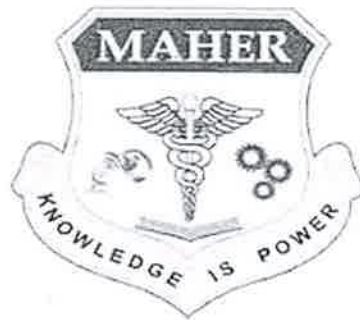


**MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH
(MEENAKSHI UNIVERSITY), CHENNAI
(Declared as Deemed to be University Under sec 3 of the UGC Act 1956)**



**REGULATIONS 2011
FOR
POSTGRADUATE SUPERSPECIALITY
DEGREE COURSES
D.M. NEUROLOGY**



A green handwritten signature, likely of the Dean, written in a cursive style.

SL NO	TABLE OF CONTENTS	PG NO
I	Vision and Mission of Meenakshi Academy of Higher Education and Research	4
II	Vision and Mission of Meenakshi Medical College and Hospital and Research Institute	4
III	Vision and Mission of Department of Neurology	5
IV	Program educational objectives (PEO's)	5
V	Program Outcomes	6
VI	Program Specific Outcomes	6
VII	Regulations 2011	7 - 12
	1. Short Title and Commencement	7
	2. Aims & Objectives	7
	3. Branch of study	7
	4. Eligibility for Admission	7
	5. (a) Duration of the course	8
	5. (b) Posting and training modalities	8
	5 (c) Logbooks and Dissertation	8
	6 (a) Commencement of Examinations	9
	6 (b) General guidelines for conduct of examination	9
	6 (c) Attendance requirement	9

	7. Break of study	10
	8. Syllabus	11 - 12
VIII	Program and Course Details	13 - 20
IX	CO PO MAPPING	20 - 22

Asheer

MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH

MASTER OF DISEASE (DM)– NEUROLOGY

REGULATIONS -2011

I.VISION AND MISSION OF MAHER

VISION

To be a world-class institution, transforming society through value-based diverse programs and healthcare advancements, leading to the all-around development of human resources, knowledge, innovation, entrepreneurship, and research.

MISSION

To become an institute of eminence by developing world-class professionals in the field of healthcare, science, liberal arts, technology and research with a focus on the societal good.

To create an enabling state-of-the-art infrastructure, intellectual capital and provide best-in class learning experience with a freedom to innovate and invent.

To foster values and ethics so as to develop students and learners into responsible citizens of the Nation and the world.

MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH

MASTER OF DISEASE (DM)– NEUROLOGY

REGULATIONS -2011

II.VISION AND MISSION OF MMCHRI

VISION

To provide global leadership in human development, excellence in education and quality health care.

MISSION

To train competent, compassionate and caring physicians through excellence in teaching, patient care and medical research



MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH

MASTER OF DISEASE (DM)– NEUROLOGY

REGULATIONS -2011

III. VISION AND MISSION – DEPARTMENT OF NEUROLOGY

To provide state of the art health care to this part of India, where many people are below poverty line. To educate public on common neurological disorders.

MISSION

To impart excellent education in the field of neurology

To promote research in Neurological diseases and its treatment modalities.

MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH

MASTER OF DISEASE (DM)– NEUROLOGY

REGULATIONS -2011

IV. PROGRAM EDUCATIONAL OBJECTIVES (PEO's)

PEO 1 Acquisition of knowledge: The student will be able to explain clearly concepts and principles of Neurology. The student will also be able to explain the disease evolution and management protocols at each stage. She/he will be able to observe and assist in clinical OPD procedures.

PEO 2 Teaching and training: The student will be able to effectively teach postgraduate students in medicine so that they become competent healthcare professionals and able to contribute to training of postgraduate trainees.

PEO 3 Research: The student will be able to carry out a research project (both basic and clinical) from planning to publication and be able to pursue academic interests and continue life-long learning to become more experienced in all the above areas and eventually be able to guide postgraduates in their thesis work.

