



# **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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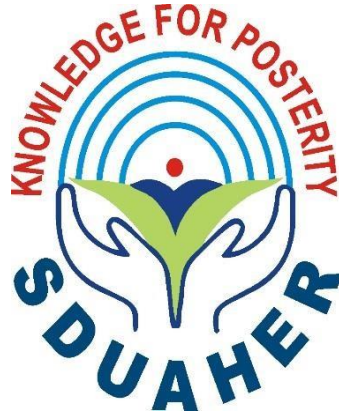
(With effect from 2019-2020 batches)

## **Competency Based Postgraduate Curriculum for Master of Surgery General Surgery**

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

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

**REGULATIONS GOVERNING**  
**POST GRADUATE DEGREE PROGRAMMES**  
**CURRICULUM 2019-2020**

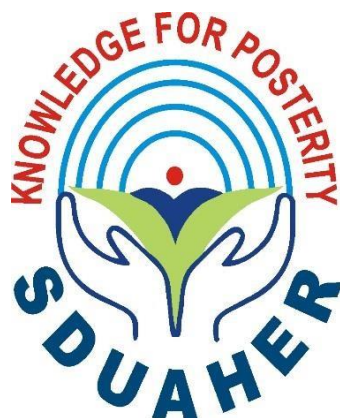


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**Comprising Sri Devaraj Urs Medical College**  
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Declared under section 3 of UGC, Act,1956,  
MHRD GOI NO.F,9-36/2006-U.3(A), Dt.25<sup>th</sup> may 2007  
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**REGULATIONS AND CURRICULA**  
**FOR**  
**POST GRADUATE DEGREE PROGRAMMES**  
**IN**  
**MEDICAL SCIENCES**  
**2019-2020**



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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:**

<b>Academic Council Meetings</b>		<b>Board of Management Meetings</b>	
19 <sup>th</sup>	17.11.2014	34 <sup>th</sup>	19.06.2015
21 <sup>st</sup>	25.04.2015	36 <sup>th</sup>	04.12.2015
22 <sup>nd</sup>	18.11.2015	44 <sup>th</sup>	23.06.2017
27 <sup>th</sup>	29.04.2017	45 <sup>th</sup>	09.11.2017
28 <sup>th</sup>	04.11.2017	48 <sup>th</sup>	20.06.2018
30 <sup>th</sup>	05.05.2018	50 <sup>th</sup>	22.12.2018
31 <sup>st</sup>	03.11.2018	54 <sup>th</sup>	06.07.2019
33 <sup>rd</sup>	04.06.2019	56 <sup>th</sup>	20.12.2019
34 <sup>th</sup>	15.11.2019	59 <sup>th</sup>	09.10.2020
36 <sup>th</sup>	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 a recognised 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 for admission.

**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 Recognized 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 to interpret various tests/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 1<sup>st</sup> 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 3<sup>rd</sup> or 4<sup>th</sup> or 5<sup>th</sup> 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

### **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](http://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](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 proper channel.

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 drawing conclusions.

#### **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 the Institution.

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: 12<sup>th</sup> 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 programmes 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 outcomes 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) checklist XII

**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 postgraduate programme.

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 3<sup>rd</sup> 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	

<u>CLINICALS/ PRACTICALS</u>		200
<u>VIVA VOCE</u>	<u>80</u>	100
<u>PEDAGOGY</u>	<u>20</u>	
<b>TOTAL</b>		<b>700</b>

### **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-subsequent 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 than one 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 3<sup>rd</sup> or 4<sup>th</sup> or 5<sup>th</sup> 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 take 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.S. GENERAL SURGERY

## **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.

A post graduate in Surgery having undergone the required training should be able to recognize the health needs of the community should be competent to handle effectively surgical problems and should be aware of the recent advances pertaining to his/her specialty. The PG student should be competent to provide professional services with empathy and humane approach. The PG student should acquire the basic skills in teaching of medical / para-medical students and is also expected to know the principles of research methodology and self-directed learning for continuous professional development.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of “domains of learning” under the heading “competencies”.

## **Goals**

The goals of postgraduate training in Surgery would be to train a basic medical graduate (MBBS) who will be able to:

- Practice as a General Surgeon equipped with appropriate knowledge and skills necessary to care of the sick.
- Practice General Surgery in the community (urban or rural) and to perform professionally at all levels of the existing health care system.
- Practice with empathy and the highest ethical standards of the profession.
- Continue to strive for excellence by continuing medical education throughout

his or her professional career.

- Teach by sharing knowledge and skills with colleagues.
- Understand the principles of research methodology and self-directed learning for continuous professional development.

### **Program Outcomes:**

At the end of postgraduate training, the PG student should be able to: -

- Diagnose and appropriately manage common surgical ailments in a given situation.
- Provide adequate preoperative, post-operative and follow-up care of surgical patients.
- Identify situations calling for urgent or early surgical intervention and refer at the optimum time to the appropriate centers.
- Counsel and guide patients and relatives regarding need, implications and problems of surgery in the individual patient.
- Provide and coordinate emergency resuscitative measures in acute surgical situations including trauma.
- Organize and conduct relief measures in situations of mass disaster including triage.
- Effectively participate in the National Health Programs especially in the Family Welfare Programs.
- Discharge effectively medico-legal and ethical responsibilities and practice his specialty ethically.
- Must learn to minimize medical errors.
- Must update knowledge in recent advances and newer techniques in the management of the patients.
- Must learn to obtain informed consent prior to performance of operative procedure.
- Perform surgical audit on a regular basis and maintain records (manual and/or electronic) for life.
- Participate regularly in departmental academic activities by presenting Seminar, Case discussion, Journal Club and Topic discussion on weekly basis and maintain logbook
- Demonstrate sufficient understanding of basic sciences related to his specialty.
- Plan and advice measures for the prevention and rehabilitation of patients belonging to his specialty.

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## **SPECIFIC LEARNING OBJECTIVES**

### **Clinical Objectives**

At the end of postgraduate training, the PG student should be able to: -

1. Diagnose and appropriately manage common surgical ailments in a given situation.
2. Provide adequate preoperative, post-operative and follow-up care of surgical patients.
3. Identify situations calling for urgent or early surgical intervention and refer at the optimum time to the appropriate centers.
4. Counsel and guide patients and relatives regarding need, implications and problems of surgery in the individual patient.
5. Provide and coordinate emergency resuscitative measures in acute surgical situations including trauma.
6. Organize and conduct relief measures in situations of mass disaster including triage.
7. Effectively participate in the National Health Programs especially in the Family Welfare Programs.
8. Discharge effectively medico-legal and ethical responsibilities and practice his specialty ethically.
9. Must learn to minimize medical errors.
10. Must update knowledge in recent advances and newer techniques in the management of the patients.
11. Must learn to obtain informed consent prior to performance of operative procedure.
12. Perform surgical audit on a regular basis and maintain records (manual and/or electronic) for life.
13. Participate regularly in departmental academic activities by presenting Seminar, Case discussion, Journal Club and Topic discussion on weekly basis and maintain logbook.
14. Demonstrate sufficient understanding of basic sciences related to his specialty.
15. Plan and advice measures for the prevention and rehabilitation of patients belonging to his specialty.

**Research:**

The student should:

1. Know the basic concepts of research methodology plan a research project and know how to consult library.
2. Should have basic knowledge of statistics.
3. Should complete “Basic Course in Biomedical Research”-ICMR-NIE within 2<sup>nd</sup> Academic Term.

**Teaching:**

The student should learn the basic methodology of teaching and develop competence in teaching medical/paramedical students.

**Professionalism:**

1. The student will show integrity, accountability, respect, compassion and dedicated patient care. The student will demonstrate a commitment to excellence and continuous professional development.
2. The student should demonstrate a commitment to ethical principles relating to providing patient care, confidentiality of patient information and informed consent.
3. The student should show sensitivity and responsiveness to patients’ culture, age, gender and disabilities.

**SUBJECT SPECIFIC COMPETENCIES**

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

**A. Cognitive domain**

- Demonstrate knowledge of applied aspects of basic sciences like applied anatomy, physiology, biochemistry, pathology, microbiology and pharmacology.
- Demonstrate knowledge of the bedside procedures and latest diagnostics and therapeutics available.
- Describe etiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children.
- Demonstrate the theoretical knowledge of general principles of surgery.
- Demonstrate the theoretical knowledge of systemic surgery including disaster management and recent advances.

- Demonstrate the theoretical knowledge to choose, and interpret appropriate diagnostic and therapeutic imaging including ultrasound, Mammogram, CT scan, MRI.
- Demonstrate the knowledge of ethics, medico-legal aspects, communication skills and leadership skills. The PG student should be able to provide professional services with empathy and humane approach.

**B. Affective domain**

- 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 opinion.
- 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.
- Develop communication skills to word reports, obtain a proper relevant history and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching.
- Obtain informed consent for any examination/procedure and explain to the patient and attendants the disease and its prognosis with a humane approach.
- Provide appropriate care that is ethical, compassionate, responsive and cost effective and in conformation with statutory rules.

**C. Psychomotor domain**

- Perform a humane and thorough clinical examination including internal examinations and examinations of all organs/systems in adults and children
- Write a complete case record with all necessary details.
- Arrive at a logical working diagnosis / differential diagnosis after clinical examination.
- Order appropriate investigations keeping in mind their relevance (need based).

- Choose, perform and interpret appropriate imaging in trauma - ultrasound FAST (Focused Abdominal Sonography in Trauma).
- Perform minor operative procedures and common general surgical operations independently and the major procedures under guidance.
- Provide basic and advanced lifesaving support services in emergency situations
- Provide required immediate treatment and comprehensive treatment taking the help of specialist as required.
- Perform minimally invasive surgery in appropriate clinical settings. Must have undergone basic training in operative laparoscopy related to general and GI Surgery.
- Undertake complete patient monitoring including the preoperative and post-operative care of the patient.
- Write a proper discharge summary with all relevant information.

**1. Clinician, who understands and provides preventive, promotive, curative, palliative and holistic care with compassion**

- 1.1 Demonstrate knowledge of normal human structure, function and development from a molecular, cellular, biologic, clinical, behavioural and social perspective.
- 1.2 Demonstrate knowledge of abnormal human structure, function and development from a molecular, cellular, biological, clinical, behavioural and social perspective.
- 1.3 Demonstrate knowledge of medico-legal, societal, ethical and humanitarian principles that influence healthcare.
- 1.4 Demonstrate knowledge of national and regional health care policies including the National Health Mission that incorporates National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), frameworks, economics and systems that influence health promotion, health care delivery, disease prevention, effectiveness, responsiveness, quality and patient safety.
- 1.5 Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is complete and relevant to disease identification, disease prevention and health promotion.
- 1.6 Demonstrate ability to elicit and record from the patient, and other relevant sources including relatives and caregivers, a history that is contextual to gender, age, vulnerability, social and economic status, patient preferences, beliefs and values.

