of Madras.
ii) Soft skill courses and industry internship made mandatory for all PG students.
iii) Student membership in

iv) Introduction of separate BoS for the IDE so that the needs of distance learners can be catered to.

Another defining feature of curriculum design and development is the special care taken to satisfy the needs of the overseas students.

1.4 Curriculum Enrichment

Curriculum revision and new programmes

The CBCS pattern is advantageous in that it allows constant review and upgradation of the curriculum to keep abreast of the latest trends in the emerging areas and also to keep pace with the industrial needs and global competition. The list of new programmes introduced in the University departments is given in Table 1.4. In the re-accreditation period, 24 new PG Programmes have been initiated in cutting edge areas like Bio-informatics, Bio-medical Sciences, Neuro Sciences, Molecular Biology, Corporate Sociology, IPR, Cyber Crimes & Information Security, Actuarial Sciences, Sustainable Development, Specializations in Commerce, Economics and Management. All these courses have been launched after reviewing the existing courses and after ascertaining the demand from various stakeholders. The strategies adopted for the revision of existing programmes include:

- Accordance with the regulatory bodies such as UGC and AICTE.
- Analysis of the current and future challenges
- Compilation of directory of experts.
- Meetings with Principals of the affiliated colleges.
- Evaluation and observation of changes, relevance and requirements.
- Feedback from alumni and stakeholders.
- Feedback from employers during campus placement activity.
- Identification of innovative pedagogy, expertise, training, tools and techniques.
- Meeting of the chairpersons of BoS to review the need.

The following 14 are value added PG Diploma, Diploma and Certificate programmes offered by various departments of the University: (i) Certificate in TV News Reading & Compering (ii) Certificate in NGO Management (iii) Certificate in Hospitality Management (iv) Certificate in Skin Care and Beauty Therapy (v) PG Diploma in Ambedkar Thoughts (vi) PG Diploma in Peace & Communal Harmony (vii) PG Diploma in Saiva Siddhanta (viii) PG Diploma in Ethics & Human Resource Management (ix) PG Diploma in Ethics & Biotechnology (x) PG Diploma in Spirituality & Counseling (xi) PG Diploma in Digital Library Management (xii) PG Diploma in Organization Development & Management of Change (xiii) PG Diploma in Molecular Cell Biology and Stem Cell Technology (xiv) PG Diploma in Immunotechnology.

The Diploma and Certificate programmes are offered during the evenings, weekends, summer/winter vacations and conducted with experts in the field both from academia and industry. The alumni are also involved in the conduct of such programmes. The infrastructure facilities available in the centres of excellence are made accessible to students during the conduct of the programmes.

Add on and skill development courses

The following 13 skill development courses have been introduced by the University, as outlined by the National Skills Development Corporation. The USAB conducts the following Certificate / Diploma courses for the benefit of the University students. It is also open to outsiders if there is vacancy: (i) Career Training (ii) Communication Skill Development courses exclusively for rural students (iii) Community Orientation (iv) Competitive and Civil Services Examinations (v) Foreign language courses (vi) Hands on training on Electronic Information Resources (vii) Instrumentation Techniques Literacy Programmes (viii) NET/SET Examinations (viii) Pedagogy/Teaching Methodology (ix) Personality Development Programmes (x) Subject wise Technical Skill- enhancing courses (xi) Training on Statistical Packages for Data Analysis (xii) Vocational Training (xiii) Women Empowerment.

1.5 Feedback System

The University uses both formal and informal feedback methods to obtain feedback about the courses and delivery system.

Student feedback about the courses and teaching

The Internal Quality Assurance Cell (IQAC) of the University, established in July 2005 developed an instrument to get a detailed feedback about the course, course content, relevance and delivery by the teacher. The instrument has been modified to meet the current requirements. The feedback received from the students is analyzed by the IQAC and the outcome is sent to the concerned head of the department and faculty with the approval of the University authorities. Informal feedbacks are obtained from the participants of seminars/conferences, campus placement companies, alumni, employers, community, academic peers, industry and parents.

Feedback from national and international faculty

Feedback has also been obtained from the visitors under MoU with foreign universities, invited distinguished scholars, UGC visiting fellows, etc. Online discussions are also held by the faculty members to upgrade the curricula to meet global challenges.

Feedback from affiliated colleges

The senior faculty members from affiliated colleges form part of the Board of Studies, Academic Council, Senate and Syndicate. The feedback, recommendations, and revised curriculum and syllabi are obtained from the affiliated colleges as and when warranted and discussed in all the above fora for incorporation and approval.

Quality Sustenance and Quality Enhancement Indicators

- Graded academic innovation through the use of structured and standardized international format adapted to local needs.
- Introduction of postgraduate programmes in cutting edge areas.
- Balanced curriculum revision of UG/PG courses interwoven with employability cum entrepreneurship skills and social orientation component.
- Extension of CBCS in UG/PG Courses to all the affiliated colleges of the university.
- Academic flexibility to pursue an extra Diploma/Certificate programme.
- Establishment of separate Boards of Studies for the IDE.
- Introduction of mandatory soft skills courses for enhancing employability

CRITERION II TEACHING – LEARNING AND EVALUATION

CRITERION II

TEACHING–LEARNING AND EVALUATION

2.1 Introduction

The University of Madras is a pioneer in formulating new programmes having societal significance. The strict adherence to academic calendar, reservation of seats as per Government of Tamil Nadu Policy, effective student mentoring system and use of modern teaching methods help set up the University's benchmarks in teaching and learning. The University is supportive in providing infrastructural facilities to teachers and students in order to develop global competencies. The use of LCD projectors, interactive boards, and audio visual aids in class room, Wi-Fi internet connectivity in library and several departments are ready instances. The teachers of the University of Madras continuously benchmark against the best across the globe and set high standards in teaching. Teachers are evaluated based on their classroom performance, research work, their contribution to corporate life of the University and other accomplishments through periodical feedback. The transparency in the teacher evaluation system has gained greater momentum among the student community. The University has been actively seeking collaboration with industries, and academic as well as research organizations all over the world with a view to meeting the challenges of globalization on the one hand and demands of the society on the other.

2.2 Student Enrolment and Profile

Student admission

Every year the University brings out an admission notification for PG and M.Phil. Programmes of the University departments in leading national and regional dailies. The information is also hosted in the University website (www.unom.ac.in) in the month of March. A separate advertisement is issued for the courses offered through the Institute of Distance Education in the month of June for academic year courses and January for the calendar year courses. This information is also hosted in IDE's exclusive website (www.ideunom.ac.in). The admission notification contains details about the courses offered, deadline for application mode of selection and the like. The University websites are user-friendly and provide details about the admission policy, academic programmes, academic calendar, curriculum, courses and syllabus.

In addition to these, the University provides a prospectus along with the application form giving details of the programmes offered, eligibility, rules and regulations governing admission to such programmes, besides information about fee structure, reservation policy, scholarship, hostel facilities, course details, applicable fee concession for SC/ST students, etc. Students can also download the application forms and apply with registration fees.

Before the admission notification is issued, the Vice Chancellor calls for the meeting of the heads of departments and discusses the matters relating to the admission of students for PG and M.Phil. programmes. Heads of departments are free to express their views on the methodology of admission to be followed subject to the rules of reservation of the Government of Tamil Nadu. The broadly-agreed decision at the meeting becomes the basis for admission for that academic year. This way, the admission process followed by the University is transparent and dynamic. Based on the decision taken in the heads of the departments meeting, the admission guidelines is circulated to all departments. All departments of the University strictly adhere to the admission guidelines which are based on merit even while following the reservation policy of the government of Tamil Nadu. As per the admission guidelines, every department constitutes an 'Admission Committee' which comprises of three members. Besides, the Heads of the Department, the committee consists of faculty member belonging to SC/ST, minorities and Women.

Application forms received from the prospective candidates are scrutinized by the 'Admission Committee'. If the number of applications received exceed the sanctioned strength, entrance examination is conducted which carries a 50% weightage and the balance of 50% given to the marks secured by the applicants in the respective qualifying examination. In case the number of applications received is less than the sanctioned strength of the students for admission, applicants are invited for counselling and direct admission is provided to the candidates who fulfill the minimum eligibility criteria. The admission committee prepares the list of candidates applied and selected and a waiting list. With the approval of the University authorities, the list is displayed in the notice board and selected candidates are informed. In addition, the details are also placed in the University website. The heads of departments admit candidates as per the selection list and for any vacancy, candidates from waiting list are admitted. As many as 41 departments conducted entrance examination to admit students to the PG degree programmes in 2012-13. In the case of MBA and MCA degree programmes, admission is based on the TANCET score following the State Government reservation rules.

Admission process in the affiliated colleges

There are as many as 132 Colleges affiliated to the University of Madras. The colleges are broadly categorized into Government (15), Aided Colleges (24), Self Financing Colleges (67), Constituent Colleges (02) and other Institutions namely Management, Oriental Title College and Stand alone Institutions (24). Student admission is managed by the colleges following the admission rules and norms of the Government of Tamil Nadu. Government and Aided Colleges strictly adhere to reservation rules of the State Government. Every affiliated college has an 'Admission Committee' which comprises of the Head of the concerned Department and the Principal of the College.

Mechanism to review admission process

The University has a mechanism to review its admission process and student profile annually. Every year, review meeting of the Admission Committee is held wherein the entire admission process is reviewed and innovative ideas are welcomed and incorporated to refine the admission process in order to make the mechanism student-friendly.

Strategies for access to special categories of students

The University, by scrupulously implementing the reservation policy of the Government of Tamil Nadu, attempts to enhance the access for students belonging to SC/ST, BC/MBC, persons with various disabilities, economically weaker sections, outstanding achievers in sports and other extracurricular activities. The rules of reservation prescribed by the Government of Tamil Nadu is as follows: General Category 31%, BC 30%, (Muslim 3.5% of 30%) MBC & DNC 20%, SC 18% for Arunthathiyars 3% and ST 1%. The following percentage of allocation is made to the specified categories in the overall seats of the University: (i) Differently abled – 3%, (1% for visually challenged + 1% for hearing impaired + 1 % for physically challenged), sports persons 2%, and wards of ex-servicemen / Tamil students of Andaman and Nicobar Islands [3 seats for the entire University]. In order to attract foreign students, the University provides 15% supernumerary seats in each department. Apart from statutory reservations extended to the above mentioned categories of students, University offers fee concessions to those belonging to the weaker sections of society. The above provision enables the University to enhance the access to the disadvantaged group of students.

Trends in admission to PG programmes

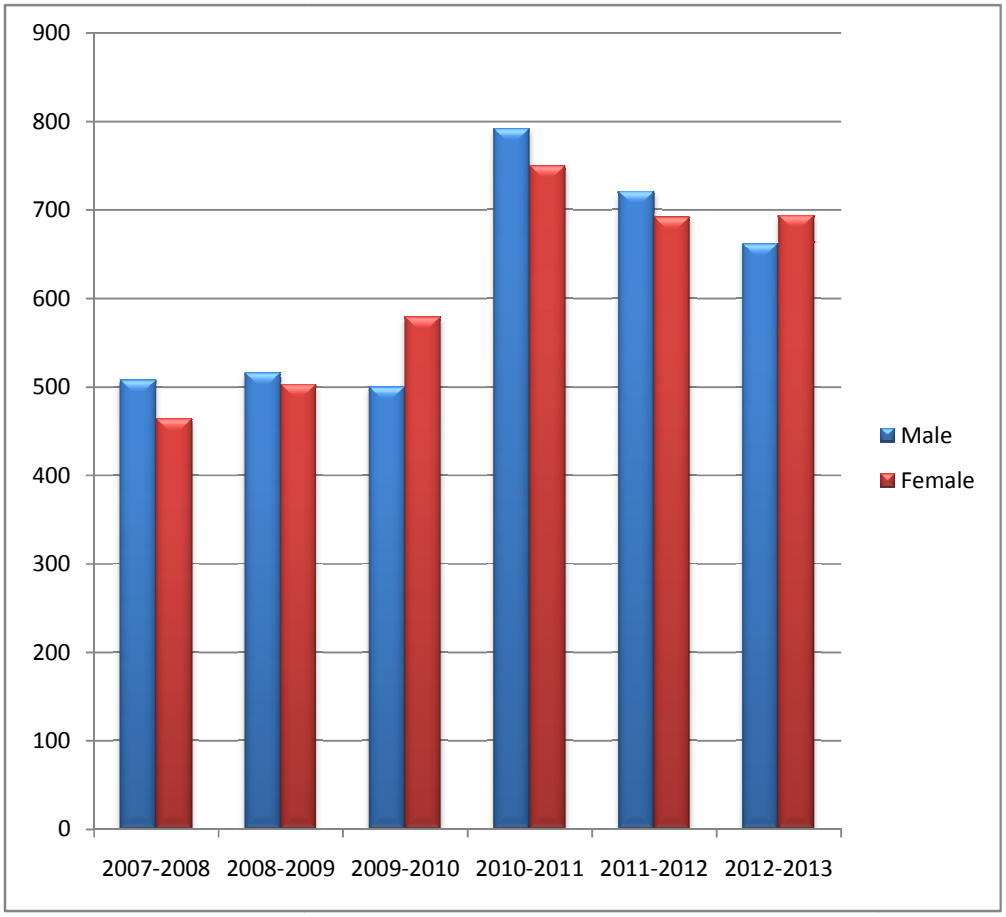
Table 2.1 clearly brings out the trends in the admission of students to the PG programmes of the University departments. It is seen from the Table that the number of students admitted to the PG degree programmes, which stood at 972 in 2007 - 2008 rose to 1542 in 2010 - 2011 which has been maintained in the subsequent years. It can be noticed from the Table that the total number of female students is more than the male students and the number of students belonging to marginalized sections of society (SC, ST and OBC) also increased considerably over the past six years. Also, the number of first generation students entering into University education has increased considerably during the past six years.

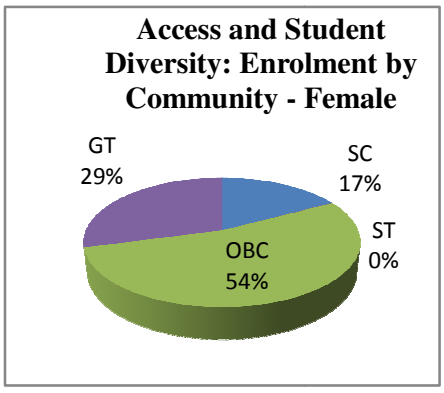
Table 2.1 Trends in admission to PG programmes

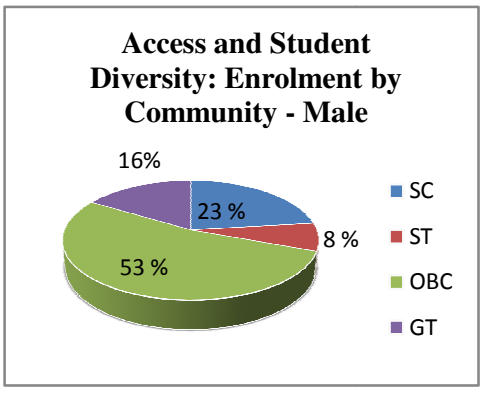
Categories	2007-2008		2008-2009		2009-2010		2010-2011		2011-2012		2012-2013	
	M	F	M	F	M	F	M	F	M	F	M	F
SC	91	74	116	81	102	85	168	145	145	111	153	113
ST	21	19	16	14	16	19	45	17	21	25	50	34
OBC	289	265	283	275	283	299	445	402	438	357	351	354
General	107	106	101	133	99	176	134	186	117	199	108	193
Total	508	464	516	503	500	579	792	750	721	692	662	694
	972		1019		1079		1542		1413		1356	

Further, as revealed in Fig. 2.1, of the total number of students admitted, female students outnumber the male students in an appreciable measure during the reporting period.

Fig. 2.1 Trends in admission of male and female students







Analysis of demand ratio

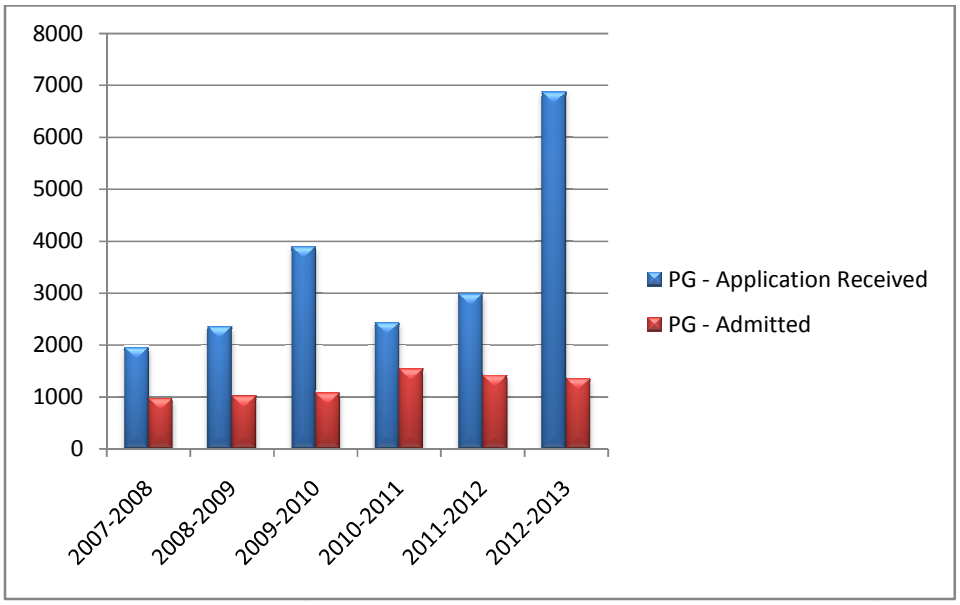
Table 2.2 makes a clear reading of the trends in the demand ratio with regard to the PG and the M. Phil programmes. This is evident in Figs. 2.2 and 2.3.

Table 2.2 Demand ratio

Year	Demand Ratio	
	PG Programmes	M. Phil Programmes
2007 - 2008	1:2	1:3
2008 - 2009	1:1	1:3
2009 - 2010	1:3	1:5
2010 - 2011	1:1	1:1
2011 - 2012	1:2	1:2
2012 - 2013	1:6	1:6

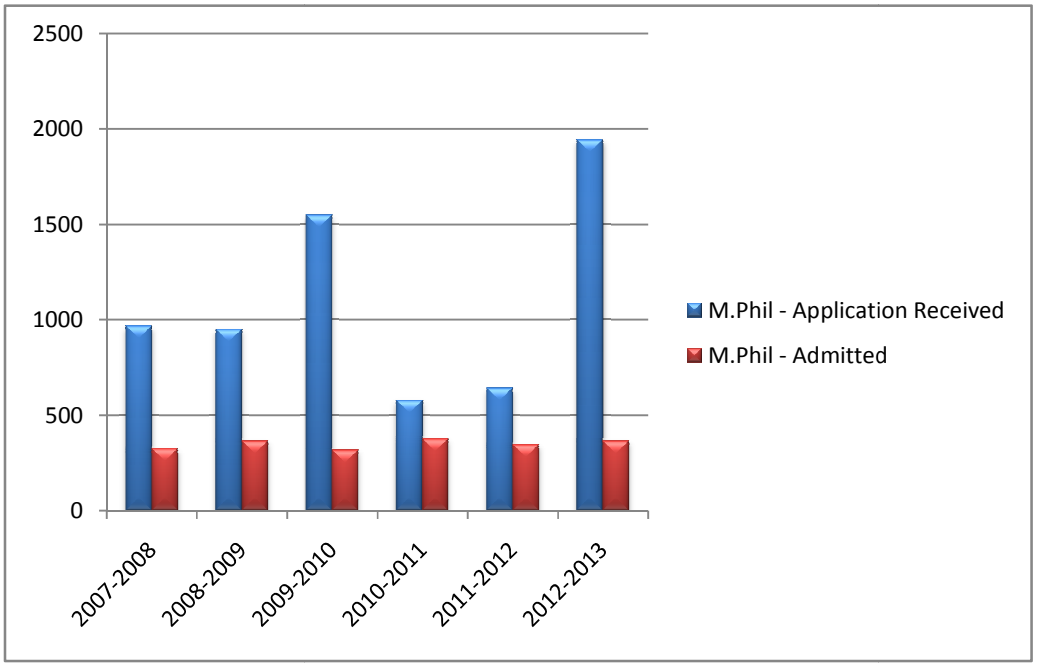
Note: Exhaustive details of the demand ratio for the various programmes by the departments of the University of Madras are furnished in Appendix 1 at the end of the report.

Fig 2.2 Trends in demand ratio for PG programmes



As can be observed, Fig. 2.2 shows that in the year 2012 - 2013, the number of applications received increased three times the average to 6872. This was attributed to special initiative taken by the University to market its PG programmes. Similar trend is seen for M. Phil degree programmes as revealed in Fig. 2.3.

Fig. 2.3 Trends in demand ratio for M. Phil programmes



Programmes discontinued/staggered

Between 2007-08 and 2012-13 a small number of 12 programmes have been discontinued for a variety of administrative and academic reasons.

2.3 Catering to Student Diversity

Orientation/induction programme for freshers

Every year, immediately after the admission process is completed, the University organizes orientation and induction programmes for the newly admitted students. The programme is organized campus wise. As a part of the induction programme, Deans, Coordinators and Librarians make presentations on various aspects relating to academic and non-academic activities of the University. For instance, freshers are given full account of the working of CBCS (Choice Based Credit System) in the University of Madras. The University brings out CBCS Handbook every year. The Handbook contains exhaustive details about the schools, departments, programmes, and courses, besides the academic calendar of the respective year. Freshers are given instructions on choosing elective courses. Instructions are also given on matters relating to examination, grading system, student amenities available in the University, scholarships, international programmes, MoUs with foreign universities, Earn While You Lea
Safety Insurance, Ragging Redres

Madras University Free Education Scheme, Internet Centre, Women Sexual Harassment Redressal Cell and Student Support schemes.

Mechanism for analyzing differential requirements of students

The University has a mechanism through which the differential requirements of the student population are analyzed after admission and before the commencement of classes. The orientation programme conducted at each department/subject before the commencement of the teaching programme helps in understanding and assessing the knowledge base and skills of the students. The performance of students in the first and second internal tests which are a part of continuous internal assessment also helps in getting an understanding of the requirements of the student population.

Bridge/remedial/add on courses

There are interdisciplinary professional and applied courses offered at the University. The remedial programme for the newly admitted students is arranged in various disciplines. Entrance test for assessment of skill and term test for ascertaining knowledge level of students are conducted to know the intelligence level of the students. The strategy is to help enhance the pace of grasping and knowledge level of students. Remedial classes in different subjects are also organized for slow learners. The University has established an exclusive 'University Students Advisory Bureau' (USAB), which regularly organizes job oriented short-term courses for unemployed graduates, provides computer training to students, offers coaching classes for various competitive examinations such as UPSC Civil Services, TNPSC Group I and II, Staff Selection Commission, UGC-NET examination, conducts seminars and workshops on career oriented courses for the benefit of post graduate students of the University. As many as 1521 students have benefited from the free UGC-NET coaching classes conducted by the USAB.

Study on the academic growth of students from disadvantaged sections

The University has conducted a study on the academic growth of students from disadvantaged sections of the society, economically disadvantaged, physically challenged and slow learners. The main findings of the study were that the socially and economically disadvantaged sections of society lack basic access to quality education. Based on the findings, the University has devised appropriate strategies for facilitating the disadvantaged sections of the society in the following manner:

- Tutorial, discussions, interactions and remedial coaching
- Personal, academic and social counselling
- Concept clarifications and problem solving exercises
- Bilingual explanation and discussions
- Trial tests and mock examinations
- Provision of simple but standard lecture notes/course material
- Making them part of student team wherein there is a blend of fast, medium and slow learners

This way, the disadvantaged sections of the society are assimilated into the academic mainstream.

Responding to the needs of advanced learners

The advanced learners of a subject are identified by the concerned faculty, based on their performance in internal assessment tests, end-semester examination, and student-teacher interaction. They are also identified based on their active participation, involvement, performance in the classroom/practical hall dynamics including participation in seminars, etc. Accordingly, subject wise, paper wise, practical wise strategies are adopted. The advanced learners can choose subjects offered in other departments and undergo those courses either by crediting or auditing. They are given enough representations in different programmes like IQAC seminars, campus placements to enhance their confidence levels.

The specific strategies for the advanced learners are as follows:

- Provisions of additional learning and reference material
- Assignment preparation on current and latest topics
- Student seminars on selected reference topics
- Participation in quiz, debate and problem solving- decision making exercise
- Student project work based on theoretical data/practical work/survey data/case studies
- Projecting them as *"Team Leaders and Facilitators of Teams"* comprising fast, medium and slow learners
- Provided with various projects, assignments and reference materials for their advancement

2.4 Teaching- Learning Process

Planning and organizing teaching, learning and evaluation schedules

The University follows an academic calendar for all its academic activities. The academic calendar of the University is prepared by the committees of deans and academic administrative authorities. There are separate semester wise and faculty wise annual calendar for PG programmes. The logistics of the semester wise annual calendar of events is based on the directions, feedbacks, UGC guidelines on academic working days and policy and orders issued by Government of Tamil Nadu. Institutional planning and organization of teaching-learning and evaluation schedule integrated into total scheme of academic calendar is mainly based on three important provisions. They are as follows:

1. The Regulations of each course specify the framework for academic schedule (The number of semesters, working/ teaching days, number of subjects, papers to be taught, hours of instructions per paper, practical method of teaching and learning (practical theory, field work etc), method of internal assessment tests, end-semester examinations, weightage for assessment declaration of results

2. The Board of Studies prescribes the detailed syllabus for a subject based on regulations

3. The CBCS section, based on their logistics, prepares the time frame for conducting examinations (exam schedule, evaluation schedule, tabulation schedule, marks card, result announcement schedule).

Thus, the systematic planning, organization and implementation of teaching, learning and evaluation is possible within the total scheme of University schedule. It is rational, realistic and scientific. IQAC plays a vital role in the quality assessment of University of Madras, emphasizing teaching-learning-evaluation process. IQAC organizes seminars to provide a platform for healthy interaction between different stakeholders. It also collects feedback from students, which is subsequently analyzed to improve the teaching-learning process.

The University provides course outlines and course schedules prior to the commencement of the academic session. The effectiveness is ensured by placing the details on the University's website (www.unom.ac.in). The University faces no challenge in completing the curriculum within the stipulated time frame and calendar.

Student-centric learning for holistic development and knowledge management

The teaching-learning process is made student-centric by assigning

(a) topics on which either a student/group of students can deliver presentations after preparing and discussing the broad synopses with faculty and seeking clarifications wherever the need arises
(b) the case studies/ business games for discussions in the classrooms
(c) the task of identifying vital reference books and relevant articles related to different topics from refereed national and international journals
(d) students to present the summary of certain research articles in the classrooms
(e) the choice of topics on which projects reports/dissertations are to be submitted by each one of them and
(f) leadership role in various situations

Student-teacher interaction is given highest priority in the teaching-learning process to make it student-centric. Further, the learning process is made more interactive through the use of different support systems like LCD projectors, interactive boards, models, maps, educational documentaries etc. The practicals conducted in different subjects are totally based on interactive learning. The University provides ample scope through well equipped and enriched central library, departmental libraries and reading rooms for independent learning.

Table 2.4 shows the details libraries of the various campuses of th

Table 2.4 Library Resources

S. No.	Particulars	Madras University Library Chepauk Campus	Central Library Guindy Campus	Central Library Taramani Campus	Central Library Marina Campus
1	Books	526625	51058	14473	98586
2	Theses	10030	5465	876	2672
3	Journals	260	55	390	550
4	CD Rom	100	160	360	100
5	E-Database	10	22	16	5
6	E-Journals	4500	6207	6212	3500

Students in departments like Management, Commerce, Psychology, all science departments, Library and Information Science, Journalism and Mass Communication etc undertake project work, where self-learning by students form the core. Such activities contribute knowledge development, skill formation in the student besides providing requisite platform to the student to become confident and self-reliant.

University's policy on inviting experts

Industry experts are invited for specialized inputs on regular basis. For this purpose, the University allocates funds every year to all the departments. The departments are free to invite eminent personalities in the relevant field. Similarly, allocation is also made for inviting experts as part of organizing seminars and conferences.

Blended learning by using e-learning resources

The University formally encourages blended learning by using e-learning resources. The computer aided learning is given priority in our educational system. The internet connections made available in all the departments and the library enhance the scope of e-learning. The University is privileged to have INFLIBNET and INFONET facilities. In addition, the University subscribes to CD-ROM databases facilitating quick e-survey of the literature by giving only keywords.

At the beginning of every academic year, orientation programmes are arranged by the library staff. In addition to orientation programmes, sensitization/awareness programmes and hands-on training are also arranged for the optimal use of INFLIBNET facilities. All the PG students, research scholars and the faculty members make optimum utilization of these resources for teaching-learning process and research work.

Technologies and facilities for effective teaching and learning

Computer and internet access and training to teachers and students

The main objective of the Network and Internet Operation Centres in all the campuses is to enable researchers, academics, students and administration to use information and communication technologies.

Functions of University network operating centre

- To provide better network connectivity with improved technology to all the four campuses
- To develop better ICT infrastructure
- To extend high-speed internet path for better access
- To create internet centres in campuses
- To be active in NME and NKN national projects

The NOC at Chepauk Campus provides DNS, Web, Mail, Database Services, e-resources and e-journal access to the Faculties and Students of the University. The Centre also updates and uploads the day to day University information like tenders, results, seminars, workshops, conferences, admissions, appointments, department information, course syllabi and time tables with the help of the website (www.unom.ac.in).

Soft Skill Lab

Separate Soft Skill Lab with 40 computer systems each has been functioning in different University campuses for the benefit of students / faculties for the past four years. More than 1000 students have benefitted each year by using the lab.

Virtual University Project

Virtual University Project of the University of Madras is a Tele-education and e-learning platform for students to take education from remote locations convenient to them. Under the project, University of Madras has set up Virtual University infrastructure at 11 Colleges/University Campuses in Chennai.

Virtual University data centre and studio are located at Chepauk Campus. The educational programmes are delivered from the studio at the Chepauk Campus and student can attend the lectures at any of the above virtual university nodal locations. The delivery of education programmes in virtual university set up is provided in both synchronous as well as asynchronous environments. The synchronous learning environment simulates real class room situation wherein students can listen and view the lectures in 11 virtual class rooms in real time and can also interact with the teachers. In asynchronous learning environment, students will be able to retrieve the stored lectures for their review.

Pan-African e-Network Programme

Inspired by recent advances in the provision of healthcare and medical education through the use of information and communication technologies, Pan African e-Network assists Africa in capacity building programmes. The platform harnesses the delivery of lectures by the scarcely resourced teachers to a very large number of students.

The University of Madras offers M.Sc (IT) and BBA programmes under this project to students of countries such as Cameroon, Eritrea, Ethiopia, Ghana, Ivory Coast, Rwanda, Seychelles, Sierra Leone, Tanzania, Togo, Mauritius, Somalia, Egypt, Malawi, Zambia, Lesotho, Zambia, Sudan, Madagascar, Niger, and Mozambique. 1245 students are enrolled under this project.

Steps for making classrooms as 24 X7 learning places

The use of modern multimedia teaching aids like LCD, OHP models, CD-ROMs and computer systems are usually employed in classroom instructions. In some departments, computer-based packages are used to elucidate abstract knowledge and virtual instruments through computer animation. Students are also encouraged to use computer software packages for meaningful analysis of the experimental data collected/acquired by them.

Provision for counselors/mentors/ advisors

University Students Advisory Bureau housed in the Chepauk campus of the University offers counseling, mentors and advisors for each class or group of students for academic, personal and psycho social guidance. Further every student is assigned a faculty advisor to advice on academic matters.

Details of innovative teaching approaches/methods/practices adopted

In the last five years, many teachers have developed ICT enabled course material. Many departments are supplied with audio visual teaching aids which are also used to teach students. Such teachers are rewarded for their innovations through commendations from the Vice Chancellor. Learner-centered activities like participative learning, interactive sessions, students' seminars, case studies, project work, assignments, problem solving exercises and field work are followed.

As a pioneering effort, Open Educational Resources on soft skills have been prepared as a suite of 250 reusable learning objects. It is hoped that this pilot project will pave way for open access learning.

The significant teaching-innovations made in the last five years are mentioned below:

(i) Practical work: Nearly half of the total academic work time is devoted to practical/pr
work environments.

(ii) Case method: Students are assigned live projects as case studies that are aimed at testing the application of theoretical concepts to industry situations.

(iii) Feedback: Both teachers and students evaluate each other with the spirit of developing mutually and for the cause of promotion of excellence.

(iv) Case study and simulation exercises: Use of case study method and organizing of mock interview sessions and review of Curriculum viate exercises for the purpose of explaining the recruitment process.

(v) Personality development initiatives: Students are divided into groups to work on projects and make class presentations to collectively work with team spirit and share their knowledge.

(vi) Self and peer assessments: Students are encouraged to assess themselves and get assessed by their peers along industry and domain specific parameters in order that they may know their strengths and weaknesses.

Efforts at creating culture sensitivity and scientific temper

To nurture critical thinking, creativity and scientific temper among students, various activities like debate, extempore speaking, essay competition, seminars, group discussions, symposia, poster presentations, field survey, making models and practical exercises of curriculum are conducted from time to time. USAB arranges Inter departmental Cultural Programme (UNIFEST) for the students in the University Departments. USAB and UCIR arrange meetings for the international students studying in the University departments and affiliated colleges and celebrate International Women's day with the participation of women staff and students of University departments and affiliated colleges.

Student projects

Project work is mandatory under the CBCS of the University for all students pursuing their PG programmes in various departments of the University. Students usually undertake projects with industrial and commercial organizations. Faculties actively involve themselves in facilitating the completion of project work. The duration of the project work is one Semester.

Mechanism for teacher evaluation

The University has a mechanism for the evaluation of teachers by students/ alumni. The student's feedback form is available in www.unom.ac.in which focuses on the broad area li

evaluation process, administration, library and Internet centres. This feedback contributes to the academic radar prepared by the IQAC.

2.5 Teacher Quality

Planning and managing human resources to meet the changing requirements of the curriculum

The University has taken conscious and continued efforts in planning and managing the human resources to meet the changing requirements of the curriculum. The University of Madras focuses on the qualitative improvement of the faculty, by encouraging and enabling faculty to

a. attend academic programmes including MDP/ FDP/ training programmes of similar type
b. attend National/international workshops/seminars/conferences/ conventions etc
c. undertake consultancy assignments
d. carry out research, publish papers in scholarly journals
e. obtain research grants from national and international agencies and
f. teach and guide students in Postgraduate, Doctoral programmes

The University rewards high performers with "Academic Achievement Award" during the Teachers Day celebrations every year. As many as 47 awards were given as part of celebrations of the 'Teachers Day' in 2012.

The University of Madras has been actively seeking collaboration with industries, and academic as well as research organizations all over the world with a view to meet the challenges of globalization on one hand and demands of the society on the other. The University constantly explores possibilities to have tie ups at regional/national and international levels for exchange of knowledge and expertise by entering into MoUs.

Appointment of qualified faculty for new programmes

The University has appointed one Associate Professor and three Assistant Professors for the new programmes such as Nanotechnology and National Centre for Ultrafast Processes in 2009 – 2010. Further, the University has, on its roll seven visiting Professors.

Academic recharge and rejuvenation of teachers is achieved by

- Deputing teachers to attend faculty development programme and staff development programmes organized by different universities with the help of UGC funding.
- Granting study leave to tea International repute.
- Funding the participation of the faculty in National and International seminars and conferences.

- Encouraging and funding university schools to organize national and international conferences/seminars and workshops

- Allowing university schools to procure state of the art equipment either to upgrade their existing laboratories and for the establishment of new labs

- Instituting the doctoral and post doctoral scholarships for promotion of high quality research.

- Liberally allowing the entire faculty of University schools to recommend latest references/ textbooks, journals and other e-resources for procurement in UIRCs

Recognition of teachers

Table 2.5 depicts the number of faculty who received awards/ recognitions for excellence in teaching.