PEO 4 Critical thinking skill: The student will be able to evaluate and manage the difficult situational cases and become competent in early management of such cases. They will be able to co-ordinate with super-specialty consultants and follow protocols based on the cases

V. PROGRAM OUTCOMES (PO's)

PO 1: A Clinician, who understands and provides preventive, promotive, curative, palliative and holistic care with compassion

PO 2: A Leader and member of the health care team and system

PO 3: A Communicator with patients, families, colleagues and community

PO 4: A Lifelong learner committed to continuous improvement of skills and knowledge

PO 5: A Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession

VI. Program Specific Outcomes

PSO 1 Technical skill: The student will be able to assist and perform day-care, minor, major and emergency (Diagnostic & therapeutic) individually under the supervision of senior faculty.

PSO 2 Professional skill: Recognize conditions that may be outside the area of his specialty/competence and refer them to the proper specialist

MEENAKSHI ACADEMY OF HIGHER EDUCATION & RESEARCH

(Deemed to be University), Chennai

REGULATIONS OF POSTGRADUATE SUPER SPECIALITY DEGREE COURSE

DM NEUROLOGY - 2011

DEPARTMENT OF NEUROLOGY

In the exercise of power conferred by Board of Management, (Meenakshi Academy of Higher Education and Research (Meenakshi University)), Chennai form the regulations for the P.G. Super Specialty courses as follows.

1.Short title & commencement.

THE REGULATIONS SHALL BE CALLED AS THE “REGULATIONS FOR D.M” POSTGRADUATE SUPERSPECIALITY DEGREE COURSES OF MEENAKSHI ACADEMY OF HIGHER EDUCATION & RESEARCH also known by abbreviation MAHER.

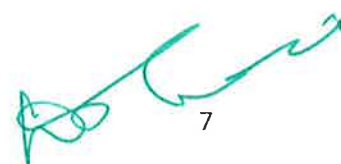
The regulations will come into force from the academic year 2011-2012.

The regulations and syllabi are formed under the above regulations and are subject to modification by the academic council of the university from time to time ****whichever is applicable for DM (NEUROLOGY) superspeciality course in accordance with MCI POSTGRADUATE MEDICAL EDUCATION REGULATIONS amended upto may 2018.READ MCI POST GRADUATE MEDICAL EDUCATION REGULATIONS (AMENDED UPTO MAY 2018) .**

2. AIMS AND OBJECTIVES

At the end of the course the student should have acquired ,

1. Broad understanding of principles of basic medical sciences related to his/ her speciality.
2. Ability and skill to perform and interpret, investigate procedures related to their speciality.
3. Skills in clinical diagnosis, planning of investigations and manage common conditions in their specialities by relevant current therapeutic measures.
4. To be competent to make independent decisions in emergencies and to perform procedures to manage the emergencies.
5. Competence in the management of intensive care of their speciality including the working knowledge of all the gadgets; instruments and equipments handled in the critical care wing of their speciality.
6. Ability to critically review published literatures, interpret data and update latest developments.
7. Ability to make the best use of latest information Technology in academic endeavours.
8. Competence to train Undergraduate and Postgraduate Medical Students aswell the Nursing and Paramedical students with regard to their specialty.
9. Ability in decision making forr medical interference & interdepartmental references.
10. Ability to conduct Research.
11. Ability to organize and start the speciality in the future.



7

3. Branch of Study

D.M.

Branch-I Neurology

4. ELIGIBILITY FOR ADMISSION

M.C.I recognized Post Graduate Degree in Medicine; Paediatrics and Geriatrics from M.C.I . recognized Medical Colleges and D.N.B (Medicine/Paediatrics)

M.C.I. recognized postgraduate degree in Surgery and D.N.B (Surgery).*

*with regards to the eligibility of D.N.B. candidates; The M.C.I. guidelines us and when issued only will be followed.