- 1.7 Demonstrate ability to perform a physical examination that is complete and relevant to disease identification, disease prevention and health promotion.
- 1.8 Demonstrate ability to perform a physical examination that is contextual to gender, social and economic status, patient preferences and values.
- 1.9 Demonstrate effective clinical problem solving, judgment and ability to interpret and integrate available data in order to address patient problems, generate differential diagnoses and develop individualized management plans that include preventive, promotive and therapeutic goals.
- 1.10 Maintain accurate, clear and appropriate record of the patient in conformation with legal and administrative frame works.
- 1.11 Demonstrate ability to choose the appropriate diagnostic tests and interpret these tests based on scientific validity, cost effectiveness and clinical context.
- 1.12 Demonstrate ability to prescribe and safely administer appropriate therapies including nutritional interventions, pharmacotherapy and interventions based on the principles of rational drug therapy, scientific validity, evidence and cost that conform to established national and regional health programmes and policies for the following:
  - i) Disease prevention,
  - ii) Health promotion and cure, ii)Pain and distress alleviation ,and
  - iv)Rehabilitation and palliation.
- 1.13 Demonstrate ability to provide a continuum of care at the primary and/ or secondary level that addresses chronicity, mental and physical disability.
- 1.14 Demonstrate ability to appropriately identify and refer patients who may require specialized or advanced tertiary care.
- 1.15 Demonstrate familiarity with basic, clinical and translational research as it applies to the care of the patient.

## **2 Leader and member of the health care team and system**

- 2.1 Work effectively and appropriately with colleagues in an inter- professional health care team respecting diversity of roles, responsibilities and competencies of other professionals.
- 2.2 Recognize and function effectively, responsibly and appropriately as a health care team leader in primary and secondary health care settings.
- 2.3 Educate and motivate other members of the team and work in a collaborative and collegial fashion that will help maximize the health care delivery potential of the team.

- 2.4 Access and utilize components of the health care system and health delivery in a manner that is appropriate, cost effective, fair and in compliance with the national health care priorities and policies, as well as be able to collect, analyse and utilize health data.
- 2.5 Participate appropriately and effectively in measures that will advance quality of health care and patient safety within the health care system.
- 2.6 Recognize and advocate health promotion, disease prevention and health care quality improvement through prevention and early recognition: in a) life style diseases and b) cancer, in collaboration with other members of the health care team.

### **3 Communicator with patients, families, colleagues and community**

- 32 Demonstrate ability to communicate adequately, sensitively, effectively and respectfully with patients in a language that the patient understands and in a manner that will improve patient satisfaction and health care outcomes.
- 33 Demonstrate ability to establish professional relationships with patients and families that are positive, understanding, humane, ethical, empathetic, and trustworthy.
- 34 Demonstrate ability to communicate with patients in a manner respectful of patient's preferences, values, prior experience, beliefs, confidentiality and privacy.
- 35 Demonstrate ability to communicate with patients, colleagues and families in a manner that encourages participation and shared decision- making.

### **4 Lifelong learner committed to continuous improvement of skills and knowledge**

- 4.1 Demonstrate ability to perform an objective self-assessment of knowledge and skills, continue learning, refine existing skills and acquire new skills.
- 4.2 Demonstrate ability to apply newly gained knowledge or skills to the care of the patient.
- 4.3 Demonstrate ability to introspect and utilize experiences, to enhance personal and professional growth and learning.
- 4.4 Demonstrate ability to search (including through electronic means), and critically reevaluate the medical literature and apply the information in the care of the patient.
- 4.5 Be able to identify and select an appropriate career pathway that is professionally rewarding and personally fulfilling.

## **5 Professional who is committed to excellence, is ethical, responsive and accountable to patients, community and the profession**

- 5.1 Practice selflessness, integrity, responsibility, accountability and respect.
  - 5.2 Respect and maintain professional boundaries between patients, colleagues and society.
  - 5.3 Demonstrate ability to recognize and manage ethical and professional conflicts.
  - 5.4 Abide by prescribed ethical and legal codes of conduct and practice.
  - 5.5 Demonstrate a commitment to the growth of the medical profession as a whole.
- Syllabus**

### **Course Contents:**

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

### **1. General topics:**

A student should have fair knowledge of basic sciences (Anatomy, Physiology, Biochemistry, Microbiology, Pathology and Pharmacology) as applied to his specialty. Further, the student should acquire **in-depth knowledge** of his subject including recent advances and should be fully conversant with the bedside procedures (diagnostic and therapeutic) and having knowledge of latest diagnostics and therapeutics available.

1. History of medicine with special reference to ancient Indian texts
2. Health economics - basic terms, health insurance
3. Medical sociology, doctor-patient relationship, family adjustments in disease, organizational behavior, conflict resolution
4. Computers - record keeping, computer aided learning, virtual reality, robotics
5. Hazards in hospital and protection:  
AIDS, hepatitis B, tuberculosis, radiation, psychological
6. Environment protection - bio-medical waste management
7. Surgical audit, evidence based surgical practice, quality assurance
8. Concept of essential drugs and rational use of drugs

9. Procurement of stores and material & personal management
10. Research methodology - library consultation, formulating research, selection of topic, writing thesis protocol, preparation of consent form from patients
11. Bio-medical statistics, clinical trials
12. Medical ethics
13. Consumer protection
14. Newer antibiotics
15. Problem of resistance.
16. Sepsis -SIRS
17. Nosocomial infection
18. Advances in imaging technologies
19. Disaster management, mass casualties, Triage
20. O.T. design, technologies, equipment
21. Critical care in surgical practice
22. Response to trauma
23. Wound healing
24. Fluid and electrolyte balance
25. Nutrition
26. Blood transfusion
27. Brain death
28. Cadaveric organ retrieval

### **1. Systemic Surgery**

The student must acquire knowledge in the following important topics are but teaching should not be limited to these topics. A standard text-book may be followed, which will also identify the level of learning expected of the trainees.

- Wound healing including recent advances
- Asepsis, antisepsis, sterilization and universal precaution
- Surgical knots, sutures, drains, bandages and splints
- Surgical infections, causes of infections, prevention
- Common aerobic and anaerobic organisms and newer organisms causing infection including *Helicobacter Pylori*
- Tetanus, gas gangrene treatment & prevention

- Chronic specific infections TB, Filariasis
- Boils, cellulites, abscess, necrotizing fasciitis and synergistic infection
- Antibiotic therapy rationale including antibiotic prophylaxis, misuse, abuse
- Hospital acquired nosocomial infection causes and prevention including MRSA etc.
- HIV, AIDS and Hepatitis B & C, Universal precautions when dealing with patients suffering from these diseases
- Fluid and electrolyte balance including acid – base disturbance, consequences,

interpretation of blood gas analysis data and management

- Rhabdomyolysis and prevention of renal failure
- Shock (septicemic, hypovolemic, neurogenic, anaphylactic), etiology, pathophysiology and management
- Blood and blood components, transfusion indication, contraindication, mismatch and prevention and management of complications of massive blood transfusion
- Common preoperative preparation (detailed preoperative workup, risk assessment according to the disease and general condition of the patient as per ASA grade) and detailed postoperative complications following major and minor surgical procedures
- Surgical aspects of diabetes mellitus particularly management of diabetic foot and gangrene, preoperative control of diabetes, consequences of hypo- and hyper- glycaemia in a postoperative setting
- Consequences and management of bites and stings including snake, dog, human bites
- Mechanisms and management of missile, blast and gunshot injuries
- Organ transplantation: Basic principles including cadaver donation, related Human Organ Transplant Acts, ethical and medico-legal aspects.
- Nutritional support to surgical patients
- Common skin and subcutaneous condition
- Sinus and fistulae, pressure sores
- Acute arterial occlusion, diagnosis and initiate management
- Types of gangrene, Burger's disease and atherosclerosis
- Investigations in case of arterial obstruction, amputation, vascular injuries: basic principles and management
- Venous disorders: Varicose veins
- Diagnosis, principles of therapy, prevention of DVT: basic

- principles and management
- Lymphatic: Diagnosis and principles of management of lymphangitis and lymphedema
- Surgical management of Filariasis
- Burns: causes, prevention and management
- Wounds of scalp and its management
- Recognition, diagnosis and monitoring of patients with head injury, Glasgow coma scale
- Undergo advanced trauma and cardiac support course (certified) before appearing in final examination
- Recognition of acute cerebral compression, indication for referrals.
- Cleft lip and palate
- Leukoplakia, retention cysts, ulcers of tongue
- Oral malignancies
- Salivary gland neoplasms
- Branchial cyst, cystic hygroma
- Cervical lymphadenitis nonspecific and tuberculous, metastatic lymph nodes and lymphomas.
- Diagnosis and principles of management of goitre
- Thyroglossal cyst and fistula
- Thyrotoxicosis
- Thyroid neoplasms
- Management of solitary thyroid nodule
- Thoracic outlet syndrome
- Management of nipple discharge
- Breast abscess
- Clinical breast examination, breast self-examination
- Screening and investigation of breast lump
- Concept of Single Stop Breast Clinic
- Cancer breast diagnosis, staging and multimodality management (common neoadjuvant and adjuvant and palliative chemotherapy protocols and indications of radiation and hormonal therapy, pathology and interpretation of Tumour Markers, breast cancer support groups and counseling)
- Recognition and treatment of pneumothorax, hemothorax
- Pulmonary embolism: Index of suspicion, prevention/recognition and

treatment

- Flail chest, stove in chest
- Postoperative pulmonary complication
- Empyema thoracis
- Recognition of esophageal atresia and principles of management
- Neoplasms of the lung including its prevention by tobacco control
- Cancer esophagus: principles of management including importance of early detection and timely referral to specialist
- Achalasia cardia
- Gastro-esophageal reflux disease(GERD)
- Congenital hypertrophic pyloric stenosis
- Aetiopathogenesis, diagnosis and management of peptic ulcer including role of H. Pylori and its diagnosis and eradication
- Cancer stomach
- Signs and tests of liver dysfunction
- Amoebic liver abscess and its non-operative management
- Hydatid cyst and its medical and surgical management including laparoscopic management
- Portal hypertension, index of suspicion, symptoms and signs of liver failure and timely referral to a specialist center
- Obstructive jaundice with emphasis on differentiating medical vs surgical Jaundice, algorithm of investigation, diagnosis and surgical treatment options
- Neoplasms of liver
- Rupture spleen
- Indications for splenectomy
- Clinical features, diagnosis, complications and principles of management of cholelithiasis and cholecystitis including laparoscopic cholecystectomy
- Management of bile duct stones including endoscopic, open and laparoscopic management
- Carcinoma gall bladder, incidental cancer gallbladder, index of suspicion and its staging and principles of management
- Choledochal cyst
- Acute pancreatitis both due to gallstones and alcohol
- Chronic pancreatitis

- Carcinoma pancreas
- Peritonitis: causes, recognition, diagnosis, complications and principles of management with knowledge of typhoid perforation, tuberculous peritonitis, postoperative peritonitis
- Abdominal pain types and causes with emphasis on diagnosing early intra-abdominal acute pathology requiring surgical intervention
- Intestinal amoebiasis and other worms manifestation (Ascariasis) and their surgical complications (Intestinal Obstruction, perforation, gastrointestinal bleeding, involvement of biliary tract)
- Abdominal tuberculosis both peritoneal and intestinal
- Intestinal obstruction
- **Appendix:** Diagnosis and management of acute appendicitis
- Appendicular lump and abscess

