SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH
(A Deemed to be University Declared under Section 3 of UGC Act, 1956)
Comprising Sri DevarajUrs Medical College
[Constituent Unit of Sri DevarajUrs Educational Trust for Backward Classes (Regd.)]
TAMAKA, KOLAR-563103, KARNATAKA, INDIA
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(With effect from 2019-2020 batches)

Competency Based Postgraduate Curriculum for Doctor of Medicine General Medicine

Dean Faculty Of Medicine
Sri Devaraj Urs Academy of Higher
Education & Research, Tamaka, Kolar.

Approved as per BOM-56-2019, (Resolution No-LVI.06) Dated-20/12/2019

REGULATIONS GOVERNING

POST GRADUATE DEGREE PROGRAMMES

CURRICULUM 2019-2020

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

Comprising Sri Devaraj Urs Medical College

A Deemed To Be University

Declared under section 3 of UGC, Act,1956,
MHRD GOI NO.F,9-36/2006-U.3(A), Dt.25th may 2007
Post box No.62, Tamaka, Kolar-563101, Karnataka, INDIA
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REGULATIONS AND CURRICULA
FOR
POST GRADUATE DEGREE PROGRAMMES
IN
MEDICAL SCIENCES
2019-2020

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VISION:

"UNIVERSITY OF EXCELLENCE - KNOWLEDGE FOR POSTERITY"

MISSION:

1. To be a global centre of excellence for Teaching, Training and Research in the field of Higher education.
2. To inculcate scientific temper, research attitude and social accountability amongst faculty and students.
3. To promote with value based education for the overall personality development and leadership qualities to serve the humanity.

OBJECTIVES:

1. To provide need based infrastructure and facilities to students to become responsible professionals with social commitment and accountability.
2. To implement effectively innovative programs in teaching learning and evaluation.
3. To impart scientific and socio cultural temperament among students to forge national identity and needs.
4. To provide instruction and training in Basic and advanced branches of learning.
5. To provide facilities for research for the advancement and dissemination of knowledge.
6. To undertake extra mural studies, consultancy, extension programmes and field outreach services for the development of society.
7. To collaborate with other Universities, Institutions of excellence and research organizations within the country and outside for the purpose of teaching, training and research.
8. To undertake need based activities for the betterment of socially and educationally backward society.

At a glance this logo is abstract, yet it contains the vital ingredients for an institution like Sri Devaraj Urs Academy of Higher Education and Research, Tamaka, Kolar.

The institution's medical background, Humanitarian values, Compassion,

Approachability, Social Commitment and the subsequent research towards the most precious thing, the human life, is the core theme.

The graphic form of a person in the centre of a bud represents the humanity. It denotes the growing process of life and its existence. And the two hands safeguarding them show the care and a sense of security. It is also capable of holding something within the vast expanse of knowledge by the University for the People's benefit. Hence, the motto "Knowledge for Posterity" is very appropriate and gives a punch in Red. The four light blue half circles (smaller to bigger) depict the unending quest for knowledge and imparting it to a wider horizon, growing higher and higher.
And finally, the whole unit is embedded in a "D" shaped graphic template as background to give it a corporate identity.

COLORS USED:

Deep Blue: Credible, Confident and Dependable. Represents Peace, Tranquility, Stability, Harmony, Trust, Security, Cleanliness and Loyalty

Light Blue: For Sky and Water (color scheme for 4 half circles)

Red: A dominant color for strengths.

Green: For Nature, Health and Generosity. It is cool quality soothes and has great healing powers

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No. SDUAHER/KLR/ADMN/1322/2020-21 Date:12/10/2020

NOTIFICATION

Sub: Regulations, curricula and syllabi of Postgraduate medical degree programmes in Preclinical, Paraclinical and clinical subjects- reg

Ref.

I. **Proceedings of the Academic Council meetings**
II. **Proceeding of the Board of Management meetings**
III. **MCI notifications**
IV. **SDUAHER notification:**

Academic Council Meetings		**Board of Management Meetings**	
19th	17.11.2014	34th	19.06.2015
21st	25.04.2015	36th	04.12.2015
22nd	18.11.2015	44th	23.06.2017
27th	29.04.2017	45th	09.11.2017
28th	04.11.2017	48th	20.06.2018
30th	05.05.2018	50th	22.12.2018
31st	03.11.2018	54th	06.07.2019
33rd	04.06.2019	56th	20.12.2019
34th	15.11.2019	59th	09.10.2020
36th	30.09.2020		

Agenda discussed:

- Objectives of external postings of Post Graduates
- Internal & External postings of PG's with assessment tools
- Minimum marks to be scored in PG theory examinations
- Topics to be included in Forensic medicine and toxicology in paper 4 for PG students
- Work placed based assessment for PG students
- Introduction of Assessment of AETCOM in formative/summative assessment
- Design and development of E-portfolio for all PG's
- Patient handover as common EPA for all departments
- Preparation of Question paper from question bank using software

- Coding of answer booklet by software enabled barcoding
- Development of CBME in PG programmes
- Quarterly formative assessment as an assessment tool for all PGs
- Start course in MD psychiatry
- Implement E- Portfolio of PG's
- Discontinuation of practice for 5th evaluation in PG exam
- Post graduate training programme MCI-PG Medical Education Regulations 2000, amended upto May 2018
- Approval of EPA's as competency based medical training for PG's
- Work placed based assessment as part of quarterly assessment for PG's
- PLO's for all programmes

V. MCI Notifications

- MCI Notification dated 09-12-2009, vide No.MCI.18(1)/2009-Med.55455
- No. MCI-23(1)/2014/Med/153433 Dated 28-01-2015
- MCI Guidelines 2017(CBME based)
- MCI postgraduate medical education regulations 2000 amended upto 2018
- (clause 13.2,gazette notification dated 05/04/2018)
- Basic Programme in Biomedical Research(MCI-23(1)/2019-Med./141602 dated 27-08-2019).
- MCI-12(2)/2019-Med.Misc./189334.- Dated:12th February 2020
- MCI-18(1)/2020-Med./121415.-date 16/09/2020- (District Residency Programme' (DRP)

VI. Office Memorandum No. SDUAHER / KLR/ ADMN /8071/2019- 20 Dated 22/06/2019

VII. SDUAHER / KLR/ ADMN /1571/2019-20 dated 12/09/2019

REGULATIONS FOR POST GRADUATE DEGREE PROGRAMME IN MEDICAL SCIENCES

CHAPTER- I

1. Branches of Study

1.1 Postgraduate Degree Programme
The following programmes may be pursued.

A. M.D. (Doctor of Medicine)

1. Anatomy
2. Physiology
3. Biochemistry
4. Pharmacology
5. Pathology
6. Microbiology
7. Forensic Medicine
8. Community Medicine
9. General Medicine
10. Dermatology, Venereology and Leprosy
11. Anesthesiology
12. Paediatrics
13. Radio-Diagnosis
14. Psychiatry

B. M.S. (Master of Surgery)

1. General Surgery
2. Obstetrics and Gynecology
3. Orthopedics
4. Ophthalmology
5. OTO-Rhino-Laryngology

1.2. Eligibility for Admission

1.2.1 MD / MS Degree Programme: A candidate affiliated to this academy and who has passed final year M.B.B.S. examination after pursuing a study in a medical college recognised by the Medical Council of India, from arecognised Medical College affiliated to any other Academy recognised as equivalent thereto, and has completed one year compulsory rotating internship in a teaching Institution or other Institution recognised by the Medical Council of India, and has obtained permanent registration of any State Medical Council will be eligible foradmission.

1.2.2 A Candidate seeking admission should have successfully cleared the qualifying examination – NEET (National Eligibility cum Entrance Test) conducted by NBE (National Board of Examination).

1.3. Obtaining Eligibility Certificate by the Academy before making Admission

No candidate will be admitted for any postgraduate degree programme unless the candidate has obtained and produced the eligibility certificate issued by the Academy. The candidate has to make an application to the Academy with the following documents along with the prescribed fee:

1. S.S.L.C Marks card
2. 10+2 Certificate
3. All MBBS Marks Cards
4. Internship Completion Certificate
5. Attempt / Academic certificate
6. Degree Certificate
7. Transfer Certificate
8. Migration Certificate
9. Study/Bonafide Certificate
10. Character & Conduct certificate
11. MCI Recognisized Certificate by college
12. Karnataka Medical Council/State medical council
13. MCC Allotment Letter
14. NEET Admission Ticket
15. NEET Rank card
16. Caste (SC/ST) /OBC certificate (domicile) & Income Certificate
17. Aadhar card of both candidate and parents / sponsors
18. Bond for SR Ship
19. Remaining years fee bond

NOTE: The NRI/NRI Sponsor students have to submit the documents as per the MCC/DGHS Criteria for NRI status

Candidates should obtain the Eligibility Certificate before the last date for admission as notified by the Academy.

A candidate who has been admitted to postgraduate programme should register his / her name in the Academy within a month of admission after paying the registration fee.

1.4. Intake of Students

The intake of students to each programme will be in accordance with the ordinance in this behalf.

1.5. Duration of Study

a) M.D /M.S Degree Programme

The programme of study will be for a period of 3 years consisting of 6 academic terms.

1.6. Method of training

The training of postgraduate for degree will be residency pattern with graded responsibilities in the management and treatment of patients entrusted to his/her care. The participation of the students in all facets of educational process is essential. Every candidate should participate in seminars, group discussions, grand rounds, case demonstration, clinics, journal review meetings, CPC and clinical meetings. Every candidate should participate in the teaching and training programme of undergraduate students. Training includes involvement in laboratory and experimental work and research studies.

1.6.1. Teaching methodology

1.6.1.1 Includes Didactic lectures, small group discussion such as seminars, journal clubs, symposia, reviews and guest lectures for acquiring theoretical knowledge.

1.6.1.2 Bedside teaching, grand rounds, structured interactive group discussions and clinical demonstrations should be the hallmark of clinical/practical learning with appropriate emphasis on e-learning. Student should have hand-on training in performing various procedures and ability tointerpret varioustests/investigations.

1.6.1.3 Exposure to newer specialized diagnostic/therapeutic procedures concerning her/his subject should be given.

1.6.4 Self-learning tools like assignments and case-based learning should be promoted.

1.6.2. Clinical postings and Rotation of posting

Basic medical sciences students will be posted to allied and relevant clinical departments or institutions. Students working in clinical departments will be posted to basic medical sciences and allied speciality departments or institutions. It should be done as concurrent studies during the 1st year of training Similarly Inter-unit rotation in the department should be done for a period of up to one year. Rotation in appropriate related subspecialties **should not extend for a period exceeding 06 months.** Postings to other specialty departments will be during the second year.

All postgraduates' students pursuing MD/MS in broad specialities shall undergo a compulsory residential rotation of three months in District Hospital / District Health system as a part of the course curriculum. Such rotation shall take place in the 3rd or 4th or 5th semester of the postgraduates programme. This rotation shall be termed as District residency programme and the postgraduate medical student undergoing training shall be termed as a District Resident.