THE CANDIDATES WHO SEEK ADMISSION TO THE SUPER SPECIALTY COURSES IN MAHER; IF THEY ARE GRADUATED IN P.G. FROM ANY COLLEGES OTHER THAN CONSTITUENT COLLEGE OF MAHER (AT PRESENT MEENAKSHI MEDICAL COLLEGE AND RESEARCH INSTITUTE, ENATHUR) THEY SHOULD OBTAIN ELIGIBILITY CERTIFICATE FROM MAHER BEFORE SEEKING ADMISSION. EVERY CANDIDATE ADMITTED TO THE COURSE SHOULD REGISTER WITH THE UNIVERSITY WITHIN SIX MONTHS OF ADMISSION.

The Upper age limit for admission is 50 years. Last day of September is taken as cutoff date for calculating the upper age limit since that happens to be last cut off date for the wait listed candidates as per the MCI norms.

5.(a) DURATION OF THE COURSE

The admission shall commence on the first day of August. Last date for admission for the wait listed candidates is 30th September.

The duration of the course is 3(three) completed years including the examination at the end 3rd Year in the month of August.

The academic Year shall commence on the first day of August. Each academic year is divided into two academic terms of six months each August 1st to January 31st on term, February 1st to July 31st the other term. The entire period of training is spread over six academic terms. No Waiver shall be given for the duration of the course for any sort of previous experience or any other Diploma or Degree or any fellowship or any Honours.

5.(b) POSTINGS AND TRAINING MODALITIES

The candidates shall be trained in their specialty as per the syllabus prescribed under each specialty. The H.O.D shall divide the program suiting the norms and practical application. The students at the discretion of the H.O.D of the department; may be sent to the other

centers of the excellence connected with their specialty by drafting the academic schedule with the permission of the Dean. Training in medical Audit, Health economics, Health Information system, Basic of Statistics, Exposure to Human Behaviour Studies, Pharmaco economics and Introduction to Linear Mathematics should be imparted to the students preferably in the first Academic Term with the Hospital administration experts. (wide M.C.I Regulation Amended upto December 2010- rule 13-7)

Every Specialty Postgraduate student should be motivated to present short papers in National Conference; atleast one paper a year. They should also publish atleast two articles in reputed journals during their 3 year period of training. These activities should be documented in their Log books. H.O.D should pay due weightage while assessing their Log books for award of marks at the time of internal assessment.

5.(c) Logbooks& Dissertation

Every candidate should maintain serial of certified Log books in which he shall document Date wise all the academic activities, procedure done, assisted, interesting and rare cases record journal club details, paper presented and published, online medical research activities and Literature Reviews. These Log books should be periodically scrutinized by the unit Head / H.O.D and these books have to be submitted to the examiners at the time of practical Examination.

Every candidate admitted to super Specialty Post Graduate Degree, on admission during first academic term, shall be assigned a topic for project Dissertation/ Thesis by the concerned unit Chief and the title shall be informed to the controller of Examinations. Any change in the Topic shall be permitted by the Controller of the Examination on the written request by the candidate duly recommended by the Unit Chief if such request is made not later than the second academic term i.e., within the first year of the course.

The Dissertation/Thesis shall be minimum 50 pages not exceeding 75 pages excluding certification 'Acknowledgements. Annexures, charts, plates and Bibliography printed in **TIMES NEW ROMAN font 12, One sided double line spacing** calico bound with the wrapper cover page depicting the title, author and institution with university logo.6 copies shall be submitted to the controller of Examinations with certification through the Dean six months before the commencement of the examination.

Two copies are to be submitted as electronic version in the standard C.D format mentioning the technical details used.

The dissertation/thesis submitted by the candidate after certification to the controller of examinations shall be evaluated by two external examiners, one of them outside the state. Thesis shall be adjudicated ACCEPTED OR NOT ACCEPTED. If dissertation/Thesis is returned as not accepted and if any suggestions are given by the examiner who has evaluated the work; such suggestions should be carried out by the candidate before appearing for the examination. No marks are awarded for Dissertation /Thesis .

6.(a) COMMENCEMENT OF EXAMINATION



9

The examination shall be conducted at the end of 3rd Academic year. There will be four papers for every specialty out of which paper I will be on basic medical science and Paper 4 will be on Recent advances. Both the papers related to their specialty. Rest of the two papers will be with regard to their subjects.

