

MS IN GENERAL SURGERY

(Revised April 2010)

This is a 5-year degree course in General Surgery, which will prepare the trainee to work as a qualified surgeon in General Surgery and/or pursue an Academic Career.

1. Objective

At the end of the training of MS in General Surgery, the candidate should have developed the following skills:

Clinical

- Obtain patient history.
- Perform detailed physical examination.
- Correlate above data to formulate diagnosis.
- Plan appropriate investigations & interpret results.
- Initiate comprehensive management of Medical Patients independently.
- Deal effectively and promptly with complications as & when they arise.
- Prepare concise summary of cases, initiate clinical audit and self-evaluation techniques.

Administrative

1.2.1 Be a role model member of patient care team and display communication skills with other health professionals, community, patient's family etc.

1.2.2 Ability to advise or organize training for other professional / paramedical colleagues & trainees in areas pertinent to his own interest and acquired skills.

Research

The prime objective of research training in clinical medicine is to promote/enhance critical thinking in day-to-day professional life.

A CANDIDATE AT THE END OF THE TRAINING SHOULD BE ABLE TO:

1.3.1 Critically evaluate papers and publications for clinical applications.

1.3.2 Collect, and organize data.

1.3.3 Express the data in writing.

2. Eligibility

(All experience must be at institutions recognized by PMDC)

- 2.1 MBBS or equivalent.
- 2.2 One year of House Job with six months in Surgery.
- 2.3 Preferably 1 year experience as RMO in Surgery.
- 2.4 Candidates will be required to pass an entrance test and an interview.

3. Duration of Training

Minimum of 5 years.

4. Structured Training Program

The training program of 5 years will comprise 4 years of training in General Surgery and 1 year of training in specialties. This training will be under the supervision of the respective faculty.

4.1. Guide to the Training Rotation

- a) General Surgery including General Urology (4 years)
- b) Compulsory Rotation to the following specialties:

Specialty	Duration
Orthopaedics	3 months
Casualty	6 weeks
ICU	6 weeks
Specialty Urology	3 months

- c) Two elective rotations of six weeks each and total of three months duration from the following specialties:

Specialty	Duration
Cardiac Surgery	6 weeks
Thoracic Surgery	6 weeks
Plastic Surgery	6 weeks
Paediatric Surgery	6 weeks
Neurosurgery	6 weeks
Radiology	6 weeks
Other (by trainee choice)	6 weeks

NB: Durations of specialty rotations can be altered as per service requirements.

4.2. Compulsory Workshops (1st and 2nd year):

BLS, ATLS, computer skills, Research Methodology (epidemiology, biostats, SPSS), Medical writing, bioethics.

5. Evaluation and Examinations

The evaluation process will include:

- a) Continuous evaluation through evaluation forms and log books.
- b) M.S. part 1 examination within 1 year of joining. Promotion to next year will be subject to passing the part-I exam.
- c) M.S. final qualifying exam; at the end of 5 years.

- d) Defense of thesis within 1 year of final MS examination.

5.1. Evaluation Forms

Three monthly evaluation will be done by the consultant concerned on evaluation forms provided by the postgraduate office and sent back, duly filled, with counter signature of the training supervisor to whom the trainee is assigned.

5.2. Log Books

Prescribed log books must be taken from the postgraduate office on submission of a certain fee and maintained regularly by the trainees. These must be submitted to the Dean's office each year to evaluate status of training.

5.3. MS Part I Examination

This exam can be taken before or within the first year of starting the MS Surgery program. This will comprise of two papers:

Paper	Content
Paper-I	MCQs / BCQs in applied anatomy (35%), Physiology (25%), Pathology (30%), related Pharmacology (10%)
Paper-II	MCQs / BCQs / SEQs on the general principles of Surgery

5.4. M.S. Final Examination

At the end of minimum of 5 years of training, the trainee will have to appear in the MS final examination of Ziauddin University.

This will comprise of MCQs, SEQs, TOACS / clinical / orals. This will be an examination in clinical subjects.

5.5. Thesis

- **Synopsis:** By the end of the 2nd year of training a synopsis defining the subject of the research, the objectives, the methodology and a few references must be submitted to the Dean's office. This will be finally approved by the Board of Advance Studies & Research.
- **Final Thesis:** By the end of training a final thesis must be submitted to the Dean's office for evaluation and final approval by the Board of Advance Studies & Research. Before being awarded the MD / MS degree the candidate will undergo a defense of thesis before an examining committee.
- **Publications:** One paper based on the thesis or another topic to be published / accepted for publication in journals listed in the index medicus or those local journals recognized by PMDC. This will be considered as an independent external evaluation.

5.6. Extension

After passing the final examination, a period of extension may be allowed, up to a maximum of 2 years to complete the requirement of thesis and papers.