Satisfactory completion of the District Residency shall be an essential condition before the candidate is allowed to appear in the final examination of the respective postgraduate course. The District Residency Programme Coordinator (DRPC) shall issue certificate of satisfactory completion of DRP and report on the performance of the District Resident on a prescribed format to the concerned Medical College and the Government of State/Union Territory. No. MCI-18(1)/2020-Med./121415.—date16/09/2020

1.6.3. Clinical meetings:

Clinical meetings will be conducted within the department weekly and also inter departmental meetings will be conducted monthly to discuss uncommon/interesting cases.

1.6.4 Log book:

Each student should maintain a logbook and document day to-day activities like documentation of ward work, teaching and learning activities , clinical case discussion, procedures performed , seminars, journal clubs, symposium ,CPC meets, inter-unit/interdepartmental teaching sessions, mortality meets, workshops, CME/conferences .The Log books will be checked and assessed periodically by the faculty members imparting the training. This will in turn be evaluated/assessed by an external reviewer appointed by the Director of PG Studies biannually during the months of July and January. The log book should be preserved and presented at the time of summative examinations conducted by the Academy.

1.6.5 Research activities:

1.6.5.1 The student should know the basic concepts of research methodology plan a research project and be able to retrieve information from the library. The student should have a basic knowledge of statistics.

1.6.5.2 A postgraduate student of a postgraduate degree programme in broad specialities should present one poster presentation, read one paper at a national/state conference and publish one research paper which should be published /accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination. MCI Notification No.18(1)/2009/ medicine/55455 Dated:09-12-2009

1.6.5.3 Department should encourage e-learning activities.

1.6.6 Basic Programme in Biomedical Research:

In order to improve the research skills of post-graduate students, the Board of Governors (BoG) has recommended a uniform research methodology programme across the country, the online programme, "Basic programme in Bio-medical Research", will be offered by ICMR-National Institute of Epidemiology (ICMR-NIE), Chennai (www.nie.gov.in). The programme will explain fundamental concepts in

Research methodology. This programme is being offered through SWAYAM programme of ministry of human resource development through SWAYAM NPTEL (http://swayam.gov.in/nc details/NPTEL)

1.6.7 Synopsis and Dissertation:

Every candidate will submit to the Registrar of the Academy in the prescribed proforma, a synopsis containing particulars of proposed dissertation work within six months from the date of commencement of the programme on or before the dates notified by the Academy. The synopsis will be sent through the properchannel.

Such synopsis will be reviewed and the dissertation topic will be registered by the Academy. No change in the dissertation topic or guide will be made without prior approval of the Academy.

Every candidate pursuing MD/MS degree programme is required to carry out work on a selected research project under the guidance of a recognized post graduate teacher. The results of such a work will be submitted in the form of a dissertation.

The dissertation is aimed to train a post graduate student in research methods and techniques. It includes identification of a problem, formulation of a hypothesis, search and review of literature, getting acquainted with recent advances, designing of a research study, collection of data, critical analysis and comparison of results and drawingconclusions.

The dissertation should be written under the following headings:

- Introduction
- Aims or Objectives of study
- Review of Literature
- Material and Methods
- Results
- Discussion
- Conclusion
- Summary
- References
- Tables
- Annexures

The written text of dissertation will be not less than 50 pages and will not exceed 150 pages excluding references, tables, questionnaires and other annexures. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should be avoided. The dissertation will be certified by the guide, Head of the department and Head of theInstitution.

Six hard copies of dissertation and one soft copy thus prepared will be submitted to

the Controller of Examination (CoE), six months before final examination on or before the dates notified by the Academy.

The dissertation will be valued by examiners appointed by the Academy. Approval of dissertation work is an essential precondition for a candidate to appear in the Academy examination.

Guide: The academic qualification and teaching experience required for recognition by this Academy as a guide for dissertation work is as per Medical Council of India, Minimum Qualifications for Teachers in Medical Institutions Regulations, 1998. Teachers in a medical college/institution having a total of eight years teaching experience out of which at least four years teaching experience as Assistant Professor with at least one research publication in indexed journals gained after obtaining post graduate degree will be recognized as post graduate teachers. (No.MCI- 12(2)/2019-Med.Misc./189334.- Dated: 12th February 2020)

Co-guide: may be included provided the work requires substantial contribution from a sister department or from another medical institution recognized for teaching/training by Sri Devaraj Urs Academy /Medical Council of India. The co- guide will be a recognized post graduate teacher of Sri Devaraj Urs Academy.

Change of guide: In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the academy.

1.6.8 Journal Club:

Journal club will be conducted once a week. All the PG students are expected to attend and actively participate in discussion and enter the relevant details in the log book. Further, every candidate must make a presentation from the allotted journal(s), selected articles, at least four times a year and a total of 12 presentations in three years. The presentations would be evaluated using check lists and would carry weightage for internal assessment (See checklist - I in Chapter V). A time table with names of the student and the moderator should be announced periodically, (Quarterly).

1.6.9 Subject Seminar:

Subject seminar will be conducted once a week. All the PG students are expected to attend and actively participate in discussion and enter the relevant details in the log book, Further, every candidate must present selected topics at least four times a year and a total of 12 seminar presentations in three years. The presentations would be evaluated using check lists and would carry weightage for internal assessment (See checklist-II in Chapter V). A timetable for the subject with names of the student and the moderator should be announced periodically, (Quarterly).

1.6.10 Student Symposium:

Student Symposium as an additional inter departmental programme will be conducted periodically, once in three months. The evaluation may be similar to that described for subject seminar.

1.6.11 Ward Rounds:

Ward rounds are service or teaching rounds.

i. ***Service Rounds:*** Postgraduate students and Interns will do every day for the care of the patients. Newly admitted patients should be worked up.by the PGs and presented to the seniors the following day.

ii. ***Teaching Rounds:*** Every unit will have 'grand rounds' for teaching purpose.
A diary should be maintained for day to day activities by the students.
Entries of (i) and (ii) should be made in the Log book.

1.6.12 Clinico-Pathological Conference:

CPC will be conducted once in two months for all post graduate students. Presentation will be done by rotation. If cases are not available due to lack of clinical postmortems, it could be supplemented by published CPCs.

1.6.13 Inter Departmental Meetings:

These will be conducted once a month. These meetings will be attended by post graduate students and relevant entries must be made in the Log Book.

1.6.14 Teaching & Learning Skills:

Post graduate students must teach under graduate students (Eg. medical, nursing) by taking demonstrations, bed side clinics, tutorials, lectures etc.

Assessment is made using a checklist by surgery faculty as well as students. (See model checklist -III in Chapter V). Record of their participation should be documented in the Log book. Training of post graduate students in Educational Science and Technology is recommended.

Further, all postgraduate students are required to attend at least about 35 hours of didactic lecture as notified by the individual departments.

1.6.15 Entrustable Professional Activity:

EPAs are units of professional practice, defined as tasks or responsibilities to be entrusted to the unsupervised execution by a trainee once he or she has attained sufficient specific competence. EPAs are independently executable, observable, and measurable in their process and outcome, and therefore, suitable for entrustment decisions. The Entrustable professional activity (EPA) concept allows faculty to make competency-based decisions on the level of supervision required by trainees. The Academy has identified few such EPA's for all students in various degree programme. These are:

1. EPA 1: Gather a history and perform a physical examination

2. EPA 2: Prioritize a differential diagnosis following a clinical encounter
3. EPA 3: Recommend and interpret common diagnostic and screening tests
4. EPA 4: Obtain informed consent for tests and / or procedures
5. EPA 5: Recognize a patient requiring urgent or emergent care and initiate evaluation and management
6. EPA 6: Give or receive a patient handover to transition care responsibility
7. EPA 7: Undertake complete patient monitoring including the preoperative and post-operative care of the patient.
8. EPA 8: Provide basic and advanced lifesaving support services in emergency situations
9. EPA 9: Collaborate as a member of an inter-professional team
10. EPA 10: Perform general procedures of a physician
11. EPA 11: Enter and discuss orders and prescriptions
12. EPA 12: Prepare a comprehensive discharge summary.
13. EPA 13: Form clinical questions and retrieve evidence to advance patient care.

However in addition to these common EPA's individual departments are advised to develop their own EPA's.

1.7. Continuing Medical Education (CME):

Every PG student must attend at least 2 CME programes either at state/regional /zonal/national levels.

1.8. Conferences:

Attending conferences is optional. However it has to be encouraged. All students are encouraged to attend conferences (at state/national/international levels) to enable them to make paper/poster presentations, which is a mandatory requirement to fulfill before appearing for final examinations.

1.9. Attendance, Progress and Conduct:

- A candidate pursuing degree programme will work in the concerned department of the institution for the full period as a full time student. No candidate is permitted to run a clinic/laboratory/nursing home while studying postgraduate programme.
- Academic term of 6 months will be taken as a unit for the purpose of calculating attendance. The candidate should have 80% attendance in each academic term of 6 months.

- Every student will attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons.
- Every candidate is required to attend a minimum of 80% of the training during each academic term of the post graduate programme. Provided further, leave of any kind will not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.
- All the candidates joining the Post Graduate training programme will work as 'Full Time Residents' during the period of training and will attend not less than 80% (Eighty percent) of the imparted training during each academic term. Including assignments, full time responsibilities and participation in all facets of the education process.
- Any student who fails to complete the programme in the manner stated above will not be permitted to appear for the Academy Examinations.
- A Postgraduate student of a postgraduate degree programme would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published / accepted for publication/sent for publication during the period of postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
  Ref: As MCI Notification dated 09-12-2009, vide No.MCI.18 (1)/2009- Med.55455 and Para No.4.

Procedure for defaulters:

Every department will have a committee containing Head of the department and PG guides to review such situations. The defaulting candidate is counseled by the guide and head of the department. In extreme cases of default the departmental committee may recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfill the, requirements in spite of being given adequate chances to set himself or herself right.

2 Monitoring Progress of Studies:

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring will be done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects. Checklists are given in Chapter V.

The learning out comes to be assessed should include:

- Personal Attitudes,
- Acquisition of Knowledge,
- Clinical and operative skills,
- Teaching skills and
- Dissertation.

a. Personal Attitudes:

The essential items are:

- Caring attitudes
- Initiative
- Organisational ability
- Potential to cope with stressful situations and undertake responsibility
- Trustworthiness and reliability
- To understand and communicate intelligibly with patients and others
- To behave in a manner which establishes professional relationships with patients and colleagues
- Ability to work in team
- A critical enquiring approach to the acquisition of knowledge

The methods used mainly consist of observation. It is appreciated that these items require a degree of subjective assessment by the guide, supervisors, self, peers, faculty from the unit and nurses. (Multi source feedback MSF)checklistXII

b. Acquisition of Knowledge:

The methods used comprise of

2.1 Log book: (Check List – XIII Chapter – V)

'Log Book' which records participation in various teaching / learning activities by the students. The number of activities attended and the number in which presentations are made must be recorded. The log book will periodically be validated by the supervisors. Some of the activities are listed. During the training period, the post graduate student should maintain a Log Book indicating various teaching / learning activities, duration of the postings/work done in Wards including super specialty, OPDs and Casualty. This should indicate the specified number of cases for clinical discussion, procedures and operations observed, assisted and performed /presented seminars and review articles from various journals in inter- unit/inter departmental teaching sessions.

The purpose of the Log Book is to:

- Help maintain a record of the work done during training,
- Enable Consultants to have direct information about the work; intervene if necessary,
- Use it to assess the experience gained periodically.