### **Colon**

- Congenital disorders, Congenital megacolon
- Colitis infective / non infective
- Inflammatory bowel diseases
- Premalignant conditions of large bowel
- Ulcerative colitis
- Carcinoma colon
- Principles of management of types of colostomy

### **Rectum and Anal Canal:**

- Congenital disorders, Anorectal anomalies
- Prolapse of rectum
- Carcinoma rectum
- Anal Canal: surgical anatomy, features and management of fissures, fistula - in – ano.
- Perianal and ischiorectal abscess
- Hemorrhoids – Non-operative outpatient procedures for the control of bleeding (Banding, cryotherapy, injection) operative options - open and closed haemorrhoidectomy and stapled haemorrhoidectomy
- Anal carcinoma
- Clinical features, diagnosis, complication and principles of management of inguinal hernia including laparoscopic repair
- Umbilical, femoral hernia and epigastric hernia

- Open and Laparoscopic repair of incisional/primary ventral hernia
- Urinary symptoms and investigations of urinary tract
- Diagnosis and principles of management of urolithiasis
- Lower Urinary tract symptoms or prostatism
- Benign prostatic hyperplasia; diagnosis and management
- Genital tuberculosis in males
- Phimosi and paraphimosi
- Carcinoma penis
- Diagnosis and principles of treatment of undescended testis
- Torsion testis
- Hydrocele, haematocele , pyocele, varicocele: Diagnosis (Medical Board for fitness)
- Varicocele: Diagnosis (Medical Board for fitness)
- Acute and chronic epididymo-orchitis
- Testicular tumours
- Principles of management of urethral injuries
- Management of soft tissue sarcoma
- Prosthetic materials used in surgical practice
- Telemedicine, tele-proctoring and e-learning
- Communication skills

A student should be expert in good history taking, physical examination, providing basic life support and advanced cardiac life support, common procedures like FNAC, Biopsy, aspiration from serous cavities, lumbar puncture etc. The student should be able to choose the required investigations.

**Clinical cases and Symptoms-based approach to the patient with:**

1. Ulcers in oral cavity
2. Solitary nodule of the thyroid
3. Lymph node in the neck
4. Suspected breast lump
5. Benign breast disease
6. Acute abdominal pain
7. Blunt Trauma Abdomen

8. Gall stone disease
9. Dysphagia
10. Chronic abdominal pain
11. Epigastric mass
12. Right hypochondrium mass
13. Right iliac fossa mass
14. Renal mass
15. Inguino-scrotal swelling
16. Scrotal swelling
17. Gastric outlet obstruction
18. Upper gastrointestinal bleeding
19. Lower gastrointestinal bleeding
20. Anorectal symptoms
21. Acute intestinal obstruction
22. Obstructive jaundice
23. Acute retention of Urine
24. Bladder outlet obstruction
25. Haematuria
26. Peripheral vascular disease
27. Varicose veins
28. New born with developmental anomalies
29. Hydronephrosis , Pyonephrosis, perinephric abscess
30. Renal tuberculosis
31. Renal tumors
32. Carcinoma prostate
33. Genital tuberculosis in male

**At the end of the course, post graduate students should be able to perform independently (including peri-operative management) the following:**

Basic skills and ward Procedures.

Ward work forms an important part of training of the surgeon. In addition to the routine examination of the patient with proper recording of findings, diligent practice of the following is recommended.

Sl. No	Procedure	Semester					
		I	II	III	IV	V	VI
1	Start I.V lines and monitor infusions.	O/A	PI	PI	PI	PI	PI
2	Insertion of nasogastric tubes , urinary catheters etc.,	O/A	PI	PI	PI	PI	PI
3	Endotracheal intubation.	O/A	PI	PI	PI	PI	PI

4	Removal of tubes and drains.	O/A	PI	PI	PI	PI	PI
5	Start and monitor blood transfusion.	O/A	PI	PI	PI	PI	PI
6	Venous cut down.	O/A	PI	PI	PI	PI	PI
7	Abdominal paracentesis including diagnostic peritoneal lavage.	O/A	PI	PI	PI	PI	PI
8	Blood sampling venous and arterial.	O/A	PI	PI	PI	PI	PI
9	Bone marrow aspiration	O/A	PI	PI	PI	PI	PI
10	Thoracocentesis	O/A	PI	PI	PI	PI	PI
11	Biopsies including image guided.	O/A	PI	PI	PI	PI	PI
12	Skills for per rectal examination and proctoscopy.	O/A	PI	PI	PI	PI	PI
13	Routine wound dressings.	O/A	PI	PI	PI	PI	PI
14	Burns dressings.	O/A	PI	PI	PI	PI	PI
15	Surgical management of wounds.	O/A	PI	PI	PI	PI	PI
16	Incise and drain superficial abscesses.	O/A	PI	PI	PI	PI	PI
17	Control of external haemorrhage.	O/A	PI	PI	PI	PI	PI
18	Communication skills with the patients, relatives , colleagues and paramedical staff.	O/A	PI	PI	PI	PI	PI
19	Ordering of the requisite laboratory and radiological investigations and interpretation of reports in light of clinical picture.	O/A	PI	PI	PI	PI	PI
20	Universal precautions against the communicable diseases.	O/A	PI	PI	PI	PI	PI
21	Conduct CPR( Cardiopulmonary resuscitation )	O/A	PI	PI	PI	PI	PI
22	Ability to teach UG's and interns.	O	O	PI	PI	PI	PI

#### ICU Procedures.

SL. No	Procedure.	Semester.					
		I	II	III	IV	V	VI
1	Insertion of Arterial lines.	O	A	PA	PI	PI	PI
2	Insertion of central venous lines.	O	A	PA	PI	PI	PI
3	Insertion of Endotracheal tubes.	O	A	PA	PI	PI	PI

4	Insertion of peritoneal dialysis catheters.	O	A	PA	PI	PI	PI
5	Intercostal drainage.	O/A	PA	PI	PI	PI	PI
6	Suprapubic puncture/ Stab cystostomy.	O/A	PA	PI	PI	PI	PI
7	Tracheostomy .	O	A	PA	PA/PI	PA/PI	PI
8	Working knowledge of ventilators and various moniters.	O	A	PA	PI	PI	PI
9	Interpretation of arterial blood gases.	PA	PI	PI	PI	PI	PI
10	Correction of electrolyte disturbances.	PA	PI	PI	PI	PI	PI
11	Prescribing parenteral and enteral nutrition.	O	A	PA	PA	PA/PI	PA/PI

Emergency room procedures

Sl. No	Procedure	Semester					
		I	II	III	IV	V	VI
1	Assessment and initial management of polytrauma [triage]	PA	PI	PI	PI	PI	PI
2	Arterial and venous lines.	O	A	PA	PI	PI	PI
3	Cardiopulmonary resuscitation	PI	PI	PI	PI	PI	PI
4	Management of airway obstruction	PA	PI	PI	PI	PI	PI
5	Management of shock and cardiac/respiratory failure.	O	PA	PA	PI	PI	PI
6	Recognition and initial management of surgical emergencies	O	PA	PI	PI	PI	PI
7	Suturing techniques.	PA	PI	PI	PI	PI	PI
8	Manage pneumothorax / pleural space collections	O	A	PA	PI	PI	PI
9	Initial assessment and management of all types of shock.	PA	PI	PI	PI	PI	PI
10	Initial assessment and management of burns.	PA	PI	PI	PI	PI	PI
11	Application of splints for fractures.	O	PA	PA	PI	PI	PI

Pre operative workup.

Sl. No	Procedure	Semester					
		I	II	III	IV	V	VI
1	Ability for adequate preoperative preparation in special situations like diabetes mellitus , renal failure , cardiac and respiratory failure etc and risk stratification.	PA	PI	PI	PI	PI	PI
2	Communication skills with special reference to obtaining informed consent.	O/A	PA	PA	PA	PA/PI	PA/PI
3	Pre operative assessment and preparation of patients including DVT prophylaxis , blood transfusion and antibiotics.	PA	PI	PI	PI	PI	PI

Post operative care.

SL. No	Procedure	Semester					
		I	II	III	IV	V	VI
1	Airway management	O	A	PA	PI	PI	PI
2	Basic physiotherapy.	PA	PI	PI	PI	PI	PI
3	Management of epidural anaesthesia .	O	PA	PI	PI	PI	PI
4	Management of fistulae.	O	A	PA	PI	PI	PI
5	Management of post operative hypo or hypertension.	PA	PA	PI	PI	PI	PI
6	Post operative pain control.	PA	PI	PI	PI	PI	PI
7	Skills for nutritional rehabilitation of patients.	PA	PI	PI	PI	PI	PI
8	Skills for proper fluid and electrolyte management.	PA	PI	PI	PI	PI	PI
9	Skills for proper antibiotics management.	PA	PI	PI	PI	PI	PI
10	Stoma care.	O	A	PA	PI	PI	PI

Minor OT procedures.

Sl. No	Procedure	Semester					
		I	II	III	IV	V	VI
1	Circumcision	O/A	PA	PI	PI	PI	PI
2	Drainage of abscesses.	O/A	PA	PI	PI	PI	PI
3	FNAC	O/A	PA	PI	PI	PI	PI

4	Minor anorectal procedures ( hemorrhoids- banding or sclerotherapy,, anal dilatation ), fistulectomy .	O/A	PA	PA	PI	PI	PI
5	Biopsies – lymph nodes , ulcers , swellings etc	O/A	PA	PI	PI	PI	PI
6	Reduction and plaster applications of simple fracture and dislocations.	O/A	PA	PI	PI	PI	PI
7	Removal of simple subcutaneous swellings.	O/A	PA	PI	PI	PI	PI
8	Sigmoidoscopy and upper GI endoscopy.	O/A	PA	PA	PI	PI	PI
9	Suturing techniques.	O/A	PA	PI	PI	PI	PI
10	Vasectomies	O/A	PA	PI	PI	PI	PI
11	Wound debridement	O/A	PA	PI	PI	PI	PI
12	Minor disarticulation	O/A	PA	PI	PI	PI	PI

Major operating room techniques.

Sl. No	Procedure	Semester					
		I	II	III	IV	V	VI
1	Instrument arrangement and trolley lay out.	PA	PI	PI	PI	PI	PI
2	Skills in sterilization technique, O.T layout and asepsis.	PI	PI	PI	PI	PI	PI
3	Skin preparation – painting and draping.	PI	PI	PI	PI	PI	PI
4	Techniques of scrubbing and gowning.	PI	PI	PI	PI	PI	PI

General surgical operative procedures.

