



Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

Syllabus for Super Speciality

2014 - 15
(Amended / Revised upto July 2019)



Dr. D.Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

(Re-accredited by NAAC with a CGPA of 3.62 on a four point scale at 'A' Grade)
(An ISO 9001 : 2015 Certified University)

Dr. A. N. Suryakar
Registrar

Ref. No. : DPU/875-Vii/2019

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NOTIFICATION

Whereas in pursuance of the following decisions taken by the Board of Management, it is hereby notified to all concerned that the "Syllabus for Super Speciality – 2014-15" is revised upto July 2019 and hereby published.

- Changes in Practical examination pattern of M. Ch. Urology vide Resolution No. BM-35(viii)-18, dated 12th October, 2018.
- Approval of Syllabus for D.M. (Cardiology), D.M. (Neurology) and M. Ch. (Cardio Vascular Thoracic Surgery) vide Resolution No. BM-38(xiv)-17, dated 27th December, 2017.
- Interdisciplinary subjects of M.B.B.S, M.D./M.S. and Super-specialty (D.M./M.Ch.) Programs under the Faculty of Medicine vide Resolution No. BM-10(viii) dated 12th April, 2019.
- Interdisciplinary subjects of M.B.B.S, M.D./M.S. and Super-specialty (D.M./M.Ch.) Programs under the Faculty of Medicine vide Resolution No. BM-27(xi) dated 30th July, 2019.

The Syllabus of Super Speciality – 2014-15 Revised upto July 2019 will be useful to all the concerned. This will come into force with immediate effect.




(Dr. A. N. Suryakar)
Registrar

Copy to:

1. PS to Chancellor for kind information of Hon'ble Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
2. PS to Vice Chancellor for kind information of Hon'ble Vice Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
3. The Dean, Dr. D. Y. Patil Medical College Hospital & Research Centre, Pimpri, Pune
4. The Controller of Examinations, Dr. D. Y. Patil Vidyapeeth, Pune.
5. Director (IQAC), Dr. D. Y. Patil Vidyapeeth, Pune.
6. Web Master for uploading on Website.

**MAPPING OF PROGRAMME OUTCOMES [POs] AND COURSE
OUTCOMES [COs] OF SUPER SPECIALITY PROGRAMMES**

PROGRAMME OUTCOMES

No.	By the end of the programme, the Postgraduate will have /be:
PO 1	Knowledge and Skills
PO 2	Planning and problem solving abilities
PO 3	Communication
PO 4	Research Aptitude
PO 5	Professionalism and Ethics
PO 6	Leadership
PO 7	Societal Responsibilities
PO 8	Environment and Sustainability
PO 9	Lifelong Learner

D.M. NEPHROLOGY PROGRAMME

Course Code	Course Title
SS03	DM Nephrology

Course 1 (Subject Code)

CO No.	At the end of the course, the learner should be able to:	Mapped Programme Outcomes
SS03.1	Take detailed renal history.	PO1,PO2,PO3,PO5.
SS03.2	Perform detailed renal examination.	PO1,PO2,PO3,PO4,PO5, PO9.
SS03.3	Able to discuss differential diagnosis.	PO1,PO2,PO4,PO9.
SS03.4	Treat all renal disorders.	PO1,PO2,PO4,PO5,PO9.
SS03.5	Understand renal anatomy.	PO1,PO2,PO4,PO9.
SS03.6	Understand renal histopathology.	PO1,PO2,PO4,PO9.
SS03.7	Understand renal physiology	PO1,PO2,PO4,PO5,PO9.
SS03.8	Interpret renal MRI, CT scan and Angiography.	PO1,PO2,PO4,PO5,PO9.
SS03.9	Able to perform (Renal biopsy and perform hemodialysis catheter insertion and permanent, cuffed, tunneled catheter insertion)	PO1,PO2,PO4,PO9.
SS03.10	Journal clubs, case presentation and seminar.	PO1,PO2,PO3,PO4,PO9.