The log book will be used to aid the internal evaluation of the student.
The Log books will be checked and assessed periodically, monthly basis by guide / head of the unit/ head of the department and biannually by external reviewer.

Procedure for defaulters:
Every department will have a committee to review such situations. The "defaulting candidate is counseled by the guide and head of the department. In extreme cases of default the departmental committee will recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfill the requirements in spite of being given adequate chances to set himself or herself right

2.2 Journal Review Meeting (Journal Club):
The ability to do literature search, in depth study, presentation skills, and use of audio-visual aids are to be assessed. The assessment is made by faculty members and peers attending the meeting using a checklist (see Model Checklist -I, in Chapter V)

2.3 Seminars / Symposia:
The topics will be assigned to the student well in advance to facilitate in depth study. The ability to do literature search, in depth study, presentation skills and use of audio- visual aids will be assessed using a checklist (see Model Checklist -II, Chapter V)

2.4 Clinico'-Pathological conferences:
This will be a multidisciplinary case study of an interesting case to train the candidate to solve diagnostic and therapeutic problems by using an analytical approach. The presenter(s) are to be assessed using a check list similar to that used for seminar.

2.5 Surgical Audit:
Periodic morbidity and mortality meeting must be held. Attendance and participation in these must be insisted upon. This may not be included in assessment.

2.6 Clinical skills
Day to Day work: Skills in outpatient and ward work will be assessed periodically. The assessment should include the candidates' sincerity and punctuality, analytical ability and communication skills (see Model Checklist -V, Chapter V). – Mini CEX (Model check list VII, Chapter V)

2.7 Clinical meetings (Clinical Presentations :) *:*
Candidates should periodically present cases to his peers and faculty members. This should be assessed using a check list (see Model checklist V, Chapter V).

2.8 Clinical and Operative skills:

The candidate will be given graded responsibility to enable learning by apprenticeship. The performance is assessed by the guide by DOPS (Model check list VI, Chapter V). Particulars are recorded by the student in the log book.

2.9 Teaching skills:

Post graduates are required to teach undergraduate medical students and paramedical students, if any *(as a part of Post graduate training)*. This performance should be based on assessment by the faculty members of the department and from feedback from the undergraduate students (See Model checklist III, Chapter V) - Microteaching Pedagogy (Model check list VIII, Chapter V)

2.10 Dissertation in the Department:

Periodic presentations must be made in the department. Initially the topic selected is to be presented before submission to the Academy for registration and again before finalization for critical evaluation and before final submission of the completed work (See Model Checklist IX & X, Chapter V)

2.11 Periodic tests:

The concerned departments will conduct quarterly tests. The final test will be held three months before the final examination. The tests may include written papers, practical's / clinical and viva voce. Records and marks obtained in such tests will be maintained by the Head of the Department and sent to the Academy, when called for.

2.12 Work diary / Log Book-

Every candidate will maintain a work diary and record his/her participation in the training programmes conducted by the department such as journal reviews, seminars, etc. Special mention must be made of the presentations by the candidate as well as details of clinical or laboratory procedures, if any conducted by the candidate.

2.13 Records:

Monthly and quarterly reviews of records, log books and marks obtained in tests will be maintained by the Head of the Department and will be made available to the Academy, when called for.

3. ASSESSMENT:

3.1 Formative Assessment

It is essential to monitor the learning progress of each candidate through **continuous appraisal and regular assessment.** It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring to be done by the staff of the department based on participation of students in various teaching /learning

activities. It may be structured and assessment be done using checklists that assess, various aspects. This includes assessment of patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system.

Checklists are given in Chapter-V

Assessment during the MS/MD training should be based on:

Assessment at end of rotation (Quarterly Postgraduate Student's Appraisal Form) by the Unit Head. The student to be assessed periodically as per categories listed in **Postgraduate Student Appraisal Form** (See Model checklist-X, Chapter V).

Multisource Feedback (MSF) – Quarterly

MSFs should be obtained quarterly from:- 2 from faculty of the unit/department; 2 from peers posted in the unit; 2 from interns,2 from staff nurses from the areas attached to the unit,2 from patient/patient relative. (Checklist XII – Chapter V)

Periodic assessment –The Quarterly tests may include written papers (theory), practical's / clinical and viva voce.

Quarterly Postgraduate Student's Appraisal Form (See Model checklist-X I, Chapter V).

- Journal based/ recent advances learning
- Patient based or Skill based learning
- Self-directed learning and teaching
- Departmental & interdepartmental learning activity
- External & Outreach activities/ Continuing Medical Education (CME)
- Attendance, Progress and Conduct

A candidate pursuing degree programme should work in the concerned department of the institution for the full period as a full time student. No candidate is permitted to run a clinic/laboratory/nursing home while studying postgraduateprogramme.

Academic term of 6 months will be taken as a unit for the purpose of calculating attendance. Every student will attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons.

Every candidate is required to attend a minimum of 80% of the training during each academic term of the post graduate programme. Provided further, leave of any kind will not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.

All the candidates joining the Post Graduate training programme will work as 'Full Time Residents' during the period of training and will attend not less than 80% (Eighty percent) of the imparted training during Academic Term of 6 months including assignments, full time responsibilities and participation in all facets of the education process.
Any student who fails to complete the programme in the manner stated above will not be permitted to appear for the Academy Examinations.

A Postgraduate student of a postgraduate degree programme in broad specialities/super specialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published / accepted for publication/sent for publication during the period of postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
Ref: As MCI Notification dated 09-12-2009, vide No.MCI.18 (1)/2009-Med.55455 and Para No.4.

Procedure for defaulters:

Every department should have a committee containing Head of the department and PG guides to review such situations. The defaulting candidate is counseled by the guide and head of the department. In extreme cases of default the departmental committee may recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfill the, requirements in spite of being given adequate chances to set himself or herself right.

3.2 Scheme of examinations

Summative assessment

The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000 and amended up to 2018. (The Clause 14 under the heading "EXAMINATION" shall be substituted in terms of Gazette Notification published on 05.04.2018).
The examination will be in three parts:

3.2.1 DISSERTATION

Every post graduate student will carry out work on an assigned research project under the guidance of a recognized Post Graduate Teacher, the result of which will be written and submitted in the form of a dissertation. Work for writing the dissertation is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature. Dissertation will be submitted at

least six months before the Theory and Clinical / Practical examination. The dissertation will be examined by a minimum of three examiners; one internal and two external examiners, who will not be the examiners for Theory and Clinical examination. A candidate will be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the dissertation by the examiners.

3.2.2. THEORY

There will be four question papers, each of three hours duration. Each paper will consist of ten questions each question carrying 10 marks, so the total marks for each paper will be 100. Questions on recent advances maybe asked in any or all the papers. The examinations will be organised on the basis of 'Grading'or 'Marking system' to evaluate and to certify candidate's level of knowledge, skill and competence at the end of the training. The Clause 14 under the heading "EXAMINATION" shall be substituted in terms of Gazette Notification published on 05.04.2018 and the same is as under:-

Obtaining a minimum of 40% marks in each theory paper and not less than 50% cumulatively in all the four papers for degree examinations and three papers in diploma examination. Obtaining of 50% marks in Practical examination shall be mandatory for passing the examination as a whole in the said degree/diploma examination as the case may be. Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical' separately will be mandatory for passing examination as a whole. The examination for MS/MD will be held at the end of 3rd academic year.

3.2.3. Clinical / Practical and viva voce Examination

Clinical examination will be conducted to test the knowledge, skills, attitude and competence of the post graduate students for undertaking independent work as a specialist/Teacher, for which post graduate students will examine a minimum one long case and two short cases.

The Oral examination will be thorough and will aim at assessing the post graduate student's knowledge and competence about the subject, investigative procedures, therapeutic technique and other aspects of the specialty, which form a part of the examination.

Assessment may include Objective Structured Clinical Examination (OSCE) Oral/Viva-voce examination needs to assess knowledge on X-rays, instrumentation, operative procedures. Due weightage should be given to Log Book Records and day to-day observation during the training.

ALLOTMENT OF MARKS

THEORY	MARKS ALLOTMENT	MAXIMUM MARKS	
PAPER-I	10 X 10	100	400
PAPER-II	10 X 10	100	
PAPER-III	10 X 10	100	
PAPER-IV	10 X 10	100	

CLINICALS/ PRACTICALS		200
VIVA VOCE	80	100
PEDAGOGY	20	
TOTAL		**700**

3.2 Examiners:

There will be at least four examiners in each subject. Out of them two will be external examiners and two will be internal examiners. The qualification and teaching experience for appointment as an examiner will be as laid down by the Medical Council of India. No person will be appointed as internal examiner in any subject unless he/she has three years' experience as recognized PG teacher in the concerned subject. For external examiners he/she should have minimum six years of experience as recognized PG teacher in the concerned subject.

3.2.4 Criteria for declaring as pass in Academy Examination:

A candidate should score minimum 40% marks in each theory paper and not less than 50% marks cumulatively in all the papers in postgraduate degree/diploma, to be declared as pass in the examinations. A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical including clinical and viva voce examination. A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. (No. MCI-23(1)/2014/Med/153433 Dated 28-01-2015) A failed candidate may appear in any sub-sequent examination upon payment of fresh fee to the Registrar of the University.

3.2.5* Declaration of distinction*:

A successful candidate passing the Academy examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate marks are 75 percent and above. Distinction will not be awarded for candidates passing the examination in more thanone attempt.

3.2.6 Number of Candidates per day.

The maximum number of candidates for practical/clinical and viva-voce examination will be as under: MD / MS Programme: Maximum of 8 per day

4. ELIGIBILITY CRITERIA FOR APPEARING FOR EXAMINATIONS 4.1 ATTENDANCE

All the candidates joining the Post Graduate training programme will work as 'Full Time Residents' during the period of training and will attend not less than 80% (Eighty percent) of the imparted training during Academic Term of 6 months including assignments, full time responsibilities and participation in all facets of the education process.

- Every student will attend all teaching programmes during each year as prescribed by the department and not absent himself / herself from work without valid reasons
- Every candidate is required to attend a minimum of 80% of the training during each academic year of the post graduate programme. Provided further, leave of any kind will not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.
- Any student who fails to complete the programme in the manner stated above will not be permitted to appear for the Academy Examinations.

4.2. PROGRESS AND CONDUCT

- Every student will attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, case presentation, clinics and lectures during each term as prescribed by the department and not absent himself / herself from work without valid reasons.
- Every candidate is required to attend a minimum of 80% of the training during each academic term of the post graduate programme. Provided further, leave of any kind will not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.

4.3. RESEARCH ACTIVITIES-PAPER/POSTER/PUBLICATIONS

- A Postgraduate student of a degree programme in broad speciality would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published / accepted for publication/sent for publication during the period of postgraduate studies so as to make him eligible to appear at the postgraduate degree examination. Ref: As MCI Notification dated 09-12-2009, vide No.MCI.18 (1)/2009-Med.55455 and Para No.4.
- It is mandatory for all postgraduate students to undergo training in online programme in "Basic Programme in Biomedical Research" Which should be completed by the end of second semester .Not completing the programme will make them ineligible for appearing for the final academy examinations.(MCI-23(1)/2019-Med./141602 dated 27-08-2019).