Sl. No	Procedure	Semester					
		I	II	III	IV	V	VI
<b>A</b>	<b>Head and neck</b>						
1	Cysts and sinuses of the neck.	O	A	PA	PI	PI	PI
2	Excision biopsy of cervical lymph node.	O	PA	PI	PI	PI	PI
3	Excision of the thyroglossal cyst .	O	A	PA	PI	PI	PI
4	Surgeries of the thyroid and parathyroid glands	O	A	A	PA	PA	PI
5	Parotidectomy/ surgeries of the salivary glands.	O	A	A	PA	PA	PA
<b>B</b>	<b>Thorax</b>						
	Thoracotomy open and closed	O	A	A	A	PA	PA
<b>C</b>	<b>GIT</b>						
1	Surgeries for esophagus.	O	A	A	A	PA	PA
2	Opening and closing of the abdomen.	O	PA	PI	PI	PI	PI
3	Exploratory Laparotomy.	O	A	PA	PA	PI	PI
4	Diagnostic laparoscopy.	O	A	A	PA	PA	PA
5	Surgeries over the stomach.	O	A	A	PA	PA	PI
6	Gastrostomy / feeding jejunostomy.	O	A	A	A	PA	PI
7	Closure of the peptic ulcer perforation/ under-running bleeding ulcer/ vagotomy and drainage procedures.	O	A	A	PA	PI	PI
8	Laparoscopic / open cholecystectomy.	O	O	A	A	PA	PA
9	Drainage of liver abcess/ hepatic resection.	O	A	A	PA	PA	PI
10	Hydatid cyst liver.	O	A	A	A	PA	PA
11	Pancreaticoduodenal resection.	O	O	A	A	A	PA
12	Pancreatic surgeries. Pseudocyst drainage	O	O	A	A	PA	PA
13	Laparotomy for abdominal trauma.	O	A	A	PA	PI	PI
14	Splenectomy.	O	A	A	PA	PA	PA
15	Management of intestinal obstruction , perforation closure, small bowel resection and anastomosis.	O	O	A	PA	PA	PI
16	Releasing of bands and simple adhesive adhesions.	O	O	A	PA	PA	PI
17	Laparoscopic/open apendicectomy.	O	A	A	PA	PA	PA

18	Colostomy .	O	O	A	A	PA	PI
19	Hemicolectomy.	O	O	A	A	PA	PA
20	Hartmann's procedure .	O	O	A	A	PA	PA
21	APR (abdominoperineal resection )	O	O	A	A	A	PA
22	Surgeries for retroperitoneal tumours.	O	O	A	A	A	PA
23	Hemorrhoidectomy.	O	A	PA	PI	PI	PI
24	Fissurectomy / simple fistulectomy.	O	A	PA	PI	PI	PI
25	Drainage of perianal abscess.	O	A	PA	PI	PI	PI
26	Hernia and groin surgeries.	O	A	PA	PI	PI	PI
<b>D</b>	<b>BREAST</b>						
1	Fibroadenoma excision .	O	A	PA	PI	PI	PI
2	Lumpectomy	O	A	PA	PI	PI	PI
3	Modified radical mastectomy.	O	A	PA	PI	PI	PI
<b>E</b>	<b>MISCELLANEOUS</b>						
1	Varicose veins surgery	O	A	PA	PA	PI	PI
2	Surgery for soft tissue sarcomas	O	A	A	A	PA	PA
3	Amputations.	O	A	PA	PA	PI	PI

### **Speciality procedures .**

There are repetition of some procedures listed under this category and those listed under general surgical procedures. Where different numbers are mentioned for the same /similar procedures between the general surgery and the speciality lists, the higher number is applicable as the prescribed number.

### **Laparoscopy and endoscopy.**

Sl. No	Procedure	Semester					
		I	II	III	IV	V	VI
<b>1</b>	Upper and lower GI endoscopies – DIAGNOSTIC	O/A	PA	PA	PI	PI	PI
<b>2</b>	Upper and lower GI endoscopies – THERAPEUTIC	O/A	O/A	O/A	O/A	PA	PA
<b>3</b>	Diagnostic laparoscopy.	O	A	A	PA	PA	PI
<b>4</b>	Laparoscopic appendectomy.	O	A	A	A	PA	PI
<b>5</b>	Laparoscopic cholecystectomy.	O	O	A	A	PA	PA
<b>6</b>	Laparoscopic hernia	O	O	A	A	PA	PA

## Neurosurgery.

	Procedure	Semester					
		I	II	III	IV	V	VI
1	Suturing of complex scalp wounds.	O	A	A	PI	PI	PI
2	Craniotomy	O	O	A	A	PA	PA
3	Management of paraplegia	O	O	A	A	PA	PI
4	Peripheral nerve repair.	O	O	A	A	PA	PI
5	Prevention of nerve injury – specific operations	O	O	A	A	PA	PA
6	Surgeries for meningeal tumours	O	O	A	A	A	A
7	Surgeries for brain tumours	O	O	A	A	A	A

## Urology .

Sl. No	Procedure	Semester					
		I	II	III	IV	V	VI
<b>A</b>	<b>Kidney</b>						
1	Nephrectomy – partial /total	O	O	A	A	A	A
2	Nephrolithotomy Pyelolithotomy Nephropyelolithotomy	O	A	A	A	A	A
3	Management of renal stones	O	O	A	A	A	A
4	Genito urinary TB .	O	A	A	A	A	A
5	HUN	O	A	A	A	A	A
<b>B</b>	<b>Ureter</b>						
1	Management of ureteral stones / URSL .	O	O	A	A	PA	PA
<b>C</b>	<b>Bladder</b>						
1	Diagnostic cystoscopy	O	A	PA	PI	PI	PI
2	Suprapubic cystostomy.	O	A	PA	PI	PI	PI
3	Surgeries for bladder tumours .	O	A	A	A	A	A
<b>D</b>	<b>Prostate</b>						
1	TURP	O	A	A	A	A	A
2	Open prostatectomy	O	A	A	A	A	A
3	Drainage of prostatic abcess.	O	A	A	A	A	A
<b>E</b>	<b>Urethra .</b>						

1	Urethral /urogenital injuries .	O	A	A	A	A	A
2	Urethral dilatation.	O	A	PA	PA	PI	PI
3	Meatotomy/ Urethroplasty	O	A	A	A	A	A
<b>F</b>	<b>Testis</b>						
1	Orchidectomy	O	A	A	PA	PI	PI
2	Orchidopexy	O	A	A	PA	PI	PI
3	Retroperitoneal lymph node dissection.	O	A	A	A	A	A
<b>G</b>	<b>Scrotum</b>						
1	Hydrocele , surgeries for groin hernia.	O	A	PA	PA	PI	PI
2	Varicocoele .	O	A	PA	PA	PI	PI
3	Vasectomy.	O	A	PA	PA	PI	PI
<b>H</b>	<b>Penis :</b>						
1	Circumcision.	PA	PA	PI	PI	PI	PI
2	Partial or total amputation of penis .	O	A	PA	PA	PI	PI
3	Inguinal block dissection.	O	A	A	A	A	A

### Oncology.

SL. No	Procedure	Semester					
		I	II	III	IV	V	VI
<b>1</b>	All radical procedures - breast , thyroid , GI and facio maxillary malignancies.	O	A	A	PA	PA	PA
<b>2</b>	Breast lumpectomy.	O	A	PA	PA	PI	PI
<b>3</b>	Thyroid surgery.	O	A	PA	PA	PA	PI
<b>4</b>	Functional neck dissection.	O	A	A	A	A	A
<b>5</b>	Gastrectomy / bowel resection.	O	A	A	A	A	PA
<b>6</b>	Imprint cytology.	O	A	PA	PA	PI	PI
<b>7</b>	Metastatic workup.	O	A	PA	PA	PI	PI
<b>8</b>	Stoma care.	O	A	PA	PA	PI	PI
<b>9</b>	USG guided biopsy.	O	PA	PI	PI	PI	PI

### Plastic surgery.

Sl. NO	Procedure	Semester					
		I	II	III	IV	V	VI
<b>1</b>	Burn resuscitation	O	A	PA	PI	PI	PI
<b>2</b>	Lip surgery	O	A	A	A	A	A

3	Local blocks in anaesthesia	O	A	PA	PI	PI	PI
4	Minor hand injuries.	O	A	PA	PA	PI	PI
5	Nerve repair.	O	A	PA	PA	PA	PA
6	Post excision reconstruction.	O	A	A	A	A	A
7	Re-implantation of digits.	O	A	A	A	A	A
8	Skin flap surgery.	O	O	A	A	A	A
9	Split skin graft.	O	A	PA	PA	PI	PI
10	Tendon repair.	O	A	PA	PA	PA	PA
11	Wound debridement.	O	A	PA	PI	PI	PI

### Pediatric surgery.

	Procedure	Semester					
		I	II	III	IV	V	VI
1	Anorectal anomalies	O	A	PA	PA	PA	PA
2	Circumcision/ meatoplasty	PA	PA	PI	PI	PI	PI
3	Herniotomy	O	A	PA	PA	PI	PI
4	Intercostal aspiration	O	A	PA	PA	PI	PI
5	Laparotomy for peritonitis	O	A	A	PA	PA	PI
6	Lymph node biopsy	O	A	PA	PI	PI	PI
7	Non operative treatment of volvulus	O	A	PA	PI	PI	PI
8	Orchidopexy	O	A	A	PA	PI	PI
9	Ostomies	O	A	PA	PA	PA	PA
10	Pediatric emergencies.	O	A	PA	PA	PA	PA
11	Pyloromyotomy.	O	A	A	PA	PA	PA

### Cardiothoracic surgery.

	Procedure	Semester					
		I	II	III	IV	V	VI
1	Cannulation of artery and vein.	O	A	PA	PI	PI	PI
2	Chest injuries	O	A	PA	PA	PA	PI
3	Empyema drainage / decortications	O	A	A	A	A	A
4	Endotracheal intubation.	O	A	PA	PI	PI	PI
5	Tracheostomy.	O	A	PA	PA/PI	PI/PI	PI
6	Intercostal drainage	O/A	PA	PI	PI	PI	PI
7	Opening and closing the chest.	O	A	A	A	A	A
8	Lobectomies and pneumonectomies	O	A	A	A	A	A
9	Oesophageal surgery	O	A	A	A	A	A
10	Pericardiectomy	O	A	A	A	A	A
11	Removal of foreign bodies.	O	A	A	A	A	A

12	Remove pulse generator ( pacing )	O	A	A	A	A	A
13	Rib resection	O	A	A	A	A	A
14	Undertake sternotomies	O	A	A	A	A	A
15	Vein and arterial harvesting.	O	A	A	A	A	A
16	Ventilator management.	O	A	PA	PI	PI	PI

### **Vascular surgery .**

	Procedure	Semester					
		I	II	III	IV	V	VI
1	AV Shunts for vascular access	O	A	A	A	A	A
2	Bypass graft – prosthetic	O	A	A	A	A	A
3	Conservative amputations	O	A	A	A	A	A
4	Embolectomy	O	A	A	A	A	A
5	Post traumatic aneurysms	O	A	A	A	A	A
6	Sympathectomy.	O	A	PA	PA	PA	PA
7	Use of heparin	O	A	PA	PA	PI	PI
8	Varicose vein surgery	O	A	PA	PA	PI	PI
9	Vascular suturing.	O	A	PA	PA	PA	PA
10	Vein graft	O	A	A	A	A	A
11	Vein patch repair.	O	A	A	A	A	A

### **TEACHING AND LEARNING METHODS**

**Didactic lectures are of least importance;** small group discussion such as **seminars, journal clubs, symposia, reviews and guest lectures should get priority** for theoretical knowledge. **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 to interpret various tests/investigations. Exposure to newer **specialized diagnostic/therapeutic procedures** concerning her/his subject should be given. **Self-learning tools** like assignments and case-based learning may be promoted.

