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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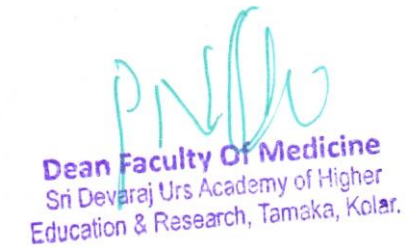
(With effect from 2019-2020 batches)

Competency Based Postgraduate Curriculum for Doctor of Medicine

Community Medicine



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

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

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Edition Year: 2020 **Published by SDUAHER**

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. COMMUNITY MEDICINE

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.

Community Medicine is an academic subject, a branch of Medicine which deals with promotion of health and prevention of diseases, involving people's participation, utilizing professional management skills. The Community Medicine specialist, will inculcate a holistic view of health and medical interventions primarily focused on Community Health/Population Health. Thus, he/she should be equipped with the knowledge, skills, competencies in primary, secondary & tertiary care, control and prevention of outbreaks/epidemics, community diagnosis, health needs assessment, epidemiological assessment, research and planning evidence-based health policies and programmes.

The Guidelines for teaching Community Medicine, therefore, should be designed to create a cadre of professionals who are competent to meaningfully contribute their expertise in planning, implementation, co- ordination, monitoring, evaluation of Primary Health Care Programs based on scientific evidence. The competencies must cover a wide spectrum of skills viz., technical, managerial, administrative, organizational skills, applied skills in Health Information Management, software application and soft skills of communication, motivation, decision- making, team building, training in scientific communication and medical writing.

Vision*: To be in the forefront of professional education, service and research in Community Medicine and related disciplines in the country.*

Mission:

- *To improve the health of the communities we serve through education, service, research, outreach and creative partnership.*
- *Prepare physicians, public health professionals and researchers through the undergraduate, masters and doctoral programme.*
- *Enhance the knowledge and skills of the public health workforce through continuing education and technical assistance.*

General Objectives

The general objectives of the training programme in Community Medicine will be to enable a candidate to be:

Teacher/trainer to

- Plan and conduct an educational session/program. He/she will be able to draw up lesson plan with details of educational objectives, content, process and essentialinputs.
- Assist in development of curriculum, teaching and learning activities and methods of evaluation.
- Assist in manpower planning and development. He/she should be able to participate in programs for the selection, training and supervision of various cadres ofhealth personnel.

Researcher to

- Plan and execute a research study including clinical trials. Use/ Organize biostatistical analysis using computers and softwares and prepare reports/papers.
- Critically evaluate research activities.
- Make recommendations on policy andprocedures.

Public Health Specialist to

- Define and manage the health problems of the community, which he/she serves. He/she should be able to organize epidemiological studies to identify health problems.
- Plan, implement and evaluate various health programs in his/her area, especially National Health, Family Welfare and disease control / eradication programmes.
- Select, train, supervise and manage various categories of health personnel working with him/her.
- Organize health care services, routine and for special groups and during periods of special needs such as disasters/calamities and epidemics.

Specific Objectives

At the end of the MD program in Community Medicine the student will:

1. Know the structure and functioning of the health system at the National and International levels and its historical perspectives.
2. Know the principles of nutrition, maternal health, and family welfare and put the same into practice.
3. Apply the principles of Epidemiology and Biostatistics to health practice including the design and implementation of health related research studies and clinical preventive medicine trials.

4. Identify the socio-cultural dimension in Health and disease and apply this knowledge in the design and implementation of an integrated Health and development program.
5. Apply the principles of environmental and occupational health in the design of health programmes aimed at improving healthstatus.
6. Assess specific health situations in a population, plan, organize, implement and evaluate programs aimed at improving healthsituations.
7. Identify the health needs of the vulnerable groups and plan to address the same.
8. Know the principles of learning and apply this knowledge in facilitating the healthcare workers in curative, promotive and preventivecare.
9. Identify the role of the Government, Private and Voluntary sector in health and understand the principles of innovations in health practices and research.

SUBJECT SPECIFIC COMPETENCIES

At the end of the course the student should be able to acquire the following competencies under the three domains, Cognitive, Affective and Psychomotor:

A. Cognitive domain (The student should be able to)

1. Describe conceptual (and applied) understanding of Public Health, Community Medicine, clinical and disease-oriented approach, preventive approach & health promotion, disease control & promotion.
2. Have knowledge about communicable and non-communicable diseases, emerging and re- emerging diseases, their epidemiology, control and prevention.
3. Apply the principles of epidemiology, health research and Bio- statistics, application of qualitative research methods
4. Calculate Odds Ratio, Relative Risk, Attributable risk and other relevant health and morbidity indicators.
5. To describe nutritional problems of the country, role of nutrition in health and disease and to describe common nutritional disorders
6. Develop nutrition plan for an individual based on his requirements and with concerns to special situations if applicable
7. Plan comprehensive programme to address issue of malnutrition in a given area for a specific group
8. To describe the concept of Environmental Health and its various determinants.

9. Identify environmental health issues in a given area/community
10. Assess impact of adverse environmental conditions on health of human beings
11. Plan awareness programmes at various levels on environmental issues and mobilize community resources and participation to safeguard from local adverse environmental conditions
12. Should be able to provide technical advice for water purification, chlorination, installing Gobar gas plant, construction of soakage pits etc.
13. Be a technical expert to advice on protection measures from adverse environmental exposure
14. To describe the working of Primary Health Care system, Panchayat Raj system, National Health Programmes, urban/rural differences, RCH, Demography and Family Welfare.
15. Do orientation of the inter-linkage of health sector and non-health sector for promotion of Health & control and prevention of diseases.
16. Have familiarity with administrative procedures and protocols
17. Have knowledge about role of media and its use in health.
18. Have knowledge of Health Care Administration, Health Management and Public Health Leadership
19. To describe Health Policy planning, Medical Education technology, Information Technology and integration of alternative Health system including AYUSH.
20. To describe the intricacies of Social & Behavioral sciences and their applications.
21. To describe Public Health Legislations
22. To understand and describe International Health & Global Diseases surveillance.
23. To relate the history of symptoms with specific occupation, diagnostic criteria, preventive measures, identification of various hazards in a specific occupational environment and legislations.

To keep abreast of recent advances in Public Health & formulate feasible, optimal, sustainable, cost effective strategies in response to the advances in public health & development.

24. To describe the principles of Health Economics and apply it in various public health settings.
25. To explain and correlate common health problems (medical, social, environmental, economic, and psychological) of urban slum dwellers, organization of health services in urban slum areas.
26. Develop workable interventions for control and prevention of

emerging and re- emerging diseases at local, national and global level.

27. Identify behavior pattern of individual or group of individuals detrimental or adversely affecting their health
28. Define and identify vulnerable, under-privileged high risk communities and their special needs
29. To create awareness about various public health laws
30. Evaluate cost effectiveness and cost benefits of a Health Program
31. Understand and express implications of 'Poverty Line', 'Social Inclusion', 'Equity', 'taxations', 'Insurance' on Health care management.
32. To categorize hospital waste and be able to guide for proper disposal.
33. To provide a comprehensive plan for disaster management and mitigation of sufferings.

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:

The student should be able to perform independently the following:

1. Conduct community surveys for assessment of health & morbidity profile, epidemiological determinants, assessment of health needs, disease surveillance, evaluation of health programmes and community diagnosis.
2. Conduct epidemic investigations, spot maps, predict disease trends, preparation of reports, planning and implementation of control measures.
3. Demonstrate clinical skills of preparing case history, examination, provisional diagnosis, treatment and clinical case management and interpretation of laboratory findings.

