



Medical Doctorate (M.D.) Degree Program and Courses Specifications for General Surgery

(According to currently applied Credit points)

*General Surgery Department
Faculty of Medicine
Aswan University
2020*

A. Basic Information

- Program Title: M. D. degree of General Surgery
- Nature of the program: Single.
- Responsible Department: Department of General Surgery at Faculty of Medicine - Aswan University.
- Total number of courses: 6 courses:
 - First part: 5 courses.
 - Second part: 1 course.

+ Examination system:

➤ First part:

- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
- Written examination Surgical Anatomy (3hour) + oral examination
- Written examination in Surgical pathology (2hour) + oral examination

➤ Second part:

- •Written exam 4 papers 3 hours for each in General surgery + Oral exam+ Clinical /practical exam
- ➤ **Elective courses**
 - Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
 - Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam

B. Professional Information

1- Program aims

- Enable candidates to keep with satisfactory standards of Surgical patients care by acquiring high level of clinical skills, bedside care skills, in addition to update medical knowledge as well as clinical experience and competence in the area of General surgery.
- Provide assistant lecturers with fundamental knowledge of surgical intensive care medicine as regards; mastering dealing with critically ill surgical patients, techniques, indications, contraindications and training skills of different intensive care techniques.
- Enable candidates to perform high standard scientific medical research and how to proceed with publication in medical journals.
- Provide the candidates with skills :
 - 1) Enabling them to have professional careers as a consultant in Egypt.
 - 2) Making them recognized as a consultant abroad.
 - 3) Enabling them to continue self-learning in subspecialties.
 - 4) Enabling them to master different research methodology and do their own.

2-Intended learning outcomes (ILOs) for the whole program:

Knowledge and understanding:

A. Demonstrate in depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological of socio-behavioral science relevant to his specialty as well as the evidence based application of this knowledge to patient care.

B. Explain basics, methodology, tools and ethics of scientific medical and clinical research.

C. Mention ethical, medico-logical principles and bylaws relevant to his practice in the field of General Surgery.

D. Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of General Surgery.

E. Mention health care system, public health and health policy, issues relevant to this specialty and principles and methods of system based improvement of patient care in common health problems of the field of General Surgery.

Intellectual outcomes

- A. Apply the basic and clinically supportive sciences which are appropriate to the specialty related conditions / problem / topics.
- B. Demonstrate an investigatory and analytic thinking research projects.
- C. Write scientific papers.
- D. Participate in clinical risk management

Skills

1) Practical skills (Patient Care)

Candidates will be able to:

- A. Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
- B. Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to General Surgery.
- C. Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.
- D. Perform diagnostic and therapeutic procedures considered essential in the field of General Surgery.
- E. Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.
- F. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the General Surgery related situations.
- G. Gather essential and accurate information about patients of the General Surgery related conditions.
- H. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up to date scientific evidence and clinical judgment for the General Surgery conditions.
- I. Develop and carry out patient management plans for General Surgery related conditions.
- J. Counsel and educate patients and their families about specialty related conditions.
- K. Use information technology to support patient care decisions and patient education in all General Surgery related clinical situations.
- L. Perform competently all medical and invasive procedures considered essential for the General Surgery related conditions / area of practices.
- M. Provide health care services aimed at preventing the General Surgery related

health problems.

N. Lead health care professionals, including those from other disciplines, to provide patient-focused care in General Surgery related conditions.

O. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets. (Write and evaluate a consultation note, inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)

2) General skills

3) Practice-Based Learning and Improvement

A. Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of General Surgery.

B. Appraise scientific evidence.

C. Continuously improve patient care based on constant self- evaluation and life-long learning.

D. Participate in clinical audit and research projects.

E. Practice skills of evidence-based Medicine (EBM).

F. Educate and evaluate students, residents and other health professionals.

G. Design logbooks, guidelines and standard protocols of management.

I. Appraise evidence from scientific studies related to the patients'

J. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.

K. Use information technology to manage information, access on-line medical information; for the important topics.

4) Interpersonal and Communication Skills

3- Program Structure
Duration of program: 4-6 years
Total number of credit point = 420

	Credit points	% from total
Basic science courses	10	4.1%
Humanity and social courses	3	1.2%
Specialty courses	147	61.3%
Field training	123	51.3%
Thesis	40	16.7%
2 published researches	40	16.7%

The program is divided into:

- Part 1:
 - Program-related basic science courses
 - Medical statistics.
 - Research methodology
 - Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
 - Students are allowed to sit the exams of these courses after 6 months from applying to the MD degree.
 - Students are allowed to sit the exams of the remaining basic science courses after 12 months from applying to the MD degree.
 - MD thesis subject should be officially registered within 1 year from application to the MD degree.
 - Part 2:
 - Candidates are not allowed to sit the exams of these courses before 4 years from applying to the MD degree.
 - Two elective courses can be set during either the 1st or 2nd parts.
- The candidates pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical/practical exams of each course.

Total degrees 1700 marks.

500 marks for first part 1200 for second part Written exam 40-70%.

Clinical /practical and oral exams 30% - 60%.