#### **1. Clinical postings**

A major portion of posting should be in General Surgery. It should include in-patients, out-patients, ICU, trauma, emergency room and speciality clinics. The postgraduate students shall be required to participate in the teaching and training programme of undergraduate students and interns.

### **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.

### **Rotation of posting**

**Two hours in two days in a week in the first year of the course the residents are rotated through basic sciences viz. Anatomy Pathology and Radiology**

### **ANATOMY:**

At the end of the posting in the Department of Anatomy, the PG student should be able to:

- Reorient to anatomy of the abdomen, pelvis, head and neck, breast and extremities.

Formative assessment: DOPS, MSF, IA Theory.

### **PATHOLOGY:**

At the end of the posting in the Department of Pathology the PG students should know:

- About various types of biopsy, needle ,trucut ,frozen , imprint cytology, IHC.

Formative assessment: DOPS, MSF, Cbd, IA Theory.

### **RADIOLOGY:**

At the end of the posting in the Department of Radiology the PG students should:

- Have knowledge about basic principles of USG, CT, MRI.
- Have knowledge about basic principles of ultrasound, CT, MRI in blunt trauma abdomen, chest trauma.
- Be able to interpret Chest X-ray in acute abdomen.
- Be able to perform guided aspiration of tumors, Cysts, Space occupying lesions (SOL) in the abdomen (diagnostic and therapeutic).

Formative assessment: DOPS, MSF, Cbd, IA Theory.

- **Inter-unit rotation in the department should be done for a period of up to one year.**
- **Rotation in appropriate related subspecialties for a total period not exceeding**

**06 months during 2<sup>nd</sup> academic year:**

<u>Department</u>	<u>Duration</u>
• Paediatric surgery	4 weeks
• Plastic surgery	4 weeks
• Neurosurgery	4 weeks
• Urology	4 weeks
• Oncology	4 weeks
• Anaesthesiology	2 weeks
• Orthopaedics	2 weeks

- **Paediatric surgery** 4 weeks

At the end of posting in the Department of Paediatric surgery the students should

- Be able to diagnose common surgical emergencies in paediatric age group
- Perform resuscitation of cases - newborn , infants , children .
- Manage fluids and electrolyte balance .
- Perform IV access

Formative assessment: DOPS, Mini-CEX, MSF, CbD, IA Theory.

- **Plastic surgery** 4 weeks

At the end of posting in the Department of Plastic surgery, students should :

- Understand basic principles of covering raw area with graft / flaps (in trauma / postoperative cases).
- Understand basic principles of nerve and tendon repair.

Formative assessment: DOPS, Mini-CEX, MSF, CbD, IA Theory.

- **Neurosurgery** 4 weeks

At the end of posting in the Department of Neurosurgery the students should : -

- Understand the basic principles and management of various head injuries
- Understand the basic principles and management of spine injuries
- Know about rehabilitation of patients recovering from neuro-deficits and develop adequate counselling skills.

Formative assessment: DOPS, Mini-CEx, MSF, Cbd, IA Theory.

- **Urology** 4 weeks

At the end of posting in the Department of Urology the students should:

- Understand basic principles and management of renal disorders.
- Understand basic principles and interpretations of diagnostic tests for various renal disorders.
- Understand management of common emergencies, rupture bladder, urethra injuries.
- Evaluate a case of retention of urine.
- Be able to counsel couples in management of infertility.
- Know about recent advances in the endo-urology.
- Understand basic principles and management of Renal transplantation.

Formative assessment: DOPS, Mini-CEx, MSF, Cbd, IA Theory.

- **Oncosurgery** 4 weeks

At the End of posting in Oncosurgery the students should:-

- Understand Staging and evaluation of common malignancies.
- Understand Basic principles of chemotherapy, complications and its Objectives: management
- Understand Basic Principles of various types of radiotherapy, complications and its management.
- Understand various forms of palliative care for incurable malignancies.
- Understand Counseling and management of terminally ill patients.

Formative assessment: DOPS, Mini-CEx, MSF, Cbd, IA Theory.

- **Anaesthesiology** 2 weeks

At the end of posting in the Department of Anaesthesiology, the post graduate students should:

- Understand the basic principles in general anaesthesia, spinal, epidural and regional anaesthesia.
- Know about commonly used anaesthetic agents and their side effects.

- Understand basic principles of mechanical ventilation.
- Be able to insert central line and peripheral lines.
- Be able to perform Endo tracheal intubation.

Formative assessment: DOPS, Mini-CEx, MSF, CbD, IA Theory.

- **Orthopedics**      2 weeks

At the end of posting in the department of Orthopaedics the student should:

- Understand basic principles in management of fractures, sprains.
- Understand basic principles in tendon repair, muscle transfer.
- Understand the basic principles of Physiotherapy and rehabilitation.

Formative assessment: DOPS, Mini-CEx, MSF, CbD, IA Theory.

## **2. Clinical meetings:**

There should be intra- and inter- departmental meetings for discussing the uncommon / interesting cases involving multiple departments.

### **Self-directed learning and teaching**

#### **Microteaching**

#### **Departmental Learning Activity:**

- a. Clinical case discussion
- b. Pedagogy session
- c. Journal Club
- d. Applied Anatomy & Operative Surgery Session
- e. Seminar
- f. Monthly departmental mortality meeting
- g. Comprehensive Daily Audit

#### **Interdepartmental learning activity**

- a. Interdepartmental PG symposium
- b. Clinico-pathological conference (CPC)
- c. Case Discussion
- d. Central mortality meeting

#### **External and Outreach Activities /CMEs**

- a. Guest Lectures
- b. CME & Work Shop
- c. Health Camps
- d. Local, State & National Conferences

Thesis writing and research:

Thesis writing is compulsory.

3. The student should know the basic concepts of research methodology plan a research project, be able to retrieve information from the library. The student should have a basic knowledge of statistics.
4. Department encourages e-learning activities.

**Procedure for defaulters:**

The departmental committee will review such situations. The "defaulting candidate is counselled 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 final examination, if she/he fails to fulfill the requirements in spite of being given adequate chances to set himself or herself right

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

**ASSESSMENT**

Assessment should be comprehensive & objective. It should address the stated competencies of the course. The assessment needs to be spread over the duration of the course.

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

**General Principles**

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

**Quarterly assessment during the MS training should be based on following educational activities:**

**1. Journal based / recent advances learning**

- Journal Clubs – Check List

**2. Patient based /Laboratory or Skill based learning**

- Mini-CEX (mini clinical examination) - Qtrly
- DOPS (Directly Observed Procedural Skills) - Qtrly
- Case based discussions – Long case discussion (Holistic) –& Short Case discussion (Focused) – QTRLY
- Multisource Feedback (MSF)-Qtrly
- Theory Examination –Qtrly

**INTERNAL ASSESSMENT**

<b>IA THEORY</b>	<b>MARKS ALLOTMENT</b>	<b>MAXIMUM MARKS</b>	<b>MINIMUM MARKS REQUIRED FOR PASSING</b>
PAPER	LEQ: 8 X 10=80 MCQ: 20X 1=20	100	50

MCQs constitute 20% of Each Paper

Note: Final Internal assessment (Theory and Practical – Viva voce) will be similar to Summative assessment.

**3. Self-directed learning and teaching**

**Microteaching**

**4. Departmental**

- Clinical case discussion- Check List 5
- Pedagogy session- Check List 6
- Seminar -Check List 3
- Surgical Anatomy & Operative Surgery
- Six monthly Thesis Review -Check list 9
- Monthly assessment

**ENTRUSTABLE PROFESSIONAL ACTIVITY**

EPAs are units of professional practice, defined as tasks or responsibilities to be entrusted to the unsupervised execution by a resident 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 residents.

- 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

**Entrustable Professional Activity - Milestones**

EPA	6 MONTHS	12 MONTHS (ENTRUSTABLE)
<b>EPA: 1 Gather a history and perform a physical examination</b>	<p>Gathers excessive or incomplete data</p> <p>Does not deviate from a template</p> <p>Communicates unidirectionally</p> <p>Does not respond to patient verbal and nonverbal cues</p> <p>May generalize based on age, gender, culture, race, religion, disabilities, and/or sexual orientation</p> <p>Does not consistently consider patient privacy and autonomy</p> <p>Questions are not guided by the evidence and data collected</p> <p>Does not prioritize or filter information</p> <p>Questions reflect a narrow</p>	<p>Obtains a complete and accurate history in an organized fashion</p> <p>Seeks secondary sources of information when appropriate (e.g. family, primary care physician, living facility, pharmacy)</p> <p>Adapts to different care settings and encounters</p> <p>Adapts communication skills to the individual patient's needs and characteristics</p> <p>Responds effectively to patient's verbal and nonverbal cues and emotions</p> <p>Demonstrates astute clinical reasoning through targeted hypothesis-driven questioning</p> <p>Incorporates secondary data</p>

	<p>differential diagnosis Performs basic exam maneuvers correctly</p> <p>Does not perform exam in an organized fashion</p> <p>Relies on head-to-toe examination</p> <p>Misses key findings</p>	<p>into medical reasoning Performs an accurate exam in a logical and fluid sequence</p> <p>Uses the exam to explore and prioritize the working differential diagnosis</p> <p>Can identify and describe normal and abnormal findings</p>
<p><b>EPA 2: Prioritize a Differential Diagnosis Following a Clinical Encounter</b></p>	<p>Approaches assessment from a rigid template</p> <p>Struggles to filter, prioritize, and make connections between sources of information</p> <p>Proposes a differential diagnosis that is too narrow, is too broad, or contains inaccuracies</p> <p>Demonstrates difficulty retrieving knowledge for effective reasoning</p> <p>Does not integrate emerging information to update the differential diagnosis</p> <p>Displays discomfort with ambiguity</p> <p>Recommends a broad range of untailored diagnostic evaluations</p> <p>Depends on team for all management plans</p> <p>Does not completely explain and document reasoning</p>	<p>Gathers pertinent information from many sources in a hypothesis-driven fashion Filters, prioritizes, and makes connections between sources of information</p> <p>Proposes a relevant differential diagnosis that is neither too broad nor too narrow</p> <p>Organizes knowledge into illness scripts (patterns) that generate and support a diagnosis</p>
<p><b>EPA 3: Recommend and Interpret Common Diagnostic and Screening Tests</b></p>	<p>Recommends tests for common conditions</p> <p>Does not consider harm, costs, guidelines, or patient resources</p> <p>Does not consider patient-specific screening unless instructed</p> <p>Recommends unnecessary tests or tests with low pretest probability</p> <p>Neglects patient's preferences</p>	<p>Recommends key, reliable, cost-effective screening and diagnostic tests</p> <p>Applies patient-specific guidelines</p> <p>Provides individual rationale based on patient's preferences, demographics, and risk factors</p> <p>Incorporates sensitivity, specificity, and prevalence in recommending and interpreting tests</p>