Table 2.5 Awards/recognitions for teachers

Year	State Level	National Level	International Level	Total
2007 - 08	4	2	2	8
2008 - 09	3	3	1	7
2009 - 10	5	4	1	10
2010 - 11	7	6	3	16
2011 - 12	15	4	1	20
2012 - 13	17	2	3	22

Staff Development Programmes (SDPs) and Academic Development Programme[ADPs] for enriching the teaching- learning process

As part of promoting excellence in teaching, the University makes continuous efforts in encouraging teachers to undergo training and development programmes. Table 2.6 shows the number of faculty who underwent Staff Development Programmes (SDPs) during the last five years. The academic development programmes are organized by the UGC Academic Staff College of the University of Madras.

Table 2.6 Staff Development Programmes (SDPs)

Name of the Programme	Number of Faculty Participants					
	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Refresher Courses	464	452	635	590	722	689
Orientation programmes	216	207	351	273	279	213
Orientation programmes for the newly recruited Govt. College Teachers conducted by TANSCHE	269	506	1035	853	-	-
Staff Training conducted by the University	-	22	40	-	-	-
Staff Training conducted by the other Institutions	-	80	1225	-	-	-
Summer/Winter Schools, workshops, etc	299	194	236	308	223	241
Total	1248	1461	3522	2024	1224	1143

Faculty invited as resource persons in workshops/ seminars/ conferences

- Percentage of faculty who participated in Workshops/ Seminars/ Conferences recognized by national/ international professional bodies: 100 %
- Percentage of faculty who presented papers in Workshops/ Seminars/Conferences conducted or recognized by professional agencies**:** 100 %
- Percentage of faculty who have teaching experience in other universities/ national institutions and other institutions**:** 100 %
- Percentage of faculty who have industrial engagement: 70 %
- Percentage of faculty who have international experience in teaching: 40 %

2.6 Evaluation Process and Reforms

The method of evaluation involves coding and decoding of answer sheets at PG levels to ensure unbiased evaluation. The University has double valuation system involving external examiners from other Universities who also set 50% of the question paper. The evaluation process of the University is transparent. The University communicates the outcome of the evaluation promptly by publishing results on the internet through the University website. This is apart from the publication of detailed results displayed on University/ department notice boards.

Important examination reforms initiated by the University

The University has introduced online registration of candidates from the University departments and affiliated colleges for the examinations held from November 2012. This enable

processing of examination application of the candidates and also error free updating of students information viz., name, date of birth, address for communication, community and subjects for which they are appearing etc. Based on this information, the nominal roll, seating arrangement and hall ticket are prepared and sent to the respective colleges online. Further, it helps the University in getting actual number of candidates appearing for each subject and this in turn enables setting and printing of question papers.

The practical marks and internal assessment marks are also obtained online from the University departments and affiliated colleges. This system has reduced malpractice and saved a lot of time in creating the data. After valuation, the University publishes the results through the website and SMS to students.

Average time for declaration of examination results

The University semester examinations are held twice a year viz., April and November and the results are published during the week of January and June every year. The duration of the conduct of examinations is for a period of 45 days in each semester and around 25 days are allotted for valuation of answer scripts. So far, there has been no delay in the publication of results during the last decade. The results are published through the website of the University of Madras and also through SMS and a hard copy of the results is sent to the respective colleges.

Transparency in the evaluation process

The University introduced some three decades ago, the system of assigning dummy numbers to all the answer scripts to avoid malpractice. On completion of valuation of answer papers, processing of results and implementation of Board recommendations, the results data are converted from dummy number to original number, a day before the publication of results.

Apart from the above, the University provides photocopy of answer scripts to students who apply for revaluation and this enables students to know the pattern of marks awarded at the time of evaluation and also after revaluation. This transparency has received appreciation from the student community.

Integrated examination platform

Pre-examination process

Time table generation, Optical Mark Recognition (OMR), student list generators, invigilators, squads, attendance sheet and online/ gateway payment are processes involved in preparation for examinations. The University examination commences on statutory dates by giving 90 working days in a semester. The Time Table for all the degrees are drawn and published in the University website.

Examination process

Currently, the University is taking earnest efforts in introducing online gateway payment and it will be implemented during this academic year, i.e. 2013-14.

For conducting examinations in affiliated colleges, the University appoints the Principal of the respective colleges or his/her nominee as Chief Superintendent of the examination centres and he/she will be given full powers to conduct the examinations, i.e. from the receipt of the question papers from the University till the dispatch of answer scripts to the University for evaluation. The Chief Superintendents have been empowered to appoint required number of invigilators for hall supervision. Further, the University appoints Additional External Chief Superintendent for all examination centres to assist the Chief Superintendent and also prevent malpractice. The University also appoints inspection squads to make surprise visits to all the examination centres to curb malpractices.

Post–Examination process

With regard to processing of examination results, the University follows computerized result processing system and error free results are published. Immediately after publishing the results, the Mark Sheets and Provisional Certificate are sent to the colleges for onward transmission to students. Immediately on publication of results, the students are permitted to apply for revaluation and re-totaling of their answer papers in the subjects of their choice. The revaluation process begins with assigning of dummy numbers, inviting the examiners who have not valued the answer papers earlier, processing of results and publishing the results within a month. With a view to enable students who have failed in the end semester to apply for higher studies/employment, the University also introduced instant examination system since April 2011. The instant examination has been conducted like the main examination with separate question papers and the results are published within a month.

Reforms in Ph. D evaluation process

The University has adopted the UGC [minimum standards and procedure for awards of M.Phil./Ph.D degree] regulations 2009. The evaluation followed all along by the University and the procedures now suggested by the UGC are one and the same.

Provision for including the name of the college in the degree certificate

The University is actively considering the inclusion of the name of the autonomous college in the degree certificate issued by the University.

Mechanism for redressal of grievances with reference to examination

In case any student feels a

teacher for a second look at his/her

departmental notification. The aggrieved student must be shown his/her answer papers in the end semester examination by the teacher concerned and

the signature of the student must be obtained. If the teacher feels that the case is genuine, he/she can re- examine and forward the revised grade, if any, to the Dean (Academic) through the heads of department with justification for the revision. Revision should be done before the document reaches the Dean/ Controller of Examinations. If the student feels that the valuation is not fair, the student can ask for revaluation as per the existing provisions of the university examinations. The Dean (Academic) with the permission of the Vice chancellor can call for all records (syllabus, question papers, attendance and answer scripts) of any course if there is any written or oral compliant or for random check.

The Controller of Examination will accept the recommendations of the Dean (Academic)/ Departmental/Class Committee with respect to the final results and will publish the same and issue the grade cards to students within 2-3 weeks after the receipt of the results.

Streamlining the operations at the Office of the Controller of Examinations

The University introduced online registration of candidates for the examinations from year 2012. The objective is to reduce the time of the processing of the examination applications of the candidates and also to ensure error-free updating of student information. The University has also implemented the online registration of practical and internal marks of the candidates and this enables the University in processing the examination results quickly.

2.7 Student Performance and Learning Outcomes

Most of the programmes offered by the University schools of studies are professional and technical in nature. Internship, dissertation, industry projects and seminars are integral part of the syllabi of almost all academic programmes. Faculty members guide the students and monitor their performance in these components of evaluation. Thus it is through arranging weekly interaction sessions that the performance of the students is monitored by the faculty in their respective departments. The faculty in charge carefully monitors the regularity of attendance, participation in seminars and other activities and also the performance of students in internal tests/ semester examinations.

The University has evolved its own teaching, learning and assessment strategies as mentioned below in order to facilitate achievement of intended learning outcomes:

- Major quality enhancement measures has been undertaken in the teaching and learning process and modernized based on the requirement of curriculum and feedback from the stakeholders.
- Modern teaching aids are en

- Learning activity is facilitated through Internet and virtual learning centre.

- Projects and study tours and field trips, assignments are made part of the courses.
- Interaction between successful and well placed alumni with the students in the departments is encouraged.
- Transparency in the evaluation system
- Thrust on faculty development- participation in seminars, refresher courses and workshops
- Subject experts deliver special lectures on recent trends and developments in their fields of expertise to the students.

Collection and analysis of data on student learning outcomes

This is done through student feedback on the performance of teachers. This is done by the dedicated IQAC wing of the University. The feedback is used by the faculty for improving the quality of teaching. The grades of performance as assessed by the students are communicated to the faculty through the office of Campus Director of the University.

New technologies deployed by the University in enhancing student learning and evaluation

The students undergo field work, projects and internships to appraise themselves with the direct application of their knowledge and skill to real life problems.

Language laboratories

The language laboratories focus on computer aided multimedia instruction and language acquisition. The learner friendly mode of language learning enables students to be self instructional. The laboratory acts as a platform for learning, practicing and producing language skills through interactive lessons and communicative mode of teaching.

Internet Centres

The University operates Internet centres in all the campuses. The internet centres are open to all the students of the University departments.

University Library system

Many of the departments of the University have their own library collections. Computer based information services have been introduced. The main library of the University is located at its Chepauk Campus. Besides, maintaining a collection of print materials, the University Library system also maintains a collection of e-resources on CDs and also subscribe to over 4000 e-journals under UGCs INFONET programmes.

- Creation of a continuum of educational process utilizing modern teaching-learning resources.

- Initiation of measures to ensure equity and access to the disadvantaged and needy sections of society through
    - Madras University Free Education Scheme
    - University Research Fellowships
    - Earn While You Learn
    - Fee exemption/ waivers for SAARC students, differently-abled students, women etc.

- Sustained growth in student enrolment especially from women, and deprived sections.

- Introduction of dual degree scheme in the IDE.

- Creation of online teaching-learning resources including Open Educational Resources.

- Provision of online student registration, online mark entry and online Ph.D application tracking systems.

- Complete academic audit through continuous course assessment, random quality checks of answer scripts student appraisals and faculty self-appraisal.

CRITERION III

RESEARCH, CONSULTANCY AND EXTENSION

CRITERION III

RESEARCH, CONSULTANCY AND EXTENSION

3.1 Introduction

The University of Madras is known for its dedicated efforts towards achieving excellence in teaching and research including sponsored and consultancy projects. The social science departments have been working to take the research to the villages and the urban poor while the science departments are working towards process and product development. A testimony to these claims is the award of the 'University with Potential of Excellence' (Phases I and II), the PURSE programme of the Department of Science and Technology (DST), Government of India programme and 25 departments are under the UGC-SAP(15), DSA-CAS(8), UGC-ASIHSS(2) DST-FIST(11)programmes and Government of Tamil Nadu grant for Centre for Excellence(1). Notable and significant achievements have been made in research, consultancy and extension programmes during the period 2007-08 to 2012-13.

3.2 Promotion of Research

Promotion of research in the university departments

The University has rich and long legacy of nurturing high quality research. It continues to support and enhance this tradition in all its departments and affiliated institutions. Every member of the faculty is encouraged to engage in research activities, and is supported in planning and executing research projects, right from the stage of making project proposals, obtaining project funding, and reporting and presenting the results. Administrative structures and procedures that reflect this philosophy are in place, and changes to these are made to enhance their effectiveness, as and when necessary. The University has adopted the 'UGC Regulations for Ph.D.[2009] in the Ph.D regulations of the University of Madras from the year 2010.

The University's focus on research achievements is made clear to the faculty right from the beginning. Apart from the statutory requirements, recruitments and subsequent promotions are always made on the basis of research achievements of the faculty. The existence of such criteria, along with a general atmosphere of respect and honour for research achievements by faculty in the University has resulted in this being one of the core strengths of the University.

The University also provides research facilities such as animal houses for research in bio-medical sciences, liquid Nitrogen facility, and other essential research infrastructure. Internet facilities, including Wi-Fi in four campuses, are freely available to the faculty and students. Connectivity to the National Knowledge Network (NKN) ensures speeds up to 08 Mbps. This has made it possible to use remote control for data collection at, for example, ultrahigh intensity X-ray diffraction facilities in France. It goes

without saying that adequate laboratory space along with water and power is freely available to every faculty member.

Research committees

The research activities of the University are promoted and monitored by (i) the Research Projects Office which is headed by the Dean (Research) (ii) the University-Industry-Community Interaction Centre (UICIC) headed by the Dean (UICIC) and (iii) the Statutory Committee – two Board of Research Studies (BoRS)– one for Arts and another one for Science. In addition to these, there is a Technology Business Incubator (TBI) Centre which is managed by an Advisory Committee and a Research Ethics Committee to ensure adherence to international ethical norms while carrying out research using animals and human beings.

In particular the office of the Dean Research has been established specifically to facilitate submission and follow-up of research project proposals submitted to funding agencies. There is also a separate office of the Dean, Industrial Consultancy (UICIC), to look into matters relating to sanction and execution of research projects and consultancy work related to the Industry.

The Board of Research Studies meets once in six months and the recommendations are discussed and approved by the Syndicate, Academic Council and Senate. After obtaining the approval of the statutory authorities, the recommendations are implemented.

Promoting research in affiliated colleges

The University plays a pro-active role in encouraging colleges and college teachers to actively involve in research. The University grants recognition and permits colleges to conduct Ph.D and M.Phil programmes if the Department meets the norms prescribed by the BoRS. The College Development Council (CDC) headed by the Dean CDC plays a key role in implementing the Faculty Improvement Programme (FIP) of the UGC.

The University departments involve teachers and students (PG, M.Phil. and Ph.D.) of affiliated colleges in all its seminars/ conferences/ workshops and training programmes. The university as on date has recognized 42 departments of affiliated colleges for doing research leading to M.Phil./Ph.D. Further, to encourage the research activities, applications are received from UG colleges intending to offer research programmes. The University appoints Inspection Commission to study the infra-structural facilities and availability of qualified guides. Upon receipt of satisfactory report of Inspection Commission and subject to rectification of deficiencies, if any, the department concerned is permitted to conduct research.

Implementation of research projects

A large part of the administration is given over to support research. Purchase committees at the level of department, campus, and the University, with clear procedural guidelines, take autonomous decisions at different financial levels, thereby promoting transparency and accountability, without compromising the needs of the researchers for quick satisfaction of the project requirements. Each of the four major campuses of the University has a Director. The major function of the Director's office is to facilitate the administration of research projects in the respective campuses.

An exclusive Research Project Office has been created to implement large scale projects such as UPE, PURSE etc. without hassles. These are managed by a Coordinator for the programme. The monitoring of projects, sanction of advances, and settlement of bills and issue of the Utilization Certificates are handled by the respective Campus Director's office and thus the time delay in implementing the project is avoided.

Inter-disciplinary research

The University encourages and promotes inter-disciplinary teaching and research. The UGC has granted five PG programmes (M.A. Corporate Sociology, M.A. French Translation, M.Sc. Actuarial Science, M.Sc. Cyber Forensics and Information Security and M.Sc. Photonics and Bio Photonics) under the innovative schemes which are inter-disciplinary programmes. The UPE programme and two CPEPA programmes granted by the UGC are testimonies to the University's efforts to promote and strengthen inter-disciplinary research.

Visits of renowned overseas academics

The University hosts the visit of internationally renowned professors within and foreign countries. The University always bears the local hospitality expenses for such visitors. Among the several internationally distinguished visitors to the University in the last few years, mention must be made of Dr. Venki Ramakrishnan, Nobel Laureate in Chemistry in 2009, from University of Cambridge, UK. Prof. Ramakrishnan visited the University, delivered lectures and interacted with faculty and students in the year 2002, and again in 2007, and once again in 2009, when, after his Nobel award, he was felicitated by the University for receiving the Nobel prize. Some of the other visitors during the last four years include:

2008-09

i) Amy Burton, International Development and Alumni Relations Officer, Faculty of Business, Economics and Law, University of Queensland, Brisbane, Australia.

ii) Visit of Jean Peeter, Vice President of International Relations Sandra Vessier, Director International Relations, Clarie Sallie, Director of Adult and Continuing Education, Anaire Rossi, Scientific and technical Computer Laboratory and Prof Alain Dufour, Microbiologist, Universite de Bretagne sud, L'Orient, France

iii) Visit of Gilles Verniers, Sciences Po, Paris

iv) Delegation from the Royal Civil Service Commission of Bhutan, Dasho Bap Kesang, Honble Secretary, Ugyen Tshewang, Chief HR Officer, Sangay Thingley, HR Officer Ugyen Dorgi, Medical Liasion Officer

v) James Bubard, Associate Provost for Strategic Initiative, Academic Affairs, Kutztown University, PA, USA

vi) Prof Gareth Roberts, Carol Vielba, Mathew Cott, Staffordshire University, UK

vii) Teams from London School of Business Management and Anglia Ruskin University, UK

viii) Delegation headed by Prof Philip Whyte, Director Relations International Unaiversite de Tours, France

ix) Prof. Sebastien Fleuret, Department of Geography, University of Angers

2009-10

i) Team from University of South Australia, Adelaide, Pal Alhuwalia – Pro- Chancellor, Anna Cicarelli – Pro Chancellor, Adrian Vicary – HOD Dept of Psychology.

ii) Mr Simakov, Director, Russian Cultural Centre.

iii) Visit of Prof Andrew Farmer from Oxford University.

iv) Team from Holland, - meeting with Prof. P.T. Srinivasan, MBA Department, UNOM.

v) Prof. J.F.M Smith, Director, Centre for Research Innovative and Supportive Policy and Dr Dorine Collijin, HOD C RISP.

vi) Mr. Christian Lecot, Université de Savoie, France.

vii) Prof. Tatiana Perova, Ms Eliena Palistskaya from Moscow State University, Russia.

viii) Prof Andrew Philominaraj (Chile) with [illegible] of students of Psychology & Commerce fro

ix) Prof. Masanon Tonegwa from Kyoto University, Japan.

x) Mr Ian Jones, Nottingham University, UK.

xi) Canadian High Commission – Mr. Simon Cridland and Mr Omar Allam – Consul and Trade Commission.

xii) Team from Northampton University, UK.

xiii) Team from University of Newcastle, Australia and PSB Academy Singapore – Prof. Andrew Low Kin Khoon, Prof. Vincent Peh Weijie, and Mr. Vicki Brew, Deputy Academic Registrar.

xiv) Arrival of Delegation from Cameroon, Africa.

xv) SIM University, Singapore, Prof. Neelam Agarwal, Dr K. Shamugam

xvi) Consul General of France Pierre Fournier and Honorary Consul for France Ms M Kausalya Devi.

2010-11

i) Visit of delegations from France, Agnes Sinsoulier – Bigot, Conseillere regionale, Presidente dela commission relations internationals, Pascal Meyer, Directeur de la cooperation interntionale, Laure Benopit, Charogee de mission Europe et Asie, Directeur de la cooperation international, Cecile Champilou, Coordinatrice de project pour la region centre.

ii) Visit of Dr. Brigit Barden, Director, International Office, Leibniz University, Hanover, Germany & Dr. Balasubramanian Ramani, Advisor, India Relations, Institute for Botany, Leibniz University, Hanover, Germany

iii) Team of American University and College representatives organized through Linder Tours.

iv) Drake University, Des Monies, lowa representative regarding activation of MOU.

v) Visit by delegation from Salford University led by the Vice-Chancellor Martin Hall who signed an MOU.

vi) Visit of delegation of University of Dublin associated with Dr. Wilfred Felex, Professor ICCR Chair, University of Dublin, Ireland.

vii) Visit of delegation from University of Dublin Ireland Registrar and Prof. Juergen Barkhoff and Vice Provosot Prof. Michael Marsh.

viii) Meeting with team of th[illegible] Juntendo University, Jap[illegible]

ix) Meeting of Angers University te[illegible]ded by John Webb with the Vice Chancellor.

x) Visit of Prof. Aaron Gael, HoD, Dept. of Religious Studies and Mr. Ken Enoch, IR Office, University of West Virginia, USA.

xi) Visit of Mr.Michael Auslin and Ms.Ratna Mukerjee, Consulate of the United States.

xii) Visit of delegation of University of Salford; Vice Chancellor Prof. Martin Hall and International Officer Mr.Michael Lurie.

xiii) Visit of Dr. Christine Ennew, University of Nottingham and a representative of the University of Loughborough, UK.

xiv) Visit of delegation from Pays de la Loire : Philippe Papin, Regional Councilor G. Moguedet, Vice President of Administrative Council, Angers, Prof. G. Bedouelle, rector, University Catholique de l'ouest, Prof. P. Daniel, Vice President RI, Maine.

2011-12

i) Ms. Cecile from the University of Francois Rebelais Tours and officials from CTRU

ii) Delegation of Belgium Strategic Consortium on Coastal and Civil Engineering along with Chairman of Faculty Commerce for Internalization, GENT University.

iii) Mr. Stuart Campbell, Deputy Consul-General for South India, Australian Government and Ms. Aparna Gupta, Program Officer, Australia-India Council.

iv) Delegation from University of Utara Malaysia consisting of Dr. Engku M Nazir, Director, Quality and Strategic Management, Dr. Saniniza Md. Dalleh, Head of the Department of School of Business Management visited UCIR.

v) Dr. Richard Edwards, Professor of Education and Head of School of Education and Dr. Richard Dockrell, Director of Learning and Teaching and a member of the Executive in the School of Education, University of Sterling, Scotland.

vi) Prof. Margarat S. Barratt, Professor and Head of Music, Queensland University.

The University has been selected to implement the scheme of the Department of Higher Education, Government of Tamil Nadu Government, to invite renowned professors University for 10-15 days and students and help the departments to improve their curriculum and research with a budget grant of Rs. 10 lakhs. The following renowned professors visited under the above mentioned sch

1. Prof. J. Sethuraman and Prof. Robert O.Lawson Distinguished Professor from Florida State University, USA visited Department of Statistics.

2. Dr. Fritz Scholz, Head, Dept. of Environmental Chemistry,University of Greifswald, Germany visited Department of Analytical Chemistry.

3. Dr. Anam K. Govardhan, Professor, Western Connecticut State University visited Department of English.

4. Dr. M.H. Ravindranath, Terasaki Foundation Laboratory, Los Angeles, USA visited Department of Zoology.

5. Dr. C. Gopinath, Sawyer Business School, Suffolk University, Boston, USA visited Department of Management Studies.

6. Prof. V.V. Srinivasu, Department of Physics, University of South Africa, P.O. Box 392, UNISA Pretoria 0003 visited National Centre for Nano Science and Nano Technology.

7. Dr. A. Ra. Sivakumaran, Associate Professor, Asst. Head – ALC, Head – Division of Tamil Language & Culture, Asian Languages and Cultures AG, National Institute of Education, Nanyang Technological University, Singapore visited Department of Tamil.

8. Prof. R. Manjunatha Kini, Department of Biological Sciences, National University of Singapore, Singapore visited CAS in Crystallography.

Budget allocation for research

A major share of the University budget is earmarked to promote research. This includes non-plan expenditure on the salary of teachers, technical assistants, non-teaching staff, purchase and maintenance of equipments for teaching and research departments and infrastructure development. It is hard to disentangle the total budget amount into teaching and non-teaching activities of the University. However, the plan account of the University budget is exclusively meant for research and it is the fund generated from outside the University sources such as UGC, Government of India, international agencies and consultancy projects for the industry. The budget amount under the plan grant for research for the six years is given below

Table 3.1: University Budget for Research Schemes

Year	Budget Amount for Research (Rs. In lakhs)	Total Budget of Plan and Non-plan of the University (Rs. in lakhs)	% of the budget spent on research
2007-08	12903.65	23701.20	54.44
2008-09	15711.64	27364.72	57.42
2009-10	12987.90	24770.52	52.43
2010-11	16097.38	31137.85	51.70
2011-12	16715.6	31773.95	52.61
2012-13	13622.68	25764.54	52.87

Schemes to promote research among faculty and students

(i) Sabbatical leave for professors

The University grants sabbatical leave for professors who have completed six years of service to take up research in another institution (within India or abroad) or to engage in book writing. The faculty members have to submit a report after availing themselves of sabbatical leave. During the period of assessment four Professors availed the facility.

(ii) Study leave

Associate Professor and Assistant Professor with not less than two years of continuous service are eligible for study leave to pursue study/research directly related to work. Study leave is granted for a period of not more than two years. The absence on study leave counts for service benefits. Three Assistant Professors were permitted to avail of study leave.

(iii) Funding for participating in conferences and seminars within the country and abroad

Faculty members are encouraged to attend seminars and conferences, within the country, or abroad, and are readily sanctioned on duty leave for the purpose. The University also meets 50% of the expenses related to participation in conferences/seminars as per UGC norms.

(iv) Autonomy in executing research projects

Complete academic autonomy is granted to faculty in proposing and executing projects, as well as great deal of financial autonomy. Thus, even equipment purchase decisions are made essentially by respective faculty me
administrative staff pla

institutional overheads attached to most projects is partly (one-third) provided to the investigator or department for un-budgeted contingencies that may arise in connection with the project, or to begin initial exploration of a new area. Every evaluation of the performance of a department or individual faculty member is based mainly on the respective research contribution.

(v) Grants to conduct seminars and conferences

All the University departments conduct seminars, conferences and workshops at various levels – regional, national and international. The University advances seed money to the departments for initial organizational expenses. For the last five years the University Departments have organized 1046 seminars / conferences.

Table 3.2 Conference / Seminar /Workshop organized

	2007-08	2008-09	2009-10	2010-11	2011-12
International	11	15	27	22	30
National	136	100	116	105	126
Regional and others	44	74	68	85	87
Total	191	189	211	212	243

(vi) Research starter grant

A research starter grant of rupees two lakhs is given to all newly recruited faculty members. This encourages them to plan their very first project without having to think about the funding. The ideas and experience thus gained helps them make larger proposals to various funding agencies. Encouragement to obtain extramural project funding is given to all faculties. The University provides financial assistance for submission/ presentation of the new project proposals.

(vii) Research support for students

Most courses in the University have a strong research orientation, with small research projects forming an integral part of the training of post-graduate students. The University also offers Ph.D. and M.Phil programmes. Admission to Ph.D. programmes are made in January/April/July/October sessions through an eligibility test. The research progress of the scholars is monitored by a doctoral committee at the department level and the Board of Research Studies at the University level. Students are also given travel grant to participate and present papers in international conferences and there is a budget provision of Rs. 10 lakhs per year for this scheme.

(viii) Earn while you learn scheme

Financial assistance is provided to needy research scholars as well as to PG students. There is a separate budget allocation for research and development activity which includes the 'Earn While You Learn' scheme. Under this scheme 1813 PG students and non-stipendiary research scholars have been provided part time employment in their own departments, each earning Rs.1,000 to Rs.1,500 per month, for 6-7 months in a year. PG students are required to undergo internships at various research institutions/industries, to have some hands-on experience of research procedures even before they decide to join a Ph.D. programme. Research scholars get financial support from sponsored research projects from national and international agencies and direct awards from Central Government bodies such as UGC and CSIR, as well as from the Government of Tamil Nadu.

(ix) University research fellowship (URF)

In addition to this, the University of Madras provides fellowships to research scholars (URF) from its own funds. The University has created 98 Research Fellowships with a total expenditure of Rs 89.22 lakhs in the review period. These fellowships allow candidates who do not get other funds to pursue Ph.D programmes.

(x) Post-doctoral Senior/Junior research fellowships (JRF/URF)

Two faculty members were awarded post doctoral fellowship by the UGC.

There are 391 (JRF 238, SRF 89 and URF 64) Ph.D scholars conducting research with funding support from the UGC and University.

(xi) UGC/DST appointees

Under the UGC career scientist programme two candidates have joined the department of Genetics and National Centre for Ultrafast Processes. Under the DST-inspire programme one candidate has joined and continues his teaching and research activities at National Centre for Ultrafast Processes.

3.3 Resource Mobilization for Research

In addition to the UGC departmental programmes, most of the faculty members of the University have mobilized funds individually to execute specific research projects in their particular areas of expertise in various disciplines. A total of 478 individual research projects have been sanctioned to the faculty membe

union government, private trusts, and international agencies. Of these 346 are new or ongoing projects that began in the period under review. 132 projects were completed during this period. (Fig 3.1) In 15 of these, the total budget exceeds Rs. One crore, in 69 cases it is more that Rs.50 lakhs, in 243 cases the budget is between 10-50 lakhs. In the other 151 projects the budget is less than Rs.10 lakhs (Fig 3.2). Faculty members have been sanctioned major and minor research projects by, among others, the following agencies of the Government of India: UGC, CSIR, DST, DRDO, DBT, DOD, DAE, ICMR, ICSSR, and ISRO. State funding agencies like TNSCST have also funded some projects. Similar funds have come from international agencies such as the European Economic Commission and International Development Research Centre. Apart from the above, there have been four international collaborative research projects with a total budget USD 6,03,485 (or approximately Rs 3,31,92,000).

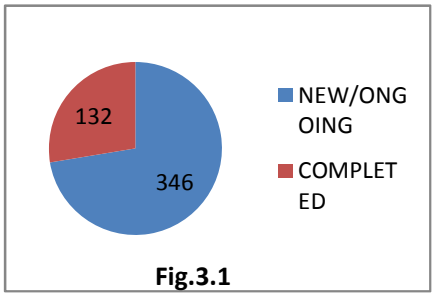


Fig.3.1

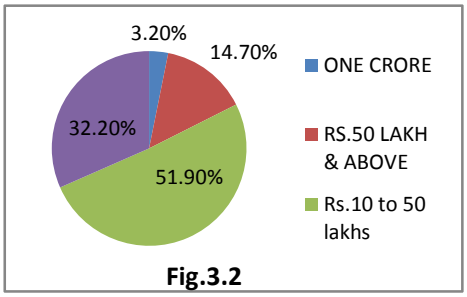


Fig.3.2

The grand total of all research grants, both departmental and individual, received during the review period is over Rs. 95.42 crores. This does not include research projects sponsored by business or industrial organizations, which are discussed in the following sections:

University with Potential for Excellence (UPE) scheme

Involvement of faculty in promoting research is exemplified by the research projects obtained from various funding agencies. The successful interdisciplinary approach involving different departments has resulted in the sanction of the second phase of the 'University with Potential for Excellence' (UPE) programme of the UGC with a budget of Rs. 50 crores for implementing the programme. The various research projects under UPE Phase II programme have already been initiated and are in progress.

Centre with Potential for Excellence in a Particular Area (CPEPA)

Under the UGC-CPEPA programme, the School of Life Sciences has been sanctioned Rs 325 lakhs for the development of Drugs from medicinal plants for human welfare, and the School of Earth Sciences a sum of Rs 230 lakhs for research on climate change and its impact on mangrove ecosystem in the region.

Centre for Advanced Studies (UGC-CAS)

Three departments have been recognized by the UGC as Centres for Advanced Study (CAS) with special funding: CAS in Crystallography and Biophysics, Ramanujan Institute for Advanced Study in Mathematics, and CAS in Botany.

Departments Recognized Under UGC-SAP, CAS, DSA, DRS III, DRS II and DRS I

1. Applied Geology DRS II
2. Bio-Chemistry – DRS II
3. Bio-Technology DRS I
4. CAS in Botany – Phase II
5. Criminology DRS I
6. Crystallography & Biophysics
7. Economics and Econometrics, DRS Phase III
8. Endocrinology, DRS Phase – I and II
9. Genetics DRS II
10. Library Information Science DRS I
11. Medical Bio-Chemistry DRS II
12. Pharmacology and Environmental Toxicology
13. Politics and Public Administration
14. RIASM – Phase IV
15. Zoology - Phase II

The efforts of faculty members of the departments have fetched 39 departmental projects in which all the faculty members are involved. This includes 29 departments recognized by the UGC for special funding under SAP, CAS or the 'Innovative Programmes' schemes. 11 departments have been funded by DST under the FIST programme to improve research infrastructure. Other funding for departments includes COSIST (Committee on Strengthening Infrastructure in Science Teaching) programme, ASIHSS (Assistance for Strengthening of Infrastructure in Humanities and Social Sciences) in the Departments of Economics and Econometrics, Politics and Public Administration and UGC-ASIST (Assistance for Improving Infrastructure in Science and Technology) in the Department of Endocrinology.. The total funds obtained by the departments amount to Rs. 17,80,30,744. Of these projects, nine were completed in the period under review, and 30 new or ongoing.

The Department of Science and Technology, Government of India is providing Research grant based on 'h'-index under scheme' Promotion of University Research and Scientific Excellence[PURSE]to the tune of Rs.9.00 crores during the assessment period. This grant has been utilized to improve the infrastructure facilities, particularly for the purchase of new equipments and to strengthen the networking facility. All the science departments have been provided with Rs.10 lakhs for the purchase of equipments. Twenty two JRFs have been provided to departments from this scheme. All the faculty members of science departments have been provided consumable grant ranging from Rs.30,000/-to Rs.1,75,000/- based on their

research performance. The University will be getting Rs.30.27 crores in the II phase of DST-PURSE programme.

3.4 Research Facilities

Research infrastructure and sophisticated equipments

Research infrastructure in the University undergoes a constant process of renewal and upgradation to serve current needs. This is especially so in the science departments, but in the humanities also, necessary facilities are created. In the period under review a variety of sophisticated equipments has been added, sometimes replacing obsolete machines. The two most sophisticated and expensive equipment added in the period under review are the Protein Crystallography equipment (Rotating Anode X-ray Generator attached to an Image plate detector) at a cost of Rs 2.35 crores, and a Transmission Electron Microscope at a cost of Rs 1.6 crores A total of 60 equipments, each costing above rupees five lakhs, were procured in this period. The lists of equipment purchased include several high-performance cluster computers. Besides these, personal computational facilities are constantly upgraded, and every faculty member has been provided with a desktop computer as well as a laptop computer, both enabled for internet access.

Research centres

Besides the UGC-CAS and UGC-SAP departments, the University has established many research centres with mandates to carry out research in specific areas: Centre for Cyber Forensics and Information Security, World Centre for Excellence in Waste Management, Centre for Multimodal Production for Differently-abled, the Centre for Technical Writing & Academic Writing, and Centre for Incubation & Technology Transfer. The last three are recent projects of the Government of Tamil Nadu at a total budget of about 90 lakhs.

The following research centres have also been established: Centre for Herbal Science, Centre for Environmental Sciences, Centre for Natural Hazards and Disaster Studies and Centre for Ocean and Coastal Studies. A Central Instrumentation Research and Service Laboratory is available in the Guindy campus. There is also a GNR Centre for Instrumentation, housing many of the sophisticated equi

laboratory with various pieces
National Chemical Laboratory, Pune, the All India Institute of Medical Science, New Delhi, and Bruker India Ltd.

A National Centre for Nano Sciences and Nano Technology has been established at the Guindy campus with funds from MHRD and Govt. of Tamil Nadu. This centre not only carries out research in the multidisciplinary area of Nanoscience and Nanotechnology, but also offers a PG programme in NSNT. This centre now operates from the GNR Centre

for Instrumentation in the Guindy campus, but will soon move into its own spacious premises being constructed in that campus. The DST funded National Centre for Ultrafast Processes established in the Taramani campus, has research facilities that are being used by researchers from different parts of the country.

The National Centre for Neurotoxicity Research to Assist Drug Development, funded by DST-DPRP, also established at the Taramani campus, has facilities to conduct advanced research in the field of neurotoxicology. The modern Central Animal House Facility at Taramani campus, under the care of a Veterinarian and recognized by the CPSEA, has provisions for breeding the small animals, and caters to the biological research that requires these animals. Another animal house is available at the Guindy campus.

Besides these, the following research centres have been functioning even before the assessment period: Agro-Economic Research Centre, Centre for Buddhism, Centre for Research on the Dravidian Movement, Centre for Canadian Studies, the Centre for Thirukkural Research, Centre for Tamil Christian Literature Studies and Centre for E-learning/Pan-African network, Mahatma Gandhi Centre for Peace and Conflict Resolution.

Other research centres which have the status of a Department are: Anna Centre for Public Affairs, Centre for South and Southeast Asian Studies, Dr. Ambedkar Centre for Economic Studies and Justice Basheer Ahmed Sayeed Centre for Islamic Studies.

Needless to say, these facilities are augmented by power supplies, UPS, water connections, air conditioning, partition walls, specialized flooring for heavy equipment, magnetic shielding where required, lab furniture, fume hoods, waste disposal units, and so on. Much of the infrastructural costs, in particular the civil works, are borne by the University out of its own funds. Also needless to say, library and Internet facilities, access to journals and books, a flexible policy that grants 24x7 laboratory access to authorized personnel, conference and meeting facilities, including halls that can seat from about 10-15 to 100-200 to 500-2000 people at a time, all facilitate the various activities concurrent to research.