D.M. Nephrology

D.M. NEPHROLOGY

(1) GOAL

The goal of teaching the postgraduate student in Nephrology is to impart such knowledge, skills and attitudes that will enable him/her to diagnose and manage common as well as uncommon renal diseases affecting the patients. The student at the end of the course should be able to act as a consultant in nephrology and render medical care at a secondary or tertiary level. The student should also have acquired teaching abilities to teach postgraduates the subject of nephrology. He/she should also be able to conduct clinical research in the field of Nephrology.

(2) OBJECTIVE

The teaching shall be designed to fulfill the following objectives: -

- **Knowledge:**

At the end of the course the student shall have adequate knowledge of

- a) Clinical features, Pathophysiology and investigative procedures of medical disorders as outlined in the syllabus to arrive at an optimum management plan for the patient.
- b) Drug therapy especially their doses, side effects, toxicity, indications, contraindications and interactions.
- c) Recent advances in the field of Nephrology.
- d) A brief history of medicine. Carrying out clinical research.

- **Attitude :**

The candidate should develop the attitude required to be a consultant in nephrology and be able to impart the same to junior colleagues. The student should have developed an attitude of scientific enquiry and be adept in conducting clinical trials and publishing a scientific paper.

DEPARTMENTAL OBJECTIVES:

At the end of the DM Nephrology course, students shall be able to:

1. Practice the art and science of nephrology in his/her field of Practice and seek and provide consultation as required. He will have knowledge, skill and attitude to provide comprehensive renal care
2. Conduct researches and communicate the findings, results and conclusion to his fraternity.

3. Acquire necessary skills of teaching and training his junior colleagues and medical students.
4. Keep abreast with the latest developments by self-learning and/or participating in continuing Medical Education programmes.
5. Organise and manage administrative responsibilities for routine day to day work as well as new situations including natural and on man-made accidents/calamities etc. and be able to manage situations calling for emergency interventions in the sphere of renal care and also routine problems in their areas.
6. Exhibit awareness of the importance of audit and the need for considering cost-effectivity in patient management.
7. Deliver preventive and rehabilitative care.

(3) METHOD OF TRAINING

The training of postgraduate student for D.M. Nephrology will be of Residency pattern with emphasis on patient care.

- a) **Clinical Teaching:** Clinical teaching shall be carried out in wards by clinical units. This shall also form the basis of grading the students.

- b) **Investigative (Lab) Approaches:**

Students should be allotted various investigative materials & Lab report for interpretation, comments, discussion in teaching activities. Graded responsibility in patient care services & day to day routine work in OPD, ward, casualty & interdepartmental activities shall be oriented towards Teaching & Learning in addition to patient care services.

- c) **Class-Room (Theory) Activities:**

Seminars :

Thesis Reviews

1. Journal Readings (Journal Club) for reviewing articles
2. Presentation of cases in clinical meetings.
3. Preparation of slides for teaching & conferences.
4. Mounting Slides, specimens, posters, panel for educative purpose
5. Active participation in teaching.

(4) MAINTENANCE OF LOGBOOK

It is personal responsibility of students to maintain a Logbook, enter the activities done and get them certified/graded from the concerned teachers/HOD regularly & periodically and at the end of term.

(5) ACADEMIC YEAR AND TERMS

The academic year for postgraduate medical course for DM (Nephrology) will start on 1st Aug and end on 31st July. It will have two academic terms.

1st term 1st Aug to 31th Jan

2nd term 1st Feb to 31st July

(6) GRANTING OF TERMS & LEAVE RULES

- a. A student shall be granted a term provided he or she puts in 80% attendance during the term.
- b. The university shall not allow a student to continue the postgraduate course on the strength of his past registration. Past registration implies the maximum period of two years after completion of the terms. Past registration should be treated as lapsed and the student desirous of pursuing the postgraduate studies be advised to register his or her name afresh. In such cases, no concessions of term will be granted. As regards the dissertation subject, if the guide of the student is prepared to guide him/her on the previous topic, the student may be permitted to register afresh with the previous topic.
- c. In case a student registers his or her name for the postgraduate course and then leaves on medical grounds. The six months gap be allowed and in that case the student may be permitted to continue his studies on compassionate grounds on the recommendations of guide, head of the department and dean.
- d. The PG resident doctors may avail as PG resident leave not exceeding 20 (Twenty) days per year.
- e. Special leave of 6 days (Six Days) per annum is admissible to the PG resident doctors for the purpose of conferences etc., subject to prior approval.
- f. No ex-post-facto sanction is permissible. The leave shall not be accumulated or carried forward to the next year.