4. Conduct common procedures such as incision, drainage, dressings & injections.
5. Do data collection, compilation, tabular and graphical presentation, analysis and interpretation, applying appropriate statistical tests, using computer-based software application for validation of findings.
6. Conduct epidemiological research studies to establish cause-effect relationships in elaborating the epidemiology of diseases and health events
7. Develop appropriate BCC Material, assessment of community communication needs, training skills, counseling skills, conduct Health Education Programmes in urban and rural settings
8. Conduct dietary surveys, assessment of nutritional status, nutritive values of common food menus, detection of food adulterants, use of lactometer, recording and interpretation of growth and development charts.
9. Use and apply various instruments and processes concerned with environmental health and biological waste management eg. Waste collection, segregation and disposal as per protocols, needle- disposers, disinfection procedures. Also use of Dosi-meters, Kata / Globe Thermometer, Slings Psychrometer, Gobar Gas Plant, Soakage pit, Solar Energy, functioning of ILRs, Deep Freezers, Cold Boxes, Vaccine Carriers.
10. Identify different types of mosquitoes, detect vector breeding places and orientation of the methods of elimination of breeding places and placement of a mosquito-proof water tank.
11. Conduct clinical screening of various diseases and organize community health camps involving community participation in urban and rural settings. Use of Snellen charts for vision, Ishiara's chart for colour blindness, tourniquet tests for dengue diagnosis in fever, BMI and other physical measurements of infants, children and adults etc., copper- T insertions and preparation of pap smear.
12. Conduct tests for assessment of chlorine demand of water (Horrock's Apparatus), procedure of well-water and urban water-tank chlorination, assessment of chlorination levels, physical examination and microbiological determinants of water, Iodine and Fluorine estimation, methods domestic water purification, oriented in use of water filters.
13. Prepare health project proposals with budgeting based on the project objectives.

Miscellaneous skills: (The student should be able to)

1. Devise appropriate health education messages for public health awareness using various health communications strategies.
2. Identify family level and community level interventions and facilitate the implementation of the same e.g. food hygiene, food storage, cooking demonstrations, community kitchen, kitchen garden, empowerment of women for promoting nutritional health etc.
3. Demonstrate counselling skills for family planning services.
4. Plan and execute BCC strategy for individuals.
5. Conduct measurement of occupational exposure to harmful influences.
6. Diagnose occupational hazards and undertake surveys to identify occupational exposures and applying ergonomic principles for its prevention.
7. Elicit appropriate response at individual and community level to prevent occupational hazards including IEC activities at different levels.
8. Use modern IT applications especially internet & internet-based applications.

COURSE CONTENTS

Health Systems in India and the World-Historical Perspective

1. History of Public Health

- Historical Lessons Learnt from the success and failure of Public Health strategies around the world.
- Historical influence and importance of Indigenous System of Medicines in Health Care in India.
- Historical Review of Implementation of the Bhore committee's and other Committee Reports on Health Services, Health Care and Health Professional Education in India.
- Historical Review of the development of National Health Policies.
- The trend of achievements of the country vis-a-vis the Health for All concept. Comparative study of development of Health System models globally and nationally

2. Concepts in Public Health

- Concept of Disease control strategies.
- Public Health importance of the Health Promotion Approach.
- Concept of Health for All, Millennium development goals.
- Multi-sector approach in Health care programs.
- Health Care as part of Community Development
- Advantages of Community Participation in health care programs.

3. Primary Health Care

- Need and importance for prioritizing of PrimaryHealthCare
- Principles of Primary HealthCare
- Elements of Primary HealthCare
- Models of Delivery of Primary Health Care

4. The Health Care Systems **inIndia**

- Organizational Structure and Functions of the Govt. Health care System at the Central, State, district, Primary Health centre, Community Health Centre, Peripheral areas as also the Urbanareas.
- Health Care systems for Factories / Mines / Plantations. Large and small scale N.G.O. sector health care system. Corporate and Private Health Insurance systems. Family Medicine, General Practitioners. Indigenous Medicine system.
- Feasibility of Networking the Govt. and NGO sectors for better coverage of health programs.

5. Role of Social sciences in Health

Need and Importance and Role of Medico- Social work in Public Health Behavioral sciences. Need and importance of Health - Seeking Behavior in implementing Health care programs.

- Meaning and relationship of Behavioral SciencestoHealth.
- Principles of Social Psychology asapplicable to Health.
- Principles of social Anthropology as applicable toHealth

Sociology

- Relevance and use of Social structures, social organizations and cultural factors in addressing problems hi Health as part of Community Development.
- Gender based issues and its relevance to impact of health care programs.
- Impact of Urbanization and Industrialization on Health.
- Difference between Advising andCounseling

Political Environment

- Impact of Political Will on planning and implementation of Health programs

6. Health Legislation

- Review of provisions available under the various Acts related to health. This covers Industries, Mines, hospitals, plantations, labor, adoption, rail/road/air travel, waste treatment, child labour, handicapped, food safety,

housing and public utilities, pollution, reporting of notified diseases, quarantine, medical negligence, etc.

7. City / Town Planning and Health

- Accessibility of health careFacilities.
- Health advisory Role on Water and Waste Treatment planning Boards.
- Recommendations on Pollution control planning and monitoring systems, as related to Health.
- Urban Ecology such as housing, slum formations, social issues, road safety, urban stress factors, micro-climatic changes, etc which impact all dimensions of health.

8. Principles of Educational Science and Technology

- Curriculum Planning, Educational Objectives.
- Principles of Learning.
- Teaching / Learningmethods.
- Teaching skills including MicroTeaching.
- Preparation and Use of Teaching Aids and Learning Research Materials.
- Methods of Evaluation

9. Principles and Practice of Information, Education and Communication

- Principles of IEC Health Education
- Objectives of Health Education
- Content of Health Education.
- Relevance of using Communication Methods in the implementation of Health care.
- Meaning of Communication.
- Principles of effective Communication, relevant tohealth.
- Communication Blocks and means ofovercoming the blocks.
- Communication strategies for facilitating effective implementation of Heath programs at individual and communitylevels.
- The use and influence of Mass Media for IEC.
- Practice (Methods) of IEC and its application in Community Health.
- Quantitative and Qualitative Evaluation of impact of IECprograms.

10. Principles of Nutrition and Applied Nutrition

- Nutrients and their dailyrequirements.
- Classification of Foods
- Balanced Diet

- Nutritional Profiles of Major Foods
- Nutritional Deficiencies
- Protein Energy Malnutrition
- Nutritional Importance of Traceelements
- Assessment of an individual's Nutritional Status
- Assessment of Community Nutritional Status
- Nutritional Problems in India including Food Borne Diseases
- Nutritional Programmes in India
- Methods and impact of nutritional Surveillance
- Social Problems in Nutrition
- Food Hygiene - domestic and commerciallevels
- Food Adulteration including PFA Act - review ofimplementation
- Primordial Prevention of Lifestyle related nutritionaldiseases.

11. Environmental Health

a) Water

- Applied importance of Sources of water
- Water Pollution and review of control and monitoring methods
- Purification of water and its storage anddistribution
- Water quality standards - its implementation andmonitoring
- Epidemiology and Control of Water bornediseases
- Epidemiological Investigation of outbreak of water bornedisease

b) Air

- Indices of thermal comfort and their appliedimportance
- Air Pollution including monitoring, control andprevention
- Ventilation and its applied importance

c) Importance of domestic and industrial Housingstandards

d) Impact and control of Noise Pollution

e) Radiation Hazards from natural, industrial, hospital, communicationdevices

f) Meterological Environment and its Healthimpact

g) Domestic and industrial Lighting Standards

h) Disposal of Waste and Sanitation

- Sources and Classification of wastes
- Disposal of Solid Wastes
- Excreta Disposal
- Sewage treatment and safe recyclingguidelines
- Health Care and Hospital Waste Management

i) Guidelines on Industrial Toxic wastes and Nuclearwastes.