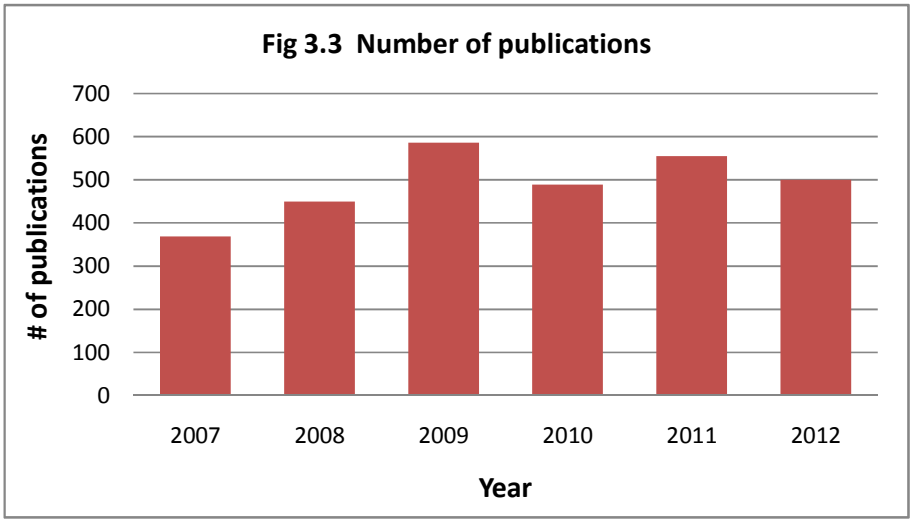
3.5 Research Publications and Awards

Research publications

The following table (Table 3.2) provides the details of the publications of faculty members during the assessment period (2007 to 2012).

Table 3.2 Research Publications

Year	Peer Reviewed Journals	Chapters in Books	Monographs	Books with ISBN	Total
2007	100	104	6	159	369
2008	169	121	7	153	450
2009	218	213	9	146	586
2010	167	183	6	133	489
2011	220	169	9	157	555
2012	213	153	8	126	500
Total	1087	943	45	874	2949



In summary, the faculty and students of the University have published 2949 research papers, reports, books and monographs. More than 150 of these are books, including textbooks, reports and monographs. The faculty has written more than 300 chapters in edited volumes, and more than 1087 papers in peer-reviewed journals. The faculty of the science departments, including the Computer Science, Mathematics and Statistics departments, account for about 2500 out of 2949, the rest being published by the faculty of the humanities departments. The average impact factor of the journals in which the publications have been made is more than 2.5. There have been more than 15 articles published in journals with impact factors greater than 4.0, including journals such as *Lancet Infectious Diseases (5 year average impact factor ~18.9), Acta Crystallographica Section D (~8.0),Trends in Analytical Chemistry [6.6] Organic Letters (~5.5),Biosensors and Bioelectronics[5.4] Journal of Biomolecular Structure and Dynamics (~5.0) Journal of Hazardous Materials [4.6] and PloS One (~4.0).* Many of the textbooks published by the faculty are standard reference works in the respective areas and are recommended in many syllabi in India and around the world. Emphasizing the linkages with the education system at the undergraduate and secondary levels, faculty members have also published school textbooks that follow the syllabus set by the relevant academic

Conference and seminar papers

Apart from the above publications, faculty members and students of the University continuously present their research findings at regional, national and international conferences and seminars. The number of such presentations over the period of review runs into more than 4000 – each member of the faculty making at least one or two such presentations each year, and each PhD student at least one during the course of the doctoral programme. Faculty members have been honoured by being nominated as peer reviewers of abstracts and papers, keynote speakers, session chairpersons or invited speakers at many of the national and international symposia.

Research outcome of the UPE programme

Special mention must be made here about the University with Potential for Excellence (UPE) programme. The University of Madras is one of the five Universities identified and selected by the UGC for implementation of UPE Programme during IX plan period. Though, the UPE scheme was formally launched in May 2003 during X plan period with financial assistance to the tune of Rs.30 crores by the UGC with "Herbal Science Research" as the focus area besides holistic development projects, a large part of the execution of the project occurred in the period under review. Under this project more than 100 research publications have been reviewed and published in renowned International journals. 1200 rare Siddha medical texts and 1600 rare manuscripts have been documented.

The achievements under Tamil Lexicon Revision Project, also a major project under UPE, are the following: Publication of ten books as supportive works to the Tamil Lexicon project: development of software for transliteration and auto alphabetization and publication of the first volume of Tamil Lexicon.

Under the multilingual dictionary project 1200 entries from seven languages have been collected and compiled in the dictionary format apart from collection of over 10000 technical terms from seven languages.

New Catalogus Catalogrum [NCC] project, Department of Samskrit:

The **New Catalogus Catalogrum** (NCC) of the Department of Samskrit, University of Madras is a union catalogue of around 2000 catalogues available in different parts of the world. It is an alphabetical register of unpublished manuscripts written in Sanskrit, Pali and Prakrit. It is a documentation of ancient Indian heritage of India. It speaks of the ancestors. It stands as a proof of records of the discovery of scientific and philosophical thoughts of our nation.

NAAC Reaccreditation – SELF STUDY REPORT
RESEARCH CONSULTANCY AND EXTENSION

Though Sir William Johnes began to preserve, document and disseminate Indian traditional knowledge syste e 18th Century, the documentation

work of unpublished manuscripts are on to rediscover this literary wealth of India lying hidden in different unseen corners.

The University of Madras is proud to have such a unique project which provides information about texts on various subjects be it science, arts, humanities, medicine, astronomy, mathematics etc. to the Ideologists of the world.

The Government of India has allocated a sum of Rs.75.00 lakhs under phase I and Rs.Two crores under phase II for this project. 18 volumes have been published so far.

Patents

Some of the research findings of the faculty that have commercial potential are patented. 15 patents have been filed and are under various stages of review in the patent office.

These research accomplishments have brought recognition and awards to the faculty. In the period under review, two of them were elected Fellows of the National Academy of Sciences, India. Many have been honoured with the Tamil Nadu Scientist Award. The faculty have been given special travel awards, or have been awarded short term fellowships for academic exchanges with institutions all around the world. They have been elected or nominated to the executive committees of national and international academic bodies and associations, often serving as office bearers – president/chairperson, secretary or treasurer. The faculty, especially those in the basic medical sciences departments, has garnered many oration awards.

3.6 Consultancy

To facilitate industrial consultancies and interaction with the industrial community, the University has set up a University Industry Community Interaction Centre (UICIC). Apart from sharing knowledge and expertise, and helping the community to benefit directly from the knowledge resources available within the University, the consultancy projects also generate revenue for the University and the faculty.

Consultancy projects (2007-08 – 2011-12)

During the review period more than 48 projects were sponsored in the University departments by industrial organizations, large and small, for a total value of about Rs 1.91 crores. It may be noted that, in order to encourage this important activity, and depending on the nature of the project, up to 45% of the project value is credited to the personal account of the respective faculty member.

The interaction with the industry has been further strengthened by signing MoU with industries and also by the inclusion of experts from the industries in policy-making bodies of the University, including many Boards of Studies. Technical experts and Research & Development professionals from the industry have been invited to deliver lectures to the faculty and students.

Table 3.3 Consultancy projects and grants through UICIC

S.No.	Year	No.of projects	Grants Sanctioned Rs.
1	2007-08	8	19,92,712
2	2008-09	12	70,26,319
3	2009-10	15	38,64,279
4	2010-11	6	.27,86,400
5	2011-12	7	35,12,755
Total		48	1,91,82,465

Technology Business Incubator (TBI)

The University has established a TBI as an autonomous registered society, headed by a Managing Director, with the Registrar, University of Madras, acting as the Secretary. This is supported by DST, Government of India. The incubator offers space (on nominal rent) for incubation of small enterprises. The TBI situated in the Guindy campus of the University comprises a total area of 1000 sq.ft., divided into 8 furnished and air-conditioned cubicles, of varying sizes ranging from 70 sq. ft. to 140 sq.ft. Telephone and Internet connections are provided. Photcopying and cafeteria facilities are also available. Seven companies have been identified as incubatees: M/s Mukunda Foods Pvt Ltd - Automation in food processing; M/s Swissmango Solar Energy Solutions Ltd - Renewable energy products and solutions; M/s Hexolabs - Mobile Internet technology; M/s Patwise Consulting Solutions - IP Consulting and Research; M/s Jammi Pharmaceuticals & Research Pvt Ltd - Ayurveda pharmaceuticals; M/s Wifin Technologies India Pvt Ltd - Mobile applications development. As mentioned earlier, the Govt. of Tamilnadu has also recently mandated a similar centre named the Centre for Incubation and Technology Transfer. This will have focus on Information Technology related businesses. About 1000 sq. ft. space, adjacent to the TBI, has been identified for this centre. The plan is to shift both the units to the Taramani campus when the building there is ready in 2014.

Centre for the Techno-entrepreneur Promotion Programme (TePP)

The University is also the nodal Centre for the TePP of the DSIR, Government of India, which helps to identify and fund innovative projects from the general public. Under this scheme, in the period under review, a total of 34 projects have been facilitated. It may be noted that of all nodal centres in the country, the one hosted by the University of Madras has had the best performance, with the largest number of successfully funded projects and has been, appreciated by the Secretary, DST and the Director-General, CSIR.

Outcome from these two Centres

Six enterprises have been created so far generating employment for over 150 people

Projects successfully completed

* Two of the innovated products which have been commercialized have touched the lives of people
  a) AAC Device has enabled cerebral palsy affected people to communicate
  b) Supportive Limb has enabled polio attacked people to stand and walk
  The above two products are available in the market at 10% of imported prices
* Open ocean farming structures have been successfully installed in the Bay of Bengal off Tuticorin, Tamilnadu enabling seaweed harvesting in large quantities which have great commercial potential. Till now seaweed cultivation is limited to shallow waters in the sea. This development helps fisher folks to earn more revenue by cultivating seaweeds
* A foolproof and failsafe solutions for manifold enhancement in security and other applications where automated monitoring is required
* cost effective circuit breakers minimizing electrical distribution losses
* An elevated automatic two wheeler parking unit
* A live system that delivers information and carries out transactions with rural masses using voice interactions as the medium and using mobile phone as the access channel
* Computer Interfaced Hi-Fidelity Affordable Mannequin for Effective CPR (Cardiopulmonary Resuscitation) Training
* Fully Digital Anesthesia Work Station
* An indigenously developed high-dynamic performance low-cost laser scan head will benefit the OEMs and end-users of this industry by making the technology affordable & user friendly

3.7 Extension Activities

The University conducts regular extension activities and services so that, education and research benefits the society at large. Most of the extension activities are organized by National Service Scheme (NSS). Other units of the University like University Students Advisory Bureau (USAB), the College Development Council (CDC), Department of Physical Education, Academic Staff College (ASC) and some of the departments like the Department of Adult and Continuing Education, Department of

Psychology, CAS in Botany and the departments of the Biomedical Sciences have also interacted with the community through their research programmes. Faculty is frequently called upon to deliver popular lectures in various schools and colleges, both within the city and outside. They also participate in Radio and TV talks and interviews. Some of the activities in this connection include education fairs, medical camps, health awareness programmes, cultural festivals, inter-college and inter-University sports meet, literacy programmes, rural development programmes, etc. These activities are mostly funded by UGC grants, project grants from national and international agencies, industries, media and NGOs. Science camps under the DST INSPIRE programme are regularly organized by the University departments. The camps familiarize school and undergraduate students with the latest developments in science.

There has been regular "Summer Camp' each year for the first year postgraduate science students in Chemistry and Physics during vacation [May-June]. About 50 students from various colleges of Tamil Nadu participate in this programme. This programme is fully supported by the "SCIENCE CITY' Government of Tamilnadu.

Extension based research activities

The Environmental Information System (ENVIS) hosted in the Department of Zoology provides web-based information to the user community on environmental issues. Genetic counselling is provided by the Department of Genetics. Disease surveillance for infectious disease is undertaken by the Department of Microbiology. Toxicity assessment is carried out by the Dept. of Pharmacology. Disease outbreak investigations are undertaken by the departments of Basic Medical Sciences in the Taramani campus. The Department of Psychology offers psychological counselling to the victims and the accused at the Madras High Court. Advice from the Department of Anthropology is frequently sought by government agencies on matters related to caste, class and gender. The Department of Criminology has strong links with the Police departments of the state and there are frequent exchange of ideas on various issues pertaining to criminal justice and related matters.

Constituent colleges

The University has established two 'constituent colleges' one at Nemmeli, and another at Thiruvetriyur. The Colleges offer undergraduate courses to students from the local population, mainly fisher folk, who would otherwise find it difficult to travel to the city for their education.

Awards received

The NSS of University of Madras was recipient of Indira Gandhi 2011 award from the Ministry of Youth Affairs & Sports, Government of India for commendable service in helping six lakhs weavers of Tamil Nadu by selling handloom materials to the tune of Rs.8 crores. The list of extension activities conducted during the re-accreditation period is listed in Table 3.4.

Table 3.4 Extension activities conducted by University departments

S.No.	Name of the Department	Nature of extension activity	Duration Date	Target Group	No. of Beneficiaries	Amount spent in Rupees	Sponsoring Agency
1.	Medical BioChemistry	ENT Camp	15.03.12	Faculty Staff ,Students	129	5000	UNOM
2.	Medical BioChemistry	ENT Camp	22.03.12	Faculty Staff ,Student	118	5000	UNOM
3.	Medical Bio Chemistry	Dental Camp	07.03.13	Faculty Staff, Student	83	5000	UNOM
4.	Medical Bio Chemistry	Dental Camp	25.03.13	Faculty Staff, Student	39	5000	UNOM
5.	Microbiology	Health Camp in Schools	2007-2010	Children (5-15)	400	40,0000	UGC Project funds
6.	Microbiology	Screening for Viral Myocarditis	2010-2012	Young adults	50	10,0000	UNOM
7.	Microbiology	Screening of ICU in Government Hospital for drug resistant bacteria	2011-2012	ICU Patients	_	10,000	UNOM
8.	Microbiology	WHO Training Programme	Jan -2012	Govt (Technicians / Medical Professionals	20	31 lakhs	WHO
9.	French	Teaching of Spoken French	Jan 2011-Mar-2011	Children (5-22)	4 NGOs	_	_
10.	French	Teaching of spoken French	2012-2013	Children (5-22)	4 NGOs	_	_
11.	Malayalam	Malayalam for Beginners	2010-11 And 2011-12	Non-Malayalees	_	_	_
12.	Management Studies	Blood donation Camp	29.10.2010 And 25.11.2011	28 donated blood	_	_	UNOM
13.	Management Studies	Bey OND-visit to orphanage	10.08.2013	Orphaned Children	26	13,500	DOMS,UNOM
14.	CAS Botany	Mushroom Cultivation	27.12.2007 - 30.12.2007	Farmers	12	_	CAS in Botany
15.	CAS Botany	Mushroom Cultivation	04.07.2010 - 07.07.2010	Women Self Help groups	18	5000	UNOM

16.	CAS Botany	Mushroom Cultivation	18.12.2010 - 21.12.2010	Women Self Help groups	18	5000	UNOM
17.	CAS Botany	Sea weed Cultivation	15.07.2011 - 17.07.2011	Fisher folk	40	_	DST
18.	CAS Botany	Mushroom Cultivation	15.12.2011 - 23.12.2011	Women SHG	36	10,000	UNOM
19.	CAS Botany	Mushroom cultivation	18.12.2012 - 21.12.2012	Students	28	10,000	UNOM
20.	Energy	Lab facilities &Expert Guidance	2009-2010 & 2010-2011 & 2011-2012	M.SC Students of affiliated Colleges	28	_	Energy dept
21.	Energy	Summer internship	2009-2010 And 2010-2011	M.SC Students of affiliated Colleges	6	_	Energy dept
22.	Energy	Technical assistance in using Scientific equipments	2009-2010 And 2010-2011	PG/Ph.D Students of various main depts.	40	_	Energy dept
23.	Energy	Lab facilities &expert guidance	2009-2010 And 2010-2011	M.SC Students of rural Colleges	02	_	Energy dept
24.	Energy	Project guidance	2010-2011	M.SC Students of affiliated Colleges	03	_	Energy dept
25.	Energy	Lab facilities & expert guidance	2012-2013	PG Students of main depts.	02	_	Energy dept
26.	Anna Centre of Public Affairs	Training Programme for elected urban bodies	2007 (15days)	Students	20	_	Anna Centre
27.	Anna Centre for Public Affairs	Internship	2007-2013	MA Students	50	_	Anna Centre
28.	Anna Centre for Public Affairs	Visit on tribal development	21.12.2009 - 22.12.2009	MA Students	_	_	Anna Centre
29.	Anna Centre for Public Affairs	Spoken English training	_	MA Students	_	_	Anna centre

30.	Psychology	Conducted certificate course in Catering and Hotel Management for Juveniles under Child Protection Act, Juvenile Guidance Bureau, Kellys. Parenting awareness were given to parents of juveniles. Psychological assessments was done to juveniles at juvenile Guidance Bureau, Kellys	2007-08	Juveniles under Child Protection Act	--	-	Global Institute of Hotel Management, Kenath Lane, Egmore, Chennai
31.	Psychology	Marital Counseling was rendered to couples who have marital conflicts and have been referred by the Family Court of High Court, Chennai	2007-08	Both Male and female married couples and their families	-	-	UNOM
32.	Psychology	Individual Psychotherapy was given to the women involved in immoral trafficking at Women's reception Home, Mylapore	2007-08	Girls who run away from home, Destitute, Women involved in immoral trafficking and sexual workers	-	-	UNOM

33	Psychology	Psychological counseling and study skills training were given to the students who have failed in 10^{th} and 12^{th} Std Board exam in Chennai during 2007-08	2007-08	Failed students Parents Schools	-	-	NSS, UNOM
34.	Psychology	Administrated Psychological test to assess the IQ, criminal propensity, personality and aptitude for Juveniles at Juvenile Guidance Bureau, Kellys	2008-09	Families of Juveniles	-	-	UNOM
35.	Psychology	Marital Counseling was rendered to couples who have marital conflicts and have been referred by the Family Court of High Court, Chennai	2008-09	Husband and Wife Their families, Family Court, High Court, Chennai	-	-	UNOM
36.	Psychology	Conducted certificate course in Catering and Hotel Management for Juveniles under Child Protection Act, Juvenile Guidance Bureau, Kellys.	2008-09	Juveniles under Child Protection Act Families of Juveniles	-	-	UNOM

37.	Psychology	Counseling and Guidance services were offered for school and college students referred by University Students Advisory Bureau	2008-09	School and College students referred by University Students Advisory Bureau	-	-	UNOM
38.	Psychology	Psychological counseling and study skills training were given to the students who have failed in 10^{th} and 12^{th} std Board exam in Chennai during 2007-08	2008-09	10^{th} & 12^{th} failed students in Board Exams Parents, Schools	-	-	UNOM
39.	Psychology	Individual counseling and workshops were conducted for the benefits of employees of State Transport Corporation, Chennai on Accident Proneness and Alcoholism	2008-09	Bus drivers & Conductors of State Transport Corporation	-	-	UNOM
40.	Psychology	Life Skills Training programme was conducted for students of corporation schools	2008-09	Students from about 10 corporation schools	8000	-	UNOM

41.	Psychology	Entrepreneurship development was offered to the Centre for Social Initiatives and Management, Chennai	2008-09	Entrepreneurs	-	-	UNOM
42.	Psychology	Individual Psychotherapy was given to the Women involved in immoral trafficking at Women's reception Home, Mylapore		Girls who run away from home, Destitute, Women involved in immoral trafficking and sexual workers	-	-	UNOM
43.	Psychology	Academic guidance was offered to IAS aspirants at Manidhaneyam IAS Coaching Centre, Chennai		Candidates preparing for IAS exams	-	-	UNOM
44.	Psychology	Marital Counseling was rendered to couples who have marital conflicts and have been referred by the Family Court of High Court, Chennai	2009-10	Both Male and female married couples and their families	-	-	UNOM
45.	Psychology	Individual counseling and workshops were conducted for the benefits of employees of State Transport Corporation, Chennai on Accident Proneness and Alcoholism	2009-10	Bus drivers & Conductors of State Transport Corporation	-	-	UNOM

46.	Psychology	Academic guidance was offered to the Centre for Social Initiative and Management, Chennai	2009-10	Entrepreneurs	-	-	UNOM
47.	Psychology	Academic guidance was offered to IAS aspirants at Manidhaneyam IAM Coaching Centre, Chennai	2009-10	Candidates preparing for IAS Exams	-	-	UNOM
48.	Psychology	Assisted the selection of Inspectors by developing psychological test for the Tamil Nadu Police Recruitment Board 2010	2009-10	Tamil Nadu Police Recruitment Board	-	-	UNOM
49.	Psychology	IQ and Personality assessment was done for recruiting employees For UCAL Private Limited, Chennai	2009-10	Middle level Management Staff of UCAL Co.	-	-	UNOM
50	Adult Education	Observance of World Population Day 2008 on Them: "Men as Partners for Maternal Health"	22.7.2008	Male & Female Illiterates New Literates community members attached to local community/ Lok Shikshan Kendra at Perungudi & Sewapet	***	----	UGC XI & XII PLAN Recurring Grants on ACEEFO/ LLE

51	Adult Education	Computer Literacy Programme	4.11.2008 to 14.11.2008	--do--	***	---	--do--
52	Adult Education	Computer Literacy Programme	17.11.2008 to 21.11.2008	-do-	***	----	--do--
53	Adult Education	Computer Literacy Programme	25.02.2009 to 06.03.2009	-do-	***	---	--do--
54	Adult Education	Breast Cancer Awareness and Medical Camp-in association with DACE and Roko Cancer Perungudi Village	22.02.2009	-do-	***	----	--do--
55	Adult Education	Inauguration of Continuing Education Centre at Perungudi Village, Chennai	05.03.2009	-do-	***	---	--do--
56	Adult Education	World Literacy in association DACE and Centre for Social education and Cultural Association at Perungudi Village	08.09.2009	-do-	***	----	--do--
57	Adult Education	Adult Learners week at Perungudi Village	09.09.2009 to 14.09.2009	-do-	***	----	--do--
58	Adult Education	World Literacy Day – Valedictory Function (DACE in association with SRC)	14.09.2009	-do-	***	---	--do--

59	Adult Education	Observance of World AIDS Day 2009 Theme:"AIDS Awareness"	07.12.2009	-do-	***	----	--do--
60	Adult Education	Computer Literacy Programme	07.12.2009 to 22.12.2009	-do-	***	---	--do--
61	Adult Education	Income Generating Programme – I at Model Continuing Education Centre (Lok Shiksha Kendras), Perungudi Village	06.01.2010	-do-	***	----	--do--
62	Adult Education	Income Generating Programme – II at Model Continuing Education Centre (Lok Shiksha Kendras), Perungudi Village	21.01.2010	-do-	***	---	--do--
63	Adult Education	Extension Lecture in the Community on reproductive Health Rights of Women	10.02.2010	-do-	***	----	--do--
64	Adult Education	Report on the International Women's Day Programme at Model Continuing Education Centre, Perungudi	15.03.2010	-do-	***	---	--do--
65	Adult Education	Observance of World Population Day – Them: "Every one Counts"	29.07.2010	-do-	***	----	--do--

66	Adult Education	Digital Literacy – Creating a Digitally Literate World	04.08.2010	-do-	***	---	--do--
67	Adult Education	Computer Literacy Programme	09.08.2010 to 03.09.2010	-do-	***	----	--do--
68	Adult Education	Computer Literacy Programme	06.09.2010 to 27.09.2010	-do-	***	---	--do--
69	Adult Education	Computer Literacy Programme	20.12.2010 to 07.01.2011	-do-	***	----	--do--
70	Adult Education	Computer Literacy Programme	31.01.2011 to 18.02.2011	-do-	***	---	--do--
71	Adult Education	Income Generating Programme	28th & 29th March 2011	-do-	***	----	--do--
72	Adult Education	Computer Literacy Programme	20.12.2010 to 17.01.2011	-do-	***	---	--do--
73	Adult Education	Observation of World Population Day: “Calling Attention to Urgent Global Issue	13.07.2011	-do-	***	----	--do--
74	Adult Education	International Women’s Day - Inaugural Function of Community Digital Literacy Programme	28.03.2012	-do-	***	---	--do--
75	Adult Education	International Women’s Day - Inaugural Function of Community Digital Literacy Programme	28.03.2013	-do-	***	----	--do--

*** Total number of beneficiaries during the re-accreditation period is approximately 10,000 persons

3.7 Collaboration

Modern research programmes are collaborative in nature, and most of the faculty research programmes involve academics from other institutions both national and international. Some of these collaborations are formalized, and are based on Memoranda of Understanding (MoU) or other agreements signed between the participating institutions. The University of Madras has been identified as the only Indian partner to be part of Erasmus Mundus project entitled MAHEVA (Man, Health, Environment, Biodiversity for Asia) that allows student and faculty mobility to the European partner universities. Eight students and two senior faculty members have visited various European universities through this project. The University of Madras has been identified as the only Indian partner for the MOVER project of the European Union Erasmus Mundus Project that allows student, faculty and staff mobility to the European partner universities. The University has signed MoU with the other two oldest Universities in our country viz. University of Mumbai and Calcutta University for academic linkage.

3.8. Quality Sustenance and Quality Enhancement Indicators

- Lab to Land programme initiated to ensure that all innovations achieved in the laboratory reaches people at the grass root level.
- Formation of two university constituent colleges to serve disadvantaged local communities.
- Procurement of major state of the art lab equipments and instrumentation facilities.
- Research and development of patentable products, process and technology transfer.
- Publication in high impact factor journals.
- Academic and research excellence highlighted through research projects funded by premier national and international agencies.
- Enhancement of university, industry and community interaction through consultancy projects.
- Academic recognition of faculty reflected in the number of national and international awards received.
- Institution of new schools, centres and chairs.

CRITERION IV
INFRASTRUCTURE AND LEARNING RESOURCES

CRITERION IV

INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Introduction

The University has been augmenting its physical and IT infrastructure and learning resources to keep pace with the changing technology. The University labs are equipped with the state-of-the-art technology comparable with any of the top Universities in India. While the University's teaching and research take place in its four campuses within the Chennai city limit, the campuses are well connected in terms of communication, technology and transportation. The four campuses can be accessed by MRTS rail and city buses. In addition to a good public transportation network among the campuses, the University has its own bus services to facilitate students to move across the campuses.

In the last six years, huge investments have been made to augment the built-up area, equipments, class room furniture, books and e-learning resources and ICT equipments to improve the teaching-learning and research environment.

4.2 Physical Facilities

Utilization of existing buildings and new constructions

The University of Madras is located in the heart of the Chennai City and on the coastal zone and hence faced with several constraints to expand its built up area. However, the University ensures sufficient space for all the departments and space for common facilities such as auditorium, seminar halls, canteen etc.

i. Each campus is equipped with an auditorium to conduct seminars, conferences and important events. The Chepauk campus is equipped with the Centenary Auditorium with a seating capacity of 3,500 which is one of the biggest of the kind in the city. The auditorium is not only used by the University for its convocation and other important events but also used by other Universities in the state and also the state government. It is also rented out for certain specific purposes with strict terms and conditions of use to avoid misuse and damage.

ii. All the four campuses are equipped with language labs which are used to teach soft skill courses and also act as internet browsing centres.

iii. The campuses are connected with Video Conferencing facilities and the studio is housed in the Chepauk campus. The campuses are also connected with e-learning platform of the Virtual University project.

iv. Every department has at least one well-furnished modern class room with LCD project and audio system. Some of the departments share their facilities with other departments of the school so that the facilities are fully utilized. The departments are also provided with adequate space to house laboratories and equipments.

v. Every faculty member is given a separate room so that he/she can concentrate on teaching and research work without disturbance. Every department has an office room with sufficient staff (clerical, technical and support) to assist the teaching-learning and research activities of the department.

vi. The University ensures that there are adequate toilet facilities, toilet provision for physically challenged persons, common room for women staff and a medical centre.

vii. All the buildings are equipped with lifts and ramps and are user friendly for the physically challenged. Energy saving schemes have been implemented and solar energy projects are in the pipeline.

viii. The campuses are provided with students amenity centres, women's common room, play ground, canteen, student supporting services such as facilities for typing and photocopying and students hostels.

ix. The campuses have well-equipped hostels for men and women, and they are modernized with hygienic dining facilities, gym, internet, common room, computer browsing centre, Wi-Fi connectivity in two campuses and other facilities required for the students. An international students hostel is under construction.

x. The University strictly adheres to state and central government norms in the construction of new buildings. Table 4.1 provides the list of building construction works undertaken during the assessment period.

Table 4.1 Construction Activities, April 2007-July 2013

S. No	Name of the Work	Estimate Cost (in Crores)	Funding agency	Utility	Date of Commencement	Current status (completed/ ongoing)
1.	Construction of I floor of Women's Hostel at Taramani	1.00	University	I Floor – Student Accommodation (842.95 M^2)	11.11.10	Completed on 11.10.2012
2.	Construction of Student Amenities Centre at Chepauk	3.50	University	Ground Floor – Canteen, Departmental store, ATM, Xerox (675.90 M^2) I floor – Gym for Ladies, Indoor games for Ladies.(675.90 M^2) II floor – Gym for Gents, Indoor games for Gents. (675.90 M^2)	20.01.11	Work nearing completion
3.	Construction of Ground floor of Micro Biology Building at Taramani	1.35	UPE X plan, SAP	Ground floor – Department of Microbiology. (1200 M^2)	21.02.11	Work nearing completion
4.	Construction of Animal Houses at Guindy	0.82	UGC + University	Ground floor – Animal House for departments. (232.34 M^2) I floor – Animal House for departments. (232.34 M^2)	01.04.12	Work nearing completion
5.	Construction of Entrance Arch at Chepauk	0.85	University	Arch at main entrance in Kamarajar Salai.	16.04.13	Completed & Inaugurated by Hon'ble Chief Minister of TN
6.	Construction of Guest House for Academic staff college at Marina	1.95	UGC + University	Ground floor – Reception, Office, Dining(284.59M^2) I floor – Rooms for accommodation(289.69M^2) II floor – Rooms for accommodation.(289.69M^2)	27.01.12	Work is in progress
7.	Construction of Multistoried Building at Guindy	30.00	University	Ground floor to VII Floors – Earth science and Chemical science departments.	21.02.11	Work is in progress
8.	Construction of Nano Technology Building at Guindy	20.00	UGC	Stilt Floor – Parking.(1444.50M^2) I, II and III Floor – For Nano Technology Departments. (I- 1444.50M^2, (II- 1444.50M^2, (III- 1444.50M^2)	01.10.12	Work is in progress
9.	Construction of Multistoried Building at Taramani	30.00	University	Ground Floor to IV Floor – Basic medical science Departments. (GF-2112.18M^2, I-2261.76M^2, II-2261.76M^2,III-2043.09M^2, IV-2043.29M^2)	12.12.12	Work is in progress

10.	Construction of PG & Research Scholar Hostel Block at Taramani	20.00	University + Donation from alumnus	Ground Floor – Students rooms, Kitchen, Dining, Computer room I, II and III Floor – Students rooms	14.06.12	Work is in progress
11.	Construction of International Students Hostel at Taramani	10.00	University + Donation from alumnus	Ground Floor – Students rooms, Computer room. (1094.40M^2) I, II and III Floor – Students rooms. (I-1011.47M^2, II-1011.47M^2, III-1011.47M^2)	14.06.12	Work is in progress
12.	Construction of Compound wall at Western Boundary	0.33	University	Compound wall western Boundary	25.05.12	Work is in progress
13.	Construction of Compound wall of North side Boundary	0.25	State Government	Compound wall of North side Boundary	02.08.11	Work is in progress
14.	Construction of II floor of Insectory Building at Guindy	0.18	SAP – DSAI	II Floor – Department of Zoology	Work yet to be started	Work entrusted to PWD

Major scientific equipments purchased (2007-2012)

The University has been augmenting its state of the art facilities during the assessment period through purchase of equipments, accessories and software. The list of sophisticated equipments purchased during the assessment period is given in Table 4.2.

Table 4.2: List of major scientific equipment (above Rs.5.00 lakhs) procured during April 2007-2013

SI. NO.	Name of the Equipment	Date of Purchase	Funding Agency	Amount
1	UV-Visible spectrophotometer- (8 Nos.)	31/07/12	UGC	5,00,000
		05/08/11	DST	5,27,055
		02/03/11	DBT	5,00,000
		2012	DST-1	8,50,000
		2012	DST-1	6,54,218
		2008	UGC	5,38,220
		26.01.08	DST-NADH	15,92,388
		18.04.11	MHRD	16,15,313
2	BRUKER Vortex-70 FR-IR Spectrophotometer	14.12.12	DST-EU	51,96,128
3	Luminescence Spectrometer	28/12/08	DST	6,85,000
4	Fluroscence Photo microscope	2009	DBT	6,50,000
5	FT-IR Spectrometer 2-Nos.	20/01/07	DST	7,16,243
		27/02/12	DST-FIST	8,50,000

6	Diode Array Spectrometer	Under Process	DST-Purse	6,00,000
7	Mdev Spectra Photometer	31/03/08	DST FIST	8,85,630
8	ELISA reader 2nos.	2013	UGC-SAP	5,00,000
		23.04.10	DOD-MoES	5,04,140
9	Nanodrop Spectrophotomer	2012	DBT	5,40,000
10	Picosecond Diodes & Accessories	30.03.08	DST-FEMTO UPCONVERSION	15,69,906
11	FPLC Akta Purifier- 3nos	27/12/12	DBT	19.95.662
		30/03/09 27/12/12	UGC-SAP DBT	20,72,930 19,86,813
12	Florescent Research Microscope	26/10/12	DBT	15,61,052
		22/11/12	UGC-SAP	5,20,000
13	HPLC 3-Nos	24/05/10	DST-1	15,86,000
		2011	UGC-SAP	12,00,000
		2009	DST	30,00,000
14	FPLC	10/04/13	UGC-SAP	11,00,000
15	H.P.T.L.C. 2 nos.	2008	DST-TBI	25,60,000
		2013	UGC-SAP	15,00,000
16	Molecular Modeling Software	26-12-2009	DBT	5,64,720
17	Rotary Evaporator	2012	DST-1	6,50,000
18	Ultra Centrifuge	2007	UGC	18,50,000
19	X-ray Diffract meter System Model DS	15/10/09	UGC	64,82,700
		04/01/08	DST-FIST	54,07,715
20	X-ray Diffraction meter 2-Nos	31/03/08, 24/12/07	DST FIST	60,07,715
21	X-ray Diffractmeter-MAR image system(Protin Crystallography) 2 nos	31/03/08 2008	DST FIST DST TBI	2,35,00,000 1,36,00,000
22	Electro Chemical Analyzer	19/11/12	MOEF	5,00,000
		23/05/07	DST FIST	5,14,416
23	Automatic Fraction Collector	31/03/11	DBT	5,98,498
24	RJ Power Supply	Under Process	DRDO	8,00,000
25	Multiparameter Water Gaits Analyzer	Under Process	DST FIST	7,00,000
26	Computer workstation	07/11/07	DST	15,20,714

27	Cluster Computer with SKUA	Under Process	DBT	6,17,000
28	Resistivity Care I.P. Meter	27/05/08	UGC-SAP	14,26,531
29	Iso dynamic Seperator	13/11/08	UGC-SAP	11,99,029
30	Water Purification System 3NOS.	15/06/12	UGC-SAP	5,04,265
		22/01/09	UGC-SAP	5,81,801
		2011	UGC-Infra	6,39,139
31	Inverterd Fluorescent Microscope with Computer Assisted programme	2013	DST-Purse	10,00,000
32	Trinocular Microscope	19.02.10	UGC-Infra	11,39,594
33	Nikon Eclipse 80i tinocularflurescent Microscope, with phase contrast and NIS element software	19.02.10	UGC-SAP	19,00,000
34	Fermentor	2013	UGC-SAP	7,00,000
35	Automated Fraction Collector	2010	DBT	7,00,000
36	Lyophilizer	2010	DBT	5,00,000
37	80' C deg Deep Freezer	2009	UGC XI PLAN	5,20,000
38	Thermal cycler	2012	ICMR	6,50,000
39	PCR machine	20.09.12	UGC XI PLAN	14,56,000
40	RT-PCR Machine	2012	DBT	8,40,000
41	RT-PCR Machine	22.11.11	UGC-SAP	19,72,441
42	RT-PCR Machine	2008	DBT	47,05,800
43	CO_2 Incubators(2 Nos)	21.04.07 30.03.11	UGC-Assist DST-Purse	12,23,288
44	High Speed Refrigerated Centrifuge [3 NOS.]	24.09.07	DST-FIST	7,20,705
		2008	DBT	9,12,376
		2013	UGC-SAP	10,00,000
45	Micro-ultra centrifuge	2007	UGC-SAP-DRS-I	13,00,000
46	Ultra Centrifuge,2 nos.	2009	DST	35,30,000
		30.03.12	DST-FIST	30,00,000
47	Automated Karyotyping	2008	UGC-SAP	18,21,000
48	Fiber Laser	28.08.09	Donated by SPI-Laser	15,00,000
49	Nicoleter 1s5FT IR	25.05.12	UGC XI PLAN	9,66,016
50	Millennia Primer Laser	09.07.12	UGC XI PLAN	12,79,485
51	Excimer Laser	05.12.12	DST-EU	48,53,279
52	Millipore element	2009	DST	6,00,000
53	ICPMS	2009	DST	60,00,000
54	Transmission Electron Microscope	2009	DST	1,88,00,000
55	Scintillation counter	2009	DST	15,00,000
56	Ultra micro tome,EMTP AUt ocut	2009	DST	55,00,000
57	GC-MS-MS	2013	UGC-SAP	34,00,000
58	Anton Paar digestion system	2009	DST	9,00,000

59	FESEM[Model SU 6660] including Nabity model lithography with bean blanker Bio TEM[Model H7650] Bio SEM[Model S3400 N type II] Bio SEM[under buyback]	09.04.10	MHRD	5,26,89,482
60	Cryo-Ultramicrotome[Model RMC]	20.10.10	MHRD	37,40,424
61	HR STEM Model Tecnai G2 30 s Twin	31.12.10	MHRD	6,20,25,429
62	X-Ray Photoelectron Spectrometer	25.01.11	MHRD	4,99,53,411
63	Confocal Raman Microscope	03.11.10	MHRD	3,06,47,475
64	Multimode Reader (UV Vis Fluorescence)	2009	DST	12,40,000
65	Wax Embedding station	2012	DST	5,10,000

4.3 Library as a Learning Resource

The University has a central library called the "Madras University Library" (MUL) which is located in the Chepauk campus and three campus libraries one in each campus. The main library not only caters to the needs of students of University departments but also for the students of the affiliated colleges and the graduates of the University of Madras. The policy decisions on library matters are vested with the library committee which is a sub-committee of the Syndicate. The important decisions taken recently are: (i) renovation of the Central Library (ii) preservation of old and soiled books (iii) digitalization of library holdings (catalogue) (iv) adequate manpower to manage the libraries and (v) streamlining of the library collection procedures and services. The recommendations of the Committee are implemented with the approval of the Syndicate.