	<p>Misinterprets insignificant or explainable abnormalities Does not know how to respond to urgent test results Requires supervisor to discuss results with patient</p>	<p>Explains how results will influence diagnosis and evaluation Distinguishes common, insignificant abnormalities from clinically important findings Discerns urgent from nonurgent results and responds correctly Seeks help for interpretation of tests beyond scope of knowledge</p>
<p><b>EPA 4: Obtain informed consent for tests and / or procedures</b></p>	<p>Is complacent with informed consent due to limited understanding of importance of informed consent Allows personal biases with intervention to influence consent process Obtains informed consent only on the directive of others Uses medical jargon Uses unidirectional communication; does not elicit patient's preferences Has difficulty in attending to emotional cues Does not consider the use of an interpreter when needed Displays a lack of confidence that increases patient stress or discomfort, or overconfidence that erodes trust Asks questions Accepts help</p>	<p>Understands and explains the key elements of informed consent Provides complete and accurate information Recognizes when informed consent is needed and describes it as a matter of good practice rather than as an externally imposed sanction Avoids medical jargon Uses bidirectional communication to build rapport Practices shared decision making, eliciting patient and family preferences Responds to emotional cues in real time Enlists interpreters collaboratively Demonstrates confidence commensurate with knowledge and skill so that patient and family are at ease Seeks timely help</p>

<p><b>EPA 5: Recognize a patient requiring urgent or emergent care and initiate evaluation and management</b></p>	<p>Demonstrates limited ability to gather, filter, prioritize, and connect pieces of information to form a patient-specific differential diagnosis in an urgent or emergent setting Misses abnormalities in patient's clinical status or does not anticipate next steps May be distracted by multiple problems or have difficulty prioritizing Accepts help Requires prompting to perform basic procedural or life support skills correctly Does not engage with other team members Communicates in a unidirectional manner with family and health care team Provides superfluous or incomplete information to health care team members Does not consider patient's wishes if they differ from those of the provide</p>	<p>Recognizes variations of patient's vital signs based on patient- and diseasespecific factors Gathers, filters, and prioritizes information related to a patient's decompensation in an urgent or emergent setting Responds to early clinical deterioration and seeks timely help Prioritizes patients who need immediate care and initiates critical interventions Initiates and applies effective airway management, BLS, and advanced cardiovascular life support (ACLS) skills Monitors response to initial interventions and adjusts plan accordingly Adheres to institutional procedures and protocols for escalation of patient care Uses the health care team members according to their roles and responsibilities to increase task efficiency in an emergent patient condition Communicates bidirectionally with the health care team and family about goals of care and treatment plan while keeping them up to date Actively listens to and elicits feedback from team members (e.g., patient, nurses, family members) regarding concerns about patient deterioration to determine next steps</p>
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<p><b>EPA 6: Give or receive a patient handover to transition care responsibility</b></p>	<p>Uses electronic handover tool          Inconsistently updates tool          Requires clarification and additional relevant information from others to prioritize information          Provides patient information that is disorganized, too detailed, and/or too brief          Requires assistance to minimize interruptions and distractions          Demonstrates minimal situational awareness          Inconsistently communicates key components of the standardized tool          Does not provide action plan and contingency plan          Delivers incomplete feedback; accepts feedback when given          Does not encourage other team members to express their ideas or opinions          Inconsistently uses summary statements and/or asks clarifying questions          Is aware of HIPAA policies</p>	<p>Consistently updates electronic handover tool with clear, relevant, and succinct documentation          Adapts and applies all elements of a standardized template          Presents a verbal handover that is prioritized, relevant, and succinct          Avoids interruptions and distractions          Manages time effectively          Demonstrates situational awareness          Highlights illness severity accurately          Provides complete action plans and appropriate contingency plans          Provides and solicits feedback regularly, listens actively, and engages in reflection          Identifies areas of improvement          Asks mutually clarifying questions, provides succinct summaries, and uses repeat-back techniques          Consistently considers patient privacy and confidentiality          Highlights and respects patient's preferences</p>
<p><b>EPA 8: Provide basic and advanced lifesaving support services in emergency situations</b></p>	<p>Does not recognize an urgent or emergent case          Does not initiate an assessment and/or management of an urgent or emergent case          Is unable to perform CPR          Does not ask for help when appropriate          Does not appropriately document patient assessments and necessary interventions in the medical record</p>	<p>Utilizes early warning scores, or rapid response team / medical emergency team criteria to recognize patients at risk of deterioration and mobilizes appropriate resources urgently          Performs basic life support when required including CPR in cardiac arrest          Asks for help when uncertain or requiring assistance          Involves team members required for immediate</p>

	<p>Does not update patient's status to family members (caregiver/advocate)</p> <p>Does not clarify goals of care</p>	<p>response, continued decision making, and necessary follow-up</p> <p>Initiates and participates in a code response</p> <p>Rapidly assesses and initiates management to stabilize the patient</p> <p>Documents patient assessments and necessary interventions in the medical record</p> <p>Updates family members/caregiver/advocate to explain patient's status and escalation-of-care plans</p> <p>Clarifies patient's goals of care upon recognition of deterioration</p>
<p><b>EPA 9: Collaborate as a member of an inter-professional team</b></p>	<p>Identifies roles of other team members but does not know how or when to use them</p> <p>Acts independently of input from team members, patients, and families</p> <p>Communication is largely unidirectional, in response to prompts, or template driven</p> <p>Has limited participation in team discussion</p> <p>Is typically a more passive member of the team</p> <p>Prioritizes own goals over those of the team</p>	<p>Effectively partners as an integrated member of the team</p> <p>Articulates the unique contributions and roles of other health care professionals</p> <p>Actively engages with the patient and other team members to coordinate care and provide for seamless care transition</p> <p>Communicates bidirectionally; keeps team members informed and up to date</p> <p>Tailors communication strategy to the situation</p> <p>Supports other team members and communicates their value to the patient and family</p> <p>Anticipates, reads, and reacts to emotions to gain and maintain therapeutic alliances with others</p> <p>Prioritizes team's needs over personal needs</p>
<p><b>EPA 10: Perform general procedures of a physician</b></p>	<p>Technical skills are variably applied</p> <p>Completes the procedure unreliably</p> <p>Uses universal precautions and aseptic technique</p>	<p>Demonstrates necessary preparation for performance of procedures</p> <p>Correctly performs procedure on multiple occasions over time</p> <p>Uses universal precautions and</p>

	<p>inconsistently Does not understand key issues in performing procedures, such as indications, contraindications, risks, benefits, and alternatives</p> <p>Demonstrates limited knowledge of procedural complications or how to minimize them</p> <p>Uses jargon or other ineffective communication techniques</p> <p>Does not read emotional response from the patient</p> <p>Does not engage patient in shared decision making</p> <p>Displays a lack of confidence that increases patient's stress or discomfort, or overconfidence that erodes patient's trust if the learner struggles to perform the procedure</p> <p>Accepts help when offered</p>	<p>aseptic technique consistently</p> <p>Demonstrates and applies working knowledge of essential anatomy, physiology, indications, contraindications, risks, benefits, and alternatives for each procedure</p> <p>Knows and takes steps to mitigate complications of procedures</p> <p>Demonstrates patient-centered skills while performing procedures (avoids jargon, participates in shared decision making, considers patient's emotional response)</p> <p>Having accounted for the patient's and family's wishes, obtains appropriate informed consent</p> <p>Seeks timely help</p> <p>Has confidence commensurate with level of knowledge and skill that puts patients and families at ease</p>
<p><b>EPA 11: Enter and discuss orders and prescriptions</b></p>	<p>Does not recognize when to tailor or deviate from the standard order set</p> <p>Orders tests excessively (uses shotgun approach)</p> <p>May be overconfident, does not seek review of orders</p> <p>Has difficulty filtering and synthesizing information to prioritize diagnostics and therapies</p> <p>Unable to articulate the rationale behind orders</p> <p>Underuses information that could help avoid errors</p> <p>Relies excessively on technology to highlight drug–drug interactions and/or risks (e.g., smartphone or EHR suggests an interaction, but</p>	<p>Routinely recognizes when to tailor or deviate from the standard order set</p> <p>Able to complete complex orders requiring changes in dose or frequency over time (e.g., a taper)</p> <p>Undertakes a reasoned approach to placing orders (e.g., waits for contingent results before ordering more tests)</p> <p>Recognizes limitations and seeks help</p> <p>Recognizes patterns, takes into account the patient's condition when ordering diagnostics and/or therapeutics</p> <p>Explains how test results influence clinical decision</p>

	<p>learner cannot explain relevance)  Places orders without communicating with others; uses unidirectional style (“Here is what we are doing...”)  Does not consider cost of orders or patient’s preferences</p>	<p>making  Routinely practices safe habits when writing or entering prescriptions or orders Responds to EHR’s safety alerts and understands rationale for them  Uses electronic resources to fill in gaps in knowledge to inform safe order writing (e.g., drug– drug interactions, treatment guidelines)  Enters orders that reflect bidirectional communication with patients, families, and team  Considers the costs of orders and the patient’s ability and willingness to proceed with the plan</p>
<p><b>EPA 13: Form clinical questions and retrieve evidence to advance patient care</b></p>	<p>With prompting, translates information needs into clinical questions  Uses vague or inappropriate search strategies, leading to an unmanageable volume of information  Accepts findings from clinical studies without critical appraisal  With assistance, applies evidence to common medical conditions  Communicates with rigid recitation of findings, using medical jargon or displaying personal biases  Shows limited ability to connect outcomes to the process by which questions were identified and answered and findings were applied</p>	<p>Identifies limitations and gaps in personal knowledge Develops knowledge guided by well-formed clinical questions Identifies and uses available databases, search engines, and refined search strategies to acquire relevant information Uses levels of evidence to appraise literature and determines applicability of evidence  Seeks guidance in understanding subtleties of evidence  Applies nuanced findings by communicating the level and consistency of evidence with appropriate citation  Reflects on ambiguity, outcomes, and the process by which questions were identified and answered and findings were applied</p>