(b)GENERAL GUIDELINES FOR THE CONDUCT OF THE EXAMINATION

Theory Examination

Basic examination pattern shall consist of four written papers in theory as per the above guidelines. Maximum mark for each paper will be 100. It is suggested to have two sections Section A and Section B in each paper. Each sections may contain questions as follows:

Section A

Essay 1x20 =20

Short Notes 3x30= 30

Section B

Essay 1x20=20

Short Notes 3x10= 30

Total 100 x 4 papers= 400 marks.

(Separate minimum 200/400 should be secured in all papers put together for a pass)

Clinical Examination Including Ward Rounds

Clinical/practical Examination including ward rounds which shall be customized for each specialty for maximum 300 marks and separate 50% minimum marks should be secured for pass.

Internal Assessment And Orals

5. Theory and Practical Examination shall be conducted during the period of three year course at the end of 9;15;21;27 and 33 month. Best of three examination marks each of 25 maximum totaling 75 marks are taken for consideration for the award of internal assessment marks. 25 marks are awarded for hand written Log book by the Unit Head in Consultation with the Head of the Department and the mark is added to internal assessment. Oral Examination will be conducted along with the clinical Examination and it will be customized by each specialty. The candidate should secure separate 50% minimum out this total 200 marks which includes 100 marks for internal assessment and 100 marks for oral.

The marks obtained in the clinical examination and internal assessment will be included with theory marks.The pass will depend upon securing 50% minimum.

Every speciality board shall decide the customized pattern of examination without deviating from the general guidelines.

Written(theory) 4papers	Maximum Marks 400	Minimum for a pass 200
-------------------------	----------------------	---------------------------

Clinical examination, orals including ward rounds	300	150
Internal Assessment and Logbook	100	50
Total	800	400

6 (c) Attendance requirements and other related subjects to the examination.

- The candidate should produce 90% attendance in total for the entire period of training. No condonation of attendance can be entertained.
- The candidates should have secured 50/100 in the internal assessment.
- The dissertation /thesis should be accepted by the two external examiners.
- Total number of appearances are 5(five)

If the candidate does not pass the examination in 3(three) attempts; He shall do refresher course for a period of 6 months in the same Institution under the Unit Chief. The Dean of the Institution in the consultation with H.O.D shall give the posting in the beginning of the academic term either in August or in February at the end of refresher course the candidate should attain the certificate of satisfactory completion of the training from the concerned H.O.D and submit the same through the Dean to the Controller of the Examination to become eligible for subsequent two attempts of the examination.

- Question Papers including basic medical sciences shall be set by external examiners belonging to the same specialty.
- The answer papers shall be corrected by two sets of examiners and the average shall be calculated for each paper. The controller of Examination with the guidance of the Vice Chancellor shall decide the intricacies of setting of question papers and valuation of answer papers especially when the mark is more than 10 for the same paper between the two examiners correcting the same paper.
- There won't be revaluation of papers after declaration of results but retotaling may be permitted at the request of the aggrieved candidates.

7. Break of Study

Any candidate who is absent for continuous period of 30 days or less may be re-admitted to the course by the Dean if he is satisfied that the period of absence is due to justifiable reasons.

If the period of absence is more than 30 days but less than 3 years the candidate shall apply to the registrar, MAHER through the Dean with recommendation from the unit Chief and



H.O.D. His absence may be condoned after levying a fee for condonation provided the request is justifiable. Vice Chancellor's decision is final with regard to condonation.

If the period of absence is continuously more than three years, the candidates registration for the course stands cancelled.



(MEENAKSHI UNIVERSITY)

SYLLABUS FOR SUPERSPECIALTY COURSE

BRANCH – I D.M. NEUROLOGY

A) Basic Sciences:-

Applied Neuroanatomy, Neurophysiology, Neurobiochemistry, Neuropathology, Neuro-Microbiology with special reference to virology, Neurogenetics, NeuroImmunology, Neuropharmacology, Neuropsychiatry, Paediatric Neurology, Neuro Imageology.