Specifications for courses/ modules

First Part

- 1) Course 1: Medical statistics
- 2) Course 2: Research Methodology
- 3) Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
- 4) Course 4: Surgical anatomy
- 5) Course 5: Surgical pathology

Course 1: Medical statistics

Name of department:
Public Health and Community Medicine
Faculty of medicine
Aswan University

Course aim:

Enable graduate students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data

Intended learning outcomes (ILOs):
knowledge and understanding

Topics	Methods of teaching/ learning	Methods of Evaluation
A. List the types of variables	Lecture and discussion	Written examination

B. Identify the methods of data collection	Lecture and discussion	Written examination
C. Describe the different sampling strategies	Lecture and discussion	Written examination
D. Identify types of tabular and graphic presentation of data	Lecture and discussion	Written examination
E. Identify measures of central tendency and dispersion	Lecture and discussion	Written examination
F. Identify the characters of normal distribution curve.	Lecture and discussion	Written examination

Intellectual

Topics	Methods of teaching/ learning	Methods of Evaluation
A. Describe the normal curves.	Lecture& Discussions	Written examination
B. Describe and summarize data	Lecture& Discussions	Written examination
C. Select the proper test of significance	Lecture& Discussions	Written examination
D. Interpret the proper test of significance	Lecture& Discussions	Written examination

Practical skills

Topics	Methods of teaching/ learning	Methods of Evaluation
A. Design data entry files.	Tutorial on SPSS	Assignments SPSS exam
B. Validate data entry.	Tutorial on SPSS	Assignments SPSS exam
C. Manage data files.	Tutorial on SPSS	Assignments SPSS exam
D. Construct tables and graphs.	Tutorial on SPSS	Assignments SPSS exam
E. Calculate measures of central tendency and dispersion.	Tutorial on SPSS	Assignments SPSS exam
F. Select, apply and interpret the proper test of significance.	Tutorial on SPSS	Assignments SPSS exam

Course contents:

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Introduction	A-F	A-D	-	A&B
Tables and graphics	D	A-D	-	A&B
Sampling	C	-	-	A&B
Methodology of data Collection	B	-	-	A&B

Type of variables	A	-	-	A&B
Proportion test& Chi-square test	E,F	C&D	-	A&B
Student T test& Paired T test	E,F	C&D	F	A&B
ANOVA test	E,F	C&D	F	A&B
Non parametric tests	E,F	C&D	F	A&B
Discrimination analysis factor Analysis	E,F	C&D	-	A&B
SPSS Introduction	A-F	A-D	-	A&B
Data entry and cleaning of Data	A	A-D	A-C	A&B
Transforming of variables	A	A&B	A-C	A&B
Descriptive statistics	D	A-D	D&E	A&B
Graphic presentation	D	A&B	D	A&B
Chi square and interpretation of results	E,F	C&D	F	A&B
Correlation Regression	E,F	C&D	F	A&B
Multiple and logistic Regression	E,F	C&D	F	A&B

Course methods of teaching:

1. Lectures
2. Assignments
3. Discussions
4. Exercises
5. Tutorial on SPSS v.16

Course assessment: Assessment tools:

1. Practical examination
 2. Attendance and active participation
 3. Assignments
 4. SPSS examination
 5. written exam
- Time schedule: After 6 months from applying to the MD degree.
 - Marks:50 (35 for written exam and 15 for oral exam)

Course 2: Research Methodology

Name of department:

Public Health and Community Medicine

Faculty of medicine

Aswan University

Course aim:

To provide graduate students with the skills of:

Research proposal, writing planning and implementing rigorous research, Writing and publishing scientific papers.

Intended learning outcomes (ILOs):

knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Explain differences between different study designs	Lecture and discussion	Written examination
B. Identify sources and types of bias in research		
C. Describe the different sampling strategies, and compute sample size		
D. Select and design valid measurement tools for research		
E. Explain ethical issues in conducting research on human subjects		

F. describe the rules of authorship in scientific writing		
G. List the steps involved in proposal writing		

H. Identify a research problem within a conceptual framework	Lecture on Criteria to Consider to identify a research Problem	discussion
I. Use the web sources to do a literature search	Practical tutorial on web	assignment
J. Select the appropriate study design for the research question	Lecture on various study designs	Written examination
K. Minimize bias in designing research	Lecture on the different types of Bias	Written examination
L. Screening & theoretical background	Lectures on criteria for successful screening program& criteria for evaluation a screening test.	Written examination

Intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Apply basic science & knowledge for appraising scientific literature	Discussions & seminars	Written examination

Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Develop a budget and time line for the research	Tutorial	Assignments
B. Design a data entry file	Tutorial on Epi-info or Excel	Assignments Written exam
C. Identify steps required in fielding the study	Lecture	Assignments Written exam
D. Identify steps required for calculation Sensitivity, Specificity, positive predictive value, negative predictive value, Accuracy of a screening test	Lecture	Assignments Written exam

General skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. To be able to write an abstract	Tutorial	Written examination case study for critique
B. Write the introduction	Tutorial	Written examination
C. Write the methodology section	Tutorial	Written examination
D. Present the results	Tutorial	Written examination
E. Perform Discussion section	Tutorial	Written examination
F. Learn Authorship ethical rules	Tutorial	Written examination

Course contents:

Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Introduction & proposal Writing	G	A	A	A-F
Epidemiological Study Designs	A,J	A	B,C	-
Screening & theoretical Background	L	A	-	-
Screening practical	L	A	D	-
Sample size calculation	B	A	B,C	-
Research bias	H	A	C	F
Ethics in research	E,F	A	C	F

Course methods:

1. Lectures
2. Assignments
3. Discussion
4. Exercises

Course assessment: Assessment tools:

1. Written examination
2. Attendance and active participation
3. Class
4. Assignments

Time schedule: After 6 months from applying to MD degree.

Marks: 50 (35 for written exam and 15 for oral exam).

Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Name of department:

Forensic Medicine and Clinical Toxicology

Faculty of medicine

Aswan University

Course aim:

To describe the basic ethical and medicolegal principles and bylaws relevant to practice in the field of General and special surgery Rheumatology

Intended learning outcomes (ILOs)

knowledge and understanding

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Mention principals of writing consent forms.	Lecture and discussion	Written & oral exam
B. Mention principals of Writing a death certificate	Lecture and discussion	Written & oral exam
C. Explain principals of medical reports.	Lecture and discussion	Written & oral exam
D. Mention principals of Dealing with wounds.	Lecture and discussion	Written & oral exam
E. Mention principals of firearm injuries.	Lecture and discussion	Written & oral exam
F. List indications of induced emesis, gastric lavage and samples collection.	Lecture and discussion	Written & oral exam

Intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case , seminars in death certificate	Lecture and discussion	Written & oral exam
B. Design and present case, seminars in toxicological cases	Lecture and discussion	Written & oral exam

Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Identify medical ethics and ethics in research.	Lecture and discussion	Discussion
B. Prepare and write consent.	Lecture and discussion	Discussion
C. Identify medical responsibilities.	Lecture and discussion	Discussion
D. Write death certificate.	Lecture and discussion	Discussion and active participation
E. Deal with a case of Suspicious death	Lecture and discussion	Discussion and active participation
F. Write medical reports	Lecture and discussion	Discussion and active participation
G. Identify types of wounds and deal with them.	Lecture and discussion	Discussion and active participation

H. Identify types, distance and direction of firearm wounds and deal with them	Lecture and discussion	Discussion and active participation
I. Elicit death associated with surgical anesthesia.	Lecture and discussion	Discussion and active participation
J. Perform gastric lavage, induce emesis, and obtain samples	Lecture and discussion	Discussion and active participation

Course contents:

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Death and death certificate	B	A	D	
Suspicious death	B		E	B
Death associated with surgical anesthesia	B		I	B
Medical reports	C	B	F	A,D,E
Toxicological Reports	F	B	J	A,E
Wounds	D		G	B
Firearm injuries	E		H	B
Ethics in research			A	
Medical ethics.	A		A,B, C	C,E

Course of teaching:

1. Lectures.
2. Discussions.
3. Exercises.

Course assessment:

1. Written examination.
2. Attendance and active participation.
3. Oral examination.

Time schedule: After 6 months from applying to the MD degree.

Marks: 50 (35 for written exam and 15 for oral exam).

Course 4: Surgical Anatomy

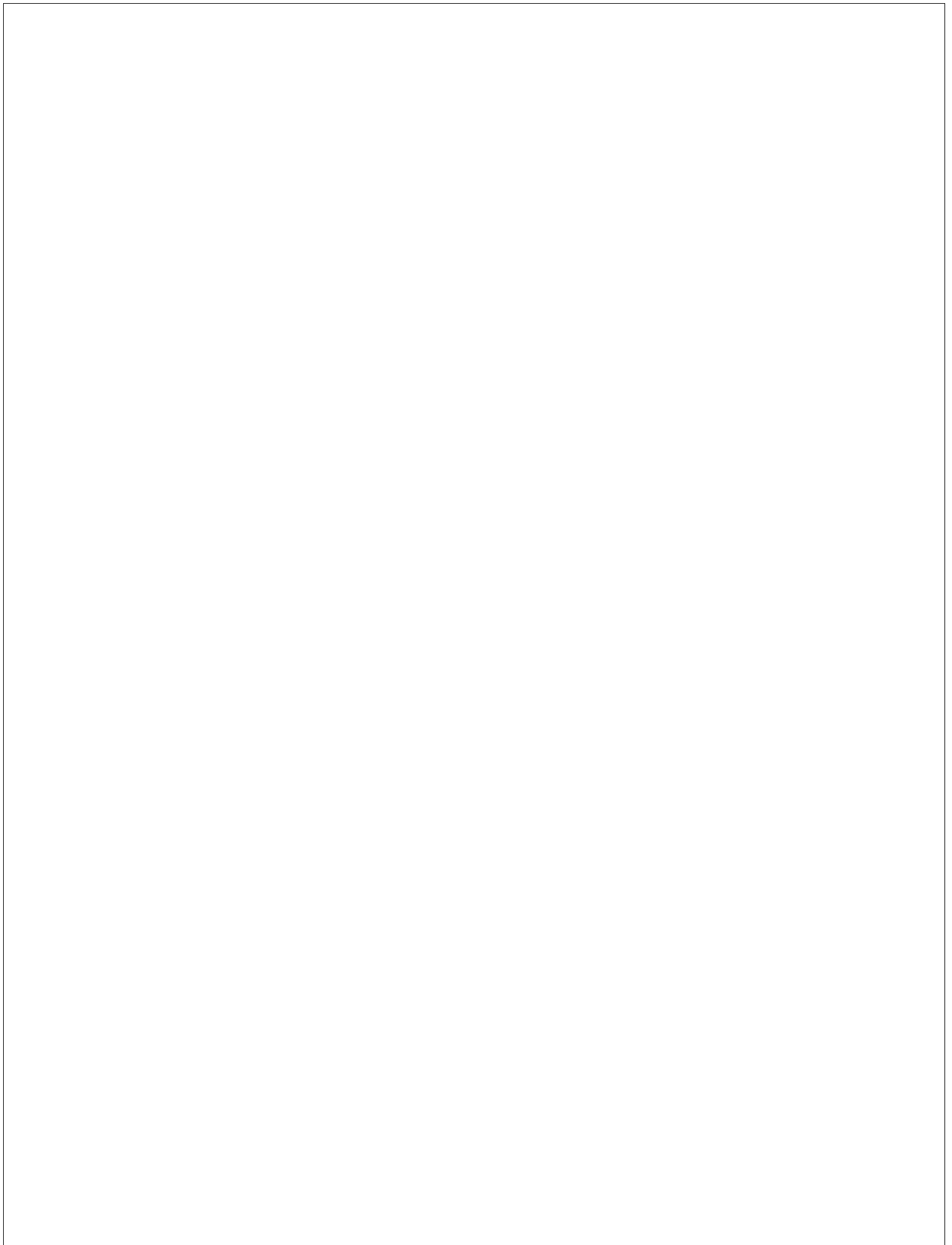
Course aim:

The student should acquire the facts of surgical anatomy which is necessary for reasoning and management conditions related to general surgery.