12. Medical Entomology

Identification of the arthropods as classified below :-

a) Insecta: Mosquito, Flies, Lice, Reas, and other insects.
b) Arachnidan: Ticks and Mites
c) Crustacea: Cyclops

- Diseases transmitted and Modes of Transmission of diseases by arthropods
- Control of Arthropods and diseases borne by them
- Integrated Vector Control
- Types, Mode of application and effectivity of Insecticides
- Types and mechanism of Insecticide Resistance and modes of Resistance prevention

13. Rodents and Anti-Rodent Measures

14. Types, Causes and Control of Zoonotic Diseases

15. Isolation / Quarantine methods

16. Maternal and Child **Health Care**

- Meaning and relevance of Risk Approach to Maternal and Child Health
- Review of the public health relevance of Maternal and Child health physical, mental social and behavioral problems
- Rationale, Components and Implementation of Antenatal, Intranasal and Postnatal Care
  Rationale, Components and Implementation of Child Health Care
- Maternal and Childhood Disease control strategies
  Indicators of MCH care and their interpretation

17. Organizational and Functional components of the Maternal and Child Health Services Programmes in India

- Review of MCH related programmes in India, eg. Reproductive & Child Health (RCH -1 & II), Integrated Child Development Scheme (ICDS), Integrated Management of Neonatal & Childhood illnesses (IMNCI) etc.

18. Family Welfare Services in India

- Meaning and relevance of Family Planning, Family welfare and Population Control
- Methods of Family Planning - Review of mechanism, effectivity, factors for non-compliance of usage, contraindications and side-effects.
- Formulation and Evaluation of Implementation strategies of Family planning programs.

19. Demography

- Significance of Demography in publichealth
- Interpretation and implications of Demographic Cycles on global and Indian context.
- Demographic trends in India and its application in the planning of Health programmes

20. Genetics and Health

- Relevance and Impact of population Genetics Preventive and Social Measures in Genetics
- Implication of Gene therapy, Stem-cell research on future disease control program x8strategies.

21. School Health Services

- Objectives of school health services
- Planning for components of school health service and their implementation strategies (including child - parent - teacher and community roles)
- School level counseling for chronic absenteeism, drug abuse, gender basedissues, behavioral and learning problems.
- Monitoring Health of school children and school staff

22. Social Pediatrics

- Interventional strategies for Juvenile Delinquency, Child Abuse, Child Labour, Street Children, Child Marriage.
- Child Guidance Clinic
- Child Placement

23. Biostatistics

- Collection / Organisation of data / Measurement scales
- Presentation of data and Record keeping
- Measures of central tendency
- Measures of variability
- Sampling and Planning of health survey
- Probability, Normal distribution and inductive statistics
- Estimating population values
- Tests of significance (Parametric / Non-parametric)
- Analysis of variance
- Multi-Variety Analysis and Meta-analysis
- Association and correlation and Regression
- Vital Statistics
- Evaluation of health and measurement of morbidity / mortality
- Life table and its uses
- Use of computers
- Census

- Qualitative Research methodologies
- Evaluation methodologies

24. Principles and Application of Epidemiology.

- Principles of Epidemiology
- Types and detailed methodologies of Epidemiological studies such as Descriptive, Analytical, Experimental and importance of Multi-Centric studies.
- Appropriate choice of epidemiological approach for given situations. Interpretation of Epidemiological studies.

25. Research Methodology

- Preparing dissertation synopsis
- Identifying need for research study
- Problem statement
- Formulating Objectives
- Methods of Literature Review (References and Bibliography)
- Conceptual framework of study
- Research design choice
- Choice of Methodologies
- Analysis and discussion and presentation

26. Communicable & Non Communicable Diseases

- Present problem statement of diseases of public health importance.
- Descriptive epidemiological factors of specific diseases of public health importance.
- Natural history Causes and factors related to increasing or decreasing trends of these diseases.
- Factors responsible for emergence of new diseases.
  Prevention and Management.
- Review of changing disease control strategies for specific diseases of public health
  Importance.

27. National Health Programs

- Components of individual National health Programs
- Review of factors associated with the success / failure / stagnation of the present status of these National Health Programs.

28. Community Mental Health

- Principles of Community Mental Health

- Epidemiological factors associated with the current and emerging mental disorders of public health importance.
- Emerging mental health issues of marital, family based problems, travel related. migration, resettlement, urbanization problems.
- Planning and Intervention strategies for community based mental health programs

29. Occupational Health

- Relevance of Occupational Environment to Health Hazards Surveying for identifying Industrial Health hazards
- Surveying for identifying Health Hazards in Agricultural / Plantation / Mining area settings.
- Surveying for identifying Health Hazards in Home based cottage Industries.
- Basic Principles of Ergonomics and Work- Physiology and their application in Occupational Health Intervention Programs.
- Health Hazards due to Industrial Pollution of air, water and land.
- Elements of Industrial waste treatment.
- Relevance and meaning of Industrial Toxicology in the management of Health hazards.
- Understanding the Basic Scope of Occupational health Legislation such as ESI ACL
  Factories Act, Mines Safety Act, etc.
- Causes, consequences and Intervention Strategies for occupation related diseases of
- public health importance.
- Principles of Industrial Safety measures and Industrial house-keeping.
- Causes and reduction of Sickness Absenteeism.
- Principles of Industrial Psychology including work related stress management.
- Gender Issues in work environment.
- Providing Social security for industrial workers by the Industrial Corporate Sector in view of Globalization and Outsourcing of work.

30. Health care of the Aged

- Public health implications of increasing trends in longevity of life.
- Health planning strategies for enhancing quality of life of senior citizens.
- Need, relevance and components of Community Based Geriatrics care Programs.

31. Health care for the Challenged

- Vulnerability factors in health, for the physically and Socio-economically challenged people.

- Intervention strategies for desired Behavioral change in the community, towards the physically challenged.
- Multi-disciplinary approach in the health care of the physically challenged. Community Based Rehabilitation for the physically challenged

32. Reaching Health Care for the Unreached

- Adaptations in Health Care Programs Methodologies for Inaccessible Terrain and Extreme climates.

33. Voluntary Sector in Health

- Understanding the Supplementary, Complementary and Substitution Roles of the Voluntary Sector in Health Care.
- Case Studies of Health care strategies adopted by NGOs.
- Networking strategies for Govt. and NGO sectors in Health Program implementation

34. Health Care Management

- Relationship of Planning to Management Situational Analysis Methods
- Vision, Mission, Goal setting and objective formulation Criteria setting for Prioritization
- Resource Generation Methods
- Strategies Formulation
- Participatory Approaches to plan execution
- Monitoring and Evaluation Parameters selection and implementation
- Project Report Writing and Reporting
- Selected Management Techniques relevant to Health care.
- Relevance of Qualitative methods in Health Management
- Basics of Health Economics
- Importance of Operation Research Methods in Health care Management.
- Basis of Health Systems Research.

35. Health Information System.

- Uses of Health Information System in Health planning including Situational analysis. Prioritization, Monitoring and Evaluation.
- Sources and methods of data acquisition.
- Applications of health information on National and International Notification of Diseases.
- Use of Internet and Intranets including NICNET, etc.

36. Disaster Management and public health emergencies

- Brief Review of definition, types and causes of Disaster. Understanding the short and long term Health Impact of Disasters Assessing priorities for

Disaster Response.

- Planning for Administrative, Operational, Technical Intervention for Disaster Relief program including Multi-Sectoral Co-ordination.
- Community Disaster Preparedness training needs for Health Providers and B beneficiaries Post Disaster Follow up care

RECENT ADVANCES AND TOPICS OF CURRENT INTEREST

(Topics may be extracted from individual area of Syllabus content above.)

- Components of National Health Policy
- Importance of Health seeking Behavior
- Basis of formulating Rational drug policy
- **Relevance of Evidence Based Medicine in the planning of Disease control Programs**
- Use of Computers in Public Health
- **Role of Clinical Specialists in Community Health Care Programs**
- Impact of Macro-Climatic changes (eg: Global Warming, etc) on Health.
- Organizing health component of Relief camps during war, mass migration.
- Planning of public Health measures during pandemics of new diseases.
- Operation Research.