B) Principles of Neurology and Clinical Neurology. (Adult and Child) Principles of Neuro electro Physiology in Clinical Electro Physiology and Principles of Imageology and Neuro Imageology.

1. Neuroanatomy:-

Anatomy of CNS –PNS- ANS-NMJ- Muscle.(This includes microanatomy)

2. Neurophysiology:-

Physiology of CNS-PNS-ANS-NMJ-Muscle.

3. Neurobiochemistry:-

Applied Neuro chemistry – Biochemical pattern of CNS-PNS-ANS-NMJ and Muscle during normal and pathological condition.

4. Neuropathology:-

Pathophysiology of CNS-PNS-ANS-NMJ-Muscle Disorders macro and microscopic pathological features of CNS-PNS-ANS-NMJ and Muscle disorders. Including Recent advances and techniques such as electron microscopic features immunocytochemistry.

5. Microbiology:-

Disorders caused by microbes – parasitic-bacterial-fungal-viral with the special attention to neurovirology.

6. Neuropharmacology:-

Neuropharmacology of Epilepsy- Movement disorders-immune mediated disorders and sleep disorders-drug interaction-contraindications, therapeutic administration of drugs in neurological disorders.

7. Neurogenetics:-

1. Principles of basic inheritance –Inherited Neurological disorders

2. Principles of prevention and therapy of neurogenetic disorders (gene therapy)

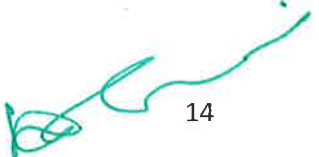
8. Neuroimmunology:-

- 1.ABC of Immunology
 2. Normal and abnormal immunological – CNS-PNS-ANS-NMJ and muscle disorder.
 - 3.Recent Trends and management of immune mediated neurological disorders.
- 9.Neuropsychiatry:-
- 1.ABC of Psychological Evaluation- Procedure.
 - 2.Basic Psychiatric Disorders – (common day to day problems)
 - 3.Neuropsychiatric- Borderlands (E.g.)Nonepileptic seizures
 - 4.Psychosomatic disorders.
 - 5.Neuropsychological-cognitive evaluation in Neurological Disorders.
- 10.Paediatric Neurology:-
- 1.Developmental-Hereditary Familial Disorders
 - 2.Disorders of CNS-PNS-ANS-NMJ and Muscle.
- 11.Neuroimageology- Plain X ray- CT scan- MRI imaging study- DSA and Other MRI studies- PET etc. Interventional Neuroradiological Procedure, Recent sonological technique- Trans cranial Doppler studies.
- 12.Electrophysiology:-
- a) ENMG Nerve Conduction Study-Magnetic stimulation technique
 - b) EMG-(ElectroMyoGram) Studies including macro, single fiber EMG studies.
 - c) Evoked potential studies- Visual – aural- Somato Sensory- Evoked potential including Dermatomal Evoked Potential.
- 13.Other Neurology oriented Investigation Procedures in Relation to Neurological Disorders/ Neuro ophthalmological- Neuro Otological.
- 14.Minor Neuro Surgical Procedures; Ventricular tap-ICP monitoring etc.,
- 15.Fundamental of Biostatistics, Epidemiology, to interpret final report of evidence based medical trials.

DURATION OF THE COURSE

The duration of certified study and training for the D.M Post Graduate Superspeciality Degree courses shall be three completed years (including the period of examination)

Completed six academic terms of six months each after obtaining the MD Degree or equivalent recognized qualification in the required subject.



Ist YEAR OF STUDY PERIOD

The program for the first of study period is as follows:

During the first year the student will be working fully in the Department of Neurology fully. In the forenoon time, He/She will be familiarized with clinical Neurology, Neurological Examination, Localisation and Differential Diagnosis , Relevant Laboratory and Radiological Investigations and Pharmacotherapeutics. He/She will attend all the Outpatient services get himself/herself aware of the common neurological problems. In addition, he/she will work in the Electro Physiology Laboratories and get himself/herself fully familiar with EMG, evoked potential and Elctroencephalography. He/she should be competent to handle the equipments and report independently. In the afternoon, he/she will concentrate on Basic sciences and will undertake the Research Study within three months after admission.