(7) CANCELLATION OF REGISTRATION

Before cancellation of the registration on account of the adverse progress report, the university should get recommendation of the guide of student, head of the department and dean.

(8) SYLLABUS

- a. Medical ethics, History of Medicine & Economical issues in clinical medicine.
- b. Symptomatology of diseases/disorders.
- c. Applied basic sciences knowledge relevant to the field of nephrology.
- d. Investigative techniques, selection and interpretation of results.
- e. Pathogenesis of renal diseases & renal histopathology.
- f. Diseases of the kidney and urinary tract (glomerular diseases, urinary tract infection, tubulo-interstitial Diseases, inherited diseases, toxic nephropathies, systemic diseases with renal involvement).
- g. Renal stone disease, urinary tract obstruction, vascular diseases of kidney, hypertension, neoplasia etc.
- h. Renal failure (diagnosis & medical management).
- i. Principles and practice of dialysis, fluid, electrolyte & acid-base balance.
- j. Renal transplantation.
- k. Recent advances in nephrology (Biostatistics & clinical epidemiology, research methodology).
- l. Preventive nephrology.

Skills :

- 1) Haemodialysis, Peritoneal dialysis, CAPD, Continuous Renal Replacement therapy, Plasmapheresis, Vascular access, Native and Graft kidney biopsies.
- 2) Communication.
- 3) Education/training.
- 4) Self directed learning.

(9) AFFECTIVE DOMAIN

Development of attitude is a very important part of surgical training. It would be the constant endeavour of the faculty to develop desirable attitudes in the P.G. trainees during the course by personal examples, interaction and group discussion. Constant watch will be maintained during their work in the wards to ensure that this objective is being met. Although there will be no formal evaluation of attitude some aspects of this domain would be covered during the formative evaluation as per the enclosed proforma for continued internal assessment.

(10) DISSERTATION

Each student shall select a topic for dissertation on a common disease of clinical and research interest in consultation with his/her guide and the head of department. The dissertation with similar objectives should not be repeated at least for 3 years from the previous work.

The synopsis for dissertation shall be submitted for approval by the university within six months of joining the DM course. The synopsis shall have following format

- a) Title
- b) Introduction (not more than 20 lines)
- c) Aims and Objects
- d) Brief review of literature in 2 pages strictly relevant to the point.
Attach separate sheets
- e) Material & methods (in brief)
- f) Study designed (flow chart); search strategy, statistical analytic methodology proposed.
- g) References (10-12)
- h) Signature with stamp of Consent form of all concerned HOD and Guide.

The work on dissertation should start after getting approval from University. The dissertation shall be completed at least nine months before the final university examination. Eight copies of thesis duly completed and bound shall be submitted by the student to the university six months before the university examination. Before submission it shall be approved by the postgraduate teacher under whom the student has done the research work.

The Guidelines for writing the Dissertation are mentioned in Annexure I

(11) EVALUATION

Evaluation shall consist of term ending examinations every 6 months in the first and second academic years, preliminary examination and university examination.

a) Term end Examination

There will be term end examination for all PGs every 6 monthly from 2nd to 5th Term to assess the overall progress.

b) Preliminary Examination

Preliminary examination will be conducted by the department in the sixth semester at least two months before the final university examination. The pattern of examination and distribution of marks will be exactly like university examination as described below.

c) University Examination

It shall consist of theory examination and clinical examination.