COURSE CONTENTS FOR PRACTICALS

1. **Microbiology applied to Public Health (Dept. of Microbiology)**
   - Hands on experience in staining techniques and interpretation of:
   a. Leishmann stain, Grams Stain, JSB Stain, Alberts Stain, Ziehl-Neilson Stain, Peripheral blood examination of thick and thin smears and reporting
   b. Microscopic examination of stools and interpretation
   - Demonstration of Collection, storage and Dispatch of water, stools, body fluids Samples to Laboratory
   - Interpretation of commonly used serological tests such as Physical / Biological / Chemical water analysis reports / Widal / HIV / Hepatitis B/ VDRL/ Viral Antibody Titres
2. **Medical Entomology**
   - Demonstration of Collection and transportation of Entomological specimens
   - Identification of mosquitoes/fleas/ticks/others
   - Demonstration of mounting entomological specimens and reporting
   - Interpretation of Entomological Survey findings and Vector indices calculation
3. Epidemiological (including outbreaks of disease) and Statistical Exercises
4. Case Studies (including family studies) to illustrate principles and practice of Community Health

5. Investigation of an Outbreak of a disease and suggested control Measures.
6. Field and simulated Exercises in
   - PRA Techniques and Interpretive Reporting
   - IEC Field Exercises organisation, execution and evaluation
   - Planning for simulated public health intervention programs including disaster relief measures.
   - VED Analysis etc.
   - Assessment of Health Needs.
   - Simulated exercises in Preparation of Budgeting at the PHC level
   - Demonstration of Supervisory methods and Performance Appraisal at PHC/SC and field level.
   - Simulated calculation of Requirement of Vaccines, Medicines, transport schedules, lab supplies, equipment, staff deployment, stationary, etc. at the PHC level
   - Simulated exercises for Organization of field and centre based camps for Family Welfare. MCH, DEC, and Specialist Camp, Immunisation camps.

7. Diet and Nutritional Survey of a Community
8. Collection and Dispatch of Food Samples for Lab Investigations
9. Situational analysis of selected potentially health hazardous Environments and its influence on health
10. Industrial Health Survey and recommendation reports for Industrial and home-based Work places. Include interpretation of reports quantifying air pollution, noise pollution, temperature, humidity and other meteorological factors and their effect on health.
11. Socio-Econornic surveys in Urban and Rural areas and their interpretation on direct and indirect health care needs and usage.
12. School Health Surveys with recommendations.
13. Situational status (organizational structure and functioning with feasible recommendations) Reporting on Visits/Postings to the following institutions
    - District Health Office
    - District Hospital
    - Taluk Hospital
    - PHC/SC/CHC
    - Field Publicity Office
    - ICDS office/Anganwadi Centre
    - Public Health Laboratory
    - Sewage Treat Plant
    - HUDCO
    - Vector control centre (Hosur)

- Meteorology department
- NGO
- UFWC
- Family Welfare Camps
- Infectious disease hospital
- Malaria/DTC/Filaria units
- National Tuberculosis Institute / DOTS centre
- Leprosy unit
- Malaria Research Centre
- Polio Surveillance Office
- Visit to factory / inspectorate of factories
- Home for the aged
- Blindness Rehabilitation schools
- Deaf and Dumb schools
- Spastic society
- Physically Handicapped Centre
- Market place
- Slaughter House
- Hotel food storage, cooking and food waste disposalzones.
- Milk Dairy
- Water supply and water treatmentplant
- Food and Beverages ProcessingUnits

Rotation postings

No.	Field Posting and work	Duration
01	Posting at Sub-centers & PHCs Under & at RHTC and UHTC attached to Dept of Community Medicine as per MCI norm	Total period of ONE year during the 3 year period of PG course. Posting at RHTC should be residential.
	Posting in the teaching hospital for	Total - One month
	exposure to clinical departments namely	General Medicine-2 wks
02	Pediatrics, OBGY & General medicine to	Pediatrics -1 wk
	acquire clinical skills for diagnosis and	Ob. & Gy. -1 wk
	management of Communicable and Non-	Time of posting shall be at the
	Communicable Diseases	discretion of local feasibility
03	Work attachment to gain hands- on skills based, training in public health department & orientation in Health Administration and Management of various National Health	Total - One month Place & time of 2 postings of 2 wks each shall be at discretion of local feasibility.

	Programmes and aspects of public health management at the offices of the DHO/DHS/THO/DTO/DMO/CDPO/MOH of Local Civic Body or district health authorities.	
	Short duration posting in various camps,	Total - one month
	melas, public health emergencies,	Minimum of four postings of 1wk
	investigation of epidemics, implementation	duration each shall be done subject to
04	of NHP, linen dept of hospital, Hospital	local feasibility.
	kitchen, Hospital record section, central	
	drug store, Medical Supdt. Office, blood	
	bank, casualty dept., CCL, Hospital waste	
	management, ART-VCTC, Matron Office	
	(HRD), HMIS etc.	
05	Visits to various institutions of Public Health Importance	Subject to local feasibility

RHTC

The Post Graduate student in Community Medicine will be posted to the Rural Health Training Centre, DRS, for a period of 6 months during their residency. At the end of the posting the students would be able to:

a. Provide Primary Health Care i.e. family and community centered, integrated, age appropriate, comprehensive patient care, applicable to the local set up. Observing and participation in Antenatal care, High risk pregnancy identification, Registration and participation in care of Antenatal and under-fives, Nutrition Status calculation, Growth and Development monitoring through analysis cumulative under-five and Antenatal cards and follow-up programs for drop-outs

b) Prescribe essential drugs as deemed fit based on appropriate screening or diagnostic studies (laboratory, radiologic or imaging).

c) Educate the community regarding the locally endemic diseases, various health care services available and help the community to overcome barriers to positive health.

d) Lead the PHC in the capacity of administrative and technical head, analyze the reports generated by HIMS and suggest appropriate measures to improve the health status of the community.

e) Impart training to the Health Care Workers, supervise their work and function as a team leader. Medical Waste management observation and

review report. Immunization coverage calculation and follow up. Cold Chain observation up to vaccine administration at field level. Collection and dispatching and follow-up for Vaccine Potency testing. Disinfections and Infection control methods

f) Recognize environmental attributes towards causation of ill health and undertake remedial measures.
g) Conduct epidemiological investigations on local emerging health problems, plan and execute research projects on important health issues.
h) Records design, recording procedures, data compilation and Reporting procedures National health programs
i) Participation in organization and management of health camps. Observation and reviewing methods of motivating for Family welfare. Health Information preparation using MCH indicators and their interpretation.

Urban Health Training Centre: the learning objectives are,

The Post Graduate student in Community Medicine will be posted to the Urban Health Training Centre, Kolar, for a period of 3 months during their residency. At the end of the posting the students would be able to:

a) To identify and analyze health problem at the level of the individual, family and community in an urban set up.
b) Function as a leader of health care team and manage health problems holistically though appropriate preventive and curative measures in association with all stakeholders including Government and NGOs.
c) Counsel patients/families on common health issues organize health educational campaigns.
d) Institute surveillance, carry out monitoring and evaluation of programmes through collection, compilation, analysis and interpretation of epidemiological information.
e) Plan and conduct research activities on urban health problems.

Entomology unit at Hosur:

The Post Graduate student in Community Medicine will be posted to the Urban Health Training Centre, Kolar, for a period of 1 week during their residency. At the end of the posting the students would be able to:

a. Correctly identify species, subspecies (as relevant) of insects of medical importance, organize their collection and study their bionomics.
b. Plan and organize entomological survey pertaining to vectors of medical importance and implement vector control measures as

relevant.

b) Design and carry out research project on vector biology and control of vector borne diseases.

Karnataka Health Promotional Trust, Bangalore: the learning objectives are, The Post Graduate student in Community Medicine will be posted to the Karnataka Health Promotional Trust, Bangalore, for a period of 7 days during their final year of residency.

At the end of the posting the students would be able to:

a) Perform the interventions being implemented among general population as well as amongst high risk groups in preventing and managing STIs through proper monitoring, surveillance and evaluation of the relevant programmes.
b) Organize care and support for PLHA being provided at the community care services in association with NGOs.
c) Implement various components of National AIDS Control Programme at various levels.

General Medicine:

The Post Graduate student in Community Medicine will be posted to the Department of Medicine, RLJH, for a period of 15 days during their 3rd year of residency. At the end of the posting the students would be able to:

a) Record clinico-social history, examine the patients for making diagnosis and plan treatment.
b) Apply the knowledge of the concerned specialty in the context of the health needs of the community and the national priorities in the health sector.
c) Perform practice of the specialty concerned commensuration to the principles of Primary Health Care.