IInd YEAR

The candidate may be sent to the best center for training and learning the following subjects: this comes under "Visit to other centers" . The total period is for three months or four months depending upon the center.

FOLLOWING WILL BE THE SUBJECT AND DURATION OF TRAINING :

NEUROPATHOLOGY	- 15 DAYS .
NEURORADIOLOGY (INCLUDING INTERVENTION RADIOLOGY)	-15 DAYS
INTENSIVE CARE IN NEUROLOGY	- 15 DAYS
PSYCHIATRY	- 15 DAYS.
PAEDIATRIC NEUROLOGY	- 30 DAYS.
NEUROSURGERY	- ONE MONTH.

Note: the rest of the period 8 months, the candidate will continue curriculum in the parent department.

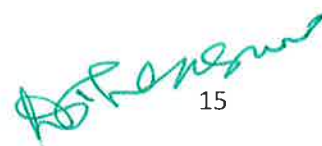
IIIrd year:

During the period,the candidate will work in the neurology department concentrating in clinical and theoretical neurology, clinical psychiatry relevant investigations and medical as well as para medical management of the patients. besides, he shall handle and report the EEG and EMG by himself/herself. examination will be conducted at the end of the year.

Research study-dissertation study;

Candidates during the first year within three months of admission in the D.M postgraduate superspeciality degree course shall be assigned a topic for dissertation by the head of neurology department consultation with the concerned unit chief. The title of the topic assigned to the candidates should intimated to the controller examinations of the university by the head of the department through the head of institution before the end of first year. Six copies dissertation shall be submitted six months prior to the commencement of examination, to the controller of examination of the university.

The dissertation should be approved by the professor of that branch and the same has to be forwarded to the controller of examination by the head of the department through the



dean/principal of the college six months prior to practical examination and examined by set of two external examiners.

Two copies of the evaluation report of the dissertation should be submitted by the examiners to the controller of examination of the university.

DM Neurology Examination

Theory Examination –Four-Papers-100Marks each

Duration :Three hours each

Marks

Paper – I	Basic Science:- Neuroanatomy, Neurophysiology, Neurobiochemistry, Neuropathology, Neuromicrobiology, Epidemiology & Genetics, Neuroimmunology,	100
Paper – II	Clinical Neurology:- Neurology, Neuropsychiatry, Neuropsychology, Paediatric Neurology	100
Paper – III	Investigatory Neurology:- Neuroradiology – Interventional Neuroradiological procedures, Ultrasound and Transcranial Doppler Studies etc., Neurootology, Neuroophthalmology. Neuroelectrophysiology, EMG, EEG, MEG, Evoke Potential etc., details of Investigatory procedures and interpretation of the results with clinical correlation. Neuroimmunological and Genetics investigation procedure	100

Relevant to Neurological Disorders

Paper – IV Recent Advances in Neurology:- 100

Distribution of Marks

Two essays 20 X 2 = 40

6 Short Notes 10 X 6 = 60

Total Marks 100

Practical / Clinical and Oral Examination

	No. of Cases	Duration	Marks
Long Case	one	one hour	100
Short Case	Two (30 mins each)	one hour	100
Oral/Vivavoce		-----	100
Total			300

(Viva includes pathology microscopic slides specimens
EEG, EMG, EP Records
X-Ray, CT Scan, MRI of neurological and
neurosurgical disorders and Ward rounds)
Ward rounds optional – by External Examiner
(The Viva and Clinical Examination to be conducted on the same day)

Dissertation:- (Approved / Not Approved) - **No Marks**

If dissertation not approved the results of the exam is withheld till
Candidate resubmits his dissertation after correction.