Intended learning outcomes

Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
A. Describe anatomical Principles of Embryology of <ul style="list-style-type: none">- The development of the face, lips and palate.- Branchial arches.- Thyroid and parathyroid.- Congenital anatomy of Breast.- H&N anatomy <ul style="list-style-type: none">- Thyroid- The surface anatomy of the neck,- The fascial compartments of the neck,- The thyroid gland,- The parathyroid glands,- The palate,- The tongue and floor of the mouth,- The tongue,- The floor of the mouth- The salivary glands,- The parotid gland,- The submandibular gland,- The sublingual gland,	-Lectures tutorial	-Written and oral examination - Log book



- The major arteries of the head and neck,
- The common carotid arteries,
- The external carotid artery,
- The internal carotid artery,
- The subclavian arteries,
- The veins of the head and neck,
- The internal jugular vein,
- The subclavian vein,
- The lymph nodes of the neck,
- The cervical sympathetic trunk,
- The branchial system and its derivatives,
- Branchial cyst and fistula,
- The surface anatomy and surface markings of the head,
- The scalp
- The mandible and
- The temporomandibular joint.

The Abdomen and Pelvis

- Surface anatomy and surface markings,
- Vertebral levels,
- Surface markings,
- The fasciae and muscles of the abdominal wall,
- Fasciae of the abdominal wall,
- The muscles of the anterior abdominal wall,
- The anatomy of abdominal incisions,
- The inguinal canal,
- Peritoneal cavity,
- Intraperitoneal fossae,
- The subphrenic spaces,
- The gastrointestinal tract,
- The Oesophagus,
- The stomach, The duodenum,
- Small intestine,
- Large intestine,
- The appendix,

- The rectum,
- Arterial supply of the intestine,
- The portal system of veins,
- Lymph drainage of the intestine,
- The structure of the alimentary canal,
- The development of the intestine and its congenital abnormalities,
- The gastrointestinal adnexae: liver, gall-bladder and its ducts, pancreas and spleen,
- The liver,
- The biliary system,
- The gall-bladder,
- The pancreas,
- The spleen

The Thorax

- Surface markings of the more important thoracic contents,
- The thoracic cage,
- The lungs,
- The mediastinum,
- The thoracic duct,

B. Describe anatomical details of the following:

Head and Neck

Thoracic Wall and

Pleurae Breast

Mediastinum

Pericardium, Heart, and Great Vessels

Diaphragm

Abdominal Wall and Hernias

Peritoneum, Omenta, and Internal

Hernias Retroperitoneum

- Great Vessels in the Abdomen
- Esophagus
- Stomach
- Small Intestine
- Appendix
- Large Intestine and Anorectum
- Liver
- Extrahepatic Biliary Tract and Gallbladder
- Pancreas
- Spleen
- Lymphatic System.

Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of Physiology with clinical reasoning, diagnosis and management of common diseases related to General Surgery.	-Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to General Surgery.		

Course Contents:

Time Schedule: One year after application to MD degree

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
Embryology of				
- The development of the face, lips and palate.	A	A,B	-	A-D
- Branchial arches.	A	A,B	-	A-D
- Thyroid and parathyroid.	A	A,B	-	A-D
- Congenital anatomy of Breast.	A	A,B	-	A-D
- Digestive System.	A	A,B	-	A-E

Head neck anatomy				
- Thyroid		-	-	-
- The surface anatomy of the neck,	A	A,B	-	A-D
- The fascial compartments of the neck,	A	A,B	-	A-D
- The thyroid gland,	A	A,B	-	A-D
- The parathyroid glands,				
- The palate,	A	A,B	-	A-D
- The tongue and floor of the mouth,	A	A,B	-	A-D
- The tongue,	A	A,B	-	A-D
- The floor of the mouth				A-D
- The salivary glands,	A	A,B	-	A-D
- The parotid gland,	A	A,B	-	
- The submandibular gland	A	A,B	-	A-D

- The sublingual gland,	A	A,B	-	A-D
- The major arteries of the head and neck,	A	A,B	-	A-D
- The common carotid arteries,	B	A,B	-	A-D
- The external carotid artery,	B	A,B	-	
- The internal carotid artery,	B	A,B	-	A-D
- The subclavian arteries,	B	A,B	-	A-D
- The veins of the head and neck,	B	A,B	-	A-D
- The internal jugular vein,	B	A,B	-	A-D

- The subclavian vein,	B	A,B	-	
- The lymph nodes of the neck,	B	A,B	-	A-D
- The cervical sympathetic trunk,	B	A,B	-	A-D
- The branchial system and its derivatives,	B	A,B	-	A-D
- Branchial cyst and fistula,	B	A,B	-	A-D
- The surface anatomy and surface markings of the head,	A	A,B	-	
- The scalp	B	A,B	-	A-D
- The mandible and				A-D
- The temporomandibular joint.	A	A,B	-	A-D
- The Abdomen and Pelvis				
- Surface anatomy and Surface markings	A	A,B	-	

surface markings,				
- Vertebral levels,	A	A,B	-	A-D
- Surface markings,	A	A,B	-	A-D
- The fasciae and muscles of the abdominal wall,	A	A,B	-	A-D
- Fasciae of the abdominal wall,	A	A,B	-	A-D
- The muscles of the anterior abdominal wall,	A	A,B	-	
- The anatomy of abdominal incisions,	A	A,B	-	A-D
- The inguinal canal,	A	A,B	-	A-D