Obstetrics & Gynecology:

The Post Graduate student in Community Medicine will be posted to the Department of Obstetrics and Gynaecology, RLJH, for a period of 15 days during their 3rd year of residency. At the end of the posting the students would be able to:

a) Record clinico-social history, examine the patients for making diagnosis of normal pregnancy as well as plan and manage such cases throughout pregnancy, labour and puerperium.
b) Identify the risk factors of adverse outcome of pregnancy and plan as well as manage such cases including timely referral to higher facilities.

c) Formulate health educational messages for the community in relation to pregnancy (including nutrition, exercise, checkups, immunization, puerperium, warning signs etc.) and family planning.
d) Advise adoption of appropriate family planning method at individual as well as community settings.

Pediatrics: The learning objectives are,

The Post Graduate student in Community Medicine will be posted to the Department of Pediatrics, RLJH, for a period of 15 days during their 3rd year of residency. At the end of the posting the students would be able to:

a) Play the assigned role of a community medicine specialist in the implementation of National health programme, as relevant, effectively and responsibly.
b) Interpret growth and development of children by use of various anthropometric tools.
c) Carry out immunization of infants and children
d) Formulate health educational messages for the community in relation to exclusive breast feeding, nutrition, growth monitoring, immunization, breast-feeding, warning signs etc. as appropriate for the community being served.

Microbiology: The learning objectives are,

The Post Graduate student in Community Medicine will be posted to the Department of Microbiology, SDUMC, for a period of 15 days during their 3rd year of residency. At the end of the posting the students would be able to:

a) Collect of appropriate specimens / materials for microbiological tests.
b) Prepare (including fixing and staining), examine and identify smears of peripheral blood for malaria and filariasis, sputum for AFB; urine and stool examination for routine investigation.
c) Correctly handle and maintain various types of microscopes.

District Health Office: The learning objectives are,

The Post Graduate student in Community Medicine will be posted to the District Health Office, Kolar for a period of 15 days during their 3rd year of residency. At the end of the posting the students would be able to:

a) Recognize the duties and responsibilities of District Health Office and relationship of various health infrastructures at Centre, State, District and Block levels in planning, organizing and implementing various health programmes.
b) Monitor and evaluate various health programmes.

c) Formulate plan to meet any public health emergency situation.

District Surveillance office: The learning objectives are,

The Post Graduate student in Community Medicine will be posted to the District Surveillance office, Kolar for a period of 7 days during their 3rd year of residency. At the end of the posting the students would be able to:

a) Recognize the duties and responsibilities of District Surveillance Officer including the process of IDSP reporting, conduct of epidemiological investigation related to public health importance and suggest/ propose appropriate solutions.
b) Predict possible future health related event from surveillance data.
c) Use effectively the tools of epidemiology for understanding disease distribution and determinants of diseases.

Public Health Institute, Bangalore: The learning objectives are,

The Post Graduate student in Community Medicine will be posted to the Public Health Institute, Bangalore for a period of 7 days during their 3rd year of residency. At the end of the posting the students would be able to:

a) Identify health problems of the community in the context of the socio - economic -cultural milieu
b) Prioritize health problems in terms of threat of the problem, availability of resources and undertaking remedial measures.
c) Prepare action plan, implement programmes, monitor and evaluate them
d) Establish and Manage Health Information System as well as Surveillance mechanisms so as to respond appropriately to the information gathered.
e) Implement public health laws and National Health Programmes.
f) Plan health manpower development, logistics and materials management.
g) Design quality assurance, medical audit and implement basics of hospital management.

NGO: The learning objectives are,

The Post Graduate student in Community Medicine will be posted to the Non-Governmental Organization, for a period of 15 days during their final year of residency. At the end of the posting the students would be able to:

a) Describe the establishment, functioning and funding for NGOs.
b) Demonstrate the art of providing comprehensive, holistic, need-based, gender & culture- sensitive, community-centered system of health care.
c) Provide Mobile Medical Unit for remote and inaccessible areas.

Organize community rehabilitation programme including provisioning of nutrition, safe drinking water

Skills to be acquired

a) Clinical skills:

- Diagnose and manage common health problems and emergencies.
- Diagnose and manage reproductive and child health problems.
- Counsel couples on the family welfare methods.

b) Teaching skills:

- The practice of medicine in hospital & community settings.
- Use the art of communication with patients in history taking and Medico-Social work.

c) Administrative skills:

- Interact with other members of the health care team in the organization & implementation of health services/care.
- Plan, implement & evaluate health care programmes in the context of needs & priorities.
- The essential laboratory techniques in the study/identification of microbial Managerial skills required in administrating the health care services at Government and Non-Government sectors.

d) Research skills:

- Collect, analyze, interpret & present hospital data.

TEACHING AND LEARNING METHODS

Teaching methodology

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

- Journal Club : Critical appreciation and discussion of research articles in indexed journals
- Seminar
- Short seminars on selected Topics
- Lecture/Discussion : Lectures on newer topics by faculty
- Case presentation : Communicable disease case presentation (focus on epidemiology, control, prevention) or Family case (focus on health needs assessment, SWOT analysis of family, social

determinants and social empowerment, community management, role of primary health care and mobilizing resources for empowerment of the family). PG students will present the cases in presence faculty and discuss various modalities of management.

- Public Health Management training in Immunization clinics, Disease Surveillance Units, General Preventive OPD, hands-on training in management of national health programs at urban health centre and rural health centre along with orientation in health administrative system.
- The PG student shall be required to participate in the teaching and training programme of Undergraduate students and interns.
- The PG student must have attended Mandatory training in Research Methodology during his tenure.
- 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.
- Special Seminars / Workshops: conducted by External Faculty on cross-cutting subjects directly or indirectly concerned with Health. eg. Critical appreciation of National Developmental Budget, delivered by prominent Economist.
- Public health updates
- Public health debate
- E-learning activities.
- Estimation of sample size using software
- Application of statistical tests using Software and interpretation of Data.
- Clinico-Pathological Case discussion
- Interdepartmental PG symposium.

MONITORING LEARNING PROGRESS

Log book

- The logbook is a record of the important activities and their critical review by the candidates during his training.
- The log book entries record includes academic activities, the presentations and procedures and feed-back, carried out by the candidate as well as encountered Problems/ Alternative solutions/ innovation /

organizational work / recommendation by student /intersectional work/ self assessment done.

- Internal assessment should be based on the evaluation of the logbook review. Collectively, logbooks are a tool for the evaluation of the training programme of the institution by the University.
    1. Self-Evaluation—Through daily Work Diary
    2. Faculty Evaluation —Through scrutiny of work diary by Head of Dept and staff
    3. Technique of skills in Pedagogy - Through lesson plans and supervised taking of classes for undergraduates
    4. Skill evaluation - through demonstration and Practicals and field reports
    5. Knowledge Evaluation— through journal clubs, seminars and tests.

Dissertation

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

Step1 Identifying guide and co guide Step 2
Review of available literature Step 3 Short
listing of topic of interest

Step 4 Workup in detail on few topics keeping in mind the feasibility and discussion at the dept level

Step 5 Selection and finalization of the topic and submission of protocol Step 6
Preparation and submission of synopsis six months after the date of admission and as notified by the University Step
7 Preparation of study instrument

Step 8 Pilot survey
Step9 Finalising the study
Step 10 Data collection
Step 11 Data entry, compilation and processing
Step 12 Analysis and interpretation
Step 13 Presentation and Discussion at the Deptlevel
Step 14 Preparation and submission of dissertation to Registrar Evaluation six months prior to university examination as notified by theUniversity

Evaluation (Formative and Summative)

FORMATIVE ASSESSMENT,

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

Quarterly assessment during the MD training should be based on:

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

SUMMATIVE (UNIVERSITY)

Theory (written) Examination

There shall be four question papers, each of three hours duration. Each paper shall consist of ten essay questions each question carrying 10 marks to make a total of 100 marks. 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.Questions on recent advances may be asked in any of all the papers *.