Each library has a purchase committee which consists of the chairpersons or heads of the departments of the campus. All decisions relating to the utilization of funds for the purchase of the books / journals and e-resources from the library grants are taken by the committee. However, the funds allotted to the individual departments for the purchase of books and journals are used to purchase the books and journals as recommended by the departmental committee.

Physical environment of the University library system

The Madras University Library is located in a heritage (Clock Tower) building of the University with a built-up area of 8000 square meters. It has a seating capacity of 540 with 250 seats in the main reading hall, 200 seats in the current periodicals section and 50 seats in the Ph.D/M.Phil thesis section,

10 seats in the OPAC and 30 seats in the e-Resource centre. The library is open from 8.00 am to 8.00 pm on all days except on national holidays. The ground floor is stacked with textbooks and reference books. Books relating to preparation for competitive examinations are also housed to facilitate users easy access and effective use of the documents. Apart from this, differently abled students are provided with Talking Book Library section on the ground floor. A separate reading cubicle and lounge area for browsing are provided in the OLIZ (Online Information Zone) with conducive reading environment. Each stack is provided with display of floor plan, bay guides and sign boards and also fire alarms and extinguishers. RO drinking water and neat and clean rest rooms are available in all the floors.

The Marina Campus Library is housed in a two storied building with 1000 square meters and seating capacity of 80 in the main reading hall as well as current periodical display area. It is partially air-conditioned and also provides internet browsing and e-resources. It has a very good collection of books relating to Tamil and other Indian languages. There is an Oriental Manuscript Library located in this campus. The Library works from 9.00 am to 6.00 pm on all University working days.

The Guindy Campus library building was constructed in the year 1972 with 3080 Sq.m and it is a two storied building. The library has a large collection of books and journals in the area of physical, chemical, life and environmental sciences to cater to the requirements of the departments located in the Guindy campus of the University. The ground floor has a main reading hall with 100 seating capacity and also book stacks. The first floor houses the theses and current periodicals. There is a small auditorium with a seating capacity of 200. In the adjoining portion of ground floor and first floor stack areas the back volumes are housed. It works from 8.00 am to 8.00 pm on working days and from 10.00 am to 5.45 pm on holidays. A separate computer centre for data processing along with Online Information Zone (OLIZ) with a seating capacity of 30 is provided. A wooden ramp is provided to enable differently abled users to access the library. For easy access of resources of the library, the sign boards, display boards and bay guides are provided wherever necessary.

The Taramani Campus library is housed in a two storied building with 1100 sq.m and seating capacity of 130 in the main reading hall of the library as well as the current periodical display units. A separate data processing unit along with OLIZ with seating capacity of 20 has been provided to the users. Ramp facility is also provided to differently abled persons. The architecturally well designed library is an attraction for users to visit and use the library. It works between 9.00 am to 6.00 pm in working days and 10.00 am to 5.45 pm in holidays.

Library holdings, access to collections and ICT deployment

The main Library is the mother library of all South Indian academic libraries. It is popular because of Dr. S. R. Ranganthan, the father of Library Science and the first University librarian. The library has acquired text books

and a large number of reference books, reports, conference proceedings and manuscripts and more than three lakhs documents. On an average, more than 3,500 documents consisting of books, journals and others, and 400 journals are purchased in a year. It also has a book bank mainly to cater to the needs of SC/ST students and materials for competitive examinations.

The Marina Campus library consists of 90,000 language and literature books in Hindi, Urdu, Arabic and Persian, Samskrit, Kannada, Tamil and Telugu and other languages. The collection consists of 70,000 text books and 10,000 reference books along with 2,202 theses. This library has been acquiring on an average about 3000 books per year during the last three years.

The Guindy Campus library has more than one lakh documents consisting of about 40,000 textbooks, 20,000 reference books, 4,000 theses and 20,000 back volumes and other documents. The Library procured about 2,700 books during the last three years. J-CCC platform is available in this library and this platform is also made available to other campus libraries.

The Taramani Campus Library caters to the needs of the bio-medical sciences and holds about 15,000 documents which include 11,000 text books and the remaining are reference books. The library holds 875 theses. The library subscribes to 45 journals. 571 books have been added in the last three years.

All the four libraries of the University of Madras have access to UGC-INFONET e-journals and e-resources and connected with high speed broadband connectivity. The Guindy and Taramani Campuses have Wi-Fi connectivity and hence the faculty members and students can access the resources anywhere within the campus. The Chepauk and Marina campuses are connected with high speed broadband LAN connectivity and can also be accessed from departments/faculty rooms and computer labs.

All the four libraries have converted the manual catalogue system into OPAC with the UGC software SOUL (version 2.0) with funding support from the UGC. The details of resources, functions and services are available in the University web portal.

Each campus library is provided with two servers with 100 Mbps internet connectivity and connected to user nodes, campus network and printers. There are 45 nodes in the main library, 15 nodes in the Guindy campus library, 49 nodes in Taramani campus library and 13 nodes in the Marina campus library available for the users. The library organizes training programmes every six months or whenever necessary, to use its resources. The libraries are connected with Online Information Zone (OLIZ) and online

access to digitized theses is available. All the libraries provide online interlibrary loan services through INFONET–JCCC platform along with Madras Library Network. The monthly downloads of e-resources are 4,500, 900, 3,500 and 3,000 in the Chepauk, Marina, Guindy and Taramani campuses respectively.

Fig. 4.1: User Nodes in the University of Madras Libraries

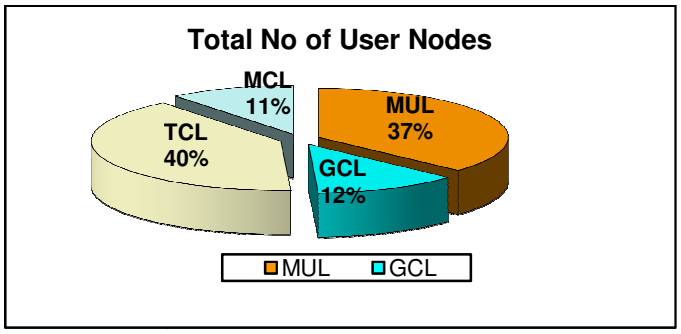


Table 4.3 Usage details and services provided by the libraries

SNo	Library situated at	No.of users	No.of transactions	Online download per month
1	Chepauk	15000	2000	4500
2	Marina	3750	700	900
3	Guindy	6000	1000	1000
4	Taramani	250	8896	3400

SNo	Library situated at	No.of books purchased per year	No.of Books borrowed	Books to student ratio
1	Chepauk	5290	2000	1500:1
2	Marina	3000	700	500:1
3	Guindy	2700	1000	500:1
4	Taramani	1360	8896	105:1

Apart from Main and campus libraries, departments have also individual libraries having books on specialized area. To mention a few, departments of Management Studies, Philosophy, Centre for South and South Asian Studies.

In addition to lending and borrowing of books and materials, helping the users to access the online system, the libraries provide the following services:

(i) All these libraries offer different kinds of reference services for obtaining correct information on collections of these libraries as well as collections available in other libraries in the form of referral and ILL modalities.

(ii) Free downloads in all libraries and limited print out service in main and Taramani campus libraries.

(iii) Reading list and bibliographical compilations are made whenever new documents are acquired and made available to users.

(iv) The Taramani Campus library is equipped with surveillance camera to avoid misuse of resources of the library. JCCC and MALIBNET services are major services of the library in library resource sharing and exchange of information.

(v) A Talking Library Section for the benefit of visually impaired students is established in the Main Library with two personal computers and 400 Audio CDs on different subjects.

Budgetary allocation for Madras University Library System

The University non-plan budget for the last four years is shown in Table 4.3. The amount shown is in addition to the plan grants, project grants from funding agencies such as UGC, DBT, DST etc. As one can notice, the University spends considerable amount for the libraries and e-resources.

Table4. 4: Annual Library Budget (Non-Plan) 2009-10 – 2012-13

Year	Campus Library Amount in Lakhs			
	Chepauk (Main)	Guindy	Taramani	Marina
2007-2008	104.98	123.86	42.10	1.80
2008-2009	116.80	47.77	47.77	8.41
2009-2010	130.55	92.74	92.74	9.53
2010-2011	135.87	98.03	98.03	9.18
2011-2012	136.99	103.41	103.41	11.15

Efforts to make the library a 'Happening Place' and enhancement of services

The libraries periodically conduct user studies and the results are presented in conferences/ seminars and also published in journals. Based on these, the numbers of user nodes are improved considerably along with system speed and bandwidth. Further, reference books and books for competitive examinations have been acquired in recent years.

Infrastructure development

The entire stack areas in the Main library was renovated by replacing the old, damaged mosaic titles with granite tiles. Further, the corroded window meshes have been replaced with new aluminum window meshes. The entire theses collection of the Main Library has been digitized and a separate section is established to give access to the digitized theses. The Main Library has already retro-converted its collections of about 1.10 lakhs documents using SOUL software old version and these documents have been upgraded with new version of SOUL 2.0 software. The Guindy and Taramani campus libraries are equipped with surveillance cameras.

4.3 IT Infrastructure

IT, network, internet and ICT facilities

University IT, ICT, network & internet operations were established in 2004, with sophisticated network user community working in challenging research areas spread across four campuses to enable researchers, academics, students and administration to use information and communication technologies and expertise to achieve and maintain knowledge superiority essential for dominating the academic and research spheres. The university operates four network operating centres (NOC) with basic network facility serving 3000 users direct connectivity and 1500 indirectly and maintains the University's inter and intra network, internet, information space and services to directly support operation for research and to promote innovative solutions.

Centralized IT infrastructure for e-governance and examination processing has been established and supports the online results processing for all the affiliated colleges and the university departments. Basic information security and a mid level network security has been covered. First level IT and network user policy is in force. Improved network and internet infrastructure was envisaged based on the demand and importance in an academic and research institution. In 2010-11 revamping and modernization of network and internet was initiated with an emphasis to provide increased internet access and better connectivity. For this, each campus NOC has been strengthened

with advanced computer servers for providing network connectivity and internet by way of secured connectivity. Network and Internet access speed has been augmented to all the campuses individually by a 16 Mbps connection in Chepauk, four Mbps in Marina, eight Mbps in Guindy and four Mbps in Taramani campuses as against the 10 Mbps available earlier for all campuses. An initiative has been started on green computing, for which the Guindy campus library has done a pilot project. In recent times, the networks are provided with the first level security to avoid any intrusion by any external forces. A dynamic website updating facility for faculties and administrators has been provided. The modified website is user friendly and informative. It is also planned to bring out a research portal of our university to bring out all the research activities and outcome in a professional manner so that our credentials and achievements can be made public.

Computing facilities

Most of the university departments have computing centres for students and scholars specific to their needs. Faculties are provided with a desktop and a laptop connected to the LAN and in turn connected to the internet access. Campus wise 40 seat sophisticated students computer labs have been provided for multi-purpose use such as online language skill, computer skill, soft skill and for personality development programmes. In addition, the university network enables access to all the online journals and research articles subscribed by the University as well as from national institutions through the respective libraries. A close user group mail service is put in action for the faculties and soon will be extended to the researchers and students. At present, the University has 4000+ systems with 20 high end servers in addition to the systems available with the departments.

In February 2011, the University was linked with the MHRD supported National Mission on Education through Information Communication Technology (NME-ICT) through a 1 GB high speed national link with a 150 Mbps internet path and further connected with the National Knowledge Network (NKN), an initiative of the National Knowledge Commission, Government of India to get connected virtually with any of the institutions, libraries and research labs for exchange of information and access across India and to international network. Infrastructure establishment is planned for this national facility so that academics can conduct virtual classes and seminars for the benefit of the society. The NME-ICT and NKN networks will get connected to all the affiliated colleges for e-class room, e-seminar and for e-governance. It is also planned to conduct the Virtual University courses and e-class seminars through this network so that our academic and research activities will reach across the globe. Breaking the barrier through this virtual network connection will put the University to the next milestone. The NKN connectivity interlinks all the campuses by a dedicated fiber link between the campuses, enabling the users to have inter and intra communication operations, e-governance and for fail-over. An improved LAN infrastructure is planned for the Chepauk campus with the support of MHRD to provide for

improved access. The objectives of the National Mission on Education through ICT and NKN will be fulfilled in a phased manner.

Wi-Fi access has been implanted in Guindy campus as a pilot project and functioning well since 2012. Wireless connectivity to all the campuses is in the pipeline and will be implemented soon so that users will have secured access within the campus. In recent times, providing Virtual Private Network (VPN) connections has been tested and will put into use shortly. VPN will enable the UNOM authorized user to access the UNOM network as if he/she is in the campus, enabling access to information - anytime, anywhere.

The IT infrastructure is maintained by a maintenance grant allocated in the budgets of the departments and campus offices. The University general maintenance grant is used to maintain the IT infrastructure of the office computers, networks and other IT infrastructure.

It is proposed to establish green computing centres in each campus along with scientific packages and application softwares for the benefit of students and faculties. Also the University has planned to establish e-resource centres with ICT enabled class rooms in the campuses in the XII plan period.

Virtual University Project

The Virtual University project of University of Madras is tele-education and e-learning platform for the students to take education from University of Madras at remote locations convenient to them. The programme is supported by the MHRD. Under the project, the University of Madras has setup a virtual university infrastructure at the four campuses of the University and eleven colleges in Chennai. The colleges connected are: Dr. Ambedkar Government Arts College, Vyasarpadi (Government) (ii) Bharathi Womens College (Government), North Chennai, (iii) D.G. Vaishnav College, Arumbakam (Aided), (iv) Vels Sri Ranga Sanku College, Avadi (Self-Financing), (v) J.H.A Agarsen College, Madhavaram (Self-Financing), (vi) D.B.Jain College, Thoraipakam (Aided) and (vii) Govt. Arts College, Nandanam (Government).

The Virtual University Data Center and the Studio is located at Chepauk campus. The education programs will be delivered from the studio at Chepauk campus and student can attend the lectures at any of the above virtual university nodal locations. The delivery of education programs in virtual university set ups is provided in both synchronous as well as asynchronous environments. The synchronous learning environment stimulates real classroom situation wherein students can listen and view. The lectures will be in 11 virtual classrooms in real time and can also interact with the teachers. In asynchronous learning environment, students can retrieve the stored lectures

for their review learning. 2 TB of storage has been provisioned for storage of lectures and other educational data. The platform harnesses the delivery of lectures by the scarcely resourced teachers to a very large number of students. A large number of students can attend the live lecture programs being delivered from Chepauk campus to the three Campuses of the University and seven remote colleges. The Virtual University environment helps students take education from the best teacher and teaching resources.

Pan-African e-Network

The University of Madras is offering M.Sc (IT) and BBA programmes under MHRD's project to the following countries: Cameroon, Eritrea, Ethiopia, Ghana, Ivory Coast, Rwanda, Seychelles, Sierra Leone, Tanzania, Togo, Mauritius, Somalia, Egypt, Malawi, Zambia, Lesotho, Sudan, Madagascar, Niger and Mozambique. A total of 1245 students are enrolled in these programmes. The live tele-sessions for the students was started on 14th July 2010. The first batch of M.Sc (IT) programme has successfully passed out. So far five semester examinations have been conducted and results have been announced.

4.4 Maintenance of Campus Facilities

Maintenance of buildings, security and housekeeping services

The maintenance of buildings, class rooms and laboratories are managed by the engineering office of the University and the Campus Director's office. Each campus office is equipped with a maintenance engineer who attends to minor works. The major repair and maintenance works are managed by the engineering office. The housekeeping and campus security have been outsourced with a limited contractual obligation. Sophisticated and office equipments are covered by annual maintenance contract.

A sum of Rs.4.25 crores has been provided in the budget for the maintenance of buildings in all campuses. For housekeeping and securities a sum of Rs.1.66 crores is being spent every year.

The University had an Estate Officer who has been entrusted the responsibility of taking care of the University land documents and dealing with the Corporation/Government offices relating to taxes, obtaining patta (land document) etc. After his tenure, it has been entrusted to the University Executive Engineer. Efforts are being made to appoint an Estate Officer.

4.5 Additions to Infrastructure under Vision 2023 of Government of Tamil Nadu

In order to bring substantial transformation in the field of higher education in terms of quality, the Government of Tamilnadu has sanctioned a sum of Rs.354.88 lakhs and announced the following schemes under "VISION 2023":

- Smart classrooms with video conference facilities.
- Foreign language laboratories.
- Entrepreneurship cum skill development centre.
- Inviting renowned Professors from foreign universities.
- Establishment of Curriculum Development Cell.
- Centre for Multinational Material Production for differently abled.
- Incubation and Technology transfer centre.
- Centre for Technical writing and Academic writing.
- Chair for taking up Research on Prisons & Rehabilitation of Prisoners.

4.6 Quality Sustenance and Enhancement Indicators

- Intelligent use and sharing of resources through meticulous funds planning and budgetary provisions.
- Inauguration of pan African E-Network and Virtual University programmes to provide tele-education to remote locations.
- Expansion of library resources and procurement of e-resources.
- Digitization of library system through online information zones. e-resources centre, LAN facilities and bar coding.
- Creation of new builtup areas and modernization of existing ones to meet the growing requirements.
- Launch of University's ICT project to network campuses and centralize browsing facilities.
- Establishment of computer centres and language labs in all campuses.
- Constant updation of UNOM and IDE websites to share information with stakeholders

CRITERION V STUDENT SUPPORT AND PROGRESSION

CRITERION V

STUDENT SUPPORT AND PROGRESSION

5.1 Introduction

At the University of Madras, students are mentored by various administrative heads from the entry to the exit points. Students are guided by necessary information, class room training, mental training, physical training, job-oriented training and placement. During their stay, students can avail of support services like library, internet, hostel, language laboratories, sports and canteen. In addition, medical support and insurance support are also provided. The facilities provided have attracted more students over the years. Also there is a marked improvement in student performance in curricular, co-curricular and extra-curricular aspects.

5.2 Student mentoring and support

The University of Madras continues its tradition to provide academically sound and rewarding environment to the students with motivated and inspiring faculty and considers student support as an essential and most important component of its functioning. In this connection, earnest efforts are made to ensure that the students progress and achieve their optimum potential by utilizing the various facilities provided to them. The Dean (Admissions), Dean (Students), Dean (Examinations) and the Director, University Student Advisory Bureau (USAB) take care of the students' need from entry to exit that is from admission, curricular guidance to the level of placement counseling. Dean (Research) provides guidance and assistance from the level of admission to collection of Ph.D reports. The needs of the Alumni are taken care by Alumni Association. USAB provides services like certificate authentication, career guidance, coaching for national level examinations and placement. Dean (College Development Cell) coordinates the activities of all affiliated colleges.

Over and above the mentoring in class rooms, Soft Skill coordinators of every campus are involved in enriching the soft skills with the support of in-house language laboratories in each campus. NSS coordinator of every campus takes the responsibility of enriching the social responsibility of students. Dean (Extension Activities) coordinates with different departments in extending the intellectual and infrastructural facilities to the student community outside the University and to common public.

Student support

The University offers a number of student support services. These include information support, financial support, library, hostel accommodation, inter-campus bus transport, career guidance and counseling, appropriate services through SC/ST cell, NSS and NCC activities and avenues for sports and games.

Information support

The University provides all required educational information through the following means: (a) The academic calendar meant for all affiliated colleges (b) The prospectus for all students aspiring for admissions in the University departments (c) The CBCS handbook which provides details of courses / programmes for students of the University departments (d) A handbook published by the USAB with all general information on educational courses available in Universities and affiliated institutions (e) The University website and the Touch Screen information kiosks. Student information is updated in the website on regular basis.

Financial support

The major student support systems provided by Madras University is the financial scheme through scholarships, merit scholarships, endowment scholarships. Fee concession and exemption for SC/ST students, fellowship through various sources like UGC-CSIR, TNJRF, and ICSSR. In addition, the University also provides University Research fellowships (URF), Madras University Merit Scholarships and other endowment scholarships to students from its own funds. University provides 98 URFs with the fellowship of Rs.7,000/- per month for Research Scholars in the University departments. Apart from SC/ST, BC/MBC and National Merit scholarships, there are 28 endowment scholarships available to students of the University departments.

A special and unique scheme namely "Earn While You Learn" was initiated and launched in 2003. A large number of students are provided part-time employment opportunities in library, laboratory and tutorial assistance in the University departments.

Madras University Free Education Scheme was introduced in 2009-10 which provides complete fee waiver for the poorest student among students based on merit and economic status in each of the PG programmes in the University departments.

A special financial assistance is also given to students who attend conferences and seminars. Students are also given support to travel abroad to present papers at international conferences.

Full fee concession including examination fees is provided for the physically challenged students in PG and M.Phil programmes in the University departments.

The request by students for educational loans through banks is also supported by the University departments.

UCIR

The University of Madras established the International Centre of University of Madras in 2003 in consonance with UGC's X Plan programme on Promotion of Indian Higher Education Abroad (PIHEAD) in fulfillment of

its policy evolved to promote the free flow of students from other nations to India, as well as allow Indian students to get educated in other nations. The primary motto of the University Centre for International Relations, as it is now called (UCIR) is to provide educational excellence and culturally appropriate ambience to all international students.

The UCIR coordinates with affiliated colleges for UG programme admission and with the University departments for the PG programmes. It also encourages joint Ph.D programmes between Madras University and foreign universities.

Guidance and coaching classes

The University Students Advisory Bureau (USAB) provides career guidance on higher education to students. During summer vacation, students are invited along with their parents. Each college is asked to appoint one Career Guidance Counsellor to render counseling service, in which the USAB arranges training for the Career Guidance Counselors. The Director gives personal counselling to students who have psychological and academic problems. On an average, 100 students visit the Bureau every month on prior appointment with the Director.

Coaching classes and training programmes are organized by the USAB on a regular basis for different categories of UG and PG students. Coaching classes are offered for various competitive examinations such as UPSC Civil Service preliminary examination/TNPSC Group I and II, Staff Selection Commission, UGC NET examination. USAB conducts seminars and workshops on career oriented courses for the benefit of graduates/post graduate students of the University and the public. USAB has organized 12 training programmes which benefited 4656 students during 2010-12. In addition to this the USAB has taken efforts to arrange for campus recruitment and a total of 593 candidates were recruited by 17 agencies out of 19 agencies who visited the campus.

Sports and extracurricular activities

To promote sports activities, the Madras University Union was formed in the year 1932 at Rutland House, Spur Tank Road, Chetpet, Chennai. The facilities include a pavilion, sports track, athletic track, volley ball court, basket ball court, badminton court and two tennis courts. Students of the University participate in more than 30 south zone and All India Inter-University sports competitions annually.

The NSS Unit of the University organizes regular and special camps related to health and hygiene, literacy, environment, personality development, etc. These camps are usually held in the affiliated colleges or in the adopted villages. NSS Unit also deputes volunteers to various Inter State camps, National Integration camps and also inter-state and National Cultural Festivals. The NCC students of Madras University also take part in the All India Basic Leadership Camps (Boys and Girls), Nau Sainik Camps, All India Competition Camps, Vayu Sainik Camps, Skeet shooting, drill and glider

competitions, Para Training courses, Mountaineering courses, Army, Navy and Air Force training.

Placement and campus interview

The centralized placement centre with dedicated staff and infrastructure is functioning as a nodal agency between the University departments and industries to provide employment opportunities for students of all the campuses through campus interviews by various organizations. The University has organized 37 campus recruitment drives for the benefit of 3900 undergraduate and postgraduate students in the centralized manner. Companies which participated in the campus recruitment drive include, Wipro Technologies, Cognizant Technologies, ITC Limited, HCL Technologies Limited, Tata Consultancy Services Limited, Advinus Therapeutics Private Limited, Agility Global Integrated Logistics, Future-tec Technologies Private Limited, Life Insurance Corporation of India, Indian Air Force, Everonn Education Limited, Royal Sundaram Alliance General Insurance and HDFC Bank. In addition to the centralized campus recruitments, departments such as Management Studies and Chemistry have also organized specialized campus recruitment drives.

Hostel facilities

Hostel facilities are provided to students at all campuses of the University. Presently, there are six hostels available for PG students and research scholars. To enhance the facilities, additional floor has been constructed in Taramani Campus Ladies Hostel and three more hostels for PG students, separate hostels for research scholars and international students are under construction at Taramani Campus. The hostels have provision for common lounge with television, radio, newspapers, magazines and internet facilities. At present, hostels accommodate 476 students (Women-326, Men-150). New hostels will add rooms for another 975 students, which will triple the hostel accommodation facility for students. All four campuses are well connected by MRTS Elevated Train, which is a big boon for inter-campus mobility. In addition, the University buses ply across campuses.

Extended student support

i) Soft skill development

The University of Madras has been offering Soft Skill programme to all its students. It is mandatory for every student of the University and affiliated college to acquire eight credits from this programme to successfully complete their post graduation programme.

ii) **Language laboratories**

The language laboratories act as platforms for learning and practicing language skills through interactive lessons and communicative mode of teaching.

iii) **Internship**

Internship is intended to provide practical knowledge related to the study. The duration is for 4-6 weeks for two credits and 6-8 weeks for three credits and it should be carried out in an organization recommended by the department during the summer vacation of the first year.

iv) **Medical facility and students' safety insurance**

A full time Medical Officer is available at Chepauk campus and is assisted by a nurse and a compounder to provide initial treatment for minor ailments and also offer medical advice. Construction of new student amenity block is nearing completion and this would provide full-fledged medical facilities for staff and students. Compulsory Students Insurance Scheme has been introduced for the students of the University departments to help them in medical emergencies.

v) **Student Amenity Centres**

The University has amenity centre in all four campuses wherein students can undertake extra-curricular activities as well as extension activities. Canteen, photocopying, telephone and other facilities have also been provided in addition to indoor games like table tennis, chess and carom in each centre. One gymnasium is also available in the Madras University Union at Chetpet campus.

vi) **Internet facilities**

The University operates Internet centres in all the campuses and it is open to all students of the University departments. The campuses have been enabled with wireless internet connectivity which is also open to all the students using their laptops. Internet centres have also been established in the hostels.

vii) **International students**

Students belonging to SAARC countries are entitled to 40% on Tuition fees. A hostel exclusively for foreigners is being constructed at Taramani campus with attached bath and kitchen.

viii) Alumni association

The University of Madras Alumni Affairs Department (UMAAD) was formed to provide a platform for the alumni of the Madras University. It functions under the Registrar, University of Madras, and under the guidance of the Syndicate of the University of Madras. Membership is open to all the

alumni of the University of Madras who have undergone a postgraduate/research degree course in the University of Madras and also to the faculty members of the University departments. Alumni Association organizes periodical get-togethers and also conducts seminars and conferences. Alumni also establish, endowments and prizes to support the existing students. One of the Medical Alumni Dr.Rajasekar Shanmugasundaram has contributed US$ 3.175 million through his death note which has been used for the construction of the new international students' hostel at Taramani campus.

ix) Grievance redressal cell

During 2007-08 an awareness meeting was held under the Chairpersonship of Dr.Cynthia Pandian, Former Director of Academic Staff College, where all the women staff members of the University (both teaching and non-teaching) participated. It discussed various measures to prevent sexual harassment and ways and means were also formulated in the meeting to prevent any sexual harassment incidents in future. Through this meeting, awareness spread among women employees and students about the existence of the Cell for Anti-ragging and Sexual harassment.

The University of Madras has set up an Anti-ragging and Sexual Harassment Committee headed by a Senior Professor to monitor any ragging related incident happening in all the campuses of the University. The Committee, consisting of women faculty members, administrative staff members and an Assistant Registrar receives complaint, if any, enquires on the complaint and provide redressal. Fortunately, as on date there is no serious complaint that has been reported to the committee.

5.3. Student Progression

The University had the following student strength during academic year 2011-12 in the University departments.

Table 5.1 Students admitted during 2012-13

P.G	1356
M.Phil	369
Ph.D	845

The following analysis clearly reveals that there is a steady increase in the student strength in the last five years.

Fig5.1(a)

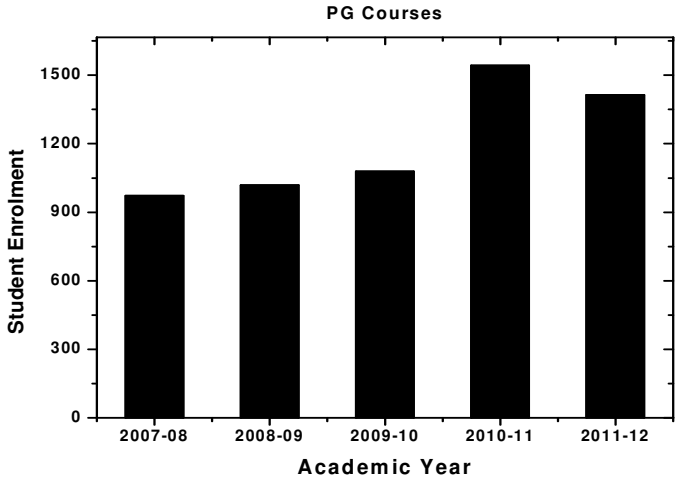


Fig 5.1(b)

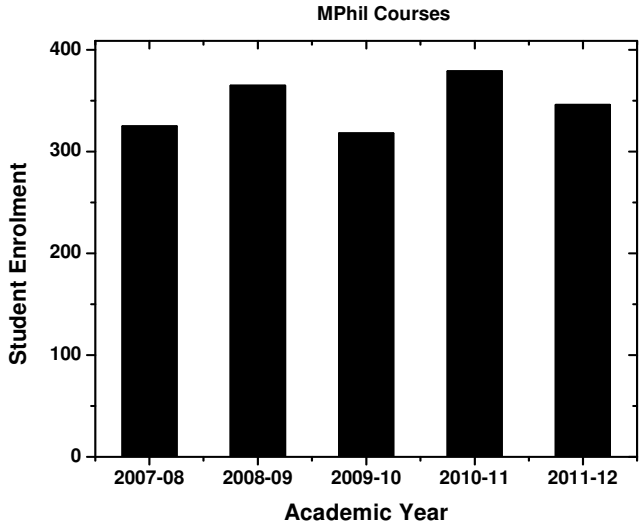


Fig.5.1(c)

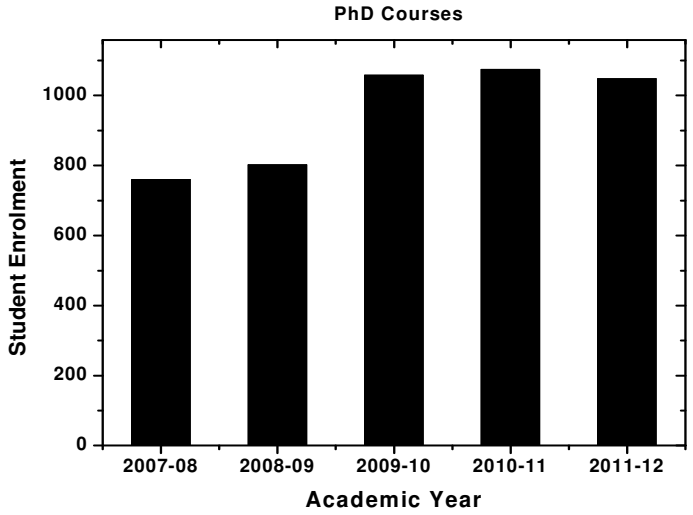


Table 5.2 Student progression

Programme	STUDENT PROGRESSION %				
	2007-08	2008-09	2009-10	2010-11	2011-12
PG to MPhil	13	16	14	14	11
PG & MPhil to Ph.D	32	35	44	33	31

The pass percentage of the post graduate programme was around 80% for all the years except one year.

Table 5.3 Pass percentage

Programme	PASS %				
	2007-08	2008-09	2009-10	2010-11	2011-12
PG	87	83	83	79	79
M.Phil.	92	87	89	90	92

A total of 356 students have cleared UGC-NET/SLET examinations from the University Departments and year-wise distribution is given below.