- Peritoneal cavity,	A	A,B	-	A-D
- Intraperitoneal fossae,	A	A,B	-	A-D
- The subphrenic spaces,	A	A,B	-	
- The gastrointestinal tract,	A	A,B	-	A-D
- The Oesophagus,	A	A,B	-	A-D
- The stomach, The duodenum,	A	A,B	-	A-D
- Small intestine,	A	A,B	-	A-D
- Large intestine,	A	A,B	-	
- The appendix,	A	A,B	-	A-D
- The rectum,	A	A,B	-	A-D
- Arterial supply of the intestine,	A	A,B	-	A-D
- The portal system of veins,	A	A,B	-	A-D
- Lymph drainage of the intestine,	A	A,B	-	
- The structure of the alimentary canal,	A	A,B	-	A-D
- The development of the	A	A,B	-	A-D

intestine and its congenital abnormalities,				
- The gastrointestinal adnexae: liver, gall-bladder and its ducts, pancreas and spleen,	A	A,B	-	A-D
- The gastrointestinal adnexae: liver, gall-bladder and its ducts, pancreas and spleen,	A	A,B	-	A-D
- The liver,	A	A,B	-	

- The biliary system,	A	A,B	-	A-D
- The gall-bladder,	A	A,B	-	A-D
- The pancreas,	A	A,B	-	A-D
- The spleen	A	A,B	-	A-D
The Thorax				
– Surface markings of the more important thoracic contents,	A	A,B	-	A-D
– The thoracic cage,	A	A,B	-	A-D
– The lungs,	A	A,B	-	A-D
– The mediastinum,	A	A,B	-	A-D
– The thoracic duct,	A	A,B	-	A-E

Course methods:

1. Didactic (lectures, seminars, tutorial)
2. journal club

Course assessment: Assessment tools:

- Written
 - Oral examination
 - Check list
 - log book & portfolio
- Marks: 175 marks

Course 5: Surgical Pathology

Course aim:

The student should acquire the facts of Surgical Pathology which is necessary for reasoning and management conditions related to General Surgery.

Intended learning outcomes (ILOs):

Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
A. Outline the Principles of General Pathology <ul style="list-style-type: none">- Cell Injury, Cell Death- Acute and Chronic Inflammation.- Tissue Repair: Regeneration, Healing, and Fibrosis- Immunity & hypersensitivity.- Bacterial infection.- Disturbance of growth- Pathology of tumors	-Lectures	-Written and oral examination - Log book
B. Describe Physiologic details of: <ul style="list-style-type: none">- GIT Pathology.- The Liver, Gallbladder, and Biliary Tract- The Blood Vessels- The Oral Cavity.- Breast endocrinal pathology		

Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Correlates the facts of Pathology with clinical reasoning, diagnosis and management of common diseases related to General Surgery.	-Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate aninvestigatory clinical situations related to General Surgery.		

Contents:

Time Schedule: One year after application to MD degree

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skill	General Skills
General Pathology				
Cell Injury, Cell Death	A	A.B	-	A-D
- Acute and Chronic Inflammation.	A	A.B	-	A-D
- Tissue Repair: Regeneration, Healing, and Fibrosis	A	A.B	-	A-D
- Immunity & hypersensitivity.	A	A.B	-	A-D
- Bacterial infection.	A	A.B	-	A-D
- Disturbance of growth	A	A.B	-	A-D
- Pathology of tumors	A	A.B	-	A-D
Special pathology:				

- GIT Pathology.	B	A.B	-	A-D
- The Liver, Gallbladder, and Biliary Tract	B	A.B	-	A-D
- The Blood Vessels	B	A.B	-	A-D
- The Oral Cavity.				
- Breast and endocrinal pathology				

- Course Methods of teaching/learning:

1. Didactic (lectures, seminars, tutorial)
2. Journal club

- Course Methods of teaching/learning: for students with poor achievements

- 1.Extra Didactic (lectures, seminars, tutorial) according to their needs
- 2.Extra training according to their needs

-Course assessment methods: Assessment tools:

1. Written
2. Oral examination
3. Chick list
4. log book & portfolio

-Marks: 175 marks

Second Part

Course 6: General Surgery

Name of department: General Surgery

Faculty of medicine
Aswan University

Course aims:

- To enable MD candidate to master high level of clinical skills, in addition to update and advanced medical knowledge, integration and interpretation of different investigations, professional competence in the area of Principles in General Surgery, GIT, Breast and Endocrine, Maxillofacial and neck and Abdominal wall, Hernias, Testis and Scrotal Surgery related disorders.
- To provide candidates with enough general skills related to General Surgery including, writing specialized medical reports, use of information technology in clinical decisions and research, teaching junior students and counseling patients and their families about General Surgical diseases and conditions.

Course intended learning outcomes(CILOs):

Knowledge and understanding

ILOs	Methods of teaching/ Learning	Methods of Evaluation
<p>A. <u>Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</u></p> <ol style="list-style-type: none"> 1. Types of wounds 2. Factor affecting wound healing 3. Management of multiple injury patients 4. causes of mortality due to trauma 5. Fluid and electrolyte imbalance 6. Acid base disequilibrium 7. Planning of fluid and electrolyte therapy 8. Classification of hemorrhage 9. Management of blood transfusion 10. Complication of blood transfusion 11. Defects of haemostasis 12. Abnormal bleeding during surgery or in postoperative period 13. Types of shock 14. Management of shock 15. Complication of surgical infections 16. Management of surgical infections 17. Burns and reconstructive surgery 18. Causes, diagnosis of malnutrition in the surgical patients 19. Nutritional support to surgical patients 20. Etiology, diagnosis and treatment of tumors 21. Indication, technical consideration, complications and results of renal, hepatic pancreatic cardiac and bone marrow transplantation 22. Terminal care in surgical patient 	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -Clinical rounds -Seminars -Clinical rotations -Service teaching 	<ul style="list-style-type: none"> -OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year -Written and oral examination