4.4 DISSERTATION

Every post graduate student will carry out work on an assigned research project under the guidance of a recognised Post Graduate Teacher, the result of which will

be written and submitted in the form of a dissertation. Dissertation will be submitted at least six months before the Theory and Clinical / Practical examination. The dissertation will be examined by a minimum of three examiners; one internal and two external examiners, who will not be the examiners for Theory and Clinical examination. A candidate will be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the dissertation by the examiners.

4.5 District Residency Programme

All postgraduates students pursuing MD/MS in broad specialties shall undergo a compulsory residential rotation of three months in District Hospital / District Health system as a part of the course curriculum. Such rotation shall take place in the 3rd or 4th or 5th semester of the postgraduates programme. This rotation shall be termed as District residency programme and the postgraduate medical student undergoing training shall be termed as a District Resident.

Satisfactory completion of the District Residency shall be an essential condition before the candidate is allowed to appear in the final examination of the respective postgraduate course. The District Residency Programme Coordinator (DRPC) shall issue certificate of satisfactory completion of DRP and report on the performance of the District Resident on a prescribed format to the concerned Medical College and the Government of State/Union Territory. No. MCI-18(1)/2020-Med./121415.—date 16/09/2020

Procedure for defaulters:

Every department should have a committee containing Head of the department and PG guides to review such situations. The defaulting candidate is counseled by the guide and head of the department. In extreme cases of default the departmental committee may recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfill the, requirements in spite of being given adequate chances to set himself or herself right.

CHAPTER II

GOALS AND GENERAL OBJECTIVES OF POSTGRADUATE MEDICAL EDUCATION PROGRAM

GOALS:

The goal of postgraduate medical education will be to produce a competent specialist and /or a medical teacher:

i. Who will recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy;
ii. Who will have mastered most of the competencies, relating to the specialty, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system:
iii. Who will be aware of the contemporary advances and developments in the discipline concerned;
iv. Who will have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology; and
v. Who will have acquired the basic skills in teaching of the medical and paramedical professionals.

GENERAL OBJECTIVES:

At the end of the postgraduate training in the discipline concerned the student will be able to:

i. Recognize the importance of the concerned specialty in the context of the health need of the community and the national priorities in the health sector.
ii. Practice the specialty concerned ethically and in step with the principles of primary health care.
iii. Demonstrate sufficient understanding of the basic sciences relevant to the concerned specialty.
iv. Identify social, economic, environmental, biological and emotional determinants of health in a given case, and lake them into account while planning therapeutic, rehabilitative, preventive and promotive measures/strategies.
v. Diagnose and manage majority of the conditions in the specialty concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.
vi. Plan and advice measures for the prevention and rehabilitation of patients suffering from disease and disability related to the specialty.
vii. Demonstrate skills in documentation of individual case details as well as morbidity and mortality data relevant to the assigned situation,
viii. Demonstrate empathy and humane approach towards patients and their families and exhibit interpersonal behavior in accordance with the societal norms and expectations.
ix. Play the assigned role in the implementation of national health programmes, effectively and responsibly.

x. Organize and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation.
xi. Develop skills as a self-directed learner, recognize continuing educational needs; select and use appropriate learning resources.
xii. Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyse relevant published research literature.
xiii. Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.
xiv. Function as an effective leader of a health team engaged in health care, research or training.

STATEMENT OF THE COMPETENCIES

Keeping in view the general objectives of postgraduate training, each disciplines will aim at development of specific competencies, which will be defined and spelt out in clear terms. Each department will produce a statement and bring it to the notice of the trainees in the beginning of the programme so that he or she can direct the efforts towards the attainment of these competencies.

COMPONENTS OF THE PG CURRICULUM

The major components of the PG curriculum will be:

- Theoretical knowledge
- Practical/clinical Skills
- Training in Thesis.
- Attitudes, including communication.
- Training in research methodology.

Source: Medical Council of India, Regulations on Postgraduate Medical Education, 2006 and 2008.

COMPETENCY BASED POSTGRADUATE TRAINING PROGRAMME FOR M.D. GENERAL MEDICINE

Undertaking:

The postgraduate students have to undertake that they have read the regulations put forward by the institution and follow it.

Preamble:

The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training. The competency based training programme aims to produce a post-graduate student who after undergoing the required training should be able to deal effectively with the needs of the community and should be competent to handle all problems related to his/her specialty including recent advances. The student should also acquire skill in teaching of medical/para-medical students in the subject that he/she has received his/her training. He She should be aware of his/her limitations. The student is also expected to know the principles of research methodology and modes of accessing literature.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of the Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of “domains of learning” under the heading “competencies”.

Goal:

The clinical rotation is intended to provide opportunity to post graduate student (PG) to the patient care and hands on experience. He/She is expected to acquire skills to be competent clinician in General Medicine. Most importantly, learn to formulate diagnosis, plan diagnostic procedures / investigations and plan rational therapy. Meticulous documentation of patients medical record by PG is encouraged. During this time PG is encouraged to learn the art of lengthy as well as brief presentations.

The PG is rotated through the subspecialty departments during second year of the three years course. This roster is provided to PGs at the entry to the course. One faculty member should be selected by the department and he/she should act as friend, guide, counselor and philosopher for PG throughout the trainingcourse.

The medical post graduate after completion of MD (Gen. Med.) should be able to manage patient independently as a specialist. He should be able to plan and carry out research activity in the field of General Medicine. He should be able to teach under graduate medical student subject of General Medicine.

SUBJECT SPECIFIC OBJECTIVES:

The postgraduate training should enable the student to:

1. Practice efficiently internal medicine specialty, backed by scientific knowledge including basic sciences and skills.
2. Diagnose and manage majority of conditions in his specialty (clinically and with the help of relevant investigations.
3. Exercise empathy and a caring attitude and maintain professional integrity, honesty and high ethical standards
4. Plan and deliver comprehensive treatment using the principles of rational drug therapy

5. Plan and advise measures for the prevention and rehabilitation of patients belonging to his specialty;
6. Manage emergencies efficiently by providing Basic Life Support (BLS) and Advanced Life Support (ALS) in emergency situations
7. Recognize conditions that may be outside the area of the specialty/ competence and refer them to an appropriate specialist
8. Demonstrate skills in documentation of case details including epidemiological data
9. Play the assigned role in the implementation of National Health Programs
10. Demonstrate competence in basic concepts of research methodology and clinical epidemiology; and preventive aspects of various disease states.
11. Be a motivated 'teacher' - defined as one keen to share knowledge and skills with a colleague or a junior or any learner
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
13. Be well versed with his medico-legal responsibilities.
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.
15. The student should be able to recognize the mental condition characterized by self-absorption and reduced ability to respond to the outside world (e.g. Autism), abnormal functioning in social interaction with or without repetitive behavior and/or poor communications, etc.

The intended outcome of a competency based program is a consultant specialist who can practice medicine at a defined level of competency in different practice settings.
i.e. ambulatory (outpatient), inpatient, intensive care and emergency medicine.

No limit can be fixed and no fixed number of topics can be prescribed as course contents. The student is expected to know his subject in depth; however, emphasis should be on the diseases/health problems most prevalent in that area. Knowledge of recent advances and basic sciences as applicable to his/her specialty should get high priority. Competence in skills commensurate with the specialty (actual hands- on training) must be ensured.

SUBJECT SPECIFIC COMPETENCIES

By the end of the course, the student should have acquired knowledge (cognitive domain), professionalism (affective domain) and skills (psychomotor domain) as given below:

A. Cognitive domain

Basic Sciences

1. Basics of human anatomy as relevant to clinical practice e.g. surface anatomy of various viscera, neuro-anatomy, important structures/organs location in different anatomical locations in the body; common congenital anomalies.
2. Basic functioning of various organ-system, control of vital functions, pathophysiological alteration in diseased states, interpretation of symptoms and signs in relation to patho-physiology.
3. Biochemical changes in various metabolic disorders.
4. Common pathological changes in various organs associated with diseases and their correlation with clinical signs; understanding various pathogenic processes and possible therapeutic interventions possible at various levels to reverse or arrest the progress of diseases.
5. Knowledge about various microorganisms, their special characteristics important for their pathogenetic potential or of diagnostic help; important organisms associated with tropical diseases, their growth pattern/life-cycles, levels of therapeutic interventions possible in preventing and/or eradicating the organisms.
6. Knowledge about pharmacokinetics and pharmaco-dynamics of the drugs used for the management of common problems in patients with diseases kidneys/liver etc. which may need alteration in metabolism/excretion of the drugs; rational use of available drugs.
7. Knowledge about various poisons with specific reference to different geographical and clinical settings, Medico legal aspects, diagnosis and management.
8. Research Methodology and Studies, epidemiology and basic Biostatistics.
9. National Health Programmes.
10. Biochemical basis of various diseases including fluid and electrolyte disorders; Acid base disorders etc.
11. Recent advances in relevant basic science subjects.

Systemic Medicine:

1. Preventive and environmental issues, including principles of preventive health care, immunization and occupational, environmental medicine and bioterrorism.
2. Aging and Geriatric Medicine including Biology, epidemiology and neuropsychiatric aspects of aging.
3. ***Clinical Pharmacology*** - principles of drug therapy, biology of addiction and complementary and alternative medicine.

4. ***Genetics*** - overview of the paradigm of genetic contribution to health and disease, principles of Human Genetics, single gene and chromosomal disorders and gene therapy.
5. ***Immunology*** - The innate and adaptive immune systems, mechanisms of immune mediated cell injury and transplantation immunology.
6. ***Cardio-vascular diseases*** - Approach to the patient with possible cardiovascular diseases, heart failure, arrhythmias, hypertension, coronary artery disease, valvular heart disease,congenital heart disease. infective endocarditis, diseases of the myocardium and pericardium and diseases of the aorta and peripheral vascular system,
7. ***Respiratory system*** - approach to the patient with respiratory disease, disorders of ventilation, asthma, Congenital Obstructive Pulmonary Disease (COPD), Pneumonia, occupational lung disorders,pulmonary vascular disorders, cystic fibrosis, obstructive sleep apnoea syndrome and diseases of the chest wall, pleura and mediastinum.
8. ***Nephrology*** - approach to the patient with renal diseases, acid-base disorders, acute kidney injury, chronic kidney disease, tubulo-interstitial diseases, nephrolithiasis, Diabetes and the kidney, obstructive uropathy and treatment of irreversible renal failure. Acid base disorders.
9. ***Gastro-intestinal diseases*** - approach to the patient with gastrointestinal diseases, gastrointestinal endoscopy, motility disorders, diseases of the oesophagus, acid peptic disease, functional gastrointestinal disorders, diarrhea, irritable bowel syndrome, pancreatitis and diseases of the rectum and anus.
10. ***Diseases of the liver and gall bladder*** - approach to the patient with liver disease, acute viral hepatitis, chronic hepatitis, alcoholic and non-alcoholic steatohepatitis, cirrhosis and its sequelae, hepatic failure and liver transplantation and diseases of the gall bladder and bile ducts.
11. ***Haematologic diseases*** - haematopoiesis, anaemias, leucopenia and leucocytosis, myelo-proliferative disorders, disorders of haemostasis and haemopoietic stem cell transplantation.
12. ***Oncology*** - epidemiology, biology and genetics of cancer, paraneoplastic syndromes and endocrine manifestations of tumours, leukemias and lymphomas, cancers of various organ systems and cancer chemotherapy.
13. ***Metabolic diseases*** - inborn errors of metabolism and disorders of metabolism.
14. ***Nutritional diseases*** - nutritional assessment, enteral and parenteral nutrition, obesity and eating disorders.
15. ***Endocrine*** - principles of endocrinology, diseases of various endocrine organs including diabetes mellitus.