Table 5.4 Students who have cleared UGC NET/SLET

2007-08	2008-09	2009-10	2010-11	2011-12
51	62	66	81	96

Fig 5.2 Year-wise progression (NET/SLET)

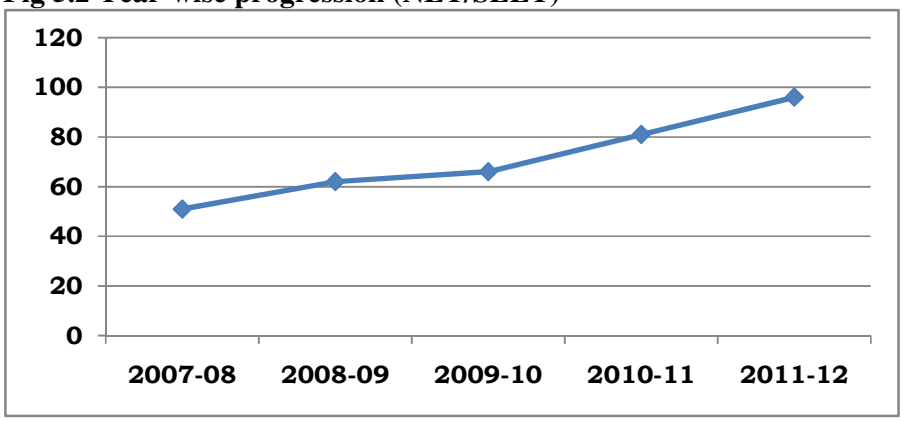
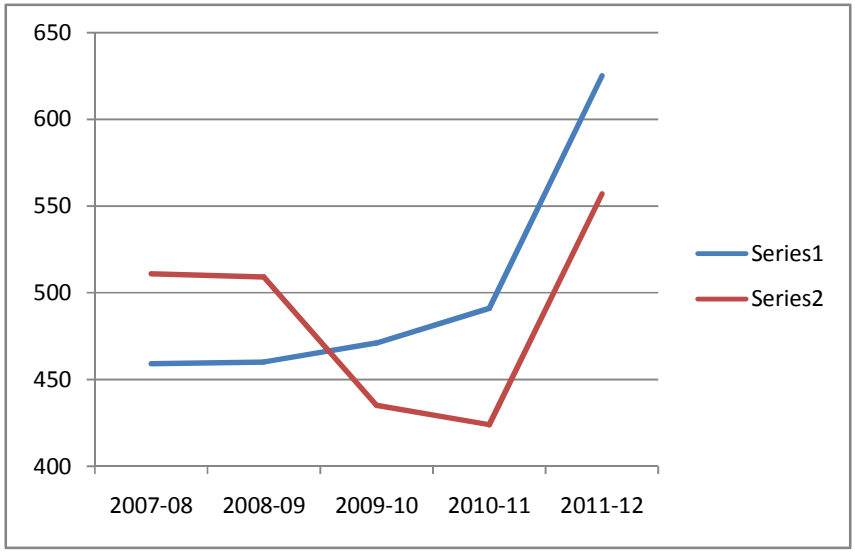


Table 5.5 Ph.D student details

Year	Thesis submitted	Awarded
2007-08	459	511
2008-09	460	509
2009-10	471	435
2010-11	491	424
2011-12	625	557
Total	**2506**	**2436**

Fig 5.3 Year-wise progression (Ph.D)



5.4 Student Participation

Sports and achievements

36 teams of the Madras University, both men and women, take part in the South Zone and All India Inter University Tournaments every year. The University has been geographically divided into two Men and two Women Zones. Each Zone organizes tournaments within and selects teams for inter-zonal participation. Madras University teams are selected during the inter-zonal tournaments. Selected teams undergo rigorous training programme under N.I.S coaches. During the pre-participation programme, boarding and lodging facilities are provided to the participants. More than 19,000 students get competitive experience from the zonal and inter-zonal competitions organized by the Madras University every year.

Table 5.6 Achievements in sports

S.No	Year	Game	Tournament
1	2007 - 08	Cricket – Men	South Zone and All India Inter Zone
2	2008 - 09	1.Squash - Men 2.Ballbadminton - Men	All India Inter University
3	2009 - 10	Athletics – Men and Women	70th All India Inter University Athletic Meet.
4	2011 - 12	1.Rowing - Men and Women 2.Kabaddi - Women	All India Inter University South Zone Inter University
5	2012 - 13	Kabaddi - Men	South Zone and All India Inter Zone

The following are the special programmes that are conducted every year:

1. Annual Award Function for All India Inter-University Tournaments
2. Summer Residential Coaching Camp for Upcoming Athletes' from Rural Colleges
3. Dr.Sir A.L. Mudaliar Silver Jubilee Commemoration Athletic Meet
4. Yoga Training for University Players prior to the Inter University Competition.

The University of Madras has won 172 Medals in the All India Inter University and Zonal tournaments during the years 2007-12. Two players have represented World University Games in the last five years. 24 students have been selected for the VIZZY TROPHY cricket tournament during the last five years.

Table 5.7 Medals won in the All India Inter University and Zonal tournaments

Sl. No.	Year	Tournaments	Position				Total
			I Gold	II Silver	III Bronze	IV --	
1	2007-08	All India Inter University	7	11	8	1	27
		South / Southwest Zone	5	2	2	1	10
2	2008-09	All India Inter University	5	9	6	3	23
		South / Southwest Zone	3	3	-	2	8
3	2009-10	All India Inter University	6	6	8	-	20
		South / Southwest Zone	3	4	1	-	8
4	2010-11	All India Inter University	12	13	8	2	35
		South / Southwest Zone	5	1	1	1	8
5	2011-12	All India Inter University	5	9	10	3	27
		South Zone	3	-	5	2	10
Grand Total							**176**

5.5 Quality Sustenance and Enhancement Indicators

- Assistance provided from entry to exit-admission to certification- for national and international students through USAB and UCIR.
- Financial assistance extended to students based on merit and need.
- Provision of placement through career fairs and coaching for competitive exams.

- Introduction of mandatory soft skill courses to enhance employability.
- Introduction of specialized courses such as "Effective presentation skills for the deaf" and "Skills in communication for the deaf for differently abled students.
- Constitution of public private partnership to promote employability, entrepreneurship and social responsibility among youth.
- Student representation in BOS
- Single window admission at the IDE.
- Introduction of learner-oriented measures such as grievance redressal system, ragging redressal system, women's sexual harassment redressal committee and insurance scheme.
- Industrial internship made integral part of curriculum.
- The IDE offers fee concession to the following categories:
- Full fee concession to differently abled candidates/prisoners
- 25% fee concession to first year students –women, serving Defence personnel, Police personnel, teachers, Press and Media personnel and Graduates of the University of Madras.
- In addition to the above concession/PG students on roll can do one Diploma or one Certificate course with full fee exemption.

CRITERION VI GOVERNANCE, LEADERSHIP AND MANAGEMENT

CRITERION VI
GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Introduction

The governance of the University begins with His Excellency the Governor of Tamil Nadu as Chancellor at the helm followed by the Hon'ble Minister for Higher Education, Government of Tamil Nadu, as the Pro-Chancellor. The Vice Chancellor as the Principal Executive Officer is vested with authority and responsibilities well delineated in the statues of the University of Madras (University Calendar – Vol. 1). The statues and ordinances also provide for the powers and duties of various administrative officers such as Registrar and Controller of Examinations.

The University of Madras, organized on the model of London University, has in the organizational hierarchy statutory bodies like the Senate, Syndicate, Academic Council, faculties, Finance Committee, Board of Studies including Board of Research Studies. Such a structure in addition to lending checks and balances in functioning enables utilization of collective wisdom in decision making.

6.2 Institutional Vision and Leadership

Vision and mission of the University

As a sesquicentennial institution and a leader in the field of higher education and research, the University has a multi-pronged vision of advancing knowledge through research, imparting higher education, inculcating socially relevant values with excellence in all pursuits.

As stated in the Executive Summary, the University's mission is to impart quality higher education in consonance with the motto "learning promotes natural talent". We strive to develop citizens with knowledge, skill and character leading to societal transformation and national development. We aim at making our students, men and women, to offer their selfless service for the progress of the country and people.

The Mission statement stated in the Executive Summary is duly propagated through display boards as well as information brochures, for awareness of the various stakeholders and to be cherished by the employees of the University.

The University thus, strives to preserve old values but at the same time interweave modernity to meet the needs of the globalised era of higher education.

Organization and management

The Syndicate is the apex executive and governing body, the Senate is the supreme decision making body, and the Academic Council is the authority to decide on courses and curriculum and other academic matters of the University. The composition of these three bodies is given in **Figs. 6.1 to 6.3.** The three bodies have adequate representation from the divergent set of stakeholders namely University faculty, affiliated college principals and faculty, academic administration as well as eminent personalities of the society. This diversity in the higher bodies enables the leadership to interact with the stakeholders and in identifying the organizational needs. It also promotes a culture of participative management.

Fig. 6.1Composition of Syndicate (2007-2013)

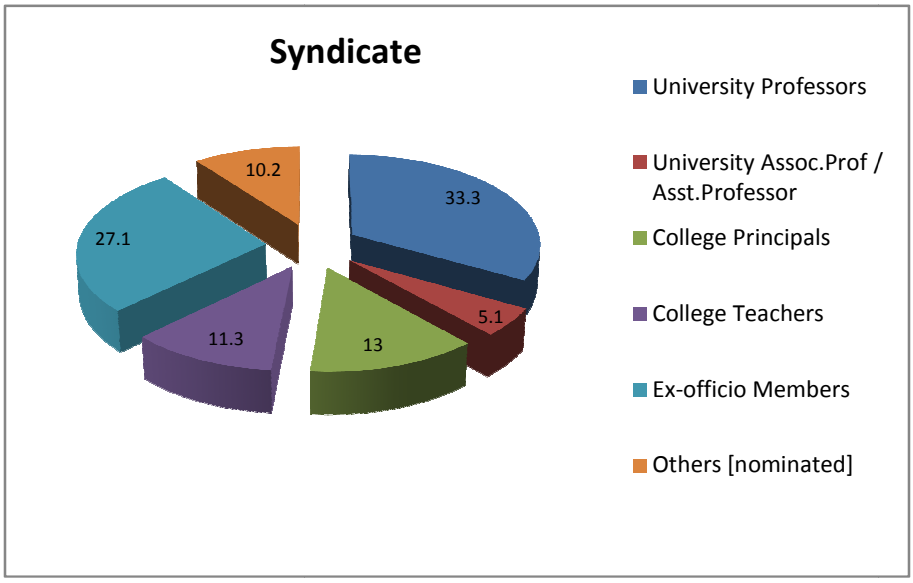


Fig. 6.2 Composition of Senate (2007-2013)

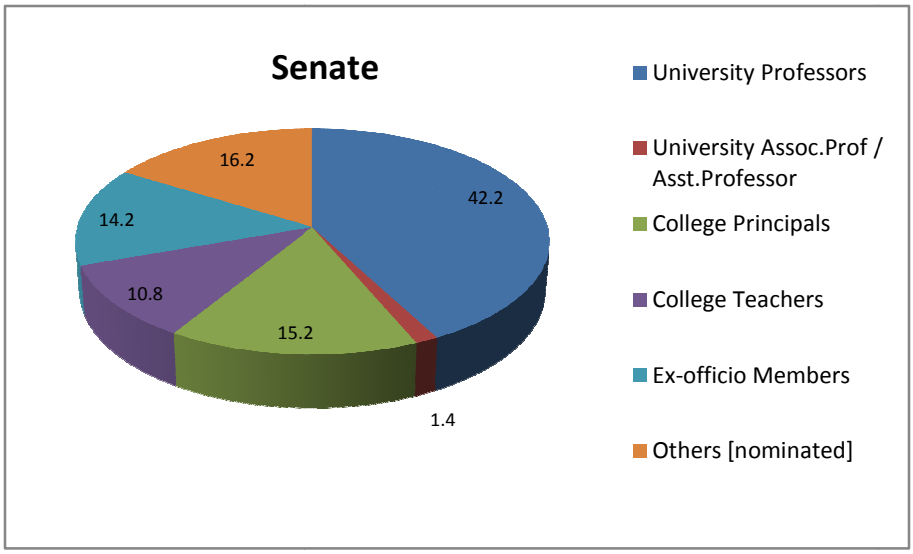
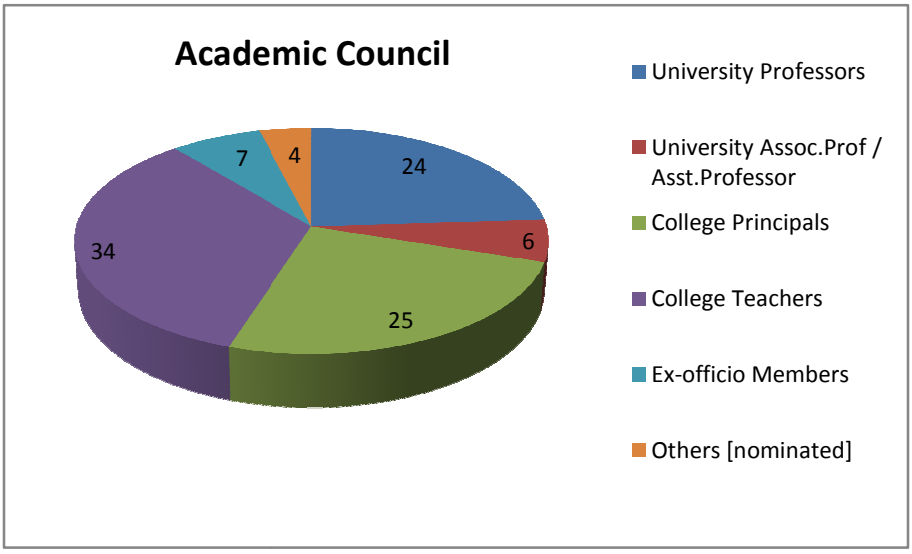


Fig 6.3 Composition of Academic Council 2010-2013



The University takes timely steps to ensure that top leadership positions are not kept vacant. All positions in various statutory bodies are filled including conducting elections for the posts that fall vacant under earmarked categories in the academic bodies. The functioning of these bodies has always adhered to the established democratic norms. The statutory bodies meet as per the statutes regularly and frequently if required, to take decisions in line with the overreaching goal of the University.

Delegating leadership to affiliated colleges

The University has under its fold 132 affiliated colleges of which as many as 21 enjoy autonomous status and two are colleges with potential for excellence. The University facilitates colleges to gain autonomous status. As knowledge management strategy, the university provides its representatives to the academic bodies of autonomous colleges. This promotes introduction of new programmes and innovations in curriculum, conduct of examination and maintenance of standards.

The University of Madras is the one of first few Universities to provide autonomous status to some of its colleges. The autonomous colleges issue mark and grade sheets but the degree is issued by the University.

The knowledge management strategy at the University ensures that the academic decisions of its sixty eight departments are taken collectively by the faculty team of the department and subsequently approved jointly by the faculty team of the School. This strategy also helps in grooming leadership among the teachers. The most significant knowledge management strategy is evident in the MoUs effective with 99 foreign and 25 Indian Universities and also with 21 Industry / Service organizations towards national development and inculcating value system among students.

The multipronged vision of the University encompassing national development, fostering global competencies in students, embracing technology with excellence in spirit of all endeavors is evident in every sphere of the functioning of the University.

The National Service Scheme (NSS) unit of the University organizes regular and special camps related to health and hygiene, literacy, environment, personality development, etc. It is noteworthy that the University received the Indira Gandhi Award for the best service rendered by the NSS volunteers of the University for the year 2010-2011.

Some recent initiatives in national development and in developing a value system among students by the University are as follows:

A mega project of Book Collection titled *"Padithathai Pirarukku Padikka Koduppom."* Under this novel project used books were collected on 26th January 2010 by the students of the university departments and the affiliated colleges. As many as 3,70,572 books have been collected and given to the Anna Centenary Library, Chennai.

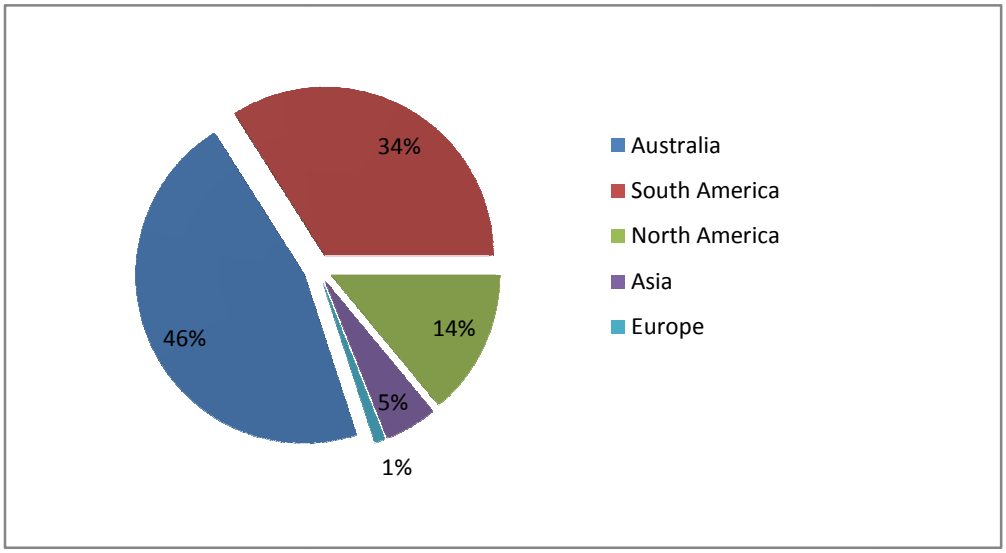
Another mega project of lending a helping hand to weavers titled *'Kaithariku Kai Koduppom'* was held on 26th January 2011. The Vice-Chancellor, Professors and NSS Volunteers were involved in the sale of handloom goods and support extended by student community to help the needy families of poor weavers. Under this novel project NSS Volunteers have sold Handloom Products worth Rs.3,00,50,000/- (Rupees Three Crores Fifty lakhs).

The final mega project in 2013 was of greening the surface and increasing the oxygen level in the atmosphere and titled as *'Maram Nattu Manam Valarpom'*. Initially under this scheme of NSS Cell of the University of Madras, 12000 student volunteers participated and planted 1,44,000 saplings in 81 villages and 12 water bodies in the districts of Chennai, Kancheepuram and Tiruvallur.

Internationalisation

The University of Madras has made significant strides in promoting the process of internationalisation during the last five years. The University has signed Memoranda of Understanding (MoUs) with 127 international universities and research institutions.

Fig. 6.4 – MoUs with international universities and research institutions



Since 2007 the University has admitted 276 PG and Ph.D. students from 44 foreign countries in addition to 69 coming under exchange programme.

The University of Madras has been identified as the only Indian partner to be part of the Erasmus Mundus project entitled MAHEVA (Man Health, Environment, and Biodiversity for Asia) that allows student and faculty mobility to the European partner universities. Eight students and Two senior faculty members have visited various European universities through this project.

The University of Madras has been identified as the only Indian partner for the MOVER project of the European Union Erasmus Mundus Project that allows student, faculty and staff mobility to the European partner universities.

Another globalization initiative of the University of Madras, the 'Dialogue on Innovative Higher Education Strategies (DIES) project' in partnership with Leibniz University Hanover, Germany and VIT University seeks to develop international office structure and the future leaders of internationalization (2010-2011).

To foster global competencies among students, the University Corpus Fund of Rs. One million has been instituted to meet the travel expenditure for "Students Exchange to Foreign Universities".

In the last five years more than five hundred students and scholars have visited abroad. In a recent scheme by the Government of Tamil Nadu ten distinguished foreign professors were invited to impart their knowledge to students, paving the way for them to learn the international developments in their respective disciplines.

Promoting the use of technology

In promoting the use of technology, the University has been taking vigorous steps. The University has now a highly sophisticated network user community working in all its five campuses with Web and Proxy Services in campuses. It has been serving 1000 users with direct connectivity and another 1200 indirectly. In 2010-11, revamping and modernization of network and internet were initiated with emphasis on providing increased internet access for better connectivity. Now all faculty members, research scholars and student labs of the University have internet connection. Further, the University network is connected with the MHRD – supported National Mission on Education through Information Communication Technology (NME – ICT) by 1 Gb high speed national link with a 150 mbs internet path. The University is now progressing in providing with Wi Fi facilities to all the campuses. All the faculty members of the University have been provided with laptops. A computer lab with 300 computers has been established in the IDE. All the campuses have been provided with computer and language laboratories. The language lab acts as a platform for learning, practicing and producing language skills through interactive lessons and communicative mode of teaching.

The libraries have been provided with Network and Education Space Operation Centre. The Main Library in Chepauk now has a large collection of e-resources available through UGC – Infonet, Inflibnet and other subscriptions.

Quest for excellence

Promoting the use of technology has boosted the university's thrust for excellence.

The University's steady climb in performance by pursuing excellence is reflected by the following:

(i) The assessment made by the Department of Science and Technology for the period of 1996-2006, based on research publications placed the University of Madras in the 7th rank among Indian Universities (including Central Universities) with a score of 37 under H-Index. In a recent assessment by DST the rank has moved up to 7th and the H Index to 59.

(ii) *The India Today* – A C Nielsen Survey of Best Universities in India had consistently ranked University of Madras as the 5th top University in two successive years 2010 and 2011.

(iii) *The Week* – The magazine has ranked the University of Madras as seventh among the Universities in India in its issue July 2013

6.3 Strategy Development and Deployment

The University undertakes both long term and short term planning to ensure that it progresses on its well laid out multipronged vision of quality in teaching and research, community and industry engagement, internationalization and human resource development.

Perspective plan

Based on an international pattern, there is a Planning and Development Board in the University, which serves as a think-tank and co-ordinates the overall planning of the University. This higher level board has the Vice-Chancellor as chairman and external experts drawn from the industry as well as from the teaching and research fraternity as members. It meets annually and provides suggestions on policies and programmes for overall academic and administrative matters of the University. The Members of the Planning and Development Board are as follows:

1. Prof. R. Thandavan, Vice-Chancellor, University of Madras (From 18.01.2013)

2. Dr. G. Thirugasagam the then Vice-Chancellor, University of Madras (upto 12.10.2012)

3. Dr. A. Gnanam, former Vice-Chancellor of University of Madras.

4. Dr. W. Selvamoorthy, Distinguished Scientist & Chief Controller, R&D, New Delhi.

5. Dr. B.K. Krishnaraj Vanavarayar, Convener, Bharatiya Vidya Bhawan, Coimbatore.

6. Mr. T. N. Manoharan, Chartered Accountant,
Founder Partner, Manohar Chowdhery & Associates, Chennai.

7. Shri Adi Godrej, President, Confederation of Indian Industry, New Delhi.

8. Shri R.V.Kanoria, President, Federation of Indian Chambers of Commerce & Industry, New Delhi.

9. Dr. M.B. Nirmal, Founder, Exnora International, Arihant Majestic Towers, Chennai.

10. Dr. P. Duraisamy, Professor & Head, Dept. of Econometrics and Director, Planning and Development.

11. Dr. G. Ravindran, Member Syndicate, Professor & Head, Dept. of Journalism & Communication.

12. Dr. P.T. Srinivasan, Member Syndicate, Professor & Head, Dept. of Management Studies.

13. Dr. S. Karunanidhi, Member Syndicate, Professor & Head, Dept. of Psychology.

14. Dr. A. Ramachandran, Director, Centre for Climate Change & Adaption Research, Anna University.

A few salient outcomes of the Planning and Development Board in the recent past are (i) establishment of two constituent colleges of the University in rural areas of Nemmili and Thiruvottriyur. (ii) the proposal for setting up five new departments in the University (iii) the establishment of a National Centre for Nano Science and Biomedical Nanotechnology and (iv) the functioning of the Pan African E-Network.

The directions of the Planning and Development Board are carried out as programmes and activities by the Directorate of Planning and Development. The Directorate is headed by a senior professor and is provided with supporting staff to carry out the day to day activities. The major activities are:

(i) Preparation of the Five Year Plan proposal of the University.

(ii) Preparing proposal for the special programmes of the Government of Tamil Nadu, Planning Commission etc.

(iii) Coordinating the implementation of the Government of Tamil Nadu special schemes to universities.

(iv) Providing data and information relating to University for specific request from Government of Tamil Nadu and national agencies.

(v) Co-ordinating the purchase & distribution of computers, laptops and software packages for faculty members / departments of the University.

Short term planning with respect to administrative matters and governance of the University is undertaken by the Syndicate, which meets once a month to take stock of the University's functioning as per its powers and responsibilities outlined in Volume 1 of the University Calendar, 2001. It passes resolutions to facilitate academic and administrative decision –making to ensure that the University moves ahead in the right direction. The Vice-Chancellor, through the Registrar, oversees the implementation of the Syndicate decisions. All major policy decisions that require amendments and additions to the Statues/Ordinances are taken to the Senate for its concurrence. The Governor – Chancellor records his assent to all statutory changes for their implementation in the University.

Organizational structure and decision making process

The internal structure of the University has at its helm the Vice-Chancellor who is the Principal Executive Officer of the University. The Registrar, along with the administrative divisions and the respective officers, assists the Vice Chancellor in the academic and administrative management of the University. There are nine Schools comprising 68 departments, which function at four campuses viz. Chepauk, Guindy, Taramani and Marina. Campus Directors with administrative powers head each of the campuses. On the academic side of the University, there are 237 faculty members and another 96 positions are to be recruited are in the near future. On the administrative side, Senior Deputy Registrar, Deputy Registrars, Assistant Registrars, Public Relations Officers, Section Officers, Assistant Section Officers, Assistants, Technical Staff, other categories and Class IV employees, totaling 800 constitute the non-teaching staff. The powers and functions of the functionaries are as indicated in the University Calendar, 2001, Volume 1. The organograms in **Fig. 6.5** provide the decentralization flow chart of administration in the University. The administrative system is effectively monitored as per the norms developed through the "Administrative Manual" by the University in 2001 and given statutory assent by His Excellency Governor-Chancellor.

Fig.6.5 Organograms Flow Chart of University Administration

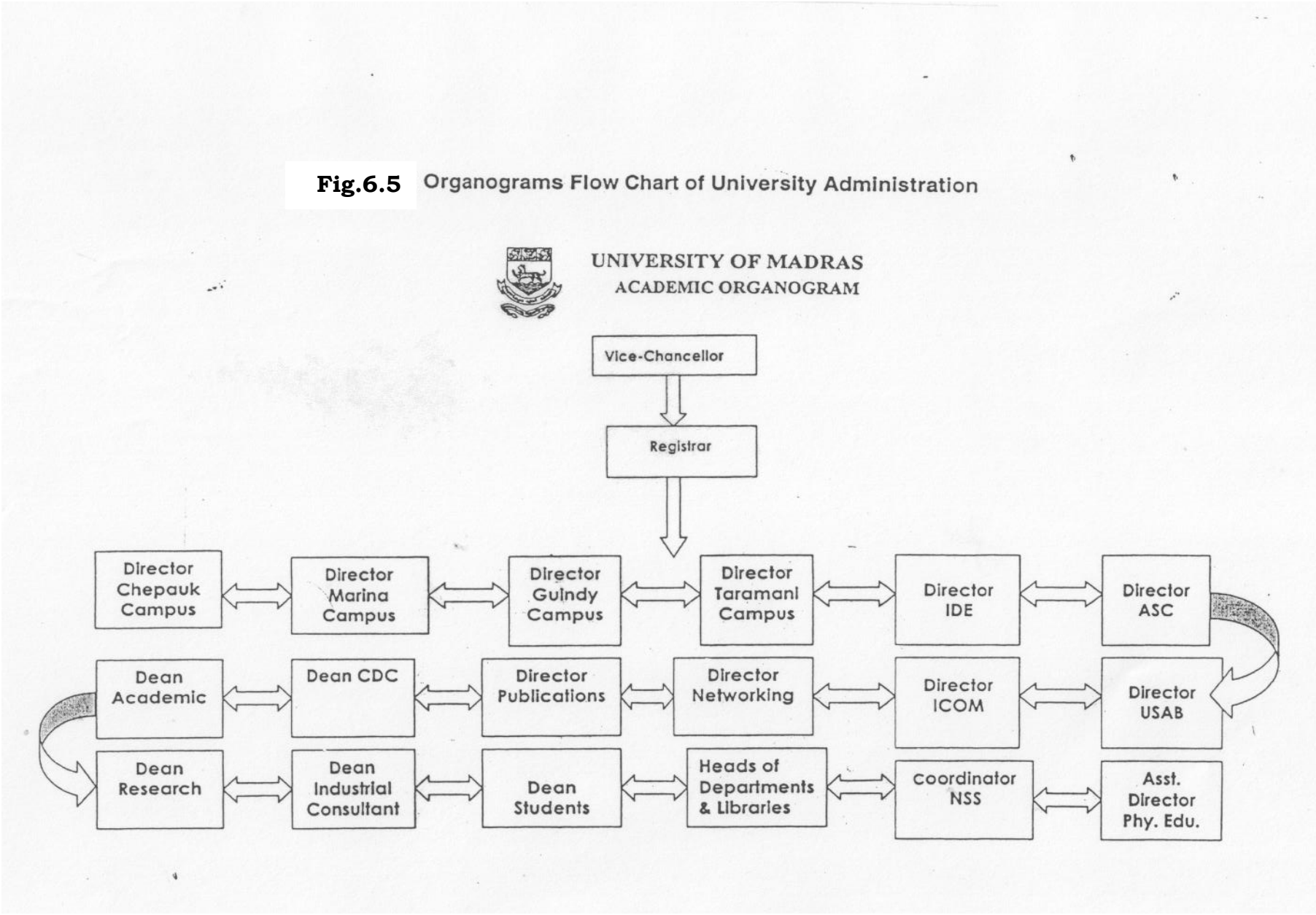
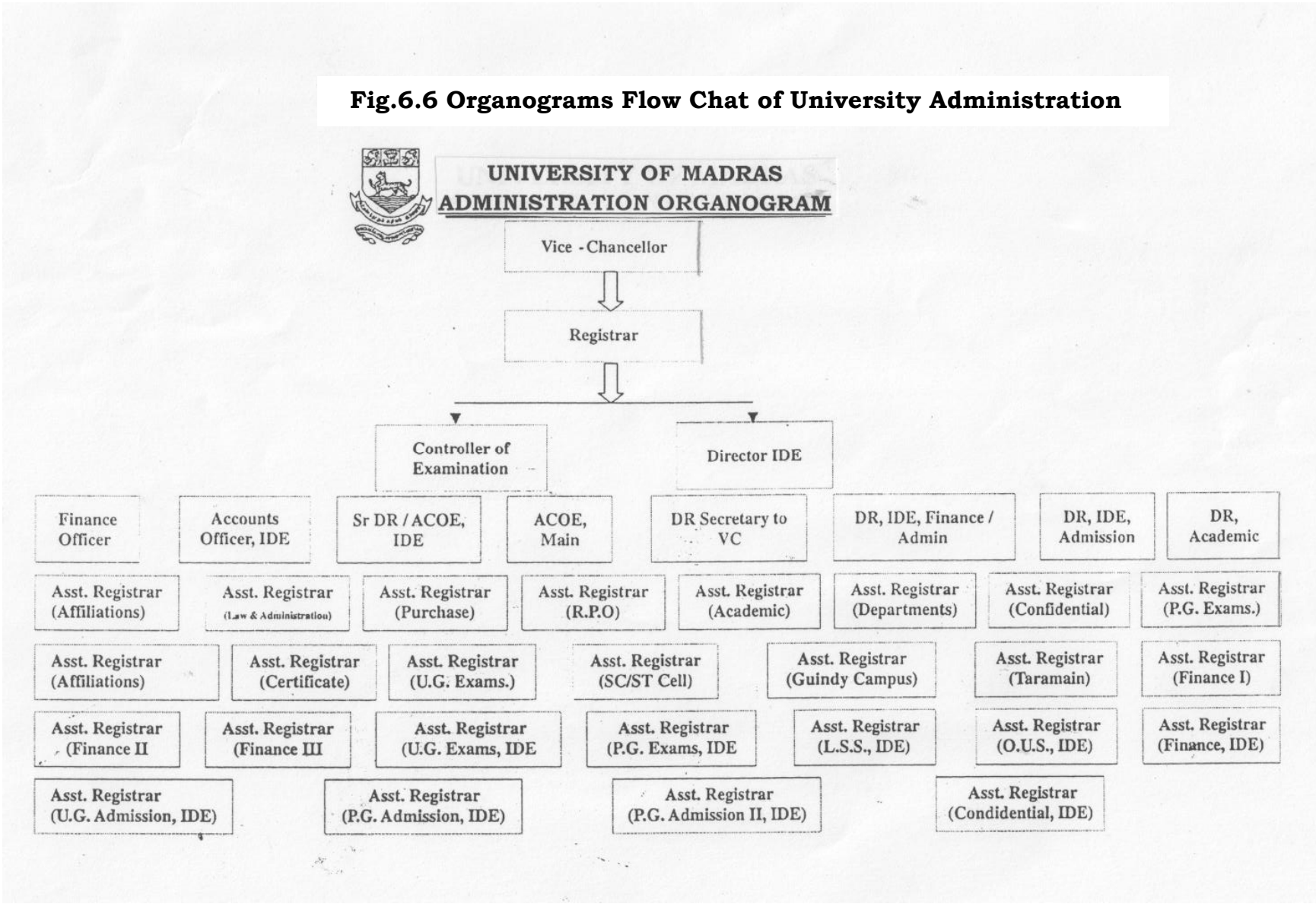


Fig.6.6 Organograms Flow Chat of University Administration



Quality assurance

The University has an effective internal coordination and monitoring mechanism through the Deans' Committee on Academic Administration, IQAC for the academic quality assessment, Campus Directors' Committee for University campus development co-ordination, monthly reviews by the Vice-Chancellor with the Deans and Directors, Engineering division and the Finance division to facilitate fast-track implementation of the approved projects of the University.

The Vice-Chancellor, along with the Registrar and the appropriate officers, meets the teaching faculty of the University Departments, Heads of the Departments and the Principals of affiliated institutions periodically, at least four times a year. While the Registrar has formal meetings with the administrative staff frequently, the Vice Chancellor meets them formally twice a year.

The Syndicate, which is the apex decision-making body of the University, meets once a month. The Academic Council which overseas the academic activities of the University meets twice a year. The Senate, which is the supreme decision making body of the University, also meets twice annually. The Finance Committee, which is statutory decision recommending body on matters concerning the finances of the University, meets as frequently as required with a minimum of at least two meetings annually. The Syndicate sub-committees meet on a monthly basis to make recommendations pertaining to a variety of issues. All the recommendations made by sub-committees are taken up to the Syndicate for final decision-making following which implementation is taken up immediately and action taken reports are filed every month before the Syndicate. The Syndicate, where they are adopted and sent for assent to the Governor – Chancellor, takes major issues concerning the amendment / changes to the statutes to the Senate after approval.

The University's policy to ensure quality in all spheres is manifest in providing transparency in its operations. A typical example is all the students of the University's departments are provided with their evaluated answer scripts of tests as well as final examination to ensure error free evaluation and provide customer satisfaction.

Academic autonomy

The University has constantly encouraged the autonomous functioning of its academic departments and in turn sought their accountability.

The Syndicate of the University and the Vice Chancellor provide effective leadership to the University with the organizational hierarchy significantly de-centralised in its decision-making powers by providing both academic and financial autonomy. Since the University has four different campuses housing the departments, Campus Directors are appointed with financial powers to minimize the administrative time in the decision-making process. As and when new centres are added, Directors are appointed to take

administrative and academic decisions. In recent time, the University has set up the University Centre for International Relations (UCIR), Network Operating Centre, Technology Business Incubator (TBI) and nominated Directors.

The Campus Director of each campus is responsible for managing the human and physical resources of that campus. Each department has a designated Head, who is in charge of decision-making pertaining to the academic and administrative activities. There is a lump sum allocation of funds, based on the approved budget of the University, at the beginning of each financial year. This enables the campuses and departments to utilize the funds effectively for achieving stipulated goals, which are in line with the overall objectives of the University.

The faculty in the departments has absolute autonomy in the designing of curriculum, conduct of programmes and evaluation of the same. Many members of the faculty participate in the day to day administration of the University by serving as members on special committees, whose recommendations are taken up by the Syndicate for implementation.

The performance of the academic departments is reviewed annually by a team headed by the Vice Chancellor and comprising two Senior Deans. This audit provides the departments a feedback on their strengths and weaknesses and the impetus to enhance their functioning.