<p><u>B.</u> Demonstrate the following</p> <p>Anatomic <u>details</u> of the following:</p> <p>* Layers of skin.</p> <p>Physiologic Principles& details of the following:</p> <ul style="list-style-type: none"> ○ Autonomic nervous system ○ Blood ○ Regulation of body temperature ○ Circulation <p>Pharmacological Principles of:</p> <ul style="list-style-type: none"> ○ General pharmacology ○ Pharmacological details of ❖ Antibiotics ❖ Antiseptics ❖ Antiparasitic Chemotherapy ❖ TB chemotherapy 	<p>-Didactic (lectures, seminars, tutorial)</p> <p>-Clinical rounds</p> <p>-Seminars</p> <p>-Clinical rotations</p> <p>-Service teaching</p>	<p>-OSCE at the end of each year</p> <p>-log book & portfolio</p> <p>- One MCQ examination at the second half of the second year and another one in the third year</p> <p>-Written and oral examination</p>
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<ul style="list-style-type: none"> ❖ Cancer chemotherapy ❖ Corticosteroids ❖ Antiviral. 		
<u>Principles & details of General Pathology of:</u> <ul style="list-style-type: none"> - Wound healing - disturbance of circulation - Shock - Immunity & hypersensitivity - Bacterial infection - Tuberculosis. - Disturbance of growth - Pathology of tumors. 	-Didactic (lectures, seminars, tutorial) -Clinical rounds -Seminars -Clinical rotations -Service teaching	-OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year and another one in the third year -Written and oral examination.
Principles&/ details of microbiology of general bacteriology Bacterial structure, growth and metabolism Bacterial genetics Antimicrobial agents Pathogenicity of microorganism Diagnostic microbiology Immunology Basic immunology Immunologic diagnostic test and serology Hypersensitivity		

Tumor immunology Immunogenetics and transplantation immunology General virology Pathogenesis of viral diseases Interferon and antiviral agents Microorganism encountered in - Surgical infection		
C. Describe the basics of quality assurance to ensure good clinical care in General Surgery		
D. Explain the ethical and scientific principles of medical research.		

E. Explain the impact of common health problems in the field of principle General Surgery on the society.		
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Practical skills (Patient Care)

ILOs	Methods of teachinhg/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to principle of General Surgery.	<ul style="list-style-type: none"> -Didactic (lectures, seminars, tutorial) -Clinical rounds -Clinical rotations (service teaching) 	<ul style="list-style-type: none"> -OSCE at the end of each year -log book & portfolio - One MCQ examination at the second half of the second year

		and another one in the third year -Clinical exam
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B. Order the following non invasive and invasive diagnostic procedures

CT brain.

Abdominal sonar. Plain

X-ray limbs.

CT

abdomen.

Arterial blood gases. Blood

picture.

Haematocrite value.

Peritoneal lavage and aspiration. Serum

electrolyte.

Blood PH and gas measurement. Platelet

count.

Bone marrow aspiration and biopsy. Bleeding time.

Tests for platelets function (adhesion, release and aggregation) .

Prothrombin time.

Partial thromboplastine time, Thrombin time.

Temperature.

Bacteriological studies of wound discharge.

Culture and sensitivity.

Tuberculin skin test.

ESR.

Biopsy.

Serum albumen.

-Clinical round with senior staff

-Observation

-Post graduate teaching

-Hand on workshops

-Perform under supervision of senior staff

- Procedure presentation

- Log book

- Chick list

C. Interpret the following noninvasive and invasive diagnostic procedures
 CT brain.
 Abdominal sonar.

-Clinical round with senior staff
 -Observation

- Procedure presentation
 - Log book
 - Chick list

Plain X-ray limbs. CT abdomen.
 Arterial blood gases. Blood picture.
 Haematocrite value.
 Peritoneal lavage and aspiration. Serum electrolyte.
 Blood PH and gas measurement. Platelet count.
 Bone marrow aspiration and biopsy. Bleeding time.
 Tests for platelets function (adhesion, release and aggregation) .
 Prothrombin time.
 Partial thromboplastine time. Thrombin time.
 CVP.
 PA
 WP.
 ECG.
 Temperature.
 Bacteriological studies of wound discharge.
 Culture and sensitivity.
 Tuberculin skin test.
 ESR.
 Biopsy.
 Serum albumen.

-Post graduate teaching
 -Hand on workshops
 -Perform under supervision of senior staff

<p>D. Perform the following noninvasive and invasive diagnostic procedures</p> <p>Abdominal sonar. Peritoneal lavage and aspiration. Biopsy</p>	<p>-Clinical round with senior staff -Observation -Post graduate teaching -Hand on workshops -Perform under supervision of senior staff</p>	<p>- Procedure presentation - Log book - Chick list</p>
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<p>E. Prescribe the following noninvasive and invasive therapeutic procedures.</p> <p>Abdominal sonar. CT abdomen. Peritoneal lavage and aspiration. Bone marrow aspiration and biopsy. CVP. Bacteriological studies of wound discharge. Culture and sensitivity. Biopsy</p>	<p>-Observation -Post graduate teaching -Hand on workshops</p>	<p>- Procedure presentation - Log book - Chick list</p>
<p>F. <u>Perform the following noninvasive and invasive therapeutic procedures</u></p> <p>Peritoneal lavage and aspiration.</p>	<p>-Observation -Post graduate teaching -Hand on workshops</p>	<p>- Procedure presentation - Log book - Chick list</p>