Paper I

- History of Public Health, Concepts in Public Health
- Role of Social Sciences inhealth
- Information, Education, Communication andCounseling
- Medical Entomology, and Zoonoticdiseases
- Environmental health and EcologyEpidemiology
- Biostatistics and Researchmethodology

Paper II

- Principles of Nutrition and AppliedNutrition.
- Communicable diseases and non-communicablediseases.
- Occupational health
- National Health Programmes
- Disaster management and Public Healthemergencies

Paper III

- Maternal health and Child health Care.
- Demography and Family welfare. Social Pediatrics
- School health, and Health Care of the Aged.
- Health Care of challenged, Community Based Rehabilitation
- Reaching health care for the unreached.
- Community Mental Health.
- Genetics and Health

Paper IV

- Health Care systems in India.
- Primary Health Care
- Health legislation
- International Health
- Voluntary Sector in Health
- City/Town planning and Health.
- Health Care management.
- Health information system.

** The topics assigned to the different papers are generally evaluated under those sect However a strict division of the subject may not be possible and some overlapping oft is inevitable. Students should be prepared to answer overlapping topics.*

B. Practical 200 marks

The practical examination should be conducted over two days, not more than 8 post graduate students per batch, per day as follows

1. **Family Study:** (One) (50 **marks)**

   One family will be allotted in rural/urban field practice area. Presentation and disc will be on the health status of the family and of any case/individual in the family and factors that contributed towards maintenance of health and occurrence of disease; manager at individual, family, and community levels.

2. **Clinico-social case study (One case) (50 marks)**

Basic clinical presentation and discussion of diagnosis, treatment and management of common communicable or non-communicable diseases/conditions with emphasis on social and community aspects.

3. **Public Health Laboratory Procedures (Two) (30 marks)**

Staining of smears, interpretation of common serological diagnostic tests, water, and analysis or interpretation of given results of any above tests.

4. **Problems on Epidemiology and Biostatistics (One) (50 marks)**

Based on situation analysis from communicable or non-communicable diseases, MCH & FP including demography, Environmental health, Entomology and Occupational Health.

5. Spotters (Five) (10 marks)

Identification and description of relevant public health aspects of the spotters/specimen by the student. Spotters shall be from Nutrition, Environmental health including Entomology & Occupational health, MCH & FP; Microbiology including parasites; vaccines, sera and other immuno biologicals.

6. Analysis of the given data using the statistical software and its interpretation - 10 marks

C. Viva-Voce: 100 marks

1) Viva-Voce Examination: (80 Marks)
   Students will be examined by all the examiners together about students comprehension, analytical approach, expression and interpretation of data. Student shall also be given case reports, charts for interpretation. It includes discussion on dissertation.
2) Pedagogy Exercise: (20 Marks)
   A topic be given to each candidate along with the Practical Examination question paper on the first day. Student is asked to make a presentation on the topic on the second day for 8-10 minutes.

D.

Maximum marks in	Theory	Practicals	Viva-voce	Total
M. D. Community Medicine	400	200	100	700

Study material

a. Recommended books

1. *Public Health and Preventive Medicine* (Maxcy-Rosenau-Last Public Health and Preventive Medicine) by Robert B. Wallace
2. *Basic Epidemiology*. R Bonita, R Beaglehole, T Kjellstrom. World Health Organization Geneva.
3. *Epidemiology,* by Leon Gordis.
4. *Oxford Textbook of Public Health.* Holland W, Detel R, Know G.
5. *Practical Epidemiology,* by D.J.P Barker
6. *Park's Textbook of Preventive and Social Medicine,* by K.Park
7. *Principles of Medical Statistics,* by A. Bradford Hill
8. *Interpretation and Uses of Medical Statistics,* by Leslie E Daly, Geoffrey J Bourke, James MCGilvray.
9. *Epidemiology, Principles and Methods*, by B. MacMahon, D. Trichopoulos
10. *Hunter's Diseases of Occupations,* by Donald Hunter, PAB Raffle, PH Adams, Peter J. Baxter, WR Lee.
11. *Epidemiology and Management for Health Care,,* by Sathe PV and Doke PP.

12. *Vaccines*, by Stanley A. Plotkin.
13. All reports and documents related to all National Programmes from the Ministry of Healthand Family Welfare.
14. Mahajan B K and M.C.Gupta, **Text Book of Preventive & Social Medicine** Jaypee Publications
15. Robert S.Goodheart Maulice E.Shills, **Modern Nutrition in Health,** K.M.Varghese & Co.,
16. John J.Hanlon, **Public Health Administration and Practice,** MOSBY
17. Mac, Mahon & Pugh, **Epidemiology-Principles and Methods,** Little Brown & Co.Boston, U.S.A
18. Mawner & Kramer, **Epidemiology : An Introductory Text,** 1985, W.B.Sanuders Co.,

COMMITTEE REPORTS AND POLICY DOCUMENTS * MEDICAL EDUCATION AND HEALTH POLICY:

1. Bhore Committee Report (1946) **Health Survey and Development Committee,** Govt. of India, Delhi.
2. Mudaliar Committee Report (1961) **Health** Survey **and Planning Committee,** Govt. of India, Delhi.
3. Shrivastav Report (1974), **Health Services and Medical Education - A programme for immediate action, Group on Medical Education and Support** Manpower. **Ministry of Health and Family Welfare,** Govt. of India, New Delhi.
4. ICSSR/ICMR (1981), **Health for All - Analternative strategy - Report ofa Joint study group of ICSSR/ICMR,** Indian Institute of Education, Pune.
5. National Health Policy, (1982) Ministry **of Health and Family Welfare,** Government of India, New Delhi.

B. Recommended Journals National JOURNALS

1. Indian Journal of CommunityMedicine.
2. Indian Journal of PublicHealth.
3. Indian Journal of CommunityHealth.
4. Journal of CommunicableDiseases.
5. Indian Journal of Maternal & ChildHealth.
6. Indian Journal of Preventive and SocialMedicine.
7. Indian Journal of Occupational Health & IndustrialMedicine.
8. Indian Journal of Medical Research.
9. National Medical Journal of India.
10. Indian Journal of Malariology.
11. Indian Journal of EnvironmentalHealth.

12. Indian Journal of Medical Education.
13. Journal of Indian Medical Association.
14. Journals of Medicine, Paediatrics, OBG, Skin & STD, Leprosy, Tuberculosis & Chest Diseases(For Reference).

INTERNATIONAL JOURNALS

1. WHO Publications - All
2. Journal of Epidemiology & Community Health.
3. Tropical Diseases Bulletin.
4. Vaccine.
5. American Journal of Public Health.
6. Lancet.
7. New England Journal of Medicine.

MODEL CHECK-LIST FOR EVALUATION OF JOURNAL

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

SI. No.	Items for observation	Not satisfactory			Satisfactory			More than satisfactory		
		1	2	3	4	5	6	7	8	9
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 the paper									

8.	Clarity of presentation									
9.	Any other observation									
Score										
	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**	**Not satisfactory**			**Satisfactory**			**More than satisfactory**		
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
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									
Score										
Total Score										

MODEL CHECK LIST FOR EVALUATION OF TEACHING SKILL PRACTICE (Pedagogy)

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 DISSERTATION PRESENTATION

1. Name of the Student: Name of the Faculty: Date:

SI. No.	Points to be considered divine **during presentation**	**Not satisfactory**			**Satisfactory**			**More than satisfactory**		
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
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									
Score										
Total Score										

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO-GUIDE

SI. No.	Items for observation during presentations	**Not satisfactory**			**Satisfactory**			**More than satisfactory**		
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
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									
Score										
Total Score										

LOG BOOK

Table 1 : Academic activities attended **Name:** **Admission Year:**		
Date	Type of Activity Specify : Seminar, Journal Club, Case Presentation, UG teaching	Particulars
Table 2 : Academic <u>presentations</u> made by the student Name: Admission Year:		

Date	Topic	Type of Presentation Specify : Seminar, Journal Club, Case Presentation, UG teaching, etc.