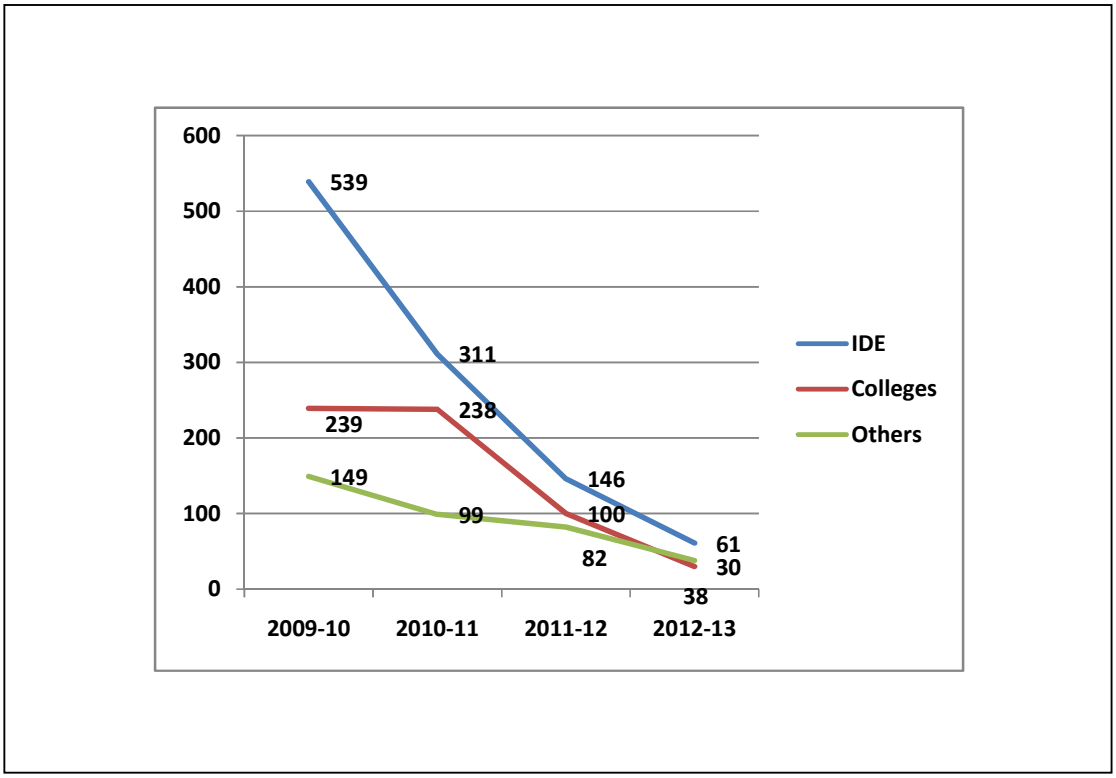
Grievance redress system

The University has a well established mechanism to address the grievances received from students, faculty members, non-teaching staff and general public.

The details of grievance redressal relating to examination and evaluation are given in the CBCS handbook as part of the regulations. Student grievances relating to admission, hostels etc. are addressed by a separate Committee constituted by the University authorities.

The University endeavors to be proactive in addressing the grievances of its various stakeholders. A notable innovation, during the review period, has been the introduction of a 'Green Box' mechanism. Complaints, if any, can be addressed directly to the Vice Chancellor by email or as hard copy in the Green Box available in a prominent location. The grievances are attended to in a time bound manner. An eloquent testimony to the functioning of the University in a committed and transparent manner has been the reduction in grievances / complaints from various stakeholders in the last four years, as can be seen from **Fig. 6.7**

Fig. 6.7 – Complaint Grievances



A particular initiative of the University is the zero tolerance for any kind of ragging/harassment which will cause inconvenience to students in academic institutions. A 'Black Box' has been introduced for receiving ragging complaints. The University has appointed a high level committee with the Vice Chancellor as the Chairperson to consider any issue pertaining to ragging in the University departments and affiliated colleges. In the period during review there has been no instance of ragging in the University departments. The members of the Committee and their contact numbers are displayed in all buildings.

The fairness in University administration is reflected in the number of court cases against the University being minimal. Even in a notable case, which has served as an impediment in faculty recruitment by the University, the issue has been on a policy matter concerning the state government, with the University being only a secondary respondent.

The open door policy of the University administration provides students as well as alumni access to department Heads, Deans and even the Vice Chancellor to give feedback on the functioning of the institution. The feedback received individually/collectively serves as inputs in streamlining the functioning of the University.

Students' feedback and academic audit

The University established the Internal Quality Assurance Cell (IQAC) in 2005-06, to undertake activities relating to maintaining and improving the quality of the programmes offered by the University. One of the important activities of the Cell is to develop instruments to obtain feedback from the students (Annexure: Proforma & Instruction to Students). The complete feedback from the students are analysed by the IQAC and subject - teacher wise scores are generated. With the approval of University authorities the scores are intimated to the concerned faculty members through the Head of the Department. Details of the student feedback are given in the Annexure.

Another innovative system introduced by the IQAC is the academic audit of examination and evaluation. The IQAC through the HOD obtains three answer scripts (high, medium and low mark scripts) for each course along with the syllabus and question papers immediately after the examination. An external expert in the rank of a Professor from another premier University is invited to review the materials and prepare a report in a prescribed format. The external expert gives his/her opinion about the syllabus and question paper standard in comparison with top universities in India and also his/her views about the valuation of the teachers. The IQAC Director/Co-ordinator consolidates such reports and forwards to the department with the approval of the University authorities.

The IQAC also undertakes Strength, Weakness, Opportunities and Challenges (SWOC) analysis at the department level.

Catering to needs of affiliated institutions and the College Development Council (CDC)

The University, in order to meet the development needs of the affiliated institutions, has set up the mechanism of

(i) a Syndicate sub-committee on affiliation
(ii) a Syndicate sub-committee on courses curriculum and autonomous colleges
(iii) a well-structured College Development Council (CDC) in the University with a Dean and an advisory council. The University has 132 affiliated colleges of which 41 colleges fall under Section 2(f) and 12 (B) of the UGC Act. Of these 16 are government colleges, 24 are aided and one is a self-financing college.

The Syndicate sub-committee on affiliation meets once a month and reviews applications received from colleges for affiliation. The affiliation norms are as per the statues of the University as mentioned in the University Calendar Volume – 1 Chapter XXVI. The University affiliation norms for (a) new institutions, (b) continuation of provisional affiliation, (c) Arts, Science, Commerce, Education, Management and other related disciplines, are in tune

with the UGC guidelines and Government of Tamil Nadu norms as provided in Appendix XVI.

The Syndicate sub-committee on Courses, Curriculum and Autonomous Colleges meets five or six times in a year and reviews the regulations and syllabus for proposed new programmes and courses received from the autonomous colleges.

The College Development Council serves as the academic and administrative link between the affiliated institutions and the mainstream administration of the University. It coordinates with the University and affiliated colleges, procuring UGC and other grants to the colleges, and administering the FIP programmes, development of novel academic and research programmes for the affiliated colleges. It effectively helps the affiliated colleges to introduce innovative programmes, study centres, career oriented programmes, avail funds for construction of women's hostel etc. Overall guidance is given to the affiliated colleges for grant of autonomy, NAAC accreditation and linkages of colleges under the Cluster College Concept. Besides the above, the CDC has also conducted several theme-based seminars/workshops, like research project proposal preparation, NAAC self study report preparation, etc.

The University has made the landmark contribution of having introduced the "Autonomous College System" for the first time in the country in the year 1973. Through CDC and the Academic Staff College, the University has periodically conducted policy promotional seminars on according autonomous status to affiliated institutions. It is to the credit of this University's efforts that it now has 21 autonomous colleges.

6.4 Faculty Empowerment Strategies

Professional development of teaching and non-teaching staff

The University has been taking concerted efforts to enhance the professional development of teaching and non-teaching staff. The aim of the University is to make the faculty internationally competent. Newly recruited members of faculty are urged to undergo mandatory Orientation and Refresher courses through the Academic Staff College. A budget head under the non-plan university budget has been created with a substantial outlay called, "Research Starter Grants" to provide seed grants for research for newly recruited teachers. The University also reimburses the research project proposal expenses of faculty submitting applications for extra-mural grants. Travel grants are also provided to faculty who are invited to present their project proposal by central funding agencies while Assistant and Associate Professors are provided with study leave, Professors can avail sabbatical leave of one year for every six years of service. Travel support and On Duty Leave are provided liberally to facilitate faculty participation in International and National Conferences, Symposia, etc. Faculty members are encouraged to undergo summer training and to attend specialized workshops for capacity

building in their respective areas of specialization. The large number of MoUs (127) signed with international and national universities facilitates such faculty exchanges.

Review/appraisal method

Faculty members are subjected to an appraisal of teaching abilities by way of student feedback administered by the Internal Quality Assurance Cell (IQAC). Their all round performance is periodically appraised by external experts for their progression under the Career Advancement Scheme.

The Academic staff college conducts periodical training programs for the administrative staff. The program covers quality circles, e-governance, administrative reforms, Debit, Credit and Balances etc. In the programmes conducted during the period 2007 – 2008 and 2012 – 2013, 454 administrative staff have participated and benefitted. They are also encouraged to pursue the courses offered by the University's own Institute of Distance Education. All administrative staff is encouraged to qualify for a computer diploma and those already employed are facilitated to acquire computer diplomas/advanced computer training. The promotion of staff in this category is based on the appraisal by confidential reports from their supervising officers and a qualifying test. A noteworthy provision is for upgrading Class IV employees to Class III positions.

Welfare schemes

The University provides a host of welfare schemes for both the teaching and non-teaching staff. These include house building and vehicle loan facilities. During the review period, 166 applicants who have sought the facility have been granted the same. The University provides Group Insurance Scheme and 100% of the teaching and non-teaching staff are covered under this scheme. Lump sum medical grants/soft loans are provided on a case to case basis to meet major surgery and hospitalization expenses of the teaching and non-teaching staff. Reimbursement of school fees for children of non-teaching staff is another motivator.

The opportunities for professional development and welfare measures for teachers have resulted in negligible number of teachers resigning or retiring from the University prior to superannuation. The University widely perceived as a model employer, in the field of higher education, draws manifold applications for notified teaching positions including attracting eminent faculty.

Gender audit and sensitization

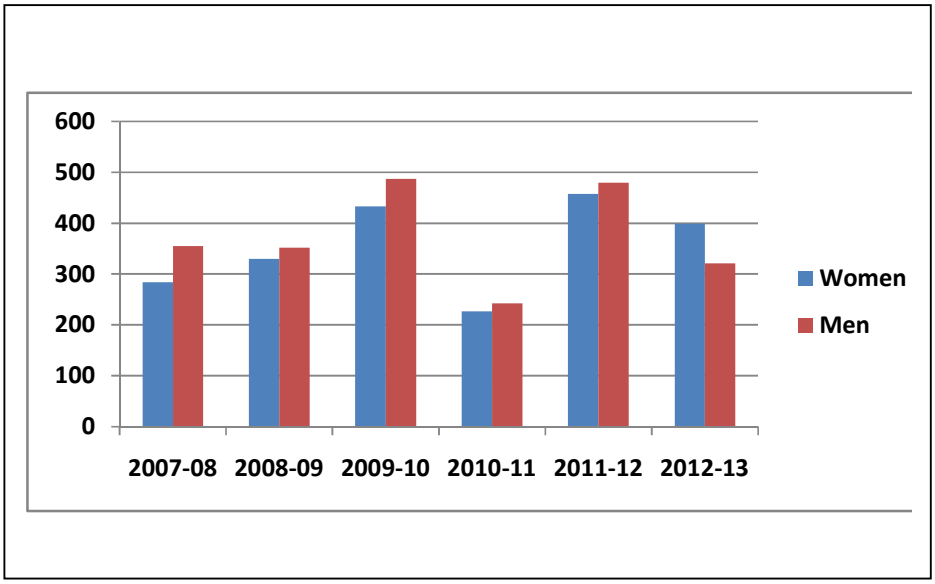
The gender composition in the University is well-balanced among teaching and non-teaching staff as well as research scholars and PG students. The women representation in the teaching and non-teaching category is a healthy 20% to 25%. Among the students and research scholars it is seen that women outnumber men**.** The University with its age old values of respect and

due consideration for women has not had a single women harassment complaint in the last four years. Nevertheless the University has constituted a Redressal Cell to oversee complaints regarding any kind of harassment of women.

Table 6.1 Distribution of staff by gender

Number	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Teachers Women	66	64	59	58	55	53
Men	235	227	219	213	200	184
Non Teaching Staff Women	144	139	147	145	199	196
Men	750	721	721	670	650	604

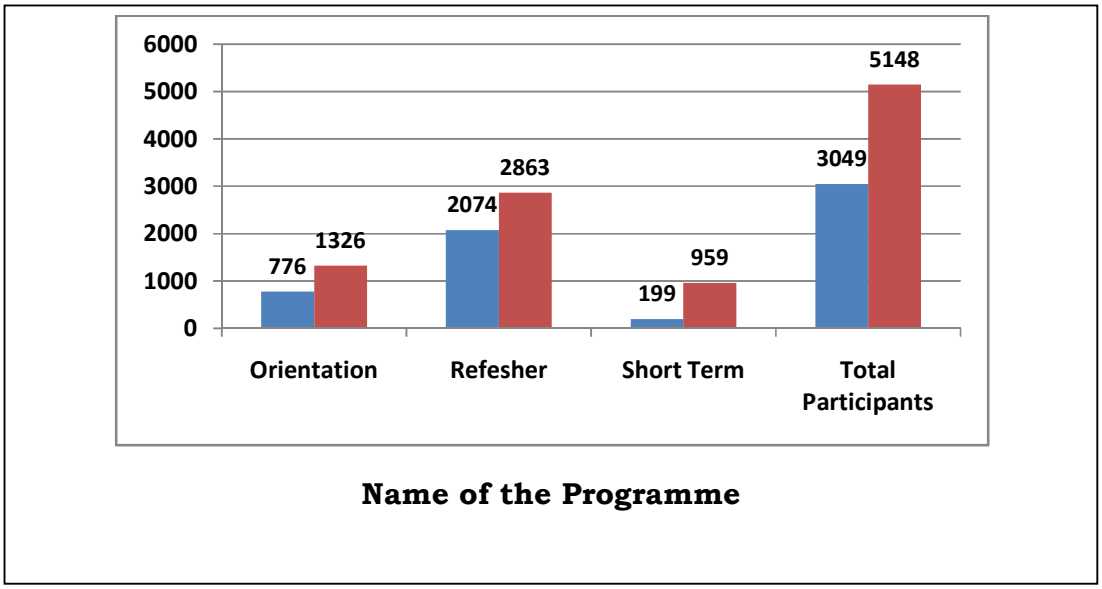
Fig. 6.8 Gender composition of research scholars



Impact of Academic Staff College programmes

A backbone of the University's efforts towards faculty empowerment is the Academic Staff College. The UGC-ASC University of Madras has recorded an upward growth in the number of programmes and participants **(Fig. 6.9).** The UGC-ASC, University of Madras has been ranked the 5th at the All India level on the basis of programmes conducted during the XI Plan period. It has also been ranked the 4th nationally on the basis of number of participants.

Fig.6.9 Enrolment to Academic Staff College programmes



Creditable among the competency enhancement outcomes of the University is that every teacher in the University is computer savvy and is in a position to use modern technological aids for teaching and research.

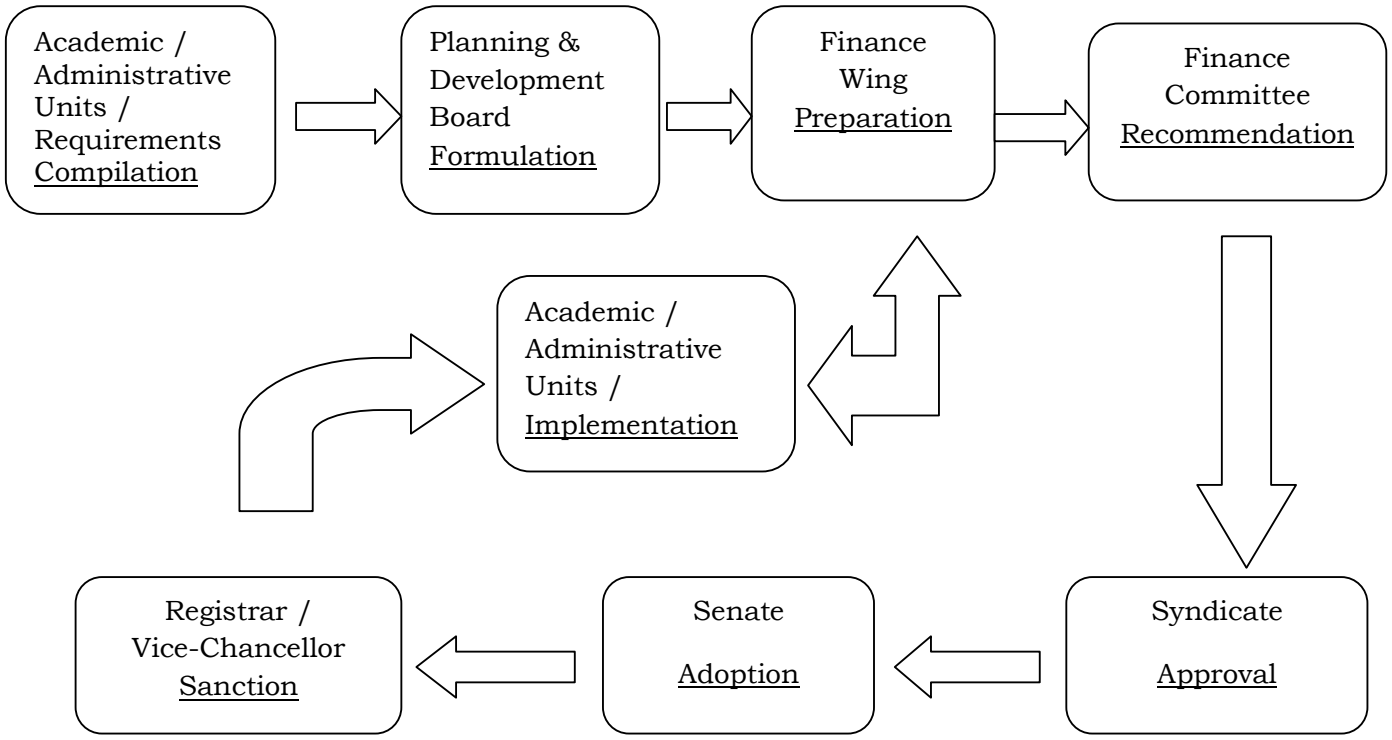
6.5 Financial Management and Resource Mobilisation

Efficient use of financial resources

The University has an efficient mechanism to monitor the effective and efficient use of financial resources.

Resources at the disposal of the University are scrupulously budgeted, based on the needs and requirements of the academic departments and the administration to fulfil the overall objective of achieving academic excellence. The budgeting cycle as presented in **Fig.6.10** below depicts how a scientific methodology is followed in the University to develop the annual budget by initially compiling the requirements of the academic and administrative units, formulating the draft budget through the Planning and Development Board, getting the recommendation of the Finance Committee of the University, placing the draft budget before the Syndicate for approval, and finally getting it adopted by the Senate of the University. Thereafter, the administration of the budget is taken care of by the Vice Chancellor and Registrar with specified financial powers for the Vice Chancellor, Registrar, Finance Officer etc. All financial transactions exceeding rupees three lakhs in respect of Non-plan and rupees seven in respect of Plan accounts have to be put up to the Syndicate for sanction.

Fig.6.10 Budgeting Cycle



Internal and external audit

The University has created two Campus Director Offices at Chepauk and Marina similar to the one already existing in the Guindy and Taramani Campuses. The Office of the Campus Directors have full financial delegation to facilitate the speedy functioning of the departments in the two campuses. The Campus Directors have necessary powers deal with financial matters. The establishment of two new offices helps avoid time delay in disbursing of advances and settlement of accounts.

To ensure accountability of financial transactions, the University's budget is submitted to scrutiny by internal audit and local fund audit. The audit of the accounts is being carried out by the Local Fund Audit department of the Government of Tamil Nadu as an External Agency independent of the University administration to take fair view and give independent opinion on the performance as well as financial transaction of the University in the form of Audit Report along with the Audited Annual Accounts for each financial year.

The comments, views, deficiencies pointed out in the paras of Audit Report are deliberated elaborately in Accounts and Audit Committee meeting and suitable replies are prepared and placed before the Syndicate and Senate for their approval.

The Audit Report along with the replies to paras, after approval of the Senate, is forwarded to Audit Department for consideration, acceptance and settlement of paragraphs raised in the Audit Reports.

The Audit Reports contain paragraphs involving certain defects, deficiencies which call for immediate attention are being attended to and modified fresh replies to unsettled paragraphs are being furnished along with connected records to audit during Joint Sitting Conducted with Officials of the Audit Department periodically.

Besides the External Audit Agency (viz Local Fund Audit Department) conducting the Audit on the transactions of the University on post execution basis, the University itself has established an Internal Audit Section as part of the administration wing to conduct pre-audit of the function, so as to improve better performance and safeguarding the overall interest in all the activities of the University. The main scope of this internal audit is to pinpoint and rectify the defects in the earlier stage itself to avoid further recurrence and future guidance to follow so that there shall be better administrative excellence in its accomplishment of the goal and target.

The resources for the University come through non-plan receipts by students fees and blockgrant support from the State government towards the salary component of its employees of all categories, planned grants from national and international funding agencies, research project grants generated by the faculty from funding agencies, resources mobilized through industry collaborations and consultancies, interest from endowments, and income from the Institute of Distance Education.

Resource mobilization

The University is aware of its increasing financial needs as also reduction in funds from the State government. Taking cognizance of it, the University has actively

mobilized its resources by adopting modern approaches. Apart from block grants from the state government and Plan funds from the UGC, the University, during the last five years, has significantly intensified its efforts to mobilize resources from faculty consultancies through UICIC, self-supporting courses, endowments, industry interaction in the Technology Business Incubator (TBI) and research grants received by the faculty for their projects from different funding agencies.

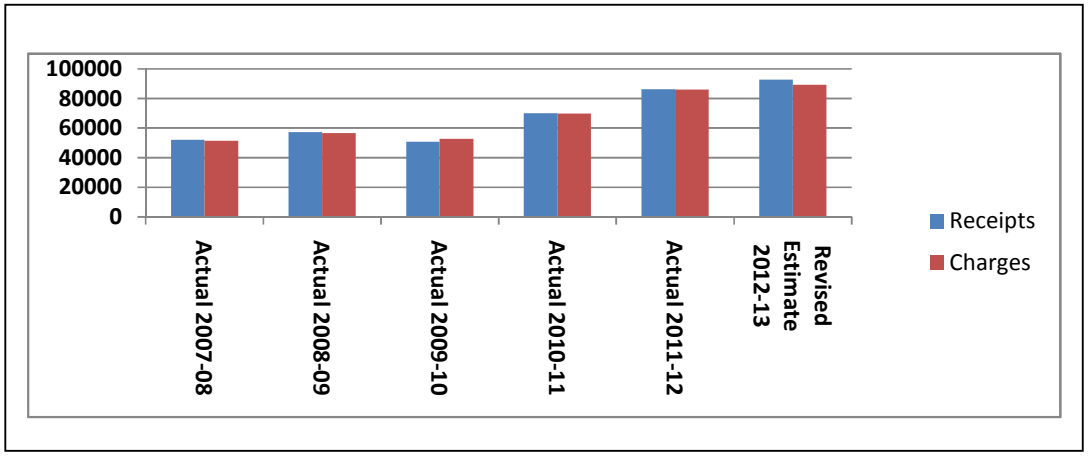
Being a public funded institution, the higher education programmes offered by the University are significantly subsidized to cater to students of all strata of the society, especially the socio-economically backward students and SC/ST students. The annual fee structure for the postgraduate programmes of the University departments under Humanities, Social Sciences and Languages is Rs.5350/- and for Science is Rs. 7470/- and Management students, the annual fees is Rs. 25425/-.

During the re-accreditation period, the University has developed novel models to mobilize resources through self – supportive streams for the existing PG courses or exclusive self-supportive courses with a fee structure approximating with the unit cost of education for these courses. In addition, the University Centre for International Relations (UCIR) established in 2003 has also attracted foreign students into the University, not only from Asian and African countries but also from Europe and USA for which the University has evolved a separate fee structure.

The University's commendable efforts in resource mobilization include a grant of Rs.2.81 crores from UGC under general development assistance scheme under XII plan, Rs.1.52 crores as first installment of grants towards Phase II of UPE, and Rs.3.54 crores from Tamil Nadu state government under seven different schemes. It is a proud privilege that the University has received an inheritance of Rs.18.601 crores from Dr. Rajasekara Shyam, alumni of University of Madras, USA. This amount is being utilized to construct an international hostel.

A perspective analysis of the University's budget for the last five years reveals significant trends on how the University has moved ahead with regard to resource mobilization and prudent use of the same to maximize the benefits to the University. **Fig. 6.11** provides, at a glance, the general trends pertaining to Receipts and Charges.

Fig. 6.11 Budgetary receipts and charges



The graph presented shows a steady increase in the revenue receipts of the University from Rs. 250.02 crores in 2005-2006 (at the year of last re-accreditation) to Rs. 862.96 crores in 2011-2012. Funds from both plan sources and non-plan sources have shown a creditable increase, thus demonstrating the University ability to stand up to the challenge of resource generation to meet the needs of modernization of infrastructure. **Ref. Tables 6.2 to 6.5 and Fig 6.12 – 6.15.** Another significant achievement in the area of management of financial resources is the fact that in the last five years the University has been successful in staying as surplus budget through a prudent management of its budgeting.

Table 6.2 Summary of charges – 2007 to 2013

Detailed Head	Actual 2007-08	Actual 2008-09	Actual 2009-10	Actual 2010-11	Actual 2011-12	RE 2012-13
(Rupees in Lakhs)						
Academic Departments	2144.65	2271.04	3018.51	3739.31	3928.62	4325.98
Library	282.33	215.75	296.30	300.55	310.92	311.56
Student Facilities	78.66	73.66	103.29	169.42	125.93	153.95
Fellowship	8.79	13.67	29.40	25.74	35.54	34.40
Total	2514.43	2574.11	3447.5	4232.02	4401.01	4825.89

Table 6.3 Summary of receipts – 2007 to 2013

(Rupees in Lakhs)						
Detailed Head	Actual 2007-08	Actual 2008-09	Actual 2009-10	Actual 2010-11	Actual 2011-12	RE 2012-13
Grants from Govt. of Tamilnadu	979.84	979.84	979.84	1617.68	145.28	4137.52
Fees	4588.51	5034.68	4748.93	6150.85	5425.41	5200.14
Publications	14.46	3.27	8.06	11.26	13.19	10.14
Total	5582.81	6017.79	5736.83	7779.79	5583.88	9347.80

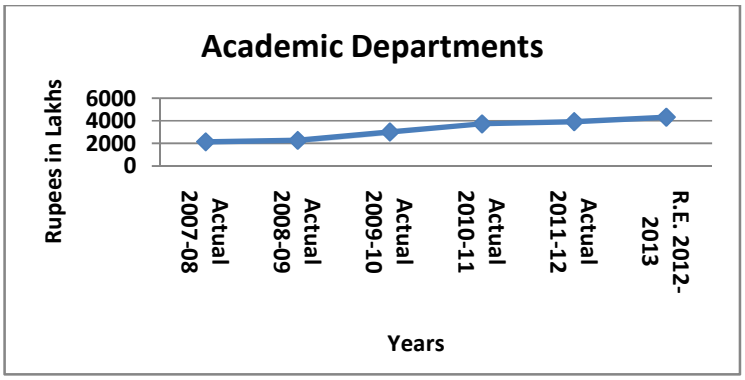
Table 6.4 Total summary of charges and receipts (Non–Plan)

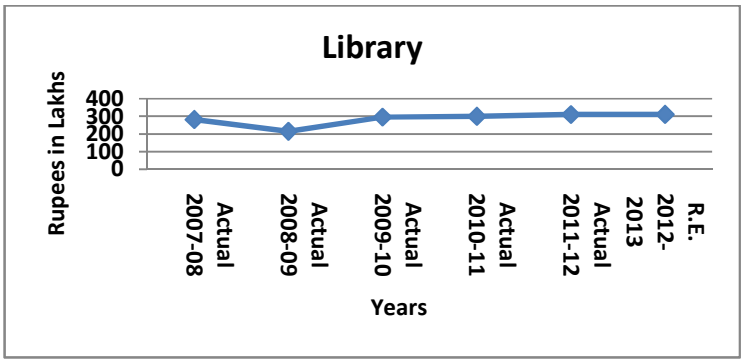
(Rupees in Lakhs)						
Detailed Head	Actual 2007-08	Actual 2008-09	Actual 2009-10	Actual 2010-11	Actual 2011-12	Revised ESTIMATE 2012-13
Receipts	10503.02	12083.44	10871.75	15422.84	12977.52	12141.86
Charges	10797.55	11653.08	11782.62	16097.38	15058.35	14196.21

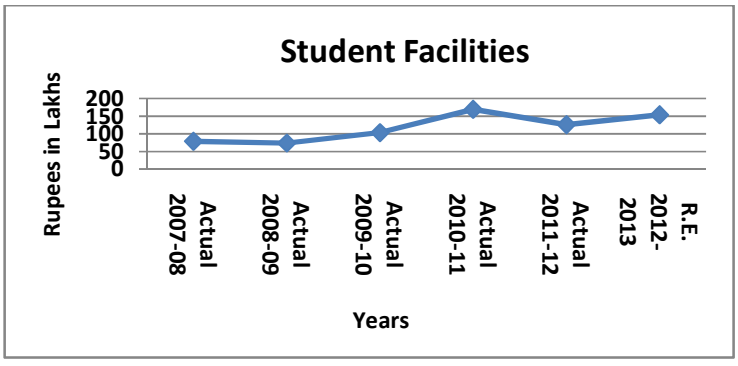
Table 6.5 Budget at a Glance [Part – I to Part – IV-C Corpus Fund, Corpus Fund Interest, Capital IDE]

(Rupees in Lakhs)						
Detailed Head	Actual 2007-08	Actual 2008-09	Actual 2009-10	Actual 2010-11	Actual 2011-12	Revised ESTIMATE 2012-13
Receipts	52062.85	57298.67	50692.21	70111.09	86296.48	92576.13
Charges	51254.01	56591.31	52667.82	69811.93	85875.34	89295.44

Fig. 6.12 Summary of charges – 2007-2013







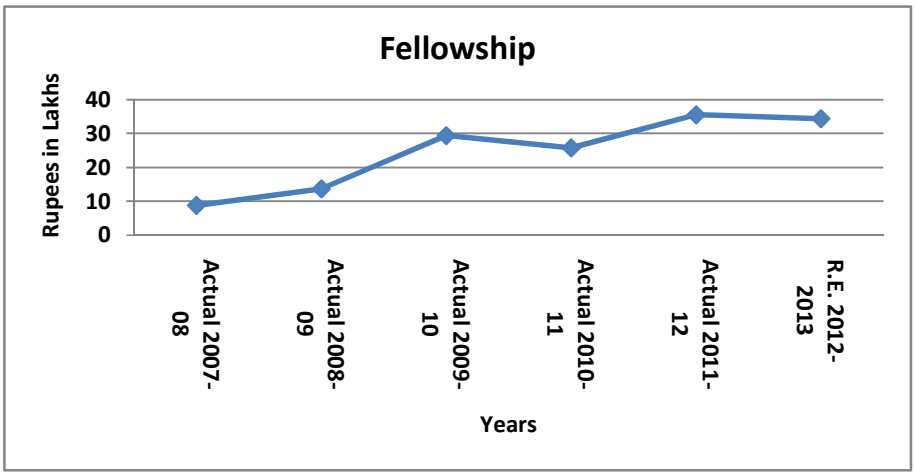
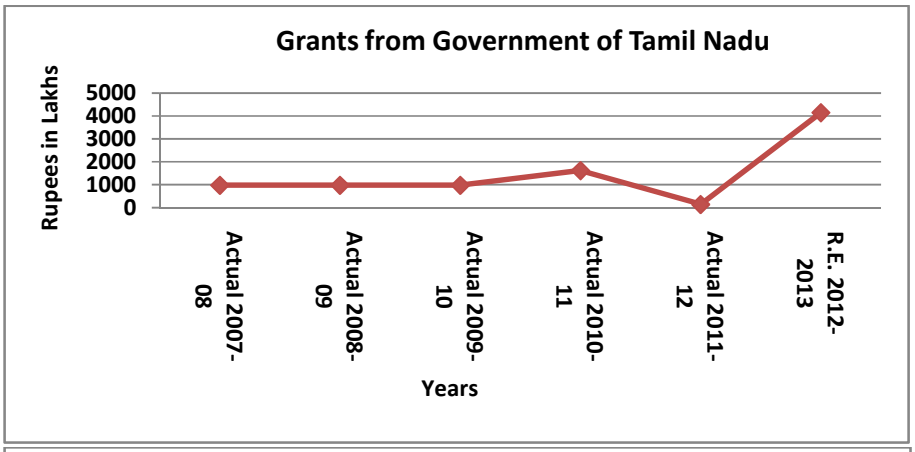
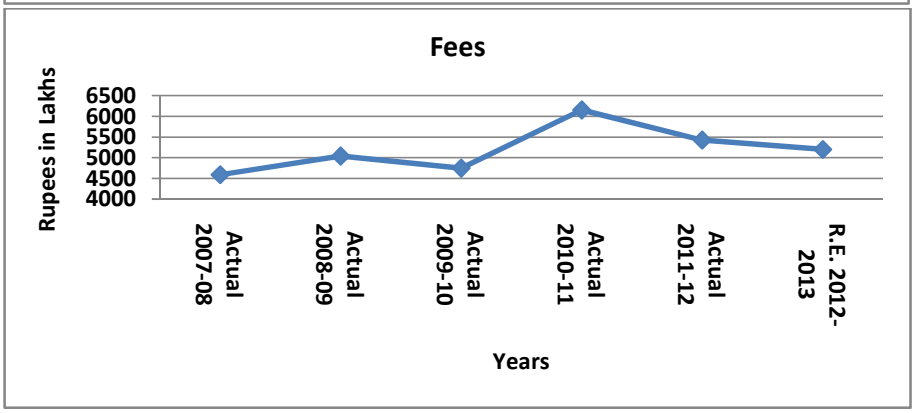
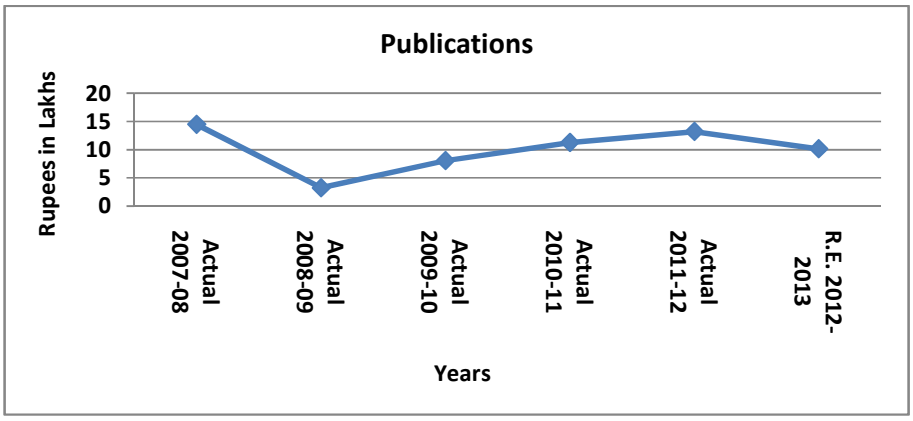


Fig 6.13 Summary of receipts – 2007 to 2013







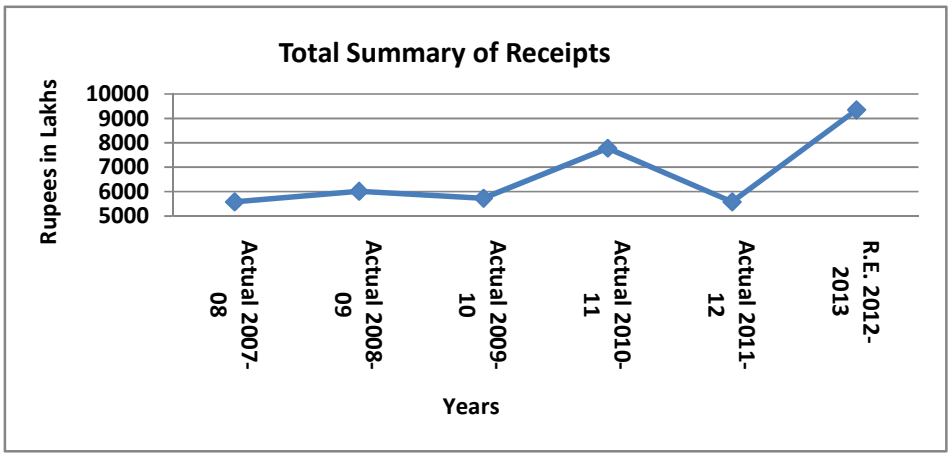


Fig. 6.14– Total Summary of charges and receipts (Non-Plan)