16. ***Rheumatic diseases*** - approach to the patient with rheumatic diseases, osteoarthritis, rheumatoid arthritis, spondyloarthropathies, systemic lupus erythematosus (SLE), polymyalgia, rheumatic fibromyalgia and amyloidosis,vasculitis.
17. ***Infectious diseases*** - Basic consideration in Infectious Diseases, clinical syndromes, community acquired clinical syndromes. Nosocomial infections, Bacterial diseases - General consideration, diseases caused by gram – positive bacteria, diseases caused by gram - negative bacteria, miscellaneous bacterial infections, Mycobacterial diseases, Spirochetal diseases, Rickettsia, Mycoplasma and Chlamydia, viral diseases, DNA viruses, DNA and RNA respiratory viruses , RNA viruses, fungal infections, protozoal and helminthic infections . Special emphasis on latest infections like Ebola, MERS, SARS, Hanta, Nipha and Covid 19.
18. ***Neurology*** - approach to the patient with neurologic disease, headache, seizure disorders and epilepsy, coma, disorders of sleep, cerebrovascular diseases, Parkinson's disease and other movement disorders, motor neuron disease, meningitis and encephalitis, peripheral neuropathies, muscle diseases, diseases of neuromuscular transmission and autonomic disorders and their management.
19. The mental condition characterized by complete self-absorption with reduced ability to communicate with the outside world (Autism), abnormal functioning in social interaction with or without repetitive behavior and/or poor communication etc.
20. ***Dermatology*** - Structure and functions of skin, infections of skin, papulosquamous and inflammatory skin rashes, photo-dermatology, erythroderma, cutaneous manifestations of systematic diseases, bullous diseases, drug induced rashes, disorders of hair and nails, principles of topical therapy.

B. Affective Domain:

1. Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.
2. Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion.
3. Develop communication skills to word reports and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching.

C. Psychomotor domain

a. Clinical Assessment Skills
b. Procedural skills
c. Interpretation Skills
d. Communication skills
e. Others

a. Clinical Assessment Skills

- Elicit a detailed clinical history
- Perform a thorough physical examination of all the systems

b. Procedural skill

- Test dose administration
- Mantoux test
- Sampling of fluid for culture
- IV- Infusions
- Intravenous injections
- Intravenous cannulation

Cardiac

- TMT
- Holter Monitoring
- Echocardiogram
- Doppler studies
- ECG recording
- Cardio Pulmonary Resuscitation (CPR) using defibrillator
- Pericardiocentesis
- Central venous line insertion, CVP monitoring
- Blood and blood components matching and transfusions
- Arterial puncture for ABG
- Joint fluid aspiration
- Ultrasound abdomen, echocardiography
- Upper GI endoscopy, procto-sigmoidoscopy

Respiratory management

- Nebulization
- Inhaler therapy
- Oxygen delivery
- Pleural tap
- PFT
- Critically ill person:
- Monitoring a sick person
- Endotracheal intubation

- ICD, Pleural Biopsy
- CPR
- Pulse oximetry
- Urinary catheterization – male and female
- Prognostication

Neurology

- Nerve Conduction studies
- EEG
- Evoked Potential interpretation
- Certification of Brain death
- Intercostal tube placement with underwater seal Thoracocentesis
- Sedation
- Analgesia
- Lumbar puncture
- Nerve biopsy
- Subdural, ventricular tap

Gastro intestinal

- Abdominal Paracentesis- diagnostic
- Aspiration of liver abscess
- Liver biopsy
- ERCP

Nephrology

- Cannula insertion for Hemodialysis
- Hemodialysis
- Kidney biopsy
- Peritoneal dialysis

Oncology

- Fine needle aspiration cytology(FNAC) from palpable lump
- Bone marrow aspiration and biopsy
- Nuclear isotope scanning
- MRI spectroscopy/SPECT

Musculoskeletal system

- Joint aspiration/ injection
- Muscle biopsy

Urology

- IVP/VUR Studies

Laboratory-Diagnostic Abilities

- Urine protein, sugar, microscopy,urine/blood ketone bodies
- Peripheral blood smear
- Malarial smear
- Ziehl Nielson smear-sputum, gastric aspirate
- Gram's stain smear-CSF, pus
- Stool pH, occult blood, microscopy
- KOH smear
- Cell count - CSF, pleural, peritoneal, any serous fluid

Observes the procedure

- Joint Aspiration – Injection
- Endoscopic Retrograde Cholangio- Pancreatography (ERCP)
- Peritoneal dialysis

c. Interpretation Skills

Clinical data (history and examination findings), formulating a differential diagnosis in order of priority, using principles of clinical decision making, plan investigative work-up, keeping in mind the cost-effective approach i.e. problem solving and clinical decision making.

- Blood, urine, CSF and fluid investigations - hematology, biochemistry
- X-ray chest, abdomen, bone and joints
- ECG
- Treadmill testing
- ABG analysis- blood lactate
- Ultrasonography
- CT scan chest and abdomen
- CT scan head and spine
- MRI
- Barium studies
- Immunological investigations
- Echocardiographic studies

<u>Interpretation under supervision</u>

- Hemodynamic monitoring
- Ultrasound guided aspiration and biopsies

d. Communication skills

- While eliciting clinical history and performing physical examination
- Communicating health, and disease
- Communicating about a seriously ill or mentally abnormal

- Communicating death
- Informed consent
- Empathy with patient and family members, soft skills
- Referral letters, and replies
- Discharge summaries
- Death certificates
- Pre-test counseling for HIV
- Post-test counseling for HIV
- Pedagogy -teaching students, other health functionaries-paramedical, lectures, bedside clinics, discussions
- Health education - prevention of common medical problems, promoting healthy life-style, adult immunization, periodic health screening, counseling skills in risk factors for common malignancies, cardiovascular disease, AIDS, Covid-19 pandemic, PPE demonstration.
- Dietary counseling in health and disease; YOGA and Meditation
- Case presentation skills including recording case history/examination, preparing follow-up notes, preparing referral notes, oral presentation of new cases/follow-up cases
- Co-coordinating care - team work (with house staff, nurses, faculty etc.) Linking patients with community resources
- Providing referral
- Genetic counseling

e. Miscellaneous

- Demonstrating
    - professionalism
    - ethical behavior (humane and professional care to patients)
- Utilization of information technology
    - Medline search, Internet access, computer usage, E-learning, telemedicine, Webinars, E-Consultation
- Research methodology
    - designing a study
    - interpretation and presentation of scientific data
- Self-directed learning
    - identifying key information sources
    - literature searches
    - information management
- Therapeutic decision-making
    - managing multiple problems simultaneously,
    - assessing risks, benefits and costs of treatment options
    - involving patients in decision-making
      selecting specific drugs within classes
      Rational use of drugs

- Health economics
- Health equity and health for all
- Geriatrics

Syllabus

Course contents:

Basic Sciences

1. Basics of human anatomy as relevant to clinical practice

□ surface anatomy of various viscera

□ neuro-anatomy

□ important structures/organs location in different anatomical locations in the body common

□ congenital anomalies

2. Basic functioning of various organ-system, control of vital functions, pathophysiological alteration in diseased states, interpretation of symptoms and signs in relation to patho-physiology.
3. Common pathological changes in various organs associated with diseases and their correlation with clinical signs; understanding various pathogenic processes and possible therapeutic interventions possible at various levels to reverse or arrest the progress of diseases.
4. Knowledge about various microorganisms, their special characteristics important for their pathogenetic potential or of diagnostic help; important organisms associated with tropical diseases, their growth pattern/life-cycles, levels of therapeutic interventions possible in preventing and/or eradicating the organisms.
5. Knowledge about pharmacokinetics and pharmaco-dynamics of the drugs used for the management of common problems in a normal person and in patients with diseases kidneys/liver etc. which may need alteration in metabolism/excretion of the drugs; rational use of available drugs.
6. Knowledge about various poisons with specific reference to different geographical and clinical settings, diagnosis and management.
7. Research Methodology and Studies, epidemiology and basic Biostatistics.
8. National Health Programmes.
9. Biochemical basis of various diseases including fluid and electrolyte disorders; Acid base disorders etc.
10. Recent advances in relevant basic science subjects.

Systemic Medicine

11. Preventive and environmental issues, including principles of preventive health care, immunization and occupational, environmental medicine and bio-terrorism.

12. *Aging and Geriatric Medicine*:

□ Biology

 Epidemiology
 neuro-psychiatric aspects of aging.

13. ***Clinical***
 Pharmacology**:** Principles
 of drug therapy Biology
 of addiction
Complementary and alternative medicine.

14. Genetics:
 Overview of the paradigm of genetic contribution to health and disease
 Principles of Human Genetics
 Single gene and chromosomal disorders
 Gene therapy.

15. ***Immunology*****:**
 Innate and adaptive immune systems
 Mechanisms of immune mediated cell injury
 Transplantation immunology.

16. ***Cardio-vascular diseases*****:**
 Approach to the patient with possible cardio-vascular diseases Heart
 failure
 Arrhythmias
 Hypertension Coronary
 artery disease
Congenital heart disease
 valvular heart disease
 Infective endocarditis
 Diseases of the myocardium and pericardium Diseases of
 the aorta and peripheral vascular system.

17. ***Respiratory system*****:**
 Approach to the patient with respiratory disease
 Disorders of ventilation
 Asthma
 Congenital Obstructive Pulmonary Disease (COPD)
 Pneumonia
 pulmonary vascular disease including pulmonary embolism
 Cystic fibrosis

 obstructive sleep apnoea syndrome and diseases of the chest wall, pleura and mediastinum.

18. *Nephrology*:

 approach to the patient with renal diseases
 acid-base disorders
 acute kidney injury chronic
 kidney disease tubulo-
 interstitial diseases
 nephrolithiasis
 Diabetes and the kidney
 obstructive uropathy and treatment of irreversible renal failure.

19. Gastro-intestinal diseases:

 approach to the patient with gastrointestinal diseases
 gastrointestinal endoscopy
 motility disorders
 diseases of the oesophagus
 acid peptic disease
 functional gastrointestinal disorders
 diarrhea
 irritable bowel syndrome
 pancreatitis and diseases of the rectum and anus.

20. ***Diseases of the liver and gall bladder*:** approach to the patient with
 liver disease acute viral hepatitis
 chronic hepatitis
 alcoholic and non-alcoholic steatohepatitis
 cirrhosis and its sequelae
 hepatic failure and liver transplantation
 diseases of the gall bladder and bile ducts.

21. *Haematologic diseases*:

 Haematopoiesis
 Anaemias
 leucopenia and leucocytosis
 myelo-proliferative disorders
disorders of haemostasis and haemopoietic stem cell transplantation.

22. ***Oncology****:*

 Epidemiology

 biology and genetics of cancer

 paraneoplastic syndromes and endocrine manifestations of tumours

 leukemias and lymphomas

 cancers of various organ systems and cancer chemotherapy.