<p>G. <u>Develop and carry out patient management plans for the following problems</u></p> <ol style="list-style-type: none"> 1. Factor affecting wound healing 2. Management of multiple injury patients 3. causes of mortality due to trauma 4. Fluid and electrolyte imbalance 5. Acid base disequilibrium 6. Planning of fluid and electrolyte therapy 7. Classification of hemorrhage 8. Management of blood transfusion 9. Complication of blood transfusion 10. Defects of haemostasis 11. Abnormal bleeding during surgery or in postoperative period 12. Types of shock 13. Management of shock 14. Complication of surgical infections 	<p>-Clinical round with senior staff</p>	
<ol style="list-style-type: none"> 16. Management of surgical infections 17. Burns and reconstructive surgery 18. Causes, diagnosis of malnutrition in the surgical patients 19. Nutritional support to surgical patients 20. Etiology, diagnosis and treatment of tumors 21. Indication, technical consideration, complications and results of renal, hepatic pancreatic cardiac and bone marrow transplantation 22. Terminal care in surgical patient. 		
<p>H. Lead health care professionals, including those from other disciplines, to provide patient-focused care in Principles in General Surgery related conditions.</p>	<p>-Clinical round with senior staff</p>	

I. Use information technology to support patient care decisions and patient education for the principles of General Surgery related conditions.	-Clinical round with senior staff	
J. Provide health care services aimed at preventing the Principles in General Surgery related health problems.	-Clinical round with senior staff	
K. Work with health care professionals, including those from other disciplines, to provide patient-focused care for the mentioned in A.A and A.C	-Clinical round with senior staff	
L. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.(Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)	Clinical round with senior staff	

Unit 1(module1): Principles in General Surgery

Course contents:

A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:

1. Types of wounds
2. Factor affecting wound healing
3. Management of multiple injury patients
4. causes of mortality due to trauma
5. Fluid and electrolyte imbalance
6. Acid base disequilibrium
7. Planning of fluid and electrolyte therapy
8. Classification of hemorrhage
9. Management of blood transfusion

10. Complication of blood transfusion
11. Defects of hemostasis
12. Abnormal bleeding during surgery or in postoperative period
13. Types of shock
14. Management of shock
15. Complication of surgical infections
16. Management of surgical infections
17. Burns and reconstructive surgery
18. Causes, diagnosis of malnutrition in the surgical patients
19. Nutritional support to surgical patients
20. Etiology, diagnosis and treatment of tumors
21. Indication, technical consideration, complications and results of renal, hepatic pancreatic cardiac and bone marrow transplantation
22. Terminal care in surgical patient

B. Demonstrate the following:

- Anatomic details of the layers of skin.

- Physiologic Principles& details of the following:

- o Autonomic nervous system
- o Blood
- o Regulation of body temperature
- o Circulation

-General pharmacology: pharmacological details of :

- o Antibiotics
- o Antiseptics
- o Antiparasitic
- o Chemotherapy
- o TB chemotherapy
- o Cancer chemotherapy
- o Corticosteroids
- o Antiviral.

- Principles & details of General Pathology of:

- Wound healing
- disturbance of circulation
- Shock
- Immunity & hypersensitivity
- Bacterial infection
- Tuberculosis.

- Disturbance of growth
- Pathology of tumors.
- Principles&/ details of microbiology of general bacteriology:
 - Bacterial structure, growth and metabolism
 - Bacterial genetics
 - Antimicrobial agents
 - Pathogenicity of microorganism Diagnostic microbiology
- Immunology
 - Basic immunology
 - Immunologic diagnostic test and serology Hypersensitivity
 - Tumor immunology
 - Immunogenetics and transplantation immunology
- General virology:
 - Pathogenesis of viral diseases
 - Interferon and antiviral agents
 - Microorganism encountered in surgical infection

C. Describe the basics of quality assurance to ensure good clinical care in General Surgery

D. Explain the ethical and scientific principles of medical research

E. Explain the impact of common health problems in the field of principle General Surgery on the society

Practical skills (Patient Care)

A. Take history, examine and clinically diagnose different conditions related to principle of General Surgery

B. Order and interpretation the noninvasive and invasive diagnostic procedures as: Brain CT, Abdominal US, Plain X-ray, abdominal CT, ABG, blood culture, Hematocrit value, Peritoneal lavage and aspiration, Serum electrolyte, Platelet count, Bone marrow aspiration and biopsy, bleeding time, Tests for platelets function (adhesion, release and aggregation)

Bacteriological studies of wound discharge, Culture and sensitivity.

Tuberculin skin test, ESR, Serum albumen.

- C. Develop and carry out patient management plans for the following problems
1. Types of wounds
 2. Factor affecting wound healing
 3. Management of multiple injury patients
 4. causes of mortality due to trauma
 5. Fluid and electrolyte imbalance
 6. Acid base disequilibrium
 7. Planning of fluid and electrolyte therapy
 8. Classification of hemorrhage
 9. Management of blood transfusion
 10. Complication of blood transfusion
 11. Defects of hemostasis
 12. Abnormal bleeding during surgery or in postoperative period
 13. Types of shock
 14. Management of shock
 15. Complication of surgical infection

General Skills

- A. Perform practice-based improvement activities using a systematic methodology in the common problems (plan and conduct audit cycles) in conditions mentioned in A.A and A.C
- B. Locate, appraises, and assimilates evidence health problems.
- C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness
- D. Use information technology to manage information, access on-line medical information; and support their own education

Unit 2 (module2): GIT surgery

- A. Explain update and evidence based etiology, C/P, diagnosis and management of the following:

Section 1: Esophagus:

1. Congenital anomalies of the esophagus
2. Congenital diaphragmatic hernia
3. Esophageal injuries

4. Neuromuscular abnormalities
5. Esophageal hiatus hernia
6. Esophageal carcinoma
7. Dysphagia

Section 2: stomach and duodenum

1. Congenital hypertrophic pyloric stenosis
2. Acute gastric dilatation
3. Peptic ulcer
4. Complication of gastric operations
5. Neoplasms of the stomach
6. Gastrectomy

Section 3: liver

1. Liver trauma
2. Infection of the liver
3. Portal hypertension
4. Liver tumors

Section 4: Biliary System:

1. Congenital anomalies of gall bladder and bile duct
2. Gall stones
3. Stricture of the biliary tract
4. Carcinoma of the gall bladder
5. Jaundice

Section 5: Pancreas

Section 6: Spleen

1. Congenital anomalies
2. Rupture of spleen
3. Infections of spleen
4. Cyst of spleen
5. Tumors the spleen
6. Splenomegaly
7. Hemolytic anemia
8. Hypersplenism
9. Splenectomy

Section 7: Peritoneum, mesentery and omentum

1. Peritonitis
2. Intraperitoneal abscess

3. Peritoneal tumors
4. Ascites
5. Torsion of omentum
6. Mesenteric cyst
7. Mesenteric lymphadenitis
8. Retroperitoneal tumors

Section 8: small and large intestine

1. Principles of colonic surgery
2. Intestinal stoma
3. Congenital anomalies
4. Intestinal trauma
5. Intestinal fistula
6. Intestinal diverticulae
7. Inflammatory bowel disease
8. Intestinal ischemia
9. Intestinal tumors
10. Intestinal obstruction
11. Rectal prolapse

Section 9: Vermiform Appendix

1. Appendicitis
2. Neoplasia of the appendix

Section 10: Anal Canal

1. Pilonidal sinus
2. Anal fissure
3. Hemorrhoids
4. Anorectal abscess
5. anal fistula
6. fecal incontinence
7. anal canal and anal verge tumors

Section 11: Review Subject

1. abdominal tumors in children
2. hematemesis
3. Bleeding/rectum

B-Intellectual outcomes

- A. Design and present case in common problem related to GIT Surgery
- B. Apply the basic and clinically supportive sciences which are appropriate to the GIT Surgery related problems.
- C. Demonstrate an investigatory and analytic clinical situation related to GIT Surgery.
- D. Plan research projects.
- E. Lead risk management activities as a part of clinical governs.

Unit3 (module3): Breast and Endocrine Surgery

A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following:

- 1 -Developmental abnormalities of thyroglossal duct
- 2- Goiter
- 3-Hyperparathyroidism
- 4-Hypoparathyroidism
- 5. Adrenal tumors
- 6- Congenital anomalies of the breast
- 7- Inflammation of the breast
- 8- Fibrocystic diseases of the breast
- 9- Cyst of the breast
- 10-Nipple discharge
- 11-Breast neoplasm
- 12-Diseases of male Breast

B. Illustrate Anatomic, pathologic Principles& details of the following:

- Anatomy of the thyroid gland
- Anatomy of parathyroid gland
- Anatomy of adrenal gland
- Anatomy of the breast

C. Outline the Principles& details related to clinical epidemiology of endocrine gland and breast

D. Know and apply the basic and clinically supportive sciences which are appropriate to the conditions mentioned above.

Unit 4 (Module 4): Maxillofacial and Neck Surgery

A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following:

- 1- Congenital anomalies of the face and tongue
- 2- Maxillofacial injuries
- 3- Infections of the face and tongue
- 4- Neoplasms of the tongue and jaws
- 5- Diseases of the salivary glands
- 6- Differential diagnosis of neck masses and their treatment

B. Demonstrate anatomic principles& details of Face and neck

C. Outline the physiologic principles &details of:

- Deglutition
- salivary gland

D. Demonstrate the Principles &details of clinical epidemiology of Diseases of Maxillofacial and neck

Unit 5 (Module 5): Abdominal Wall, Hernias, Testis and Scrotal Surgery

A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following:

- Abdominal incision
- Disease of abdominal wall
- Inguinal Hernia
- Femoral Hernia

- Umbilical Hernia
- Epigastric Hernia
- Other rare types of Hernias
- Congenital anomalies of the testis
- Inflammatory, conditions of testis and spermatic cord
- Neoplasm of the testis
- Varicocele
- Hydrocele
- Fournier's gangrene
- Carcinoma of the Pines

B. Demonstrate anatomic principles& details of the following:

- Inguinal Canal
- Abdominal wall
- Scrotum.

D. Physiologic principles & details of testis and scrotum and Human Chorionic Gonadotrophins.

Overall Course Methods of Teaching/Learning

1. Didactic (lectures, seminars, tutorial)
2. Outpatient
3. Inpatient
4. Clinical rounds
5. Clinical rotations
6. Service teaching
7. Direct observation
8. Post graduate teaching
9. Hand on workshops
10. Perform under supervision of senior staff
11. Simulations
12. Present a case (true or simulated) in a grand round
13. Case Taking
14. journal club,
15. Critically appraised topic,
16. Educational prescription
17. Observation & supervision
18. Written & oral communications

Course Methods of teaching/learning: for students with poor achievements:

1. Extra Didactic (lectures, seminars, tutorial) according to their needs
2. Extra training according to their needs

Course assessment methods: Assessment tools:

- Clinical examination
- Written
- Oral examination
- Check list
- log book & portfolio
- Procedure/case presentation
- One MCQ examination in the second year and one in the third year
- Objective structured clinical examination
- Check list evaluation of live or recorded performance
- Record review (report)
- Patient survey

Time schedule: At the end of the second part

Marks: 1200