Marks for Qualifying for a pass

	Maximum Marks	Minimum for a pass
Written Theory 4 Papers	400	200
Clinical examination, orals including ward rounds	300	150
Internal assessment and log book	100	50
Total	800	400

Recommended reading

Books and Journals:-

NEUROLOGY TEXT BOOKS

1. HARRISON'S PRINCIPLES OF INTERNAL MEDICINE
 2. BRAIN'S PRINCIPLES OF NERVOUS DISEASE
 3. NEUROLOGY IN CLINICAL PRACTICE EDITED BY WALTER G.BRADLEY
BUTTERWORTH-HEINMANN BOSTON
 4. PRINCIPLES OF NEUROLOGY BY ADAMS AND VICTOR
 5. MERRITT'S NEUROLOGY
LEWIS P.ROWLAND & TIMOTHY A.PEDLEY
WOLTERS KLUWER HEALTH/LIPPINCOTT WILLIAMS AND WILKINS
 6. DISORDERS OF PERIPHERAL NERVES
HERBERT H. SCHAUMBERG ALLEN R. BERGER, P.K.THOMAS
CONTEMPORARY NEUROLOGY SERIES
F.A.DAVIS COMPANY PHILADELPHIA
 7. PERIPHERAL NEUROPATHY VOL I & II
DYCK, PJ & LAMPERT&P.K.THOMAS
1. SAMUELS'S MANUAL OF NEUROLOGIC THERAPEUTICS
MARTIN A . SAMUELS'S ALLAN H.ROPPER
WOLTERS KLUWER HEALTH/ LIPPINCOTT WILLIAMS AND WILKINS
 2. WOLFF'S HEADACHE
INDIAN EDITION
EDITED BY STEPHEN D.SILBERSTEIN-etal
OXFORD UNIVERSITY PRESS
 3. THE TREATMENT OF EPILEPSY
SIMEN SHORVON etal
WILEY – BLACKWELL
 4. STROKE PRACTICAL MANAGEMENT
C.WARLOW etal
BLACKWELL PUBLISHING
 5. CAPLAN'S STROKE A CLINICAL APPROACH
LOUIS R CAPLAN
SAUNDERS ELSEIVER
 6. NEURO-OPHTHALMOLOGY ILLUSTRATED
NANCY J. NEWMAN THIEME.
 7. DAVIDSON'S PRINCIPLES AND PRACTICE OF MEDICINE CHURCHILL
LIVINGSTONE

CLINICAL NEUROLOGY

- BICKERSTAFF'S NEUROLOGICAL EXAMINATION IN CLINICAL PRACTICE
- DEJONGS NEUROLOGICAL EXAMINATION

- BRAZIER'S CLINICAL NEUROLOGY
- WYNCAN& BRUIEEN CLINICAL LOCALISATION VOL-2
- NEUROPHYSIOLOGY-A CLINICAL APPROACH BY KEVIN WALSH; B.I.CHURCHILL LIVINGSTONE NEWDELHI
- AIDS TO EXAMINATION OF THE PERIPHERAL NERVOUS SYSTEM - INDIAN EDITION K.M. VERGHESE COMPANY BOMBAY
- NEUROLOGICAL EXAMINATION MADE EASY - GERIANT FULLER ; CHURCHILL LIVING STONE
- NEUROLOGY AND NEUROSURGERY ILLUSTRATED - KENNETH W.LINDSA Y. LAN BONE