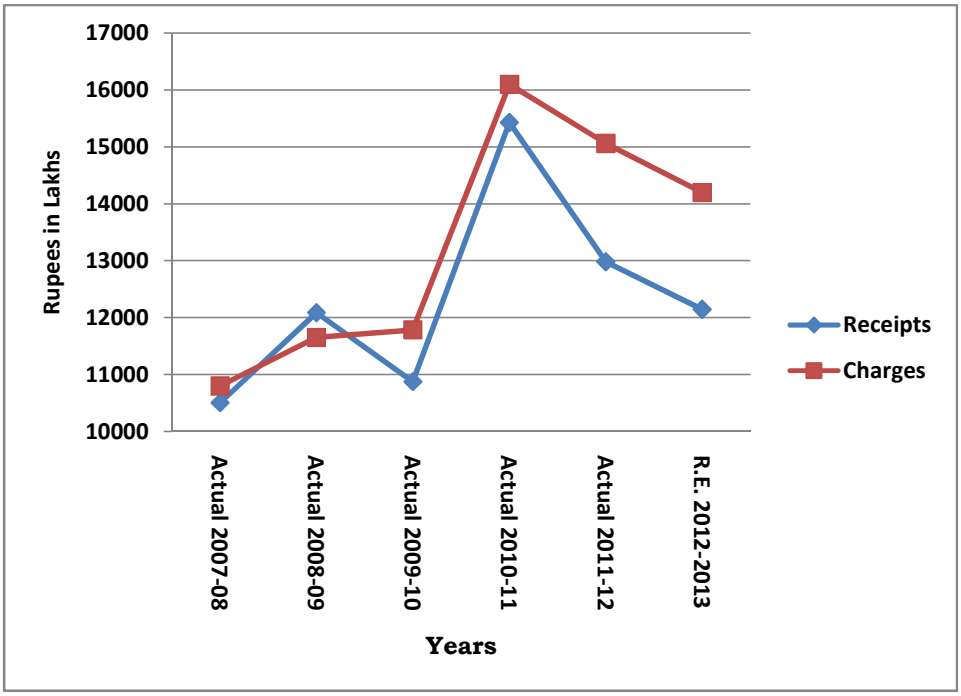
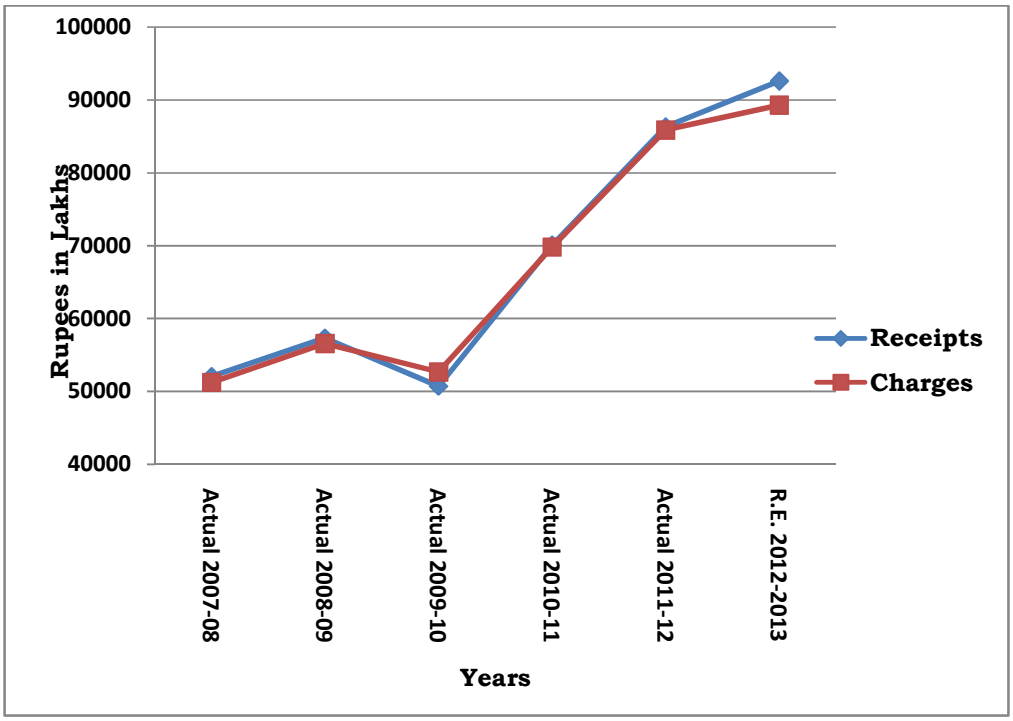


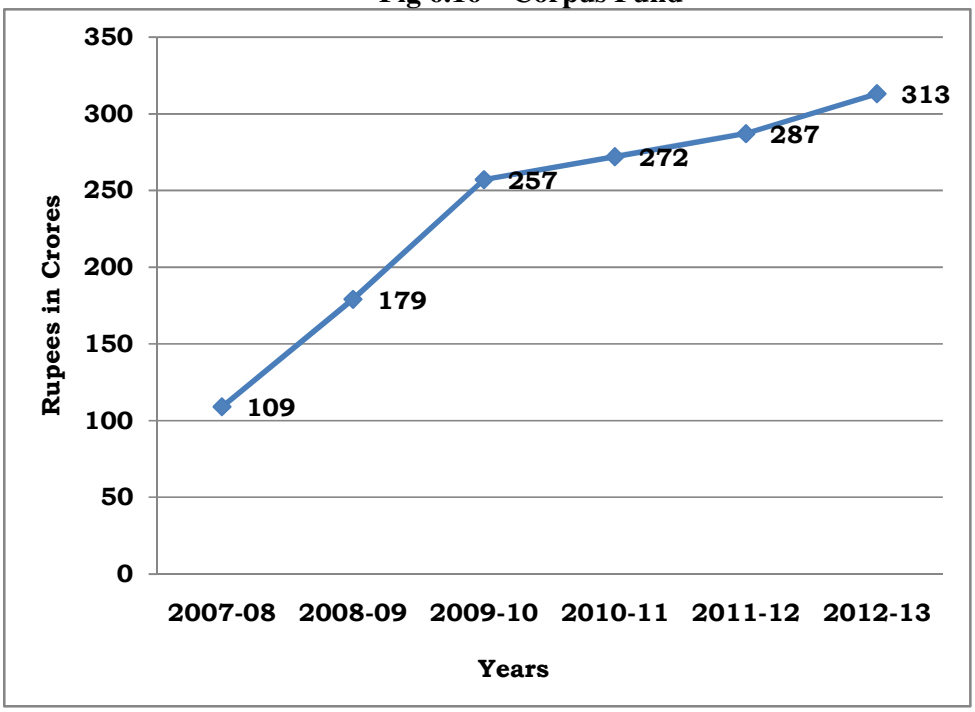
Fig 6.15- Budget at a Glance [Part – I To Part – IV- C, Corpus Fund, Corpus Fund Interest, IDE]



Corpus fund

As a farsighted and prudent financial step, a corpus fund account is being maintained separately from the year 2006-07 to show the deposits and interest accrued. With a target of Rs.500 crores, the corpus fund is a measure of forecast and discipline in regulating the financial liability of this University in future years in two broad areas--retirement benefits of the staff and infrastructure facilities. Initially, a sum of Rs.150 crores was drawn from IDE deposits on maturity and current surplus and brought under corpus fund to achieve the target of Rs.500 crores with the approval of the Syndicate. This corpus fund account which was created as a pilot scheme has slowly and steadily accumulated Rs.313 crores as deposits which (Refer Fig.6.16) yields an interest value of nearly Rs.32 crores per annum and the interest is being utilized to cater to the needs of pension liabilities.

Fig 6.16 – Corpus Fund



6.6 Internal Quality Assurance System

The University has committed to Total Quality Management (TQM) as both a philosophy and a set of guiding principles that foster continuous improvement of the organization in a systematic, integrated, consistent and organization – wide perspective involving every unit and everyone of the University community, aiming towards total satisfaction of every participant of the system.

The University has institutionalized the process of benchmarking and internal quality checks by introducing the Academic Audit system for University departments, affiliated colleges and approved research institutes and R & D institutions. The academic audit is envisaged as an educational exercise of accountability linked autonomy to assess and improve the performance of teachers, students, administrative staff and the whole institution in a holistic manner and to have a pragmatic view about the present academic standards of the University. The internal quality checks that are adopted include stratified proforma based information on students feedback of teaching – learning process, self-appraisal by teachers, grievance redressal for all stakeholders of the University system, strict adherence to UGC norms in all academic functions of the University, administrative transparency by providing information to the needy as per Right to Information Act besides bringing the entire University system under internal surveillance as per Vigilance and Anti-corruption Act by the appointment of Vigilance Officer for the University.

Academic audit and IQAC

The Academic Audit and Internal Quality Assurance Committee constituted soon after the NAAC accreditation in 2000 was formalized as Internal Quality

Assurance Cell (IQAC) as per the specifications of NAAC in 2003 and made as a statutory component of the University with due approval by the Academic Council and Senate.

The University of Madras, following its accreditation in 2000 by NAAC at 5-star level, has set up the Internal Quality Assurance Cell (IQAC) and Academic Audit Committee to formulate broad guidelines, monitor and assess quality, undertake quality improvement measures and develop a template to obtain information / data annually from the University departments as well as affiliated institutions (colleges and research institutes) and devise appropriate methodology to facilitate continuous quality assessment.

The IQAC, which includes external members, monitoring the quality sustenance and quality enhancement efforts of the University departments, affiliated colleges, approved institutions and the recognized research institutions, has undertaken the following activities:

(i) Constructing Internal Quality Assessment scores for the University departments and affiliated institutions, based on the Quality Indicator – Academic (Teaching, Learning and Evaluation), Research Consultancy and Extension, and Infrastructure and Special Assistance and Support Services.

(ii) Students' feedback of the CBCS courses and their evaluation of teachers of the University departments is done using a Likert type five point scale on the parameters-course content, teaching-learning process and evaluation process.

(iii) Self-Appraisal Report from faculty members.

(iv) Academic Audit of the CBCS.

The IQAC of the University provides guidance and support to undertake quality assessment and improvement activities in the affiliated institutions and these institutions are requested to submit a copy of the IQAC annual report to the University.

During the review period from 2007-2008 the IQAC has processed a total of 14984 student feedback forms. The overage rating of teachers range from a minimum of 83.4% to a maximum of 93.6%.

The quality hallmark for the academic programme has been given a paradigm shift in the last five years to reorient curricula towards skill and capacity building so as to link them with entrepreneurship development and employability. In order to assess and remedy the "missing links" in the curricula to meet the above academic targets and to remove the "mis-match" between human resources required by the employers and those generated by higher education institutions, all the Boards of Studies of the University have been reorganized with a statutory provision to have one third of the 12 experts of each Board from non-academia like industries, consultant organizations, governmental, corporate and non-governmental organizations. At the delivery level of academic programmes, quality is ensured through the "cafeteria type" CBCS pattern of

PG courses in the University department and autonomous colleges to provide horizontal mobility and through CBSS in all non-autonomous colleges. Quality monitoring in teaching-learning is further assured through transparency in student evaluation by providing photo copies of evaluated answer papers and by revaluation, improvement examination of courses and by third party external evaluation of 10% of the answer scripts of the CBCS and semester examinations of the University departments. The increasing percentage of placement profile of students from the postgraduate departments of the University stands testimony to the improved quality of the academic programmes.

A significant curriculum innovation enhancing student employability arising from the IQAC inputs is the introduction of soft skills as mandatory for the PG as well as the UG students. University students now undergo soft skills courses to improve their communication abilities and also take up a summer internship. IQAC inputs, taken cognizance by the Planning and Development Board, has led the University to introduction new postgraduate programmes in cutting edge areas like Bioinformatics, Biodmedical Sciences, Neurosciences, Molecular Biology, Corporate Sociology, Cyber crimes and Information security, Actuarial Science, Sustainable Development and Financial Economics.

A heartening aspect of University's growth has been 'inclusiveness' benefitting the disadvantaged sections of the society. In the University the number of SC/STs qualifying for admission has risen from 495 at the end of X plan period to 551 at the end of the X1 plan period.

The University's efforts towards Quality enhancement and sustenance of excellence has been through the collective wisdom and decision-making process facilitated by the Syndicate, Planning and Development Board, IQAC Cell, and faculty members of the University.

6.7 Quality Sustenance and Enhancement Indicators

- Provision of autonomy to learners, teaching and non-teaching staff within well-framed university norms and regulation.
- Introduction of transparency and openness through phased e-governance initiatives.
- Optimization of existing resources through sharing.
- Comprehensive academic audit system through IQAC.
- Combination of thrift and prudence in budgeting and expenditure through Planning & Development Board.
- Provision of Research Starter Grants and Travel Grants to students and faculty to attend seminars and conferences.

- Free IT training for administrative staff.
- Group Insurance scheme for staff and students.
- Collaboration with industry, national and international universities through MoUs to facilitate knowledge sharing and enhancement.
  .
- Academic Achievement Award to encourage faculty excellence.

CRITERION VII
INNOVATIONS AND BEST PRACTICES

CRITERION VII

INNOVATIONS AND BEST PRACTICES

7.1 Introduction

At every juncture in its long history, the University of Madras has rejuvenated itself by dovetailing its innovations and best practices into healthy practices for all its stakeholders and Higher Education at large.

University healthy practices are defined as *"institutionalization of innovative self-regulated responsibilities which aim to promote academic growth of international quality in the University system"*. Higher educational institutions are expected to build optimally seven healthy practices, if they are to answer professionally the requirements of societal transformation by universities. They are:

1. Respecting diverse talents and ways of learning
2. Communicating high expectations
3. Encouraging increased interaction between students and faculty
4. Developing reciprocity and cooperation among students
5. Encouraging active learning with advanced teaching tools
6. Giving prompt feedback to staff and students and
7. Emphasizing task on time with total quality management.

While it has always been easy for educationists to suggest innovations in the educational policy of the nation, pragmatism and implementability are the areas of concern. These concerns are addressed by putting in place a codified 'Ethics Policy' which is meant to serve as a guide to assist the Governing Councils/Boards of Governors, administrators, faculty and staff, collectively called "Members of the University Community", in making ethical decisions and engaging in appropriate, lawful conduct. It is the intent of the University of Madras that compliance with the Code of Ethics will foster a work-environment that stimulates and encourages the development of abilities and pursuit of personal and professional growth while maintaining the highest ethical standards and goals of the university. The Governing bodies of the University facilitates the members of the University Community to develop moral and ethical commitment.

The highest ethical standards set for the holders of public office of the University are:

i. **Selflessness**

Holders of public office should take decisions solely in terms of the public interest. They should not do so in order to gain financial or other material benefits for themselves, their family, or their friends.

ii. **Integrity**

Holders of public office should not place themselves under any financial or other obligation to outside individuals or organizations that might influence them in the performance of their official duties.

iii. **Objectivity**

In carrying out University activities including making public appointments, awarding contracts, or recommending individuals for rewards and benefits, holders of public office should make choices on merit.

iv. **Accountability**

Holders of public office are accountable for their decisions and actions to the public and must submit themselves to whatever scrutiny is appropriate to their office.

v. **Openness**

Holders of public office should be as transparent and open as possible about all the decisions and actions that they take. They should give reasons for their decisions and offer information, when the wider public interest clearly demands.

vi. **Honesty**

Holders of public office have a duty to declare any private interest relating to their public duties and to take steps to resolve any conflict arising in a way that threatens the public interest.

vii. **Leadership**

Holders of public office should promote and support principles by leadership and setting themselves as examples.

7.2 Environmental Consciousness: Eco-Friendly Campus

a. Green audit and energy conservation

During the academic year 2009-10, the University of Madras initiated certain steps towards exploring and providing opportunities for Renewable

Energy and Energy Efficiency Optimization Schemes at all the four University campuses by calling for a study report through a consultant firm namely M/s. New Energy Corporation. Accordingly, incandescent light bulbs were replaced by cost effective, high efficient LEDs. In addition, proper placement of windows and skylights as well as the use of architectural features that reflect light into a building has reduced the need for artificial lighting. Energy conservation is achieved by optimum usage of lights and electrical appliances only when needed.

b. **Use of renewable energy**

Plans are underway to use solar energy power in the campuses to reduce power consumption and use alternative sources of generating power which would help in overcoming the power crisis.

c. **Rain water harvesting**

Rain water harvesting has been done in the existing buildings. It is also made mandatory in all the new/proposed constructions in the University.

d. **Efforts for Carbon neutrality**

Implementation of e-governance by the University is one among the novel means to promote carbon neutrality in various campuses.

e. **Plantation**

NSS has taken lot of efforts to make the campus green by planting trees in the campuses during the important activities conducted by the NSS such as Youth day celebrations, Independence day celebration and World Environment day.

f. **e- waste management**

The University, along with *Deccan Chronicle*, has initiated efforts to create e-waste awareness. Further, the University in collaboration with Northampton University has proposed to offer a two year online PG programme as well as Ph.D. programme on waste management.

g. **Dissemination of research findings**

Lab to Land programme has been initiated to ensure that all innovations achieved in all the laboratories of the University of Madras are shared with people at the grass root level.

Within this framework, the healthy practices introduced in the University of Madras can be classified as innovations to foster

- Institutional Health
- Healthy practices for Teachers as academic, service related, motivational and quality upgrading efforts
- Healthy practices for Students as academic, infrastructural, financial and health support oriented efforts
- Healthy practices for Administrative, Technical and Other Non-Teaching Staff Members.

7.3 Innovations to Foster Institutional Health

The robust institutional health of the University of Madras is based on a three pronged strategy of Expansion, Inclusion and Excellence. The University has registered a 112% overall increase in student strength and corresponding 80% increase in rural affiliated colleges in addition to the growing numbers in the Distance Education Stream. Together, the introduction of new courses, new centres and new constituent colleges has contributed significantly to the increase in the Gross Enrolment Rate (GER) in Tamil Nadu. The policies of Inclusion at the University of Madras have brought underprivileged and marginalized sections into the educational mainstream. Reservations in doctoral admissions, fee exemption for physically challenged, fee concession for women in the IDE admission have resulted in women outnumbering men in University admission. The University's commitment to Excellence is evident in the number of high impact publications, cutting edge research and increased placement rates.

i) **University library system**

All the departments in the University of Madras have their own library collections. Besides, all the campuses of the University are served by large libraries. Computer based information services have been introduced. The main library of the University is located at its Chepauk Campus. Besides maintaining a collection of print materials, the University Library system also maintains a collection of e- resources on CDs and also subscribe to over 5500 e-journals under UGC's INFONET programme.

ii) **Internet centres**

The University operates Internet centres in all the campuses. The Internet centres are open to all the students of the University departments. As of now, the Network Operating Centre has been provided with 10 Mbps Internet Services from M/s BSNL.

iii) **Hostel facilities**

Accommodation is provided to needy and deserving students in the following hostels maintained by the University:

1. Mother Theresa Hostel for Women, Chepauk Campus, Chepauk.
2. Thiruvalluvar Hostel for Men, Marina Campus
3. Bharathiar Hostel for Men, Guindy Campus
4. Avvai Hostel for Women, Guindy Campus
5. Bharathidasan Hostel for Men, Taramani Campus
6. Dr.Muthulakshmi Reddy Hostel for Women, Taramani

The hostels provide basic amenities including a common lounge with television, radio, internet connectivity, newspapers and magazines.

iv) **University Centre for International Relations (UCIR)**

The University of Madras established the University Centre for International Relations in consonance with UGC's X Plan in fulfilment of its policy evolved to promote the free flow of students from other nations to India, as well as allow Indian students to get educated in other nations. The primary motto of the UCIR is to provide educational excellence and culturally appropriate ambience to all international students.

v) **University Students Advisory Bureau (USAB)**

- The USAB housed in the Chepauk campus of the University offers counselling and career guidance and also offers placement services to graduates and postgraduates of the University.

- USAB organizes exhibitions on careers (INFORMEX) and vocations.

- The USAB is responsible for processing applications of foreign students seeking admission to the University.

- USAB is the authorized body of the University of Madras for attestation of certificates/marks statements of the University students applying for admission to foreign Universities.

- The other activities include: Issue of Railway Concession Forms (Season Ticket, Vacation, Data Collection and Educational Tour) to the students studying in the University Departments; Organise Science Talent Promotion Scheme for the First year PG Students studying in the University Departments;

Organise Job oriented Short-term courses for the Unemployed Graduates; Provide Computer Training courses to the Students; Offer coaching classes for Various Competitive Examinations such as UPSC Civil Service Preliminary Examination/TNPSC Group I and II, Staff Selection Commission, UGC NET Examination; Conduct Seminars and Workshops on Career Oriented Courses for the benefit of Graduates/Post Graduates students of the University and the Public; arrange Inter Departmental Cultural Programmes (UNIFEST) for the students in the University Departments.

- It also arranges placement programmes bi-annually for the students of the Madras University departments and affiliated colleges.

vi) **National Service Scheme (NSS)**

The NSS Unit of the University organizes regular and special camps related to health and hygiene, literacy, environment, personality development, etc. These camps are usually held in the campuses of affiliated colleges or in the adopted villages. These involve student volunteers in various youth-related seminars, workshops and training programmes. NSS Unit also deputes volunteers to various Inter State Camps, National Integration Camps and also Inter State and National Cultural Festivals. The NSS students of Madras University area take part in All India Basic Leadership Camps (Boys and Girls), Nau Sainik Camps, All India Competition Camps, Vayu Sainik Camps, Skeet shooting, drill and glider competitions, Para Training courses, Mountaineering courses, Army, Navy, and Air Force training, All India Trekking Expeditions, National Integration Camps, Para Sailing, Flying/Gliding training, etc. In the year 2010-11 the innovative scheme 'Helping Hands to Weavers' has received recognition from the Government of India and received Indira Gandhi National Award for selling Handlooms to save the lives of weavers.

vii) **Sports and games**

For the promotion of sports, the Madras University Union was formed in the year 1932 at Rutland House, Spur Tank Road, Chetpet, Chennai. The facilities include a pavilion, sports track, athletic track, volley ball court, basket ball court, badminton court, and two tennis courts. Students of the University participate in more than 30 South zone and All India Inter-University sports competitions annually. Three of our students got selected to play in the prestigious VIZZY TROPHY CRICKET CHAMPIONSHIP (2012-2013) conducted by the Association in Indian Universities with the collaboration of Board of Control for Cricket in India.

viii) **SC/ST cell**

A Standing Committee for the welfare of SC/ST has been constituted in the University with the Vice Chancellor as Chairman to look after the welfare of SC/ST

students. A Special Cell for the welfare of students belonging to Scheduled Castes and Scheduled Tribes has been set up. The Cell has the responsibilities of receiving, scrutinizing and processing applications from SC/ST students of University departments for: Tuition fee concession; National overseas scholarship for higher studies abroad; Indian Oil scholarships to SC/ST students pursuing full time Engineering, Medical and PG Degree course in Business Administration / Management in recognized institutions; Closely monitoring the implementation of the reservation policy of the State Government in admission and hostel accommodation; Collecting data from the university departments and affiliated colleges regarding admission of SC/ST students and hostel accommodation. SC/ST students may contact the SC/ST Cell, University of Madras, Chepauk Campus for any guidance and redressal of grievances.

ix) **Differently abled students**

Full fee waiver including examination fee is provided for the differently abled students in PG and M.Phil. programmes in the University departments. The University of Madras has taken a laudable effort to provide ramps wherever possible. The same has been extended to affiliated colleges.

x) **Endowment fellowships /scholarships**

Apart from SC/ST, BC/MBC and National Merit scholarships many other scholarships are available to the students of the University Departments

1. Lions International Endowment Scholarship (C&UD)
2. Rotary Club of Madras city Endowment Scholarship (C&UD)
3. Lady Willingdon Peace Endowment Scholarship (C&UD)
4. Srimathi Sivakama Radhakrishnan Scholarship (C&UD)
5. Sir T. Muttuswami Ayyar Endowment Scholarship (C&UD)
6. The Srimathi Padmasani Bai Endowment Scholarship (C&UD)
7. K.N. Ayyaayyar Endowment Scholarship (C&UD)
8. Gokhale Endowment Scholarship (UD&C)
9. Sambuvarayar Endowment Scholarship
10. Aringnar Anna Endowment Scholarship
11. Maharaja Sri Ganga Singhji Endowment Scholarship

12. Professor R. Selvam Endowment Scholarship
13. A.M.M. Foundation Endowment Scholarship
14. IBP Endowment Scholarship
15. Dr. A.L. Mudaliar Silver Jubilee Endowment Scholarships
16. Prof. L. Krishnasamy Endowment Scholarship
17. R.Tatachariyar Endowment Scholarship
18. Lady K. Srinivasa Ayyangar Endowment Scholoarship
19. Shri.A. Nageswara Rao Endowment Scholarship
20. Thiru.A.R. Ramasawami Endowment Scholarship
21. N.C. Vasanthakokilam Endowment Scholarship
22. Baliga Family Endowment Scholarship
23. Bardswell Law Endowment Scholarship
24. Sir T. Muttuswami Ayyar Memorial Endowment Scholarship
25. Selvi.V. Saraswathi Memorial Endowment Scholarship
26. Dasari Narayana Rao Endowment Scholarship
27. Thiru.K.Gopalan Memorial Endowment
28. V.Rama Ayyangar Endowment Scholarship

Several medals and prizes for rank holders in various examinations, for outstanding essays and for research thesis are awarded under various Endowments instituted in the University.

xi) **Madras University Free Education Scheme for University and affiliated college students**

Complete fee waiver for one poorest student among students based on merit and economic status in each PG Programme. Candidates belonging to SAARC countries are entitled to 40% of tuition fee concession. Likewise Tamil students coming from Sri Lankan and Tibetan refugees are not considered as foreign nationals but can pay fees on parfor PG/M.Phil programmes like all regular Indian students in the Departments of the University as well as for the IDE

xii) **Earn While You Learn scheme**

A novel scheme of "Earn while you Learn" for Postgraduate students and Research Scholars of the University has been introduced. Under this, eligible students

will work as Part-time Laboratory Assistants, Library Assistants, Technical Assistants, and Tutorial Assistants (for M. Phil. & Ph.D. Scholars) in the University for a specified number of hours every month and will receive a suitable monthly remuneration.

Name of the Scheme	No.of beneficiaries
Madras University Free Education Scheme	64
Earn While You Learn Scheme	163
University Research Fellowship	100
Endowment Fellowships	160
Teaching cum Research Fellow (TRF)	43
Total	530

xiii) **Soft Skill programme**

In tune with the goals and vision of the University, the authorities of the University have devised new methodology for successfully conducting Soft Skill courses in the four campuses. The University of Madras has been offering the Soft Skills programme to all its students. It is mandatory for every student of the University to acquire 8 credits from this program to successfully complete their post graduation degree. The Soft Skills programme at the University is a thirty hour module with two hours of class per week. Attendance is very important for this course; therefore students may miss only 2 classes. They are provided study materials for the course.

xiv) **Language Laboratories**

Language Laboratories have been set up in all the four campuses of the University. The language laboratory focuses on computer-aided multi-media instruction and language acquisition. This learner friendly mode of language learning enables the students to be self instructional. The laboratory acts as a platform for learning, practicing and producing language skills through interactive lessons and communicative mode of teaching. Four labs have been established in all four campuses. The fifth lab has been established at Chepauk campus with the financial support of Government of Tamil Nadu to teach English, French, Chinese and German. Students from University and affiliated colleges will learn these foreign languages and will get training in IELTS and TOEFL.

xv) **Internship**

Internship is intended to gain practical knowledge related to the study. The duration is for 4-6 weeks for 2 credits and 6-8 weeks for 3 credits and it should be carried out in an organization recommended by the Department during the summer vacation of the first year.

A report must be prepared and submitted to the HOD concerned for evaluation and grading. Internship is optional and is left to the discretion of the concerned Department. In case of a student not opting for internship, he/she must take one more soft skill 2/3 credits to fulfil the total credits requirement of 10/15 credits.

xvi) **Students Safety Insurance**

Compulsory Students Insurance Scheme has been introduced for the students of University Departments of study and research. A sum of Rs.60/- per annum per student is being collected towards student's safety insurance scheme. Under the scheme, the following coverage is given to students:

1. Compensation for accidental death of a student:	Rs.1,00,000/-
2. Compensation for accidental death of student's bread winning parent:	Rs. 50,000/-
3. Reimbursement of hospitalization expenses incurred for the students arising out accident upto :	Rs. 50,000/-
4. Accidents leading to death of student after hospitalization,	
5. Re-imbursement of hospitalization expenses upto:	Rs. 50,000/-
6. Compensation for death :	Rs.1,00,000/-

xvii) **Women Sexual Harassment Redressal Cell**

Sexual Harassment Redressal Cell was established to promote the well being of the students and staff in the University of Madras. A committee has been constituted in such a way to deal with the claims of sexual harassment for the alleged victims and the alleged assailants.

xviii) **Anti-Ragging committee**

Ragging in any form is strictly prohibited and students who indulge in any such activity will be dealt with seriously by the authorities of the University. Anti Ragging Committee has been established in the University as per the UGC rules and plays a vital role for the welfare of the students. This Committee has deterred recurrence of ragging in the University. For maintaining confidentiality, a black box is provided at the entrance of the University for informants to present their issues/problems in case of ragging.

xix) **University of Madras Alumni relations**

The University of Madras Alumni Relations (UMAR) was formed and revived in 2010 with the initiative taken by the Vice-Chancellor of the University of Madras, to provide a platform for the alumni of the University of Madras. The free membership is open to all the alumni of the University of Madras who have undergone a post graduate/research degree course in the University of Madras. It has created 20,000 data base entries of Alumni. Further, each department in the University has its own alumni meets regularly every year and the alumni are of great support to the student community in terms of assisting for placement and arranging value added lectures for the benefit of students.

xx) **UGC coaching classes in the departments and through USAB**

Remedial coaching are arranged at undergraduate and postgraduate levels for Scheduled Castes, Scheduled Tribes and Minority community students. Coaching scheme has been devised for entry into services for Scheduled Castes, Scheduled Tribes and Minority community students. Coaching is arranged for SC/ST and Minority community candidates to prepare for National Eligibility Test (NET) or State Eligibility Test (SET) for Lectureship.

xxi) **Pan African e-network and Virtual University Programme**

Courses offered under Pan African E-network programme are Bachelor of Business Administration (BBA) Master of information Technology M.Sc (IT) Certificate in German, Certificate in Arabic. These programmes have extended the reach of education beyond the borders.

xxii) **Equal Opportunity Cell**

The University of Madras has established an Equal Opportunity Cell for persons belonging to Scheduled Castes, Scheduled Tribes, other Backward Class and other minorities in order to enhance their employability and success.

xxiii) **Student cultural programmes**

Annual Inter Department Cultural Programmes and sports are organized for the students in various departments of the University of Madras across all campuses. The University Students Advisory Bureau organizes cultural get together annually for the International students studying in the university departments/colleges in collaboration with Government of India.

xxiv) **ALM Basic Sciences and Development Centre**

Dr.ALM Centre for Basic Science and Development has been established to develop interest among students in Basic Sciences which is the need of the hour. The aim of the centre is to inculcate scientific spirit and motivate school students to join basic science. During the year 2011-12 three camps were conducted and 450 students at Higher Secondary level participated. In the year 2012-13 four camps were conducted

and 600 students at Higher Secondary level participated. The Financial support from DST is Rs.9.75 lakhs per camp.

xxv) **Fine arts club**

The University has students from various regions, cultures and countries. Their traditional art forms and art can unite people. The Fine Arts Club of the University of Madras helps in dialogue related to art and art forms among students from different backgrounds.

xxvi) **Curtain Call**

A theatre group of students drawn from different departments together performs plays in various institutions under the guidance of the Department of English. Students have secured first prize in the state level theatre festival hosted by the Central University of Thiruvarur, Tamil Nadu in 2012-13.

xxvii) **Health centre for students**

Health Centre has been established in the University of Madras to cater to the basic health of students and staff.

xxviii) **Single Window Admission Centre**

A new Single Window Admission Centre for the students of distance education facilitates issue of their identity cards, study materials and other formalities within 30 minutes.

xxix) **Students feed-back mechanism and assessment of teachers in University departments**

In addition to the self assessment of teachers in the University departments, a confidential assessment by students on the teacher's performance and conduct in class has been taken and feedback is provided to the teachers regarding the same.

xxx) **Tatkal scheme for students**

`Tatkal' scheme has been introduced to arrange for issue of certificates within 24 hours of request on payment of a certain nominal fee.

xxxi) **Erasmus Mundus Maheva project**

The Erasmus Mundus Maheva Project undertaken by the University has been functioning efficiently and during this academic year, eight students from university at the UG, PG and doctoral levels have been selected under this project and they have left for various European destinations for varying lengths of time.

xxxii) **Placement cell for students**

The University of Madras has signed MoU with HCL Technologies Ltd. Chennai to provide enhanced training skills and employment opportunities based on the aptitude of students.

xxxiii) **Grievances redressal cell**

Apart from redressal of grievances of research scholars/supervisors, the Syndicate has also given equal importance to the grievances of the students of the University departments, affiliated colleges and distance education. Modernized public relations officers both at main office and IDE have been established to redress the grievances of the students in a more systematic and time bound manner i.e within 15 days.

xxxiv) Statutory provision for inviting non-academic experts from outside the University system as regular experts in all Boards of Studies in the University to the level of 30% in order to bridge the 'gap' between human resource produced by Universities and human resource required by stakeholders.

xxxv) Inter-Institutional collaborations through Memoranda of Understanding (MoU) with foreign universities across the world and national Universities / institutions. University – Industry Consultancy agreements for innovative teaching programmes development of drugs / processes with eight pharmaceutical / Biotech / IT / Management companies.

xxxvi) The publications division of the University of Madras has brought out the reprint of Chidambaranatha Chettiar's ***English – Tamil Dictionary*** in a new attractive format, the selected addresses of Thiru Surjit Singh Barnala, the former Chancellor of the University and the Governor of Tamil Nadu, has recently been brought out as a University publication. It is an anthology of the representative speeches of his Excellency made between November 2004 and June 2011. The addresses delivered have been arranged thematically and chronologically under 18 chapters.

xxxvii) Open Educational Resources – is a new phenomenon in India and University of Madras is one of the pioneers in the country and the Asian region to make its teaching-learning resources available online and as open access. A suite of 250 reusable learning objects on soft skills under six categories has been created – body language, language skills, etiquette, leadership and team building. This is uploaded in the UNOM and IDE websites for the benefit of faculty and students in the University departments and affiliated colleges.

xxxviii) Online learning of classroom lectures – To enhance the learning ability of the students, 24 hours online classroom activities are uploaded in a social networking site 'Facebook'. The advantage is that lectures are recorded and uploaded, doubts can be posted and clarified with faculties and assignments and exchange of notes can be posted all with the intention of making learning interesting and easy.

Extension activities are carried out by the University such as voluntary blood donation, voting awareness camp, promotion of Tamil culture and language, donation of books to public library and donation of funds toward the Chief Minster's Relief Fund for the relief measures of people affected by natural calamities.

7.4 Quality Sustenance and Quality Enhancement Indicators

Healthy Practices for Teachers (Academic, Service-Related, Motivational & Quality Upgrading Efforts)

1. Filling of vacancies of teachers and effecting promotions in order to maintain proper teacher-student ratio and provide teachers more time for research and experimentation in teaching – learning process.

2. Video-Conferencing interview methodology in the teacher selection process for candidates from foreign countries to facilitate larger number of well-qualified candidates to take part in the selection process.

3. Yearly self-appraisal report of teachers for Internal Quality Assurance Cell of the University.

4. 'Research Starter Grant' for all the newly appointed faculty members, especially for those at the level of Assistant Professor.

5. Reimbursement of research project proposal preparation expenses of faculty for submitting them for extra-mural grants.

6. Travel fare support for faculty who are invited for presentations of research project proposal by central funding agencies.

7. Performance linked incentive scheme which includes cash incentive (10%) and infrastructure incentive (90%).

8. All faculty members in the University departments are provided with high configuration laptops

9. Internet facility for faculty members.

10. 50% travel fare support for attending conferences / seminars both within India and outside India.

11. Consultancy projects with official eligibility of a percentage of grants received as consultant's share as per the consultancy rules of the University.

7.5 Healthy Practices For Administrative, Technical & Other Non Teaching Staff Members

1. Free Computer based I.T. Training for all administrative staff members to facilitate smooth transition to e-governance programme of the University.