ENTRUSTABLE PROFESSIONAL ACTIVTIES FOR MD COMMUNITY MEDICINE

SUGGESTED ENTRUSTABLE PROFESSIONAL ACTIVTIES FOR M.D. COMMUNITY MEDICINE

EPA 1: Conduct a population health status assessment Manage all aspects of completing a health status assessment

EPA 2: Conduct a health needs assessment

EPA 3: Design & manage health surveillance systems

EPA 4: Conduct a health impact assessment manage all aspects of conducting a health impact assessment

EPA 5: Conduct environment health risk assessment. 05

LEVELS OF SUPERVISION

I. Knowledge only, can observe supervision – At the beginning of the Post- graduation
II. Can do under direct supervision – I year (latter half)
III. Can do under indirect supervision – II year of post graduation
IV. Can do independently – III year of post graduation
V. Has expertise to teach others – towards the completion of MD Community Medicine

1. PATIENT CARE (PC): Provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health

PC1.1 Perform all medical, diagnostic, and surgical procedures considered essential for the area of practice

PC1.2 Gather essential and accurate information about patients and their condition through history taking, physical examination, and the use of laboratory data, imaging, and other tests

PC1.3 Organize and prioritize responsibilities to provide care that is safe, effective, and efficient

PC1.4 Interpret laboratory data, imaging studies, and other tests required for the area of practice

PC1.5 Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment

PC1.6 Develop and carry out patient management plans

PC1.7 Counsel and educate patients and their families to empower them to participate in their care and enable shared decision making

PC1.8 Provide appropriate referral of patients, including ensuring continuity of care throughout transitions between providers or settings and following up on patient progress and outcomes

PC1.9 Provide health care services to patients, families, and communities aimed at preventing health problems or maintaining health

PC1.10 Provide appropriate role modeling

PC1.11 Perform supervisory responsibilities commensurate with one's roles, abilities, and qualifications

2. MEDICAL KNOWLEDGE (MK): Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social–behavioral sciences, as well as the application of this knowledge to patient care

MK 2.1 Demonstrate an investigatory and analytic approach to clinical situations

MK 2.2 Apply established and emerging biophysical scientific principles fundamental to health care for patients and populations

MK2.3 Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision making, clinical problem solving, and other aspects of evidence-based health care

MK2.4 Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention/health promotion efforts for patients and populations

MK2.5 Apply principles of social–behavioral sciences to provision of patient care, including assessment of the impact of psychosocial–cultural influences on health, disease, care-seeking, care compliance, and barriers to and attitudes toward care

MK2.6 Contribute to the creation, dissemination, application, and translation of new health care knowledge and practices

3. PRACTICE-BASED LEARNING AND IMPROVEMENT (PBLI): Demonstrate the ability to investigate and evaluate their care of patients, to appraise and

assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning
PBLI3.1 Identify strengths, deficiencies, and limits in one's knowledge and expertise
PBLI3.2 Set learning and improvement goals
PBLI3.3 Identify and perform learning activities that address one's gaps in knowledge, skills, or attitudes
PBLI3.4 Systematically analyze practice using quality-improvement methods, and implement changes with the goal of practice improvement
PBLI3.5 Incorporate feedback into daily practice
PBLI3.6 Locate, appraise, and assimilate evidence from scientific studies related to patients' health problems
PBLI3.7 Use information technology to optimize learning
PBLI3.8 Participate in the education of patients, families, students, trainees, peers, and other health professionals
PBLI3.9 Obtain and utilize information about individual patients, populations of patients, or communities from which patients are drawn to improve care PBLI3.10 continually identify, analyze, and implement new knowledge, guidelines, standards, technologies, products, or services that have been demonstrated to improve outcomes

4. INTERPERSONAL AND COMMUNICATION SKILLS (ICS): Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals
ICS4.1 Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds ICS4.2 Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies
ICS4.3 Work effectively with others as a member or leader of a health care team or other professional group
ICS4.4 Act in a consultative role to other health professionals
ICS4.5 Maintain comprehensive, timely, and legible medical records
ICS4.6 Demonstrate sensitivity, honesty, and compassion in difficult conversations (e.g., about issues such as death, end-of-life issues, adverse events, bad news, disclosure of errors, and other sensitive topics)
ICS4.7 Demonstrate insight and understanding about emotions and human responses to emotions that allow one to develop and manage interpersonal interactions

5. PROFESSIONALISM (P): Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles

PROF5.1 Demonstrate compassion, integrity, and respect for others

PROF5.2 Demonstrate responsiveness to patient needs that supersedes self- interest

PROF5.3 Demonstrate respect for patient privacy and autonomy

PROF5.4 Demonstrate accountability to patients, society, and the profession PROF5.5 Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation

PROF5.6 Demonstrate a commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations.

6. SYSTEMS-BASED PRACTICE (SBP): Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care

SBP6.1 Work effectively in various health care delivery settings and systems relevant to one's clinical specialty

SBP6.2 Coordinate patient care within the health care system relevant to one's clinical specialty

SBP6.3 Incorporate considerations of cost awareness and risk–benefit analysis in patient and/or population-based care

SBP6.4 Advocate for quality patient care and optimal patient care systems SBP6.5 Participate in identifying system errors and implementing potential systems solutions

SBP6.6 perform administrative and practice management responsibilities commensurate with one's role, abilities, and qualifications

7. Inter professional Collaboration

Demonstrate the ability to engage in an inter professional team in a manner that optimizes safe, effective patient- and population-centered care.

IPC 7.1 Work with other health professionals to establish and maintain a climate of mutual respect, dignity, diversity, ethical integrity, and trust.

IPC 7.2 Use the knowledge of one's own role and the roles of other health professionals to appropriately assess and address the healthcare needs of the patients and populations served.

IPC 7.3 Communicate with other health professionals in a responsive and responsible manner that supports the maintenance of health and the treatment of disease in individual patients and populations.

IPC 7.4 Participate in different team roles to establish, develop, and continuously enhance inter professional teams to provide patient- and population-centered care that is safe, timely, efficient, effective, and equitable.

8. PERSONAL AND PROFESSIONAL DEVELOPMENT (PPD): Demonstrate the qualities required to sustain lifelong personal and professional growth

PPD 8.1 Develop the ability to use self-awareness of knowledge, skills, and emotional limitations to engage in appropriate help-seeking behaviors

PPD 8.2 Demonstrate healthy coping mechanisms to respond to stress

PPD 8.3 Manage conflict between personal and professional responsibilities PPD 8.4 Practice flexibility and maturity in adjusting to change with the capacity to alter behavior

PPD 8.5 Demonstrate trustworthiness that makes colleagues feel secure when one is responsible for the care of patients

PPD 8.6 Provide leadership skills that enhance team functioning; the learning environment, and/or the health care delivery system PPD 8.7 Demonstrate self-confidence that puts patients, families, and members of the health care team at ease

PPD 8.8 Recognize that ambiguity is part of clinical health care and respond by using appropriate resources in dealing with uncertainty

EPA 01: Conduct a population health status assessment

Competencies	1. identifying the necessary human and other resources to complete the assessment 2. identifying community partners and their engagement 3. collecting, analyzing, interpreting and presenting data 4. Preparing and presenting a final report. 5. Do orientation of the inter-linkage of health sector and non-health sector for promotion of Health & control and prevention of diseases. 6. Have knowledge of Health Care Administration, Health Management and Public Health Leadership 7. To describe Health Policy planning, Medical Education technology, Information Technology and integration of alternative Health system including AYUSH. 8. To describe the intricacies of Social & Behavioral sciences and their applications. 9. Identify behavior pattern of individual or group of individuals detrimental or adversely affecting their health 10. Define and identify vulnerable, under-privileged high risk