23. ***Metabolic diseases*** - inborn errors of metabolism and disorders of metabolism.

24. ***Nutritional diseases*** - nutritional assessment, enteral and parenteral nutrition, obesity and eating disorders.

25. ***Endocrine*** - principles of endocrinology, diseases of various endocrine organs including diabetes mellitus.

26. ***Rheumatic diseases***:

 approach to the patient with rheumatic diseases

 osteoarthritis

 rheumatoid arthritis

 spondyloarthropathies

 systemic lupus erythematosus (SLE)

 polymyalgia

 rheumatic fibromyalgia and amyloidosis.

27. ***Infectious diseases***:

 Basic consideration in Infectious Diseases

 clinical syndromes

 community acquired clinical syndromes

 Nosocomial infections

 Bacterial diseases - General consideration, diseases caused by gram - positive bacteria, diseases caused by gram - negative bacteria

- miscellaneous bacterial infections
- Mycobacterial diseases
- Spirochetal diseases
- Rickettsia
- Mycoplasma and Chlamydia
- viral diseases
- DNA viruses
- DNA and RNA respiratory viruses
- RNA viruses

 fungal infections, protozoal and helminthic infections.

Ebola, SARS Overlaping

Coronavirus –Covid-19 Pandemic

28. **Neurology** - approach to the patient with neurologic disease, headache, seizure disorders and epilepsy, coma, disorders of sleep, cerebrovascular diseases, Parkinson's disease and other movement disorders, motor neuron disease, meningitis and encephalitis, peripheral neuropathies, muscle diseases, diseases of neuromuscular transmission and autonomic disorders and their management.

29. The mental condition characterized by complete self absorption with reduced ability to communicate with the outside world (Autism), abnormal functioning in social interaction with or without repetitive behaviour and/or poor communication etc.

30. Dermatology:

- Structure and functions of skin
- infections of skin
- papulo-squamous and inflammatory skin rashes
- photo-dermatology
- erythroderma
- cutaneous manifestations of systematic diseases
- bullous diseases
- drug induced rashes disorders
- of hair and nails principles of
- topical therapy

TEACHING AND LEARNING METHODS

Didactic lectures are of least importance; seminars, journal clubs, symposia, reviews, and guest lectures should get priority for acquiring theoretical knowledge. Bedside teaching, grand rounds, interactive group discussions and clinical demonstrations should be the hallmark of clinical/practical learning.

Students should have hands-on training in performing various procedures and ability to interpret results of various tests/investigations. Exposure to newer specialized diagnostic/therapeutic procedures should be given. Importance should be attached to ward rounds especially in conjunction with emergency admissions. Supervision of work in outpatient department should cover the whole range of work in the unit. It is particularly necessary to attend sub-specialty and symptom specific clinics. The development of independent skills is an important facet of postgraduate training. Joint meetings with physician colleagues, e.g. radiologists and pathologists play a valuable part in training. The training techniques and approach should be based on principles of adult learning. It should provide opportunities initially for practicing skills in controlled or simulated situations. Repetitions would be necessary to become competent or proficient in a particular skill. The more realistic the learning situation, the more effective will be the learning. Clinical training

should include measures for assessing competence in skills being taught and providing feedback on progress towards a satisfactory standard of performance. Time must be available for academic work and audit.

The following is a rough guideline to various teaching/learning activities that may be Employed:

- Intradepartmental and interdepartmental conferences related to case discussions.
- Ward rounds along with emergency admissions.
- Attendance at sub-specialty and symptom specific clinics
- External rotation postings in departments like cardiology, neurology and other subspecialties
- Skills training
- Conferences, Seminars, Continuing Medical Education (CME) Programmes.
- Journal Club
- Research Presentation and review of research work.
- A postgraduate student of a postgraduate degree course in broad specialties/super specialties would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
- Participation in workshops, conferences and presentation of papers etc.
- Maintenance of records. **Log books** should be maintained to record the work done which shall be checked and assessed periodically by the faculty members imparting the training.
- Postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.
- Department should encourage e-learning activities.

Illustration of Structured Training

Time Period	Description/Levels	Content	Responsibilities
1st Month	**Orientation**	**Basic cognitive skills**	- **Combined duties** - **Supervised procedures**
I year	**Beginners**	**Procedural abilities OPD and Ward Work**	- **History sheet writing** - **Clinical abilities,** - **Procedural abilities(PA,PI)*,** - **Laboratory-Diagnostic(All PI)** - **Communication skills O,A,PA** - **BLS & ACLS**
II Year	**Intermediate**	**Intermediate degree of cognitive abilities Specialized procedural skills Emergency**	- **Independent duties** - **All procedures** - **Respiratory management abilities(All PI)** - **Communication skills(PA,PI)** - **Writing thesis** - **Teaching UGs**
III year	**Advanced**	**Special skills Intensive critical care**	- **Advanced levels of independent duties** - **Casualty calls** - **ICU, MICU** - **UG teaching**

Specialized skills include exchange transfusions, intercostal drainage, peritoneal dialysis, defibrillation/ cardioversion etc.

Levels of necessary cognitive skills are best illustrated by the following:

Basic: history taking, diagnosis/differential diagnosis, points for and against each Diagnosis

Intermediate: detailed discussion on differential diagnoses, analysis and detailed interpretation of clinical and laboratory data;

Advanced: analysis of clinical information and synthesis of reasonable concepts including research ideas.

During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently; for this purpose, provision of skills laboratories in the medical colleges is mandatory.

ASSESSMENT:

FORMATIVE ASSESSMENT, during the training programme Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system.

General Principles

Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills. The Internal Assessment should be conducted in theory and practical/clinical examination.

Quarterly assessment during the MD training should be based on:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self-directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

The student to be assessed periodically as per categories listed in postgraduate student appraisal form (Annexure I).

6.QUARTERLY THEORY ASSESSMENT

1ST YEAR	**2ND YEAR**	**3RD YEAR**
A.Symptomatology and cardinal manifestation of diseases	**E.Hematology and oncology**	**I.Nephrology Rheumatology**
B. Gastrointestinal system	**F.Neurology**	**J.Endocrinology and Infectious diseases**
C. Electrolyte imbalance	**G.Respiratory system**	**K.Prefinal preparatory exams**
D.Respiratory system	**H.Cardiology and Emergencies**	**L.Exams**

SUMMATIVE ASSESSMENT, namely, assessment at the end of training

The summative examination would be carried out as per the Rules given in

POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

The Post graduate examination shall be in three parts:

1. Thesis:

Every post graduate student shall carry out work on an assigned research project under the guidance of a recognized Post Graduate Teacher, the result of

which shall be written up and submitted in the form of a Thesis. Work for writing the Thesis is aimed at Contributing to the development of a spirit of enquiry, besides exposing the post Graduate student to the techniques of research, critical analysis, acquaintance with the Latest advances in medical science and the manner of identifying and consulting Available literature.

Thesis shall be submitted at least six months before the Theory and Clinical / Practical examination. The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and Clinical examination. A post graduate student shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

2. Theory:

The examinations shall be organized on the basis of 'Grading 'or 'Marking system' to evaluate and to certify post graduate student's level of knowledge, skill and competence at the end of the training. Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical' separately shall be mandatory for passing examination as a whole. The examination for M.D./ MS shall be held at the end of 3rd academic year. An academic term shall mean six month's training period.

There will be four theory papers, as below:
Paper I: Basic Medical Sciences (at the end of first year of training)
Paper II: Medicine and allied specialties including pediatrics, dermatology & psychiatry
Paper III: Tropical Medicine and Infectious Diseases
Paper IV: Recent Advances in Medicine

3. Clinical / Practical and Oral/viva voce Examination:

The final clinical examination should include:
□ cases pertaining to major systems
□ stations for clinical, procedural and communication skills
□ Log Book Records and day-to-day observation during the training Oral/viva
□ voce examination shall be comprehensive enough to test the
post graduate student's overall knowledge of the subject

Recommended Reading

Text Books (latest edition)

- API Text book of Medicine
- Davidson's Principles and Practice of Medicine

- Harrison's Principles & Practice of Medicine
- Oxford Text book of Medicine
- Kumar & Clark : Book of Clinical Medicine
- Cecil : Text Book of Medicine

Reference books

- Hurst : The Heart
- Braunwald - Heart Disease: A Textbook of Cardiovascular Medicine
- Marriot's Practical Electrocardiography
- Crofton and Douglas : Respiratory Diseases
- Brain's Diseases of the Nervous system
- Adam's Principles of Neurology
- William's Text Book of Endocrinology
- De Gruchi's Clinical Hematology in Medical Practice
- Kelly's Text Book of Rheumatology
- Slesenger & Fordtran : Sherlock's disease of the liver and biliary system • Gastrointestinal and Liver disease
- Manson's Tropical Diseases

Clinical Methods

- Hutchinson's Clinical Methods
- Macleod's Clinical examination
- John Patten : Neurological Differential Diagnosis
- Neurological examination in Clinical Practice by Bickerstaff Dejong , Brazis.

Journals

03-05 international Journals and 02 national (all indexed) journals

- J. Association Physicians of India
- Indian J of Tuberculosis and Chest Diseases
- Indian Heart Journal
- Neurology India
- Indian J of Gastroentrology
- British Medical Journal
- Postgraduate Medical Journal
- The Lancet
- Journal of American Medical Association
- British Heart Journal
- Medical Clinics of North America
- New England J Medicine
- Annals of Internal Medicine
- Recent Advances in Internal Medicine

Postgraduate Students Appraisal Form
Pre / Para /Clinical Disciplines

Name of the Department/Unit :

Name of the PG Student :

Period of Training : FROM……TO……

Sr. No	PARTICULARS	Not Satisfactory	Satisfactory	More Than Satisfactory	Remarks
		1 2 3	4 5 6	7 8 9	
1.	Journal based / recent advances learning				
2.	Patient based/ Laboratory or skills based learning				
3.	Self-directed learning and teaching				
4.	Departmental interdepartmental learning activity				
5.	External and Outreach Activities / CMEs				
6.	Thesis / Research work				
7.	Log Book Maintenance				

Publications Yes/ No

Remarks* _____

_____

_____

***REMARKS: Any significant positive or negative attributesof a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.**

SIGNATURE OF ASSESSEE **SIGNATURE OF CONSULTANT**

SIGNATURE OF HOD

CLINICAL POSTING(rotation &posting in other department):

The listed knowledge and skills are to be learnt over a period of 3 years. The process is a continuous one. However the recommended period and timing of training in basic subjects, allied departments and specialty departments is given below. In the first year, during the morning session, student should work in the parent department. It is recommended that 2 years and 6 months are spent in General medicine and 6 months in allied and specialty departments. Depending on the time and opportunities available, some of the procedures listed for second year activity can he shifted either to the first or the third year. Students must be 'on call' on a regular basis. The total duration of postings in core and other specialties will be six months.

Allied Specialty Training(During second year)

Posting to other specialty departments will be during the second year for a period extending not more than six months. The departments and duration of postings are as under:

Department	Duration
• Neurology	8 weeks
• cardiology	4 weeks
• Dermatology	2 weeks
• Psychiatry	2 weeks
• Oncology	2 weeks
• pulmonology	2 weeks
• Nephrology	6 weeks

OBJECTIVES OF EXTERNAL POSTINGS

CARDIOLOGY POSTINGS:

The post graduate students are posted to cardiology for a period of 1 month during the II year of their courses. At the end of the postings in cardiology they should be able to examine, diagnose, treat and advise the patients with following cardiac condition.