2. Time bound promotions to all eligible staff on the very same day of vacancy.

3. House building / vehicle loan facilities to all eligible non-teaching staff.

4. Group – insurance scheme for all the staff.

5. Reimbursement of school fee for children of staff – increase of slabs.

6. Liberal provision of overtime allowances and examination duty allowances.

7. Lump sum medical grants / soft loans as per eligibility to all staff.

8. Outsourcing of non- core services like security staff and conservancy staff.

9. Acceptance of the proposal of "Performance Linked Incentive Scheme for the Non-Teaching Staff of the University".

10. Provision of rest rooms for women administrative staff members

7.6 Healthy Practices and Inclusion Programmes for Students

1. Exclusive grievance redressal system for college students and IDE students.

2. Ragging redressal committee

3. Women's sexual harassment redressal committee

4. Insurance scheme for all students

5. Transport services across University campuses

6. Online mark entry system of the continuous assessment marks and end semester marks

7. Online mark student registration system

8. Online fee payment for IDE students is available which helps them to enroll for the course across India and overseas and also helps avoid wastage of time and energy

9. Online Ph.D application tracking system

10. Campus recruitment through USAB and specific departments like Management Studies, Computer Science, Commerce etc.

11. Internationalization of University of Madras – signed MoUs with international universities and research institutions paving way to projects to mention a few – MOVER PROJECT, DIES PROJECT, MAHEVA PROJECT.

12. Centralized browsing facilities in all campuses

13. Web and Proxy services in campuses

14. Wi-Fi connections in the University departments for student's use

15. Well equipped computer and language labs

16. Public – Private partnership model to promote employability, small entrepreneurship model, and social responsibility among the youth

17. SC/ST/BC/ Merit scholarships for students

18. Conduct of annual workshops/seminars/conferences in all departments at the national or international level

19. Introduction of Choice Based Credit system

20. Provision for student membership in Boards of Studies

21. Industrial internship for all II year PG students made mandatory

22. Provision for 50% travel fare support for research scholars attending conferences/seminars both within India and outside India

23. Soft Skill courses made mandatory for all PG students

24. Free enrolment in the University of Madras Alumni

25. Publication of examination results on the website with downloadable printouts of results

26. Retotalling, revaluation of answer scripts of the end semester examination is permitted after the student goes through their answer scripts obtained with permission to ensure greater transparency and fair play in the evaluation system

27. Medical insurance for students

28. Full fee exemption for the differently abled students and research scholars of Madras University

29. Fee concession for students with learning disability/dyslexia

30. Reservation policy for admission to Ph.D courses in the departments of the University and affiliated colleges

31. Award of URF and TRF for students fulfilling the UGC criteria

32. Tuition fee structure for Sri Lankan Tamil students for PG and M.Phil courses is now on par with that of Indian students

33. Madras University Free Education scheme to the department students and students from the affiliated colleges

34. Hostel services to male and female students

35. Virtual learning centre at IDE providing tele-education and e-learning facilities for students in remote areas in the state

36. Internet browsing centres for students

37. Introduction of Open Educational Resources to foster collaborative teaching and learning.

38. To inculcate social responsibility, cultural awareness and waste resource management among students, the University of Madras has conducted workshops, fairs, rallies, etc.

39. Special training classes for NET/SET examinations and other competitive examinations offered free of cost to SC/ST and deserving students.

QUALITY SUSTENANCE AND ENHANCEMENT MEASURES UNDERTAKEN DURING THE RE-ACCREDITATION PERIOD

QUALITY SUSTENANCE AND ENHANCEMENT MEASURES UNDERTAKEN BY THE UNIVERSITY OF MADRAS DURING THE RE-ACCREDITATION PERIOD

Introduction:

As a premier Higher Education institution in India, the University of Madras has a long and illustrious history that has shaped the national and global treads. Over the years, this sesquicentennial university has effectively maintained its tradition even while embracing the advent of technologies in education. Also, it has envisaged the holistic development of students evenwhile shaping them as efficient contributors to the goals of national development and equipping them to contribute to global demands. In short, the vision and mission of the University of Madras have been nurtured by its unfailing adherence to expansion, inclusion and excellence in all its activities. The University has established five new Departments and several Centres in the new and emerging areas in order to be in the forefront of teaching and research and also create opportunity for the students to undertake studies and research. Outlined below is the quality sustenance and enhancement measures undertaken by the University in response to the previous NAAC peer committee recommendations as well as to the suggestions made by our stakeholders from time to time.

1. Curricular Aspects

As a dual mode institution with a large number of affiliated institutions, the University of Madras has to balance the needs of the university departments and affiliated colleges even while fulfilling the demands of the industry. The following measures have been initiated for quality sustenance and quality enhancement during the current cycle of accreditation:

a) The unique and distinguishing feature of the University of Madras is that there is a separate department for each specialisation in subjects such as Bio-medical, Chemistry, Physics and Life Sciences besides Economics, Philosophy, Tamil and Indian languages.

b) The University offers postgraduate programmes not only in new and emerging areas such as Nano Science & Nanotechnology, Photonics and Bio-photonics, Bio-informatics, Actuarial Science, Spatial Information Technology, sustainable Development, Cyber Forensics & Information Security, Financial Economics, International Business & Finance, International Relations but also continues its traditional courses in Anthropology, Archaeology, Philosophy and Samskrit.

c) The highlighting feature with respect to curriculum is the introduction and expansion of the Choice Based Credit Systems (CBCS) to the affiliated colleges. This has resulted in a twofold quality enhancement.

(i) It provides flexibility and choice to learners and teachers.
(ii) It provides a broad framework for curriculum benchmarks evenwhile democratizing the decision making process.

d) The minimum number of credits required for qualifying for a PG degree has been increased from 72 to 91 in order to accommodate courses on soft skills and summer internship which are intended to enhance the employability of the University graduates.

e) The number of courses offered in the elective category has been increased to about 400 and the syllabi have been modified and restructured. The University has also introduced centralized allotment of elective courses to provide equal opportunity to all students to choose some of the highly sought after courses.

f) The introduction of separate Boards of Studies for the IDE programmes is an innovation that caters to the needs of distance learners. The quality sustenance is evident in the centralized question paper setting and evaluation leading to realistic pass percentage.

g) The number of courses to choose from among the soft skill courses has been increased from 20 in 2007-08 to 43 in 2012-13 to give wider choice for the students and thus improve their skills in language, communication, management and personality development.

h) Language courses under soft skills category have been taught using language labs and appropriate software and students to practice in the language labs.

i) The curriculum design and development take into account the inputs from students, alumni and industry experts. This is made possible by the inclusion of student representatives and industry experts as members of Boards of Studies.

j) Concerted efforts have been made to enrich the curriculum of the affiliated colleges through the Board of Studies, and by facilitating the autonomous colleges to introduce new courses.

k) Differently abled students are brought into the fold by customized courses such as “Effective Presentation Skills for the hearing impaired” and “Skills in Communication for the hearing impaired’.

l) The introduction of dual degree scheme at the IDE as well as the introduction of add on courses have proved to be time conserving for the students.

2. Teaching – Learning and Evaluation

Teaching, learning and evaluation are crucial links in the educational process and the University of Madras has forged these links in a meaningful manner. While technologies have been harnessed to enhance the teaching-

learning experience, the University has opened its arms to embrace the marginalized and under-privileged sections of society.

a) The access to University education has been enhanced by increasing the sanctioned strength in all PG programmes of the University departments with effect from the academic year 2008-09.

b) The University has increased access and opportunity to students from marginalized sections such as women, SC. ST, OBC and economically poor.

c) Hostel facilities, especially for women, has been substantially increased which has helped the University to improve the enrolment of women.

d) To improve the effectiveness of teaching-learning, every department is equipped with one modern class room with LCD projector and audio-video facilities. Some of these class rooms are even air-conditioned.

e) To ensure equity and access to quality education, the University has introduced innovative schemes such as Madras University Free Education Scheme, University Research Fellowships. Earn While You Learn as well as fee concessions and waivers to differently abled students, women and students from SAARC countries. This has resulted in the sustained growth of student enrolment especially women and deprived sections. The University offers fee reduction for Tibetian and Sri Lankan refugees.

f) The teaching-learning process is made meaningful and of sustained quality through continuous and rigorous academic audit. This includes continuous course assessment, random checks of answer scripts, student appraisal of faculty and self-appraisal by faculty.

g) While each campus is provided with modern class rooms with enabling technology teaching-learning resources also harness the power of technology. The Pan African E-Network programmes highlight our e-learning potential. Further, as a pioneering effort, Open Educational Resources on Soft Skills have been created. This will foster collaborative teaching and learning. Similarly, the Virtual University Programmes aims to create close collaboration with affiliated colleges.

h) The University has used technology to ensure an accessible and transparent academic evaluation. Online student registration, online mark entry, revaluation and photocopy of the answer scripts to students are some measures which have received appreciation from students.

i) The learning resources (books, journals, and other on-line materials) have been substantially improved.

j) Teachers have access to all online materials and catalogue from their office and students have access to internet and online resources from internet centres in each campus.

k) Internet, Wi-Fi and computer access to students in all hostels.

3. Research Consultancy and Extension

The University has a rich and long legacy of nurturing high quality research evenwhile interacting closely with industry and at the grass root level. The approval of the second phase of the UGC-UPE, DST PURSE programme and the grant from the Ministry of Culture for the second phase of the Catologram of Catalogues in Samskrit and two UGC Centres with Potential of Excellence in Particular Area (CPEPA) are testimony to the high quality research being conducted by the faculty members and students of the University of Madras. To maintain international standard and quality of the Ph.D thesis, the theses are evaluated by an expert from reputed university of a foreign country especially from US, Australia and European addition to an expert evaluation from within India and the Supervisor.

a) The University ensures academic freedom for faculty members to conduct research based on their interest and facilitates faculty to obtain projects from national and international agencies.
b) In order to ensure quality research, the projects under the UGC-UPE programme are reviewed by a Research Review Committee comprising national level experts, This has ensured that the faculty members obtaining projects under the scheme put in their best efforts.
c) The award of Research Starter Grants to young faculty paves the way for obtaining national and international projects with more scope and funding.
d) In addition there is a generous allocation of funds in University budget to foster research. Also sabbatical leave for professors, conference participation funds and grants to organize conferences and workshops are enablers to kindle the research potential.
e) Students are supported in their research through URFs and travel grants to participate and present papers at conferences, seminars, etc.
f) Apart from research facilities and infrastructure, the University has established centres to promote research. All these have resulted in research publications in high impact factor journals and patents, which in turn has placed the University in the 5th place at the national level.
g) The UICIC facilitates interaction with industrial community. While the consultancy projects generate funds for the University, they also transfer the benefits of research back to the community. The lab to land programme is an initiative in the direction.
h) The Technology Business Incubator (TBI) is an active agent for promoting employability and small entrepreneur model among students. The

University's partnerships with Exnora, Elcot, CII and UNDP has also reinforced the social responsibility among students.

i) The University is also the nodal centre for the Techno-entrepreneur Promotion Programmes (TEPP) and has the distinction of facilitating the largest number of successfully funded projects.

j) The University extension activities are promoted through its many arms including NSS, USAB, CDC, ASC and IDE. Of particular importance is the NSS Indira Gandhi Award 2011 received for commendable service rendered for the cause of handloom weavers.

k) The University has been a crusader for the environmental cause. The Environmental Information System (ENUIS) hosted by the Zoology department and the Erasums Mundus project entitled MAHEVA are ready example. At an institutional level, green audit, rain water harvesting, energy conservation and e-waste management are scrupulously followed.

l) The University has extended its services to the grass root level and this is amply evident in the formation of two constituent colleges in remote locations.

4. Infrastructure and Learning Resources

Despite constraints to expand the physical space, the University has ensured sufficient space for departments in all its campuses. By optimal pooling of resources, the University has ensured that the state of the art equipments procured by departments are available to all.

a) Through renovations and maintenance of buildings, the University ensures adequate physical infrastructure in terms of auditorium, canteen, and language labs and student amenity centres in every campus. New buildings are under construction mainly in terms of hostel space to accommodate more students.

b) The main library as well as the four campus libraries serves as repositories of knowledge resources. The libraries have harnessed technology to create innovations such as Talking Book library and OLIZ as well as e-journals.

c) The campuses are connected physically by bus, train and MRTS. They are also networked by the four Network Operating Centres in the four campuses.

d) The University's reach across borders and boundaries is highlighted by the Pan African E-Network and Virtual University Programmes. While the former takes the university's expertise to African countries, the latter effectively links the University with its colleges.

e) The setting up of an exclusive website for the IDE, in addition to the University of Madras website, reveals the commitment to be in constant touch with the stakeholders.

f) The Medical Centre has been adding facilities to the community of students, faculty and non-teaching staff. Since physical space was inadequate, it has been proposed to allot an entire floor in the upcoming construction.

5. Student Support and Progression

The University of Madras strives to provide an academically sound and socially rewarding environment to students. Empowerment of students and access to quality education are assured through several initiatives. These include grievance redressal systems, anti ragging committee, sexual harassment redressal committee, online systems for fee payment, student registration and mark entry, transport services across campuses and insurance scheme.

a) Continuous mentoring and support is offered to students from admission through evaluation to certification. In addition to the mechanisms mentioned above, student concerns are addressed by Dean-Admissions, Dean- Students, Dean-Examinations, Director-USAB, Dean-Research, Dean-CDC and Dean-Extension Services.
b) In addition, Placement Cell takes care of the employment prospects of the students. It is of interest that mandatory Soft Skills courses and internship have been introduced to enhance the employable skill sets of students.
c) The Alumni Association has pro-actively created a database of its members. The highlight of this wing is the recent endowment of USD 3.175 million which will help construct an international students hostel.
d) The various fee concessions, fee waivers and part-time employment schemes for students reveal the University's commitment to inclusion of meritorious and needy students.
e) The single window Admission Centre at the IDE is designed as a student's support Service to save time and energy of students taking admission into the IDE courses.
f) The exclusive campus for sports has honed the sporting skills of many students and the result is evident in the large number of victories at Inter-University, Zonal and National levels.

6. Governance, Leadership and Management

The University of Madras has a clear organizational hierarchy combined with individual and academic freedom. This framework is at work in the University's commitment to encourage affiliated colleges to apply for autonomous status.

a) Over the years, the University has successfully balanced its links with institutions at national and international levels. The increasing number of MOUs bears testimony to this.
b) The highlight of the University's governance policy is the formation of the Planning and Development Board in order to practice thrift and prudence in budgeting and expenditure.
c) Every stakeholder in the University system experiences a bonding. While funds are spent on conference visits by faculty and students sufficient funds are

allotted for training of administrative staff. The visionary plan to create a corpus fund for paying the retirement benefits without delay is a case in point.

d) The University undertakes comprehensive academic audit through the IQAC. The review mechanism has helped meet the varied demands of different stakeholders.

e) People management is given utmost importance in order to help every individual to contribute to the best of his/her potential. The Academic Achievement Awards instituted to appreciate academic excellence of faculty is an example of motivation. Similar incentives given to students and staff include group insurance scheme and free IT training.

7. Innovation and Best Practices

To be in the forefront among the Indian Universities, the University of Madras has been introducing and following innovative practices. The important measures initiated and adhered to during the current accreditation cycle are listed below:

a) Environmental consciousness and eco-friendly campus: Rain water harvesting, tree sapling planting, energy conservation by using LED lights.

b) The new buildings are designed to use sun light during the day and energy saving measures are also in place.

c) Introduction of online system of registration for examination of University students and also students from affiliated colleges, electronic delivery of hall tickets for the examinations etc., have made the process paperless and thus helped save paper.

d) To support the national education policy, the University has introduced several strategies towards Expansion, Inclusion and Excellence - Expansion through increased intake of students, Inclusion through reservations in all programmes including PhD and Excellence through incentives and recognition granted to faculty through honours and awards. Travel support to participate in conferences and seminars, Academic Achievement Award for best performing teachers etc., are some of the measures introduced. The Excellence in research is evident from the high quality publications and recognition by national level agencies such as UGC (UPE, CPEPA, CAS, SAP) and DST (FIST and PURSE).

e) Ragging free campus: No incidents of ragging have been reported in the University campus during this accreditation period.

f) Well established grievance redressal schemes, committees to closely monitor sexual harassment, ethics committee to monitor the research based on animals and human beings, etc., are some of the measures the University has introduced.

The Way Forward

The University of Madras has scaled new heights and never rested on its laurels. The quality sustenance and enhancement measures outlined in this document are the result of the combined, sustained and dedicated efforts of each and every member of the extended family- the stakeholders of the University of Madras. Our goal, as always, is to create an expanded, inclusive and quality assured higher education system.

ACTION TAKEN REPORT ON THE PEER COMMITTEE RECOMMENDATIONS

ACTION TAKEN REPORT

1. Though the University has made efforts to fill the vacant faculty positions, departments have vacancies and still function with less staff. This has impact on quality of teaching and therefore there is an urgent need to fill vacant positions.

The University Grants Commission, New Delhi had revised the pay scales of the teachers and equivalent cadres in universities and colleges w.e.f. 1st January 2006. Subsequently, vide its letter dated 30th June 2010 UGC had issued regulations on minimum qualifications for appointment of teachers and other academic staff in universities and colleges and measures for the maintenance of standards in Higher Education 2010. Based on the above, the Government of Tamil Nadu had revised the scales of pay of the teachers in Universities w.e.f. 01.01.2006 in G.O.Ms.No.350 Higher Education [H1] Department, dated 09.09.2009. The Government has mentioned in the G.O. that necessary guidelines regarding promotion/recruitment will be issued separately. Pending receipt of the guidelines, the Syndicate of the University has decided to issue necessary advertisement for filling up the teaching posts as per UGC Regulations 2010. Until 2008 vacancies in the teaching position, depending on the need were filled up. After the issue of the revised regulations, the University advertised 90 teaching posts for various departments during 2011 and 2012. In view of the adoption of 200 point roster system in lieu of 100 point roster system as directed by the Government of Tamil Nadu and representation from service /community associations and also writ petitions filed, the University could not proceed further in the matter. Implementation of the 200 point roster system was questioned in the Court of Law claiming that the new system would affect certain categories adversely. After assuming office the present Vice-Chancellor has given a re-look on the whole matter and steps are being taken to advertise and fill up the posts.

2. There is an urgent requirement to increase hostel facilities for both male and female students. Further, the existing hostel facilities need immediate attention in term of providing safe drinking water and water for utility, cleanliness and maintenance of hostel buildings as well as improvement in quality of food.

The University has already constructed an additional floor in the existing hostel building at Taramani Campus to the extent of 842.95 sq.mts.

Currently, the University has initiated construction of additional hostel facilities at Taramani. 1. Construction of PG and Research Scholar Hostel at an estimated cost of 20 crores. [PG Block: Ground Floor 1820 sq.mts and I, II and III Floor 1573.35 sq.mts each and Research Scholar Block Ground Floor 1609.99 sq.mts I, II and III Floor 811.84 sq.mts.each] In order to provide safe drinking water Reverse Osmosis system has been installed in all the Hostels and maintenance of Housekeeping has been outsourced in order to exercise control and to have checks and balance. The repairs and maintenance of buildings have been undertaken periodically and carried out.

The University has also initiated construction of Students amenity block at an estimated cost of 3.5 crores with Ground Floor [675.90 sq.mts] with two floors 675.90 sq.mts and 585.80 sq.mts.

One of the Medical Alumni Dr.Rajasekar Shanmugasundaram has contributed US$ 3.175 million and it has been used for the construction of the new international students hostel at Taramani campus.

3. **Avenues for providing fellowships to research students need to be augmented. Few students are awarded UGC, DST, CSIR etc. fellowships and some receive support from R & D projects. The provision of University Research Fellowships [URF] by the University is a good attempt, but these should be increased to reduce the gap between the need and availability. The system needs to be strengthened to pay fellowships on monthly basis.**

The University of Madras has already created University Research Fellowships (URF) and has provided sufficient funds to the tune of 89.22 lakhs to benefit 98 scholars from its own resources. The University will be offering scholarship to the meritorious scholars/students chosen for M.Phil and Ph.D. programmes (Rs.5,000/- and Rs.8,000/- respectively) under the University with Potential for Excellence scheme from 2012-2013. Around 250 students will be benefited through this scheme.

4. Student placement process at the University level needs to be streamlined by further efforts to forge better relations with potential employees and various employment agencies.

The centralized placement centre with dedicated staff and infrastructure is functioning as a nodal agency between the University Departments and industries to provide employment opportunities for students. University has organized **37 campus recruitment** drives during 2010-2012 for the benefit of University and affiliated college

students. **3900** undergraduate and postgraduate students wer absorbed in various institutions. Companies which participated in the campus recruitment drive include, Wipro Technologies, Cognizant Technologies, ITC Limited, HCL Technologies Limited, Tata Consultancy Services Limited, Advinus Therapeutics Private Limited, Agility Global Integrated Logistics, Future-tec Technologies Private Limited, Life Insurance Corporation of India, Indian Air Force, Everonn Education Limited, Royal Sundaram Alliance General Insurance and HDFC Bank. In addition to the centralized campus recruitments, departments have also organized the campus recruitment drive, which includes Management Department and Chemistry School.

The University of Madras has been offering Soft Skill courses as mandatory to enhance employability and every student of the university and affiliated colleges is required to obtain eight credits on soft skills to successfully complete the post graduation course.

Members from the industry and organizations are inducted in the Board of Studies of each subject and their inputs are incorporated into the curriculum design. Feedback of the alumni and employers are also taken into consideration while designing the syllabus. Employability is given a major thrust in designing and developing the curriculum. The curriculum development emphasizes application/practical orientation, in addition to soft skill development and communication skills.

5. **Facilities for physically challenged students in terms of accessibility to "Learning resources, conduct of examinations and provision of Physical facilities need attention.**

For the benefit of visually impaired students a System named Talking Book Library has been functioning from October 2012. The *Talking Book Library* is equipped with 400 audio CDs on various subjects. The CDs are indexed with Braille letters housed in the racks for easy search by the visually impaired students. Presently t*wo* personal computers are provided exclusively for the use visually impaired students for listening to audio books of the Main Library.

Facilities available to the Physically Challenged persons:

i. Special arrangements have been made to accommodate physically challenged candidates to sit for the examinations in the Ground Floor.
ii. Full Fee concessions including Examination Fees are provided to differently abled candidates.
iii. Visually challenged, Dyslexic candidates and Physically Challenged students with more than 70% of disability were

provided with scribes to write the examinations and are provided with extra examination time.

iv. Dyslexic candidates are provided with special considerations in valuation and also provided with extra examination time.

With regard to physical facilities all the campuses are provided with permanent ramp structure with wheel chair facilities on demand.

6. Guidance and coaching for civil services and other competitive examinations may be increased and institutionalized

The University has modified its existing courses and introduced new courses and new programmes in tune with the changing industrial and societal needs. The UGC model curriculum is used as basis for many of the programmes in liberal arts and science courses. This satisfies the requirements of UPSC, UGC NET/SET examinations. Director, USAB has been appointed on regular basis so as to cater to the needs of the students. The USAB provides personal counseling to students who have psychological and academic problems and during the period of report an average of 100 students visit the USAB for this purpose. The USAB also organized 12 training programmes on free of cost for Net/SET examination for SC/ST/OBC which benefited 4656 students. During the assessment period a total of 356 students have cleared NET/SET examinations.

7. The University has a Dean of Student Welfare. This office be made more visible to aid in the process of grievance redressal.

The Syndicate has considered the recommendations of the Committee constituted by the Vice-Chancellor and accepted the recommendations of the committee defining the following duties assigned to the Dean:

Students Health programme/Insurances
Providing Students ID Card
Railway concession/Bus pass
Conducting Students cultural /sports meet
Students' counseling/supportive programme
Students' Developmental activities
Students General Discipline
Database of the student's bio data with Photo, email id, profile and Blood group
Redressing the Student's grievances
Student's feedback form
Coordinating with placement cell to organize campus interviews

During the current year, sixty one grievances received from the students of IDE have been attended and the issues have been settled. Similarly thirty eight grievances from College students have been received and settled.

8. Innovative and elective courses need to be properly marketed and advertised.

Advertisements are issued prominently for courses offered including innovative courses by the University departments in the month of May and simultaneously the notification is uploaded on the website of the University. The programmes include M.Sc Applied Geography; M.Sc. Spatial Information Technology; M.Tech Geoinformatics and M.Sc Geoinformatics (Private Study). Other collaborative programmes with other universities, industries, foreign institutions are M.Sc. Sustainable Development for Urban Environments (online programme) - Collaboration with Staffordshire University, U.K; M.Sc. Sustainability and Natural Resource Management (online programme) – Collaboration with Staffordshire University, U.K; M.Sc. International Environment Management (online programme) – Collaboration with the University of Northampton, U.K; M.Sc Geographical Information Science and Systems (online programme) – Collaboration with Salzburg University, Austria and Professional Diploma in Geographical Information Science and Systems (online programme) – Collaboration with Salzburg University, Austria

Separate advertisements are given to announce the start of the IDE Programmes in English and local dailies. The information is also uploaded on the IDE website.

9. Though there has been a follow-up of the earlier NAAC Committee recommendations by appointment of a Medical Officer, much needs to be done to improve health facilities for students particularly on the Chepauk and Marina Campuses.

A full-time Medical Officer assisted by a nurse and a compounder is currently catering to the needs of the staff and students. The University is experiencing space crunch in terms of providing a well equipped health care centre. Taking the fact into account, construction of student amenity block at Chepauk campus has been initiated and is nearing completion. Necessary space and facilities will be provided in the campus in compliance of the recommendation.

The Staff and students of the University visit the centre for various ailments like diabetes, hypertension, heart diseases, fever and any medical emergency. The medical centre also provides medications. The Centre has facilities for computerized ECG and emergency blood glucose monitoring. 5000 Staff/Students are benefited by the centre.

10. The existing internet facilities be improved to meet the growing needs of students and faculty.

During the period of the report, computer and internet facilities for training students and faculties have been increased to 16 Mbps in 2012 -13 from 10 Mbps in 2009-10. A separate 40 Mbps ISP Point to Point Service from BSNL is shared from Guindy Campus through NME-ICT-MKN. The Chepauk campus has also been provided with separate 6 Mbps ISP from Tata Communications for University WEB/MAIL/RESULT Services for the benefit of the students, faculties and public. The ISP service has been increased to 6 Mbps in 2012-13 from 2 Mbps in 2009-2010.

Similarly, steps have been taken to increase the bandwidth for Marina campus to 4 Mbps from 256 kbps in 2007-08. A separate 20 Mbps ISP Point to Point Service in 2011-2012 from BSNL shared from Chepauk Campus through NME-ICT-NKN.

With regard to Guindy campus a separate 8 Mbps (1:1) ISP from BSNL and 200 Mbps ISP with 1 Gbic Link from BSNL through NME-ICT-NKN.

In Taramani campus also steps have been taken to increase the bandwidth from 256 Kbps in 2007-2008 to 4 mbps (1:1) in 2011-2012. A separate 20 Mbps ISP Point to Point Service from BSNL shared from Guindy Campus through NME-ICT-NKN.

More than 1500 postgraduate students and research scholars currently benefit from the above facilities which were 600 students in 2007-2008.

11. Many individual departments possess expensive sophisticated equipments. There is a shared feeling of non-accessibility to these facilities for scholars of other departments. The University has planned to create a central facility named G.N. Ramachandran Infrastructure centre. While implementing this centre it is suggested that procedures be formulated so as to achieve maximum benefits.

The above recommendations have been implemented in true spirit and major scientific equipments and costly equipments purchased by the University departments have been centrally pooled under the control of the Head in charge, Central Instrumentation and Service laboratory. The Head in charge makes available the usage of instruments based on demand and availability.

The University Science Instrumentation Centre has been in existence since 1980 when the UGC gave the proposal to the University with Building and grants for starting the working activities of providing maintenance and servicing of sophisticated Instruments. In 2008, in honour of Professor G.N.Ramachandran, an additional wing was created in a separate building and instruments were pooled from Science Departments located there. These instruments are second usage or spent instruments belonging to various completed funded projects of departments and after the projects were completed, the instruments have been donated by the department concerned and are made available in the centre for common facility. These are being maintained and services offered to all Research Fellows belonging to all departments, free of charge.

In the G.N.R. wing of the Instrumentation Centre, there are three major instruments, which are still under the operating expertise of the companies which supplied and installed those instruments, such as the Transmission Electron Microscope, the Scanning Electron Microscope and the Field Emission SEM. Several scholars use these equipments for their experiments.

12. With a view to capacity building among supporting staff of the University, systematic and organized training and professional development programmes may be conducted.

The Academic Staff College of the University of Madras conducts training programmes for administrative staff members in the cadre of Assistants and Assistant Section Officers and orientation programmes to the officers of the University. For the year 2011 – 2012, 46 staff members in the cadre of D.R/A.R/S.O have undergone training programme conducted by the Academic Staff College. Staffs in the cadre of Section Officers; Assistant Registrars and Deputy Registrars are periodically sent training provided by Anna Institute of Management, Government of Tamil Nadu,Chennai in current administrative topics.

13. In pursuance of promoting interactive research, internal coordination be strengthened by bringing faculty together through brain storming sessions, lecturers in interdisciplinary topics, networking with Indian as well as foreign Universities which have already signed the MoUs.

The number of MoUs signed between the University of Madras and national/international institutions have steadily increased during the reaccreditation period. Heeding to the Peer committee recommendation, general MoUs which benefit several departments and faculty are encouraged.

Further the University has been identified as the only Indian Partner to be part of the Erasmus Mundus project entitled MAHEVA (Man Health, Environment, Biodiversity for Asia). This project allows student and faculty mobility to the European partner Universities. Eight students and two senior Faculty Members have visited various European Universities through this project

14. While appreciating the efforts of many departments in humanities in preparing the dictionaries and translation of manuscripts, they should be encouraged to exploit the information in these manuscripts by sharing them with the appropriate groups.

The Tamil Lexicon is available on the internet with search facility in the websites of the Tamil Virtual Academy and Chicago University. The English-Tamil Dictionary is also available on the internet with search facility in the website of the Tamil Virtual Academy. Also this dictionary has been loaded in the laptops freely distributed by the Government of Tamil Nadu to the students of schools and colleges all over Tamil Nadu. Similarly the translated works are being shared with appropriate groups. Thus the University of Madras has been very keen to make all concerned to enjoy the fruits of all lexicographic and translated products.

15. At present consultancy is limited to research services, however industries which hold potential for research leading to patenting possibilities may be identified and supported.

During the period of report, the University Industry Community Interaction Centre (UICIC) which was set up exclusively for coordinating with the industries has identified 28 Industries for carrying out collaborative research with the departments of CAS in Botany, Pharmacology, Inorganic Chemistry, Endocrinology, Microbiology, Bio-Chemistry, Applied Geology, Zoology, Medical Bio-Chemistry and Adult and Continuing Education. 14 patents applications have been filed by five faculty members and application are in process.

15. Post-Accreditation, the number of registrations for Ph.D. programme has considerably increased both at the University as well as in affiliated colleges. Attention should be paid to maintain standards, especially in affiliated colleges which may not have the required infrastructure for experimental work. A beginning could be made at the University level by connecting all the four University campuses through seminars and workshops and "EDUSAT' may be used for broadcast lecturers given at the University to all the affiliated colleges.

In order to maintain standards the University has adopted the guidelines issued by the University Grants Commission's UGC [minimum standards and procedure for award of M.Phil/Ph.D.] degree. Further, while considering the applications from the affiliated colleges for recognizing the department for conducting research leading to the

award of Ph.D./M.Phil. Degree an Inspection Commission consisting of experts is constituted to physically inspect and report on the facilities available in the affiliated colleges and also availability of guides and library facilities. After careful consideration of the availability of all the parameters, the departments of affiliated colleges are permitted to conduct research. During the period of report a research project office has been set up under the control of Dean, Research to monitor the research programmes and to maintain standards in the affiliated colleges. Between October 2008 and 2013, 39 departments in various affiliated colleges had been granted recognition to offer Ph.D programmes after due process.

The Government of Tamil Nadu has sanctioned a sum of Rs.20.00 lakhs for establishing smart class rooms. Four smart class rooms, one in each of the four campuses of the University have been established. The smart class room at the Chepauk campus has the video conferencing facilities and other three campuses have receiving facilities. All the students of University departments and more than 150 faculty members in the above mentioned four campuses will be the beneficiaries of this project. University is in the process of linking the facilities with the existing Virtual University Scheme which connects about 11 affiliated colleges and the Pan African Net work which offers programmes to African countries. This would be more than 3000 students of 70 teaching and research departments of the University and also the affiliated colleges.

17. Distance Education should always be encouraged as this is the only channel to address the higher educational needs of a larger cross section of adult population. It also improves the financial position of the University. However, the University should be careful in not compromising on the quality of programme in pursuance of creating financial resource.

As far as the Distance Education is concerned, a separate Board of Studies for all the courses has been established. The syllabi and regulations are framed on par with the courses offered through the affiliated colleges. The process of evaluation is also carried out as in the case of regular stream without any deviation and in order to maintain the quality and standard in distance education.

The IDE committee periodically meets and reviews the various academic programmes. The committee considered the proposal to implement semester system in the IDE from the academic year 2012 – 2013 for professional courses viz MBA, MCA and M.Sc IT. With regard to assessment and examination, the valuation is based on strict guidelines. The following table would show the percentage of passes in the examination held in May/ June 2012 and justify the standards maintained in Distance Edu

NAAC Reaccreditation – ACTION TAKEN REPORT

students is concerned.

University of Madras				
Institute of Distance Education				
UG/PG/Professional/Certificate & Diploma Courses Pass Percentage MAY – JUNE 2012				
S.No	Degree	Appeared	Passed	Pass percentage
1	UG	23207	5472	23.58
2	PG	15585	4023	25.81
3	M.C.A	877	287	32.73
4	M.B.A	13084	2347	28.64
5	M.SC.IT	553	153	27.67
6	Certificate/ Diploma	832	288	34.62

18. While appreciating the efforts of the University in instituting the IQAC and its work, it is recommended that the outputs be not only used to improve the performance but also be made known to stakeholder.

Sincere efforts are taken to disseminate the IQAC findings to all the stakeholders. At present, students and faculty are informed about the evaluation results. Steps are underway to share the findings with all the stakeholders through e-governance channels.

19. Avenues for promotion may be created for qualified and competent non-teaching staff including technical staff.

The University is taking keen interest to consider suitably qualified candidates for the posts of Technical Officers, Class IV cadres for upgrading their positions to higher posts. The position of six Qualified Technical Officers in the research and teaching departments were re-designated and appointed to teaching posts.

Six Technical Officers in the various campuses of the University Libraries were promoted and appointed as Assistant Librarians.

Between 2007 and 2013, 17 incumbents in the sub-staff cadres i.e. attenders/office assistants were promoted to the post of Assistant by due process of selection.

20. The accreditation process has improved the motivation of many faculty members leading to a surge in research publications. This tempo has not only to be sustained but attempts have to take up multidisciplinary high impact projects.

The faculties and students of the University have published more than 2900 papers, reports, books and monographs. The average impact factor of journals in which publications have been made is more than 2.5. There have been more than 15 articles published in journals with

impact factor >4. It is also to be pointed out in this context, the DST has noticed traceable increase in H-indices and granted 31.4 crores phase II, ranking University of Madras one among the 14 universities.

21. There is a need to strengthen Alumni Association and utilize the enthusiasm and capabilities of the alumni to enhance quality of education at the University as well as networking with agencies and institutions and resource mobilization from different parts of the country and from abroad.

The alumni association was strengthened and established in the name of University of Madras Alumni Affairs Department [UMAAD] in 2010. The Department is functioning under the Headship of Registrar, University of Madras. One of the Medical Alumni, Dr. Rajasekar Shanmugasundaram(alias Rajasekar Sham) has contributed US$ 3.175 million as his will to the University of Madras. Membership is free and open to all alumni who have undergone a postgraduate /research degree course. It has created 20,000 data base entries of Alumni.

22. It is recommended that the existing academic programmes and the courses offered at University be consolidated prior to embarking upon new programmes.

The recommendation has been conveyed to all the Boards of Studies. Accordingly, each department has taken initiative to offer innovative programmes and new elective courses. To mention a few innovative programme viz., Cyber Crime, Actuarial Science, Applied Geography; Spatial Information Technology; M.Tech Geoinformatics and M.Sc Geoinformatics (Private Study)etc.