6. Competency Levels

The evaluation of competence of a specialist is a varied and complex issue to be judged with certainty. However, evaluation of skills can be taken as a guideline only in the general evaluation process. An individual can attain the highest level of competence in the 1st year but the following is the minimum expected.

- O: Observer status
- A: Assistant status
- SP: Supervised performance
- P: Performance independently

6.1. General Skills

Skills	Minimum Competence				
	At 1 yr	At 2 yr	At 3 yr	At 4 yr	At 5 yr
Obtains pertinent history	P	P	P	P	P
Performs physical examinations	P	P	P	P	P
Orders appropriate investigation & interprets results	P	P	P	P	P
Decides & implements correct treatment	SP	SP	P	P	P
Carries out self evaluation audits, & research activities	SP	P	P	P	P
Maintains follow up & records of patients	P	P	P	P	P

6.2. Surgical Skills

Operative surgery has been broadly classified into four categories:

- **Minor Operations & Procedures:** Suturing of wounds, excision of small lumps & lesions, removal of toe nails, peritoneocentesis, thoracocentesis, cut downs, i.v. cannulation etc.
- **Intermediate Operations:** Appendicectomy, cervical LN biopsy, ureterolithotomy, abdominal closure, herniorrhaphy, haemorrhoidectomy, operation for anal fissure etc.
- **Major Operations:** e.g., cholecystectomy, laparotomy, repair of duodenal perforation, small and large bowel resection / anastomosis, simple nephrectomy, gastrectomy etc.
- **Extra Major Operations:** e.g., pancreatectomy, oesophagectomy, radical cancer surgery etc.

Operations	End of 1 yr	End of 2 yr	End of 3 yr	End of 4 yr	End of 5 yr
Minor	SP	P	P	P	P
Intermediate	A	SP	SP	P	P
Major	A	A	SP	SP	P
Extra Major	A	A	A	A	SP

8. Exemption

- Where candidates have had training in other institutions and/or have a postgraduate qualification, the Head of the Department may recommend, on a case-to-case basis, to grant exemption from part of the training program up to a maximum of two years.
- The recommendation will be forwarded through the training supervisor who will present the case for exemption to the Dean after a three-month evaluation period from the start of the training.
- The Dean will consider the years of the training in the respective specialty, any gaps in training, postgraduate certification e.g., Part-I, Part-II, and the three months evaluation by the supervisor and the Head of the Department, then send it to BASR for final approval.
- Candidates with Part-I FCPS or one of the Royal Colleges can be considered for exemptions from Part-I MS exam.

9. Recommended Academic Schedule

- 9.1 Two outpatient clinics per week.
- 9.2 One teaching ward round per week.
- 9.3 Two Operating sessions per week (assisting).
- 9.4 Two Academic activities per week including the following in rotation:

- o Formal case presentation in the wards or in hospital clinical meetings
- o Topic presentations
- o Journal Club
- o Surgical audit including mortality & morbidity of the wards
- 9.5 Daily “Emergency admission & management review meeting” is desirable.

10. Recommended Reading

10.1 Current Surgical Diagnosis & Treatment, Ed. by Lawrence W. Way, 10th Ed.

(Lange Medical Book)

10.2 Hamilton Bailey’s Emergency Surgery, Pathologic Basis of Disease, Ed. by H.A.F.

Dadley, 11th Ed. (Wright)

10.3 Pathologic Basis of Disease, Ed. by Stanley L. Robbins, Ramzi S. Cotran & Vinay

Kumar, 3rd Ed. (W.B. Saunders)

10.4 Bailey & Love’s Short Practice of Surgery, Revised by Charles V. Mann, R.C.G.

Russell & Norman S. Williams, 22nd Ed. (Chapman & Hall)

10.5 Farquharson’s Textbook of Operative Surgery, Ed. by R.F. Rintoul, 8th Ed.

(Churchill Livingstone)

10.6 Last’s Anatomy: Regional & Applied, Ed. by R.M.H. McMinn, 9th Ed. (Churchill

Livingstone)

10.7 Clinical Anatomy for Medical Students by Richard S. Snell, 5th Ed.

10.8 Pye’s Surgical Handicraft, Ed. by Hamilton Bailey

10.9 Essential Surgical Practice by A. Cusheiri

10.10 Operative Surgery & Management by G. Keen

10.11 Operative Surgery by R.M. Kirk

10.12 Anatomical Complications in Surgery

10.13 Farquharson’s Textbook of Operative Surgery, Ed. by R.F. Rintoul

10.14 Guyton’s Physiology

10.15 Surgery by Schwartz

10.16 Journals:

- British Journal of Surgery
- American Journal of Surgery
- Journal of RCS Colinburg L.
- Journal of RCS England