1. Congenital heart diseases
2. cardiomyopathies
3. valvular heart disease
4. Arrythmias
5. Acute coronary syndrome
6. Cardiac failure

Assessment:

Short and long case assessment
Clinical work sampling
OSCE
Case based discussion and evaluation

NEUROLOGY POSTINGS:

The post graduate students are posted to neurology for a period of 2 months during the II year of their courses. At the end of the postings in neurology they should be able to examine, diagnose, treat and advise the patients with following neurologic condition.

1.Neuroinfections and neurodeficits
2.Parkinsons disease
3.Multiple sclerosis
4.Transverse myelitis
5.Dementia 6.Wilsons
disease
7.Huntingtons disease
8.Motor neuron disease
9.Compressive myelopathy
10.Myopathies
11.Seizure disorders

Assessment:

Short and long case assessment DOPS
for investigation procedures Clinical
work sampling
OSCE
Case based discussion and evaluation

ENTRUSTABLE PROFESSIONAL ACTIVITY

EPAs are units of professional practice, defined as tasks or responsibilities to be entrusted to the unsupervised execution by a trainee once he or she has attained sufficient specific competence. EPAs are independently executable, observable, and measurable in their process and outcome, and therefore, suitable for entrustment decisions. The entrustable professional activity (EPA) concept allows faculty to make competency-based decisions on the level of supervision required

by trainees. The Academy has identified few such EPA's for all students in various degree courses. These are

1. EPA 1: Gather a history and perform a physical examination
2. EPA 2: Prioritize a differential diagnosis following a clinical encounter
3. EPA 3: Recommend and interpret common diagnostic and screening tests
4. EPA 4: Obtain informed consent for tests and / or procedures
5. EPA 5: Recognize a patient requiring urgent or emergent care and initiate evaluation and management
6. EPA 6: Give or receive a patient handover to transition care responsibility
7. EPA 7: Provide basic and advanced life saving support services in emergency situations
8. EPA 8: Collaborate as a member of an inter professional team
9. EPA 9: Perform general procedures of a physician.
10. EPA 10: Enter and discuss orders and prescriptions
11. EPA 11: Prepare a comprehensive discharge summary.
12. EPA 12: Form clinical questions and retrieve evidence to advance patient care

Competency	Developmental Milestones Informing Competencies	Approximate Time Frame Trainee Should Achieve Stage	Assessment Methods/Tools
Clinical skills and reasoning 1) Gather a history and perform a physical examination	**Historical Data Gathering** 1. Acquire accurate and relevant history from the patient in an efficiently customized, prioritized, and hypothesis driven fashion 2. Seek and obtain appropriate, verified, and prioritized data from secondary sources (e.g. family, records, pharmacy) 3. Obtain relevant historical subtleties that inform and prioritize both differential diagnoses and diagnostic plans, including sensitive, complicated, and detailed information that may not often be volunteered by the patient 4. Role model gathering subtle and reliable information from the patient for junior members of the healthcare team	6 months 6 months 12 months 24 months	Standardized patient Direct Observation Simulation
	Performing a physical exam 1. Perform an accurate physical examination that is appropriately targeted to the patient's complaints and medical conditions. Identify pertinent abnormalities using common maneuvers 2. Accurately track important changes in the physical examination over time in the outpatient and inpatient settings 3. Demonstrate and teach how to elicit important physical findings for junior members of the healthcare team 4. Routinely identify subtle or unusual physical findings that may influence clinical decision making, using advanced maneuvers where applicable	6 months 12 months 24 months 30 months	Standardized patient Direct Observation Simulation

2) Prioritize a differential diagnosis following a clinical encounter	**Clinical Reasoning** 1. Synthesize all available data, including interview,physical examination, and preliminary laboratory data, to define each patient's central clinical problem 2. Develop prioritized differential diagnoses, evidence based diagnostic and therapeutic plan for common in patient and ambulatory conditions 3) Modify differential diagnosis and care plan based upon clinical course and data as appropriate 4) Recognize disease presentations that deviate from common patterns and that require complex decision making	12 months 24 months 36 months	Simulation Chart stimulated recall Multisource feedback Direct Observation
5) Delivery of patient-centered clinical care common modalities utilized in the practice of Internal Medicine • Appropriately uses laboratory and imaging techniques • Demonstrates sufficient knowledge to interpret basic clinical tests and images,.	**Diagnostic tests** 1. Make appropriate clinical decisions based upon the results of common diagnostic testing, including but not limited to routine blood chemistries, hematologic studies, coagulation tests, arterial blood gases, ECG, chest radiographs, pulmonary function tests, urinalysis and other body fluids 2. Make appropriate clinical decision based upon the results of more advanced diagnostic tests 3. Understand prior probability and test performance characteristics	12 months 18 months 12 months	Chart stimulated recall Standardized tests Chart stimulated recall Standardized tests
4.obtain informed consent for tests and procedure	1. provide timely and comprehensive verbal and written communication to patient and attenders 2. engage patients or attenders in shared decision making for difficult, ambiguous or controversial scenarios 3. apropriately counsel the patients regarding risks and benefits of tests and procedures highlighting cost awareness and resource allocation	6 months 12 months 12 months	Multisource feedback Patient surveys Direct observation Mentored self reflection

5.Recognize a patient requiring urgent or emergent care and initiate evaluation and management	1. recognize situation with a need for urgent and emergent medical care including life threatening condition 2.initiate management and stabilize patients with emergent medical condition 3. Manage patients with conditions that require intensive care 4. Independently manage patients with a broad spectrum of clinical disorders seen in the practice of general medicine 5. Manage complex and rare medical conditions	6 months 6 months 12 months 24 months 30 months	Multisource feedback Direct observation Simulation
6: Give or receive a patient handover to transition care responsibility	1.Effectively communicate with other care givers in order to maintain appropriate continuity during transition care 2.role model and teach effective communication with next care givers during transition of care	12 months 24 months	Multisource feedback Direct observation Sign out form ratings Patient surveys
7: Provide basic and advanced life saving support services in emergency situations	1.Recognise the situation with a need for urgent or emergent medical care including life threatening conditions • Recognise when to seek additional guidance • With supervision manage patients present to emergency care • With minimal supervision manage patients present to emergency care • Independently manage patients present to emergency care and able to perform advance life saving procedures independently like intubation etc.	6 months 6 months 12 months 24 months	Multisource feedback Direct observation Simulation

8: Collaborate as a member of an inter professional team	1. Request consultative services in an effective manner 2. Clearly communicate the role of consultant to the patient in support of primary care relationship 3. Effectively communicate plan of care to all members of health care team 4. Provide specific, responsive consultation to other services 5. Provide general medicine consultation to the patients with more complex clinical problems requiring detailed risk assessment	6 months 6 months 12 months 24 months 30 months	Multi source feedback
9: Perform general procedures of a physician	1. Appropriately perform invasive procedures along with pre and post procedural management for elective procedures like thoracocentesis, ascetic tap, lumbar puncture etc. under minimal supervision 2. Independently perform invasive procedures along with pre and post procedural management for elective procedures. 3. Appropriately perform invasive procedures along with pre and post procedural management for emergency procedures like ABG, intubation, CPR under minimal supervision 4. Independently perform invasive procedures along with pre and post procedural management for emergency procedures.	6 months 12 months 6 months 18months	Direct observation Simulation
10: Enter and discuss orders and prescriptions	1. prescription of appropriate medication along with appropriate dosage, route of administration, frequency and course of the drug under minimal supervision 2. prescription of appropriate medication along with appropriate dosage, route of administration, frequency and course of the drug independently	6 months 12 months	Direct observation Multi source feedback
11: Prepare a comprehensive discharge summary.	1. Provide legible, accurate, complete and timely written communication that is congruent with medical standards 2. Ensure succinct, relevant and patient specific written communication	12 months 24 months	

12: Form clinical questions and retrieve evidence to advance patient care	1. Access medical information resources to answer clinical questions and support decision making 2. Develop a system to track, pursue and reflect on clinical questions 3. Appraise the quality of medical information resources and select among them based on the characteristics of the clinical questions 4. Appraise study design, conduct, and statistical analysis in clinical research papers with assistance 5. Independently appraise study design, conduct, and statistical analysis in clinical research papers 6. Independently appraise clinical guideline recommendations for bias and cost benefit consederations	12 months 12 months 24 months 12 months 30 months 36 months	Evidence based medicine evaluation EBM miniCEX Chart stimulated recall

MODEL CHECK-LIST FOR EVALUATION OF JOURNAL REVIEW PRESENTATIONS

Name of the Student: Name of the Faculty/Observer: Date:

SI. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Article chosen was					
2.	Extent of understanding of scope & objectives of the paper by the candidate					
3.	Whether cross references have been consulted					
4.	Whether other relevant publications consulted					
5.	Ability to respond to questions on the paper / subject					
6.	Audio- Visual aids used					
7.	Ability to defend t he paper					
8.	Clarity of presentation					
9.	Any other observation					
	Total Score :-					

MODEL CHECK-LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the Student: Name of the Faculty/Observer: Date:

SI. No.	Items for observation during presentation	Poor 0	Below Average	Average 2	Good 3	Very Good
1.	Whether other relevant publications consulted					
2.	Whether cross references have been consulted					
3,	Completeness of Preparation					
4.	Clarity of Presentation					
5,	Understanding of subject					
6.	Ability to answer questions					
7.	Time scheduling					
8.	Appropriate use of Audio-Visual Aids					
9.	Overall Performance					
10.	Any other observation					
	Total Score:-					

MODEL CHECK LIST FOR EVALUATION OF TEACHING SKILL PRACTICE

SI. No.		Strong Point	Weak Point
1	Communication of the purpose of the talk		
2.	Evokes audience interest in the subject		
3.	The introduction		
4.	The sequence of ideas		
5.	The use of practical examples and/or illustrations		
6.	Speaking style (enjoyable, monotonous, etc., specify)		
7.	Attempts audience participation		
8.	Summary of the main points at the end		
9.	Asks questions		
10.	Answers questions asked by the audience		
11.	Rapport of speaker with his audience		
12.	Effectiveness of the talk		
13.	Uses AV aids appropriately		

MODEL CHECK LIST FOR EVALUATION OF CLINICAL WORK IN WARD / OPD

(To be completed once a month by respective Unit Heads including posting in other departments)

Name of the Student: Name of the Unit Head: Date:

SI. No.	Points to be considered:	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Regularity of attendance					
2.	Punctuality					
3.	Interaction with colleagues and supportive staff					
4.	Maintenance of case records					
5.	Presentation of cases during rounds					
6.	Investigations work up					
7.	Bedside manners					
8.	Rapport with patients					
9.	Counseling patient's relatives for blood donation or Postmortem and Case follow up.					
10.	Over all quality of Ward work					
	Total Score :-					

EVALUATION FORM FOR CLINICAL PRESENTATION

Name of the Student: Name of the Faculty: Date:

SI. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Above Average 3	Very Good 4
1.	Completeness of history					
2.	Whether all relevant ' points elicited					
3.	Clarity of Presentation					
4.	Logical order					
5.	Mentioned all positive and negative points of importance					
6.	Accuracy of general physical examination					
7.	Whether all physical signs elicited correctlv					
8.	Whether any major signs missed or misinterpreted					
9.	Diagnosis: Whether it follows logically from history and findings					
10	Investigations required • Complete list				-	
	• Relevant order					
	• Interpretation of investigations					
11.	Ability to react to questioning Whether it follows logically from history and findings					
12.	Ability to defend diagnosis					
13.	Ability to justify differential diagnosis					
14.	Others					
	Grand Total :-					

EVALUATION FOR DOPS

Direct Observation of Procedural Skills (DOPS)

Trainee	**Assessor**
Name :	**Name :**
Assessment date:	**Hospital DOPS took place:**
FEEDBACK: Verbal and written feedback is a mandatory component of this assessment.	
General	
Strengths	
Development needs	
Recommended actions	
TRAINEE REFLECTIONS ON THIS ACTIVITY (optional)	
What did I learn from this experience?	
What did I do well?	
What do I need to improve or change? How will I achieve it?	
RATINGS Your ratings should be judged against the standard laid out in the syllabus for the trainee's stage of training. **N =** Not observed **D =** Development required, **S =** Satisfactory (no prompting or intervention required) **O =** Outstanding	

Domain	**Rating**	**Comments**
1: Describes indications, anatomy, procedure and complications to assessor		
2: Obtains consent, after explaining procedure and possible complications to patient		
3: Prepares for procedure according to an agreed protocol		
4: Administers effective analgesia or safe sedation (if no anaesthetist)		
5: Demonstrates good asepsis and safe use of instruments and sharps		
6: Performs the technical aspects in line with the guidance notes		

7: Deals with any unexpected event or seeks help when appropriate		
8: Completes required documentation (written or dictated)		
9: Communicates clearly with patient and staff throughout the procedure		
10: Demonstrates professional behaviour throughout the procedure		

GLOBAL SUMMARY Level at which completed elements of the PBA were performed on this occasion		**Tick**
Level 0	Insufficient evidence observed to support a summary judgement	
Level 1a	Able to assist with guidance (was not familiar with all steps of procedure)	
Level 1b	Able to assist without guidance (knew all steps of procedure and anticipated next move)	
Level 2a	Guidance required for most/all of the procedure (or part performed)	
Level 2b	Guidance or intervention required for key steps only	
Level 3a	Procedure performed with minimal guidance or intervention (needed occasional help)	
Level 3b	Procedure performed competently without guidance or intervention but lacked confidence	
Level 4a	Procedure performed confidently to a high standard without any guidance or intervention	
Level 4b	As 4a and was able to anticipate, avoid and/or deal with common problems/complications	

DOPS DETAILS	
Name of Procedure:	
No. times procedure previously performed:	**Emergency / Elective** (please circle)
Performed in a simulated setting **Description of the simulation:**	
DOPS performed while on a course Yes / No **If yes, please give details:**	
Difficulty of procedure: Easier than usual **Average difficulty More difficult than usual**	
Trainee's signature:	**Assessor's signature:**

Mini-Clinical Evaluation Exercise (CEX)

Evaluator: _____ **Date:** _____

Resident: _____ O R-1 O R-2 O R-3

Patient Problem/Dx: _____

Setting: O Ambulatory O In-patient O ED O Other _____
Patient: Age: _____ Sex: _____ O New O Follow-up

Complexity: O Low O Moderate O High

Focus: O Data Gathering O Diagnosis O Therapy O Counseling

1. Medical Interviewing Skills (O Not Observed) 1 2 3 UNSATISFACTORY	4 5 6 SATISFACTORY	7 8 9 SUPERIOR
2. Physical Examination Skills (Not Observed) 1 2 3 UNSATISFACTORY	4 5 6 SATISFACTORY	7 8 9 SUPERIOR
3. Humanistic Qualities/Professionalism 1 2 3 UNSATISFACTORY	4 5 6 SATISFACTORY	7 8 9 SUPERIOR
4. Clinical Judgment (O Not Observed) 1 2 3 UNSATISFACTORY	4 5 6 SATISFACTORY	7 8 9 SUPERIOR
5. Counseling Skills (O Not Observed) 1 2 3 UNSATISFACTORY	4 5 6 SATISFACTORY	7 8 9 SUPERIOR
6. Organization/Efficiency (O Not Observed) 1 2 3 UNSATISFACTORY	4 5 6 SATISFACTORY	7 8 9 SUPERIOR

PEDAGOGY STUDENT OBSERVATION SHEET

Rating scale: A- well done: B- done fairly: C- needs to improve: D not applicable
DIRECTIONS: Please enter ratings as A, B, C or D in the boxes

Name of teacher: **Title:**

1. _____ 1. _
2. _____ 2. _
3. _____ 3. _
4. _____ 4. _
5. _____ 5. _
6. _____ 6. _
7. _____ 7. _
8. _____ 8. _

Sl No	Skill	Teacher's action	Teachers performance								
			1	2	3	4	5	6	7	8	9
1	Set induction	1.1 Aroused interest in the beginning by relation to previous learning, throwing a new idea, questioning, etc. 1.2 Specified the objectives of presentation									
2	Planning	2.1 Organized material in a logical sequence 2.2 Used relevant content matter									
3	Presentation	3.1 Changed the pace of presentation by shifting emphasis, joke, etc 3.2 Used specific example to illustrate main ideas 3.3 Used non-verbal cues, eye contact, etc									
4	Pupil participation	4.1 Allowed questions from students 4.2 Asked questions 4.3 Solicited/ raised questions 4.4 Rewarded pupil effort									
5	Use of AV aids	5.1 Used proper AV aids 5.2 Used the aid (s) effectively									
6	Closure `	6.1 Summarized most important points at the end of the lesson									
7	Lesson of the whole was effective										

For additional comments use the reverse side

Remarks:

Teacher 1:
Teacher 2:
Teacher 3:
Teacher 4:
Teacher 5:
Teacher 6:
Teacher 7:
Teacher 8:
Teacher 9:

MODEL CHECK LIST FOR SYNOPSIS PRESENTATION

Name of the Student: Name of the Faculty: Date:

SI. No.	Points to be considered divine	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Interest shown in selecting a topic					
2.	Appropriate review of literature					
3.	Discussion with guide & other faculty					
4.	Quality of Protocol					
5.	Preparation of proforma					
	Total Score :-					

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO- GUIDE

SI. No.	Items for observation during presentations	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Periodic consultation with guide/co-guide					
2.	Regular collection of case material					
3.	Depth of analysis / discussion					
4,	Departmental presentation of findings					
5.	Quality of final output					
6.	Others					
	Total Score :-					

Department of General medicine, SDUMC, SDUAHER, Kolar
Quarterly Postgraduate Student's Appraisal Form

Name of the Unit:

……

Name of the PG Student:

……

Period of Training:

FROM……TO……

Sl No	Particulars	Not Satisfactory	Satisfactory	More Than Satisfactory	Attendance (Wherever applicable) %	Remarks
		1 2 3	4 5 6	7 8 9		
1	Journal based / recent advances learning					
2	Patient based/ Skill based learning					

3	Self directed learning and teaching					
4	Departmental and Interdepartmental learning activity					
5	External and Outreach activities / CMEs					
6	Thesis / Research work					
7	Log Book Maintenance					
8	Professionalism					
9	Attendance					

Publications: Yes/ No

Remarks*_____

_____

_____

_____

_____

*REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested.

Individual feedback to postgraduate student:

_____

_____

_____

_____	_____	_____	_____
Signature of Resident	Signature of Unit Head	Signature of Guide	Signature of HoD

Department of medicine, SDUMC, SDUAHER, Kolar

Multi- Source Feedback (MSF) Form

Resident Name						
PG YEAR	I		II		III	
Residency duration at the time of assessment in months	06	12	18	24	30	
Which clinical environment have you primarily observed the resident in?	Ward	OPD	SICU	**ICU**	**OT**	**EMD**
Your Position	Faculty	Resident	Intern	Staff Nurse	Patient/Relative	
Length of working relationship with the resident (in months)						
RATING	1	2	3	4	5	NA
Ability to diagnose patient problems						
Ability to formulate appropriate management plans						
Ability to manage complex patients						
Awareness of own limitations						
Ability to respond to psychosocial aspects of illness						
Appropriate utilization of resources eg. Ordering investigations						
Ability to assess risks and benefits when treating patients						

Ability to co-ordinate patient care						
Please describe any strengths/indicators of good practice in the area of "Medical Expertise" of this resident						
Please describe any behavior that has raised concerns or should be a particular focus for development in the area of "Medical Expertise" of this resident						
Technical skills (appropriate to current practice)						
Ability to apply up-to-date/ evidence- based medicine						
Ability to manage time effectively/prioritize						
Ability to deal with stress						
Please describe strengths/indicators of good practice in the area of "Personal development & Professionalism" of this resident						
Please describe any behavior that has raised concerns or should be a particular focus for development in the area of "Personal development & Professionalism" of this resident						
Commitment to learning						

Willingness and effectiveness when teaching/training colleagues						
Ability to give feedback (Private, honest and supportive)						
Please describe strengths/indicators of good practice in the area of "Teaching and Training, Appraising and Assessing" of this resident						
Please describe any behavior that has raised concerns or should be a particular focus for development in the area of practice in the area of "Teaching and Training, Appraising and Assessing" of this resident						
Communication with patients						
Communication with carers and/or family						
Respect for patients and their right to confidentiality						
Verbal communication with colleagues						
Written communication with colleagues						
Ability to recognize and value the contribution of others						
Accessibility						
Reliability						

Leadership skills						
Management skills						
Please describe strengths/indicators of good practice in the area of "Interpersonal & communication skills" of this resident						
Please describe any behavior that has raised concerns or should be a particular focus for development in the area of practice in the area of "Interpersonal &communication skills" of this resident						
Overall, how do you rate this resident compared to other residents at the same duration of residency?						
Do you have any concerns about this resident's probity?	Yes/No	If Yes, please specify here -				
Do you have any concerns about this resident's health in relation to their fitness to practice?	Yes/No	If Yes, please specify here -				
Please use this space for any other comments you have about this resident.						

LOG BOOK

Table 1 : Academic activities <u>attended</u> Name: Admission Year: College:		
Date	Type of Activity Specify : Seminar, Journal Club, Case Presentation, UG teaching	Particulars

LOG BOOK

Table 2 : Academic presentations made by the student Name: Admission Year: College:		
Date	Topic	Type of Presentation Specify : Seminar, Journal Club, Case Presentation, UG teaching, etc.

LOG BOOK

Table 3: Diagnostic and theraupetic procedures performed

Name: Admission Year:

Date	Name	IP No.	Procedure	Category O, A, PA, PI*

Key: O - observed
A - Assisted a more senior
PA - Performed procedure under the direct supervision of a senior
PI - performed independently

Model Overall Assessment Sheet Name of the College: Academic Year:											
SI. No	Faculty Member & Others	Name of Student and Mean Score									
		A	B	C	I)	E	F	G	H	I	J
1											
2											
3											
4											
5											
Total Score											

Note: Use separate sheet for each year.