<table>
<tr><td></td><td colspan="3">communities and their special needs
11. Conduct community surveys for assessment of health & morbidity profile, epidemiological determinants, assessment of health needs, disease surveillance, evaluation of health programmes and community diagnosis.
12. Do data collection, compilation, tabular and graphical presentation, analysis and interpretation, applying appropriate statistical tests, using computer-based software application for validation of findings
13. Conduct dietary surveys, assessment of nutritional status, nutritive values of common food menus, detection of food adulterants, use of lactometer, recording and interpretation of
growth and development charts.</td></tr>
<tr><td>Domains</td><td colspan="3">MK 2.1, 2.2,2. 3,2.4,2.5,2.6
PBLI 3.1,3. 2, 3.5, 3.6, 3.7,3. 9
P- 5.4,
SBP 6.1,6. 5
IPC 7.2,7. 3
PPD 8.1</td></tr>
<tr><td>Milestones</td><td>At the end of</td><td>Milestone to be achieved</td><td></td></tr>
<tr><td></td><td>1 year(12 months)</td><td>Level-I</td><td>1. Inconsistently able to acquire accurate information in an organized fashion
2. Does not perform an appropriately thorough physical exam or misses key physical exam findings
3. Inconsistently recognizes population health status or extracts limited information /knowledge</td></tr>
<tr><td></td><td>2 year(24 months)</td><td>Level- II</td><td>1. Consistently acquires accurate and relevant information from community
2. Seeks and obtains data from secondary sources when needed
3. Consistently performs accurate and appropriate enquiry & thorough physical exams
4. Uses collected data to define a population’s health status.</td></tr>
<tr><td></td><td>3 year (36 months)</td><td>Level- III</td><td>1. Acquires accurate information from population in an efficient, prioritized, and hypothesis- driven fashion
2. Performs accurate physical exams that are targeted to the patient’s complaints
3. Synthesizes data to generate a</td></tr>
</table>

			prioritized community diagnosis and problem list
	Aspirational		1. Obtains relevant historical subtleties, including sensitive information that informs about the hidden health issues (Social taboos, myths, beliefs, unmet needs etc.) 2. Identifies subtle or unusual physical exam findings (e.g. Fluorosis, lathyrism etc.) 3. Efficiently utilizes all sources of secondary data to support/ refute the information gathered. 4. Role models and teaches the effective use of gathering information and communication
Assessment Methods	1. Record review (written reports) 2. Portfolio review 3. Auditing field work (Checklist based assessment / DOPS/Oral presentation)		

EPA 02: Conduct a health needs assessment

Competencies	Applying understanding of the epidemiology of conditions, and their determinants of public health importance, to the development, implementation and evaluation of health surveillance systems		
Domains	KP 2.4 PBLI 3.1, 3.2, 3.3 ICS 4.1, SBP 6.3, 6.5,		
Milestones	At the end of	Milestone to be achieved	
	1 year	Level-I	• Defining the issue, population, context, and stakeholders
	2 year	Level- II	• Profiling a community's characteristics, needs, and resources (see Health Indicators Frameworks)
	3 year	Level- III	1. Prioritizing needs for action - size and severity of impact; changeable; effective and

			acceptable interventions 2. Preparing and presenting a final report
Assessment Methods	1. Record review (written reports) 2. Portfolio review 3. Auditing field work (Checklist based assessment /DOPS/Oral presentation)		

EPA 03: Design and manage health surveillance systems

Competencies	1. Applying concepts of epidemiology with regard to specific conditions, and their determinants of public health importance, to the development, implementation and evaluation of health surveillance 2. Apply the principles of health research and Bio-statistics		
Domains	PC 1.4 KP 2.4 PBLI 3.1, 3.2, 3.3,3.5, 3.7, 3.9 ICS 4.2		
Milestones	At the end of	Milestone to be achieved	
	1 year	Level-I	1. Defining scope of impact assessment of a project in terms of what information will be needed, by whom and in what time frame
	2 year	Level- II	1. Screening the project to ascertain whether the policy/project could have an impact.
	3 year	Level- III	1. Appraising the available information to determine the positive and negative impacts 2. Preparing and presenting a final report
Assessment Methods	1. Record review (written reports) 2. Portfolio review 3. Auditing field work (Checklist based assessment /Oral presentation) 4. PBL		

EPA 04: Conduct a health impact assessment manage all aspects of conducting a health impact assessment

<table>
<tr><td>Competencies</td><td colspan="3">Manage all aspects of conducting a health impact assessment including:
1. Screening whether the policy/project could have impact
2. Defining the scope of what information will be needed by whom and when
3. Appraising the available information to determine positive and negative impacts.
4. Assess impact of adverse environmental conditions on health of human beings</td></tr>
<tr><td>Domains</td><td colspan="3">KP 2.1, 2.2, 2.4
PBLI 3.1, 3.2, 3.3,3.5, 3.7, 3.9, 3.10
ICS 4.4
P 5.5
SBP 6.3, 6.4</td></tr>
<tr><td rowspan="4">Milestones</td><td>At the end of</td><td colspan="2">Milestone to be achieved</td></tr>
<tr><td>1 year</td><td>Level-I</td><td>1. Assess the development or improvement of a health surveillance system
2. Evaluate an existing health surveillance system</td></tr>
<tr><td>2 year</td><td>Level- II</td><td>1. Improve the management of a surveillance system including the quality control of data</td></tr>
<tr><td>3 year</td><td>Level- III</td><td>1. Analyze and interpret surveillance data
2. Communicate surveillance results to inform public health action.</td></tr>
<tr><td>Assessment Methods</td><td colspan="3">1. Record review (written reports)
2. Portfolio review
3. Auditing field work (Checklist based assessment /Oral presentation)
4. PBL</td></tr>
</table>

EPA 05: Conduct an environmental health risk assessment

Competencies	The conduct of an environmental health risk assessment to characterize the nature and magnitude of health risks to humans from chemical contaminants and other stressors that may be present in the environment. This includes:

<table>
<tr><td></td><td colspan="3">1. Identifying a hazard and assessing exposure
2. Characterizing and managing the risk
3. Communicating the risk.
4. Describe conceptual (and applied) understanding of Public Health, Community Medicine, clinical and disease-oriented approach, preventive approach & health promotion, disease control & promotion.
5. To describe the concept of Environmental Health and its various determinants.
6. Identify environmental health issues in a given area/community
7. Assess impact of adverse environmental conditions on health of human beings
8. Plan awareness programmes at various levels on environmental issues and mobilize community resources and participation to safeguard from local adverse environmental
9. Be a technical expert to advice on protection measures from adverse environmental exposure
10. To explain and correlate common health problems (medical, social, environmental, economic, and psychological) of urban slum dwellers, organization of health services in urban slum areas.</td></tr>
<tr><td>Domains</td><td colspan="3">KP 2.4, 2.6
PBLI 3.1, 3.2, 3.3
IPC 7.3</td></tr>
<tr><td>Milestones</td><td>At the end of</td><td>Milestone to be achieved</td><td></td></tr>
<tr><td></td><td>1 year</td><td>Level-I</td><td>1. Identifying a Hazard</td></tr>
<tr><td></td><td>2 year</td><td>Level- II</td><td>1. Exposure Assessment - assessing the magnitude and routes of exposure by person, place and time
2. Risk Characterization</td></tr>
<tr><td></td><td>3 year</td><td>Level- III</td><td>1. Risk Management
2. Risk Communication.</td></tr>
<tr><td>Assessment Methods</td><td colspan="3">1. Record review (written reports)
2. Portfolio review
3. Auditing field work (Checklist based assessment /Oral presentation)
4. PBL</td></tr>
</table>

References:

1. Domains of competency. Western Michigan University. Homer Stryker MD. School of Medicine. https://med.wmich.edu/

2. Internal Medicine – Preventive Medicine (Combined) programs must annually report on each set of milestones.

3. competency based postgraduate training programme for md - community medicine

Competency Domains

MK- Medical Knowledge, PC – Patient Care , PBLI- Problem Based Learning and Improvement , SBP – Systems Based Practice, P – Professionalism, ISC- Interpersonal and communication skills

Levels of Competency

Level I – knowledge only, can observe supervision, Level II – can do under direct supervision, Level III- Can do under indirect supervision, Level IV – can do independently, Level V – has expertise to teach others

Multisource Feedback (MSF): Faculty/Peers/Interns/Staff Nurse/PGs/Relatives

Assessment: Mini CEX/ DOPS/ OSCE/ OSPE/ Audit/PBL (Problem based learning) / Portfolio/ Record review