**Mapping of Competencies:**

Sl. No	MCI Subject Specific Competencies GENERAL SURGERY	MCI		ACGME	
		ROLE	Competency Number	DOMAIN OF COMPETENCE	COMPETENCY NUMBER
1	Demonstrate knowledge of applied aspects of basic sciences like applied anatomy, physiology, biochemistry, pathology, microbiology and pharmacology.	Clinician	3.1.1 , 3.1.2	Medical knowledge	MK-2
2	Demonstrate knowledge of the bedside procedures and latest diagnostics and therapeutics available.	Clinician	3.1.11	Patient Care MEDICAL KNOWLEDGE	PC-6A PC-6B  MK 1
3	Describe etiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies, in adults and children.	Clinician Leader	3.1.9 3.2.1	Patient Care MEDICAL KNOWLEDGE	PC4  PC8 MK1 MK2
4	Demonstrate the theoretical knowledge of general principles of surgery.	Clinician	3.1.2	Medical knowledge	MK 2
5	Demonstrate the theoretical knowledge of systemic surgery including disaster management and recent advances.	Clinician Lifelong learner	3.1.2, 3.4.1	Patient Care Medical knowledge Practice based learning and improvement	PC4  MK 2 PBL2
6	Demonstrate the theoretical knowledge to choose, and interpret appropriate diagnostic and therapeutic imaging including	Clinician	3.1.11	Medical knowledge	MK1

	ultrasound, Mammogram, CT scan, MRI.				
7	Demonstrate the knowledge of ethics, medico-legal aspects, communication skills and leadership skills. The PG student should be able to provide professional services with empathy and humane approach.	Clinician, Communicator, leader, Professional	3.1.3, 3.3.1, 3.3.2, 3.2.1, 3.5.1	Interpersonal And Communication Skills Patient Care Professionalism	ICS1 ICS2 PC5 PC8 PF1 PF2 PF3
8	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 opinion.	Leader,  Communicator	3.2.1, 3.2.2, 3.3.1, 3.3.2, 3.3.3, 3.3.4	Patient care Interpersonal And Communication Skills	PC8 ICS1 ICS2
9	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.	Clinician, Professional,  Communicator	3.1.3, 3.5.1, 3.5.2, 3.5.3, 3.3.1, 3.3.2, 3.3.3, 3.3.4	Patient Care	PC1 PC8
10	Develop communication skills to word reports, obtain a proper relevant history and professional opinion as well as to interact with patients, relatives, peers and	Clinician  Leader ship Communication	3.1.5, 3.1.6, 3.2.1, 3.2.2, 3.3.1, 3.3.2, 3.3.4	Interpersonal And Communication Skills Patient care	ICS1 ICS2 PC2 PC5 PC8

	paramedical staff, and for effective teaching.				
11	Obtain informed consent for any examination/procedure and explain to the patient and attendants the disease and its prognosis with a humane approach.	Clinician,  communication  Professionalism	3.1.3 3.1.6, 3.3.1, 3.3.2, 3.3.3 3.5.1	Patient care Medical knowledge Professionalism Interpersonal And Communication Skills	PC5  PF1  PF2  ICS1  ICS2
12	Provide appropriate care that is ethical, compassionate, responsive and cost effective and in conformation with statutory rules.	Clinician  Professionalism Communicator	3.1.3,  3.5.1,  3.3.1	System based practice	SBP2 SBP3 PC1 PF2
13	Perform a humane and thorough clinical examination including internal examinations and examinations of all organs/systems in adults and children.	Clinician	3.1.7, 3.1.8	Patient care professionalism	PC6 PF1 PF2  PF3
14	Write a complete case record with all necessary details.	Clinician	3.1.5, 3.1.10	Patient care	PC3 PC4
15	Arrive at a logical working diagnosis / differential diagnosis after clinical examination.	Clinician	3.1.9	Patient care Medical Knowledge	PC6 MK1
16	Order appropriate investigations keeping in mind their relevance (need based).	Clinician	3.1.11	Patient Care Medical Knowledge	PC3 MK1

17	Choose, perform and interpret appropriate imaging in trauma - ultrasound FAST (Focused Abdominal Sonography in Trauma).	Clinician	3.1.11	Medical knowledge Patient care	MK1 PC6B
18	Perform minor operative procedures and common general surgical operations independently and the major procedures under guidance.	Leader Learner	3.2.5 3.4.1, 3.4.3	Patient Care	PC6B
19	Provide basic and advanced lifesaving support services in emergency situations.	Leader	3.2.5,	Patient Care	PC4 PC6B
20	Provide required immediate treatment and comprehensive treatment taking the help of specialist as required.	Leader	3.2.1, 3.2.5	Patient Care	PC4 PC8
21	Perform minimally invasive surgery in appropriate clinical settings. Must have undergone basic training in operative laparoscopy related to general and GI Surgery.	Learner	3.4.2	Patient Care Medical knowledge	PC6B MK1
22	Undertake complete patient monitoring including the preoperative and post-operative care of the patient.	Leader	3.2.1, 3.2.5	Patient care	PC 4

## **SUMMATIVE ASSESSMENT, ie., assessment at the end of training**

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

**POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.**

### **ELIGIBILITY CRITERIA FOR APPEARING FOR EXAMINATIONS**

#### **ATTENDANCE:**

'Full Time Residents' with 80% (Eighty percent) attendance during each Academic Term of 6 months and 80% attendance in each of the Departmental & Interdepartmental academic activities.

#### **RESEARCH ACTIVITIES-PAPER/POSTER/PUBLICATIONS**

To present one poster presentation, to read one paper at a state/ national/conference and to present one research paper which should be published / accepted for publication/sent for publication during the period of postgraduate studies

The examination will be in three parts:

#### **1. Thesis**

Every post graduate student shall carry out work on an assigned research project under the guidance of a recognized Post Graduate Teacher, the result of which shall be written up and submitted in the form of a Thesis. Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the 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.

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 candidate shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

## 2. Theory

The examinations shall be organized on the basis of 'Marking system' to evaluate and to certify candidate'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 MS shall be held at

the end of 3rd academic year. *An academic term shall mean six month's training period.*

Theory shall consist of four papers of 3 hours each.

**Paper I:** Basic Sciences & Basic of General Surgery

**Paper II:** Eye & Orbit, Cleft Lip & Palate, Jaws & Teeth, Nose & Sinuses, Pharynx & Larynx, Neck, Thorax, Heart & Pericardium, Breast & Endocrine-Salivary Glands

**Paper III:** GIT

**Paper IV:** Specialties / Orthopedics & Recent Advances in Surgery

## ALLOTMENT OF MARKS

### SUMMATIVE ASSESSMENT

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

### Pass Criteria:

Paper Minimum Marks: 40%

Overall (Aggregate) Pass: 50%

## 3. Clinical and viva voce Examination

Clinical examination shall 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 shall examine a minimum **one long case and two short cases.**

The Oral examination shall be thorough and shall 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

CLINICAL	MARKS ALLOTMENT	MAXIMUM MARKS	MINIMUM MARKS REQUIRED FOR PASSING
LONG CASE	1 X 100	100	100
SHORT CASE	2 X 50	100	
VIVA VOCE+	80	100	50
PEDAGOGY	20		

### Recommended Reading:

#### Books (latest edition)

1. Text Book of Surgery, by Christopher Davis
2. ASI Text Book of Surgery
3. Surgery of Colon, Rectum and Anal canal, by Goligher JC
4. Schwartz Text Book of Surgery
5. Textbook on Laparoscopic Surgery
6. Trauma(Mattox)
7. Recent Advances in Surgery
8. Year Book of Surgery
9. Surgical Clinics of North America
10. Short practice of Surgery by Bailey and Love

11. A manual of clinical Surgery, by SD as
12. Hamilton Bailey's demonstration of clinical signs
13. Pye's Surgical Handicraft

**Journals**

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

JOURNALS FOR REFERENCE

- a. Indian Journal of Surgery
- b. British Journal of Surgery
- c. American Journal of Surgery
- d. Surgery International
- e. New England Journal of Medicine
- f. Surgery, Gynaecology & Obstetrics
- g. Year Book of Surgery
- h. Surgical Clinics of North America

**Postgraduate Student's Appraisal Form**

**Name of the Department/Unit** :

**Name of the RESIDENT** :

**Period of Training** : FROM.....TO.....

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

**Publications**

**Yes/No**

**Remarks\*** \_\_\_\_\_

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

**SIGNATURE OF GUIDE  
OF HOD**

**SIGNATURE OF HOD**

**SIGNATURE**

**CHECKLIST FOR EVALUATION OF JOURNAL CLUB PRESENTATIONS**

Name of the Resident:

Name of the Faculty:

Date:

<b>Sl. No.</b>	<b>Observations</b>	<b>Poor 0</b>	<b>Below Average 1</b>	<b>Average 2</b>	<b>Good 3</b>	<b>Very Good</b>
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					
	<b>Total Score :-</b>					

### CHECK-LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the Resident:

Name of the Faculty:

Date:

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

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

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

Name of the Resident:

Name of the HOU:

Date:

Sl. No.	OBSERVATIONS	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Regularity of attendance					
2.	Punctuality					
3.	Interaction with colleagues and supportive staff					
4.	Maintenance of case records					

5.	Presentation of cases during rounds					
6.	Investigations work up					
7.	Beside manners					
8.	Rapport with patients					
9.	Counseling patient's relatives for blood donation or Postmortem and Case follow up.					
10.	Over all quality of Ward work					
Total Score :-						

### EVALUATION FORM FOR CLINICAL PRESENTATION

Name of the Student:

Name of the Faculty:

Date:

Sl. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Above Average 3	Very Good 4
1.	Completeness of history					
2.	Whether all relevant ' points elicited					
3.	Clarity of Presentation					
4.	Logical order					
5.	Mentioned all positive and negative points of importance					
6.	Accuracy of general physical examination					
7.	Whether all physical signs elicited correctly					
8.	Whether any major signs missed or misinterpreted					
9.	Diagnosis: Whether it follows logically from history and findings					

10	Investigations required					
	• Complete list					
	• Relevant order					
	• Interpretation of investigations					
11.	Ability to react to questioning Whether it follows logically from history and findings					
12.	Ability to defend diagnosis					
13.	Ability to justify differential diagnosis					
14.	Others					
	Grand Total :-					

### **PEDAGOGY STUDENT OBSERVATION SHEET**

**Rating scale: A- well done: B- done fairly: C- needs to improve: D not applicable**

**DIRECTIONS: Please enter ratings as A, B, C or D in the boxes**

**Name of teacher:**

**Title:**

25. \_\_\_\_\_  
 26. \_\_\_\_\_  
 27. \_\_\_\_\_  
 28. \_\_\_\_\_  
 29. \_\_\_\_\_  
 30. \_\_\_\_\_  
 31. \_\_\_\_\_  
 32. \_\_\_\_\_

25. \_\_\_\_\_  
 26. \_\_\_\_\_  
 27. \_\_\_\_\_  
 28. \_\_\_\_\_  
 29. \_\_\_\_\_  
 30. \_\_\_\_\_  
 31. \_\_\_\_\_  
 32. \_\_\_\_\_

SI No	Skill	Teacher's action	Teachers performance											
			1	2	3	4	5	6	7	8	9			
1	Set induction	1.8 Aroused interest in the beginning by relation to previous learning, throwing a new idea, questioning, etc.												

		1.9 Specified the objectives of presentation											
2	Planning	2.1 Organized material in a logical sequence 2.2 Used relevant content matter											
3	Presentation	3.1 Changed the pace of presentation by shifting emphasis, joke, etc 3.2 Used specific example to illustrate main ideas 3.3 Used non-verbal cues, eye contact, etc											
4	Pupil participation	4.1 Allowed questions from students 4.2 Asked questions 4.3 Solicited/ raised questions 4.4 Rewarded pupil effort											
5	Use of AV aids	5.1 Used proper AV aids 5.2 Used the aid (s) effectively											
6	Closure`	6.1 Summarized most important points at the end of the lesson											
7	Lesson of the whole was effective												

**For additional comments use the reverse side**

**Remarks:**

<b>Teacher 1:</b>
<b>Teacher 2:</b>
<b>Teacher 3:</b>
<b>Teacher 4:</b>
<b>Teacher 5:</b>
<b>Teacher 6:</b>
<b>Teacher 7:</b>
<b>Teacher 8:</b>
<b>Teacher 9:</b>

### CHECK LIST FOR SYNOPSIS PRESENTATIONS

Name of the Student:

Name of the Faculty:

Date:

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

### REVIEW OF DISSERTATION WORK BY GUIDE / CO-GUIDE

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

### Quarterly Postgraduate Student's Appraisal Form

Name of the Unit:

.....