(12) THEORY EXAMINATION

There will be four Theory papers on four days. The syllabus covered paper wise will be as follow:-

PAPER- I (3 Hrs.)
PAPER- I Basic Science: (1) Applied basic sciences knowledge relevant to the field of nephrology. (2) Investigative techniques, selection and interpretation of results. (3) Pathogenesis of renal diseases & Renal histopathology.
PAPER- II (3 Hrs.)
PAPER- II –Clinical Nephrology-1 (1) Inherited diseases, toxic nephropathies, systemic diseases with renal Involvement. (2) Diseases of the urinary tract (Glomerular diseases, Tubulointerstitial, urinary tract infection, renal stone disease, urinary tract obstruction).
PAPER- III (3 Hrs.)
PAPER- III Clinical Nephrology -2 (1) Renal failure (diagnosis & medical management). (2) Principles and practice of Haemodialysis and Peritoneal dialysis. (3) Fluid, electrolyte and acid-base balance.
PAPER- IV (3 Hrs.)
PAPER- IV - Recent advances (1) Recent advances in nephrology (Biostatistics & clinical epidemiology, research methodology). (2) Hypertension, Vascular diseases of kidney, Neoplasia. (3) Renal transplantation applied immunology. (4) Preventive nephrology.

(13) DISTRIBUTION OF MARKS:

Each paper will be of three hours duration. Paper I, II, III and IV shall be as follows:

Section A : 02 LAQs of 25 marks each 050 Marks

Section B : 05 SAQs of 10 marks each 050 Marks

Total 100 Marks

Thus the grand total of theory marks will be 400.

(14) CLINICAL EXAMINATION :

The examiners for theory and clinical examination shall remain the same for a particular examination. Not more than eight candidates will be examined in a day. Clinical examination pattern and distribution of marks shall be as follows: -

One Long case - Maximum marks 150 150 Marks

Two short cases - Maximum marks 75 each 150 Marks

Four table viva/Orals - Maximum 25 marks each 100 Marks

Total 400 Marks

(X-Ray, USG, DTPA, DMSA, CT scans / MRI, Laboratory reports, Emergency Management, Recent advances, Dissertation viva etc.)

The grand total of clinical marks will be 400. Forty-five minutes for long case and twenty minutes for short case shall be allotted to the students for examination. Ten minutes for each candidate per table will be allotted for table viva.

(ANNEXURE I)

Instructions / Rules and Regulations for Preparing the Dissertation / Thesis

1. Format of Thesis

Total Copies of Project Report	8 (Eight) Out of 6/8 copies 2 copies shall be without any identification mark like name of student, name of PG Guide, Certificates, acknowledgment etc 4 copies – University -1 copy – Dept. Library 1 copy – PG Guide - 1 copy – Central Library 1 copy – Self
Binding	Black Color Hard Bind
Embossing	Golden
Page Size	A4 (White – Executive Bond Paper)
Margin	Left-1.5”/ Right-0.8”/ Top-1”/ Bottom-1”
Line Spacing	1.5”
Typing	On One side of paper only
Heading	Font-Times new Roman/ size-14 (Bold) UPPER CASE
Sub. Heading	Font-Times New Roman/ Size-12 (Bold) UPPER CASE
Text (Body)	Font- Times new Roman/ Size-12 (Normal) Lower Case

2) The cover page should be followed by-

- a) Certificate issued by the PG Guide countersigned by the HOD (if PG Guide is not a HOD) and also countersigned by the Dean of the Medical College.
- b) Acknowledgement by student
- c) Contents.

3) Contents should include-

- a) Introduction.
- b) Aims and objectives.
- c) Including other relevant material like anatomical, Physiological, Pharmacological description, if applicable.
- d) Review of literature.
- e) Material and Methods.
- f) Observations.
- g) Discussion.
- h) Summary and conclusions.
- i) Bibliography.
- j) Annexure.

- Annexures should include attachments like consent form, proformas, list of abbreviations & Master chart.
- Any additional material, suitable photographs, graphs, bar diagrams, etc. should be included wherever necessary and applicable.
- Review of Literature should be written in chronological order viz. the reference with the oldest year or date should come as first and followed by chronology.
- References should be written in Vancouver format i.e. name of the author, up to six authors with their initials, title of the paper followed by name of the journal, year of the journal, volume and page nos. If the reference is taken from a book then name of the author with initials, name of the chapter, title of the book from which the reference is taken, followed by edition no., followed by name of the editor, name of the publisher, place of publication, year of publication, followed by page nos. Bibliography to be written in the order of the appearance of references starting from introduction - numbered and onwards followed by the numerical references in their order of appearance and not alphabetically.