EMG-EP-EEG

1. CLINICAL NEUROPHYSIOLOGY - EDITED BY JASPER R.DAUBE,M.D; F.A DAVIS COMPANY PHILADELPHIA
2. EVOKED POTENTIAL IN CLINICAL MEDICINE - KEITH H.CHIAPPA,M.D, RAVEN PRESS NEWYORK
3. EVOKED POTENTIALS - R.SPHELMANN
4. THE ELECTROMYOGRAPHER'S HANDBOOK - LOWERY LEE THOMPSON, M.D
5. PRACTICAL ELECTROMYOGRAPHY - EDITED BY ERNEST W.JOHNSON,M.D
6. ELECTRODIAGNOSIS IN CLINICAL NEUROLOGY- EDITED BY MICHAEL J.AMINOFF,M.D., AND F.R.C.P; CHURCHILL LIVINGSTONE NEWYORK, EDINBURGH, LONDON, MELBOURNE.
7. ATLAS OF ELECTROENCEPHALOGRAPHY
8. EPILEPSIES,EEGVAND EPILEPTIC SYNDROMES - JOHN LIBBEY,EUROTEXT
9. EEG PRIMER - R.SPHELMANN; ELSIEVER BIMEDICAL PRESS
10. OXFORD EEG TECHNOLOGY
11. EPILEPSY:A COMPREHENSIVE TEXTBOOK - EDITED BY J.ENGEL,JR AND T.A.PEDLEY. LIPPINCOTT-RA VEN PUBLISHERS, PHILADELPHIA

JOURNALS:-

1. NEUROLOGIC CLINICS
WWW.NEUROLOGIC.THECLINICS.COM
W.B.SAUNDERS COMPANY,
WEST WASHINGTON SQUARE PHILADELPHIA.
2. JOURNAL OF AMERICAN ACADEMY OF NEUROLOGY
3. JOURNAL OF NEUROLOGY, NEUROSURGERY AND NEUROPSYCHIATRY
4. ANNALS OF INDIAN ACADEMY OF NEUROLOGY
5. CURRENT TREATMENT OPTIONS IN NEUROLOGY
6. THE NEUROLOGIST INDIAN EDITION WOLTERS KLUWER
WILLIAMS AND WILKINS

COURSE OUTCOMES

CO.1	Practice efficiently internal medicine specialty, backed by scientific knowledge including basic sciences and skills
CO.2	Diagnose and manage majority of conditions in his specialty (clinically and with the help of relevant investigations)
CO.3	Exercise empathy and a caring attitude and maintain professional integrity, honesty and high ethical standards
CO.4	Plan and deliver comprehensive treatment using the principles of rational drug therapy
CO.5	Plan and advise measures for the prevention and rehabilitation of patients belonging to his specialty;
CO.6	Manage emergencies efficiently by providing Basic Life Support (BLS) and Advanced Life Support (ALS) in emergency situations
CO.7	Recognize conditions that may be outside the area of the specialty/competence and refer them to an appropriate specialist
CO.8	Demonstrate skills in documentation of case details including epidemiological data
CO.9	Play the assigned role in the implementation of National Health Programs
CO.10	Demonstrate competence in basic concepts of research methodology and clinical epidemiology; and preventive aspects of various disease states
CO.11	Be a motivated 'teacher' - defined as one keen to share knowledge and skills with a colleague or a junior or any learner
CO.12	Continue to evince keen interest in continuing education irrespective of whether he/she is

	in a teaching institution or is practicing and use appropriate learning resources
CO.13	Be well versed with his medico-legal responsibilities
CO.14	Undertake audit, use information technology tools and carry out research - both basic and clinical, with the aim of publishing the work and presenting the work at scientific forums.

COURSE OUTCOME – PROGRAMME OUTCOME MAPPING

NEUROLOGY							
CO/PO	PO.1	PO.2	PO.3	PO.4	PO.5	PSO.1	PSO.2
CO.1	3	3	3	3	3	2	3
CO.2	3	2	2	2	2	1	3
CO.3	3	2	3	2	3	3	1
CO.4	3	2	3	2	2	3	3
CO.5	2	3	2	1	3	3	2
CO.6	3	2	2	3	2	3	2
CO.7	3	3	2	2	1	2	2
CO.8	3	2	2	3	3	3	3
CO.9	3	2	2	3	3	2	3
CO.10	2	2	3	2	3	2	3

CO.11	3	3	2	3	2	1	2
CO.12	2	2	2	2	3	3	2
CO.13	3	3	3	3	3	3	3
CO.14	3	2	3	3	2	3	3
Average	2.7	2.5	2.8	2.6	2.5	2.42	2.5

Handwritten signature in green ink.