Name of the PG Student:

.....

Period of Training:

FROM.....TO.....

Sl No	Particulars	Not Satisfactory			Satisfactory			More Than Satisfactory			Attendance (Wherever applicable) %	Remarks
		1	2	3	4	5	6	7	8	9		
1	Journal based / recent advances learning											
2	Patient based/ Skill based learning											
3	Self directed learning and teaching											
4	Departmental and Interdepartmental learning activity											
5	External and Outreach activities / CMEs											
6	Thesis / Research work											
7	Log Book Maintenance											
8	Professionalism											
9	Attendance											

Publications: Yes/ No

Remarks\* \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

Individual feedback to postgraduate student:

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\_\_\_\_\_  
Signature of Resident

\_\_\_\_\_  
Signature of Unit Head

\_\_\_\_\_  
Signature of Guide

\_\_\_\_\_  
Signature of HoD

**(LOGBOOK AND POTFOLIO)**

**LOG BOOK**

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

**LOG BOOK**

<b>Table 2 :Academic <u>presentations</u> made by the resident</b>		
Name:		Admission Year:
College:		
Date	Topic	Type of Presentation Specify : Seminar, Journal Club, Case Presentation, UG teaching

### LOG BOOK

**Table 3: Diagnostic and Operative procedures performed**

Name:

Admission Year:

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

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

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

Note: Use separate sheet for each year.

**Log book with annexures/Paper based Portfolio:** Each student must be asked to present a specified number of cases for clinical discussion, perform procedures/tests/operations/present seminars/review articles from various journals in inter-unit/interdepartmental teaching sessions. They should be entered in a Log Book. The Log books shall be checked and assessed periodically by the faculty members imparting the training.

## Paper based PORTFOLIO



It is mandatory that all surgical residents have a portfolio/training folder, reflecting not only the Resident's training but also on his/her personal reflection of learning experiences.

This is a record of the Resident' progress during the training years and includes several work-based assessments including 360° (MSF) appraisal, learning methods and assessor's reports.

Contents:

- Personal Details
- All medical certificates
- WPBAs
- Courses attended with appropriate certification
- Logbook
- Research publications, abstracts, posters and Papers
- Quarterly Assessment Grades and Scores

### **Section 1 – Good clinical care:**

This section should include evidence of the resident's ability to communicate with patients and manage acutely ill patients under supervision. Within this section evidence of workshops attended such as basic surgical skills, advanced trauma and life support, advanced life support ,local infection control should be displayed.

### **Section 2 – Maintaining good medical practice:**

This will be the largest section in the portfolio and will contain various subsections, including evidence of work-based assessments, learning methods ( Seminars, Journal clubs, Case Presentations, Pedagogy, Interdepartmental programmes) and assessor's feedback forms and half-yearly internal assessment results for each training post set out in a chronological style, audit, research, publications and presentations.

This section should also include a separate sub-section on evidence of reflection by the resident.

### **Section 3 – teaching and training, appraising and assessing**

UG teaching that the resident delivers including Microteaching.

#### Section 4 – Relationships with patients:

This section will expand as the resident progresses through his/her training and should include any thank-you letters or acknowledgements from patients or their relatives.

#### Section 5 – Working with colleagues:

The resident needs to demonstrate that he/she is a team player by providing multi source feedback forms(MSF)

#### Section 6 – Probity

Documentary evidence is difficult to acquire for this section. A good system is to provide details of any complaints against them, or cite any critical incidents/ adverse events with which the resident have been involved.

#### Section 7 – Health

Evidence should be given here of all vaccinations received like hepatitis B, Tetanus vaccine.

#### Section 8 – Curriculum Vitae update

This is very important as it is the item most likely to be viewed by a reader. It should be set out in a clear and concise way

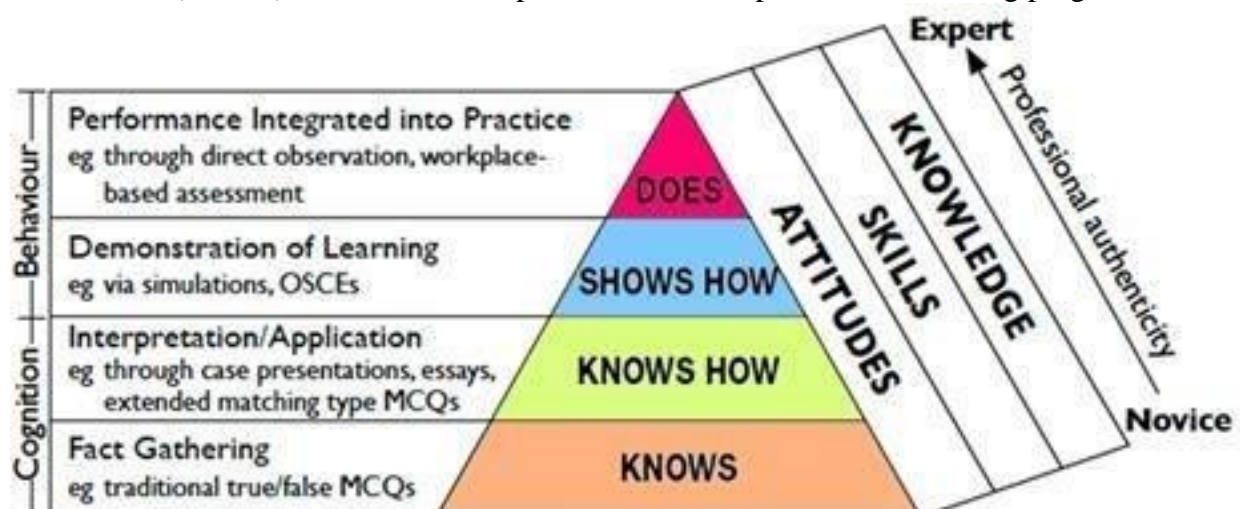
#### Section 9 – Consolidated operative logbook

This should include a consolidation sheet of all procedures observed, assisted , performed with assistance and performed independently during each training post. These should be signed by the relevant Faculty and have an official stamp visible on them.

### WORK PLACE BASED ASSESSMENT

Traditional clinical examinations such as Objective Structured Clinical Examinations (OSCEs) have been used widely across many education fields for several decades. However there are limitations with such assessments.

Recently, trends are moving towards gathering evidence of clinical competence and professional behavior on a daily basis in the workplace. For this reason, workplace- based assessments (WPBA) have been developed to assess workplace-based learning programs.



## **MILLER'S PYRAMID**

Workplace-based methods of assessment target this highest level of the pyramid and collect information about doctors' performance in their everyday practice. It includes:

- DOPS
- Mini- CEX's
- Case Based Discussion (CBD)
- MultiSource Feedback (MSF)

The advantages of WPBA are:

- The resident is responsible for selecting cases, requesting an assessment and proper completion of the paperwork, so it promotes active, learner-centered learning.
- Assessment occurs as a natural part of the training environment, which minimises the artificiality of the task.
- The assessors evaluation is recorded on a structured checklist that enables provision of developmental verbal feedback to the resident immediately afterwards. Faculty and Residents can identify and agree strengths, areas for development and an action plan for each encounter.
- All of the areas in Miller's pyramid which describes an overall assessment framework that is relevant to medicine both as a cognitive and skills-based discipline can be explored through WPBAs .
- WPBA help identify residents who are struggling and are in need of extra support early in training. This creates a supportive environment for residents in difficulty.

## **Direct Observation of Procedural Skills (DOPS)**

DOPS is designed to provide feedback on procedural skills essential to the provision of good clinical care. Residents are asked to undertake practical procedures with a different observer for each encounter. The assessment involves an assessor observing the resident perform a practical procedure within the workplace and a structured checklist is designed to give guidance for the assessors.

<b>Resident</b>		<b>Faculty</b>	
<b>Name :</b>		<b>Name :</b>	
<b>Assessment date:</b>		<b>Place of DOPS:</b>	
<b>FEEDBACK:</b> Verbal and written feedback is a mandatory component of this assessment.			
General			
Strengths			
Development needs			
Recommended actions			
<b>RESIDENT REFLECTIONS ON THIS ACTIVITY</b>			
What did I learn from this experience?			
What did I do well?			
What do I need to improve or change? How will I achieve it?			
<b>RATINGS</b> N = Not observed D = Development required, S = Satisfactory (no prompting or intervention required) O = Outstanding			
<b>Domain</b>		<b>Rating</b>	<b>Comments</b>
1: Describes indications, anatomy, procedure and complications to assessor			
2: Obtains consent, after explaining procedure and possible complications to patient			
3: Prepares for procedure according to an agreed protocol			
4: Administers effective analgesia or safe sedation (if no anaesthetist)			
5: Demonstrates good asepsis and safe use of instruments and sharps			
6: Performs the technical aspects in line with the guidance notes			
7: Deals with any unexpected event or seeks help when appropriate			
8: Completes required documentation (written or dictated)			
9: Communicates clearly with patient and staff throughout the procedure			
10: Demonstrates professional behaviour throughout the procedure			
<b>GLOBAL SUMMARY</b> Level at which completed elements of the PBA were performed on this occasion			<b>Tick</b>
Level 0	Insufficient evidence observed to support a summary judgement		



## Mini-Clinical Examination(CEX)

**Evaluator:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Resident:** \_\_\_\_\_  R-1  R-2  R-3

**Patient Problem/Dx:** \_\_\_\_\_

**Setting:**  Ambulatory  In-patient  ED  Other \_\_\_\_\_

**Patient:** Age: \_\_\_\_\_ Sex: \_\_\_\_\_  New  Follow-up

**Complexity:**  Low  Moderate  High

**Focus:**  Data Gathering  Diagnosis  Therapy  Counseling

**1. Medical Interviewing Skills** ( Not

Observed)

1    2    3	4    5    6	7    8    9
UNSATISFACTORY	SATISFACTORY	SUPERIOR

**2. Physical Examination Skills** ( Not

Observed)

1    2    3	4    5    6	7    8    9
UNSATISFACTORY	SATISFACTORY	SUPERIOR

**3. Humanistic**

**Quantifies/Professionalism**

1    2    3	4    5    6	7    8    9
UNSATISFACTORY	SATISFACTORY	SUPERIOR

**4. Clinical Judgment** ( Not

Observed)

1    2    3	4    5    6	7    8    9
UNSATISFACTORY	SATISFACTORY	SUPERIOR

**5. Counseling Skills** ( Not

Observed)

1    2    3	4    5    6	7    8    9
UNSATISFACTORY	SATISFACTORY	SUPERIOR

**6. Organization/Efficiency** ( Not

Observed)

1    2    3	4    5    6	7    8    9
UNSATISFACTORY	SATISFACTORY	SUPERIOR

### Case-Based Discussion (CBD)

The CBD is a structured discussion between the Resident and Faculty about how a clinical case was managed by the resident.

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

**Multi- Source Feedback (MSF) Form**

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

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

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

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

**SUMMARY**

Workplace-based assessments create a self-directive learning environment that is essential for continuing professional development.

