



Program Specifications
Master's degree in Pediatric Surgery.
(Pedia. Surg. 900)

I – Welcome Statement.

The Pediatric Surgery unit welcomes you to the master's degree in Pediatric Surgery program. We are committed to medical student education and continuously strive to improve your educational experience.

This handbook presents information guide of this degree administered by the Pediatric Surgery department, Faculty of Medicine, Al-Azhar University.

II - Mission Statement.

The mission of the Faculty of Medicine, Al-Azhar University is ***“Preparation of a trained physician, researcher and lifelong tutor capable of following standards of medical care and ethics, with managerial and technical skills in his specialty. Furthermore, promotion outstanding programs of health care to serve the society, environmental development and targeted scientific research for continual improvement of health”***.

The mission of this degree is to develop competent pediatric surgeons with high professional standards, who are well prepared to face, respond to, and solve various surgical problems in the pediatric age group (neonates, infants, children and adolescents).

The graduate will be trained to implement evidence-based practice, and to cope with the future challenges through lifelong learning and conducting the necessary medical research.

The program will support acquisition of basic knowledge of normal and abnormal growth and development (physical, physiologic, psychosocial), and its clinical application from birth through adolescence.

The program will enable the development and application of appropriate professional attitudes, communication and problem-solving skills.

III –Affiliated Departments and Hospitals

- 1- Pediatric Surgery Department of Al-Azhar University.
- 2- Anatomy Department of Al-Azhar University.
- 3- Pathology Department of Al-Azhar University.
- 4- Histology Department of Al-Azhar University.
- 5- Physiology Department of Al-Azhar University.
- 6- Biochemistry Department of Al-Azhar University.
- 7- Bacteriology Department of Al-Azhar University.
- 8- Pharmacology Department of Al-Azhar University.

A- Basic Information

1. **Program title:** Master's degree in Pediatric Surgery.
2. **Program type:** Single.
3. **Faculty:** Faculty of Medicine.
4. **Department:** Pediatric Surgery Department.
5. **Head of the Program:** Head of Pediatric Surgery Department.
6. **Coordinator:** Prof- Amin Abokifa
- 7- **Assistant coordinators:** Dr-Mohammad Daboos

B- Professional Information:

1. Program aims:

The aim of this program is to develop competent pediatric surgeons with high professional standards, who are well prepared to face, respond to, and solve various surgical problems in the pediatric age group (neonates, infants, children and adolescents).

The graduate will be trained to implement evidence-based practice, and to cope with the future challenges through lifelong learning and conducting the necessary medical research.

The program will support acquisition of basic knowledge of normal and abnormal growth and development (physical, physiologic,

psychosocial), and its clinical application from birth through adolescence.

The program will enable the development and application of appropriate professional attitudes, communication and problem-solving skills to perform surgical interventions and deal with complications in the pediatric age group.

2. Intended learning outcomes (ILOs):

a. Knowledge and understanding:

By the end of the program the candidate will be able to:

- a1. Recognize the normal growth and development of the human body, and the embryological background of surgically manageable congenital anomalies.
- a2. Recognize the surgical anatomy of various parts of the body with special considerations relevant to children at various age groups.
- a3. Recognize the surgical pathology of various diseases that require surgical intervention in pediatric age group.
- a4. Recognize the principles of genetics and its role in various surgical problems in children particularly in congenital anomalies, as well as, the basics of genetic counseling.
- a5. Recognize the principles and international guidelines of management of various congenital anomalies, traumatic, and other conditions in children.
- a6. understand the scientific basis and interpretation of common diagnostic studies with emphasis on their prioritization in management plans
- a7. Know the principles of infection control in hospitals and within community.
- a8. Recognize the principles governing ethical decision making in clinical practice and the major ethical dilemmas in medicine, with its relevant medico-legal aspects.
- a9. Recognize the Arabic medical terminology and its use in communicating medical information to patients, their relatives and authority.
- a10. Know the Basic computer knowledge needed to support literature retrieval and learning.
- a11. Know the basic principles of medical statistics, research methodology, and critical evaluation of evidence.
- a12. Recognize the global Egyptian national health care system.

b. Intellectual capabilities:

By the end of the program the candidate will be able to:

- b1. Obtain and document a complete or focused medical history in the outpatient, inpatient or emergency settings.
- b2. Perform and document a complete or focused physical and mental examination.
- b3. Interpret patient's symptoms and physical signs in terms of anatomic, pathologic and functional diagnostic significances.
- b4. Identify problems and select the most appropriate and cost-effective diagnostic procedures for each problem.
- b5. Interpret the results of commonly used diagnostic procedures (laboratory and radiological).
- b6. List a differential diagnosis with prioritization of the common possibilities for each problem.
- b7. Exhibit clinical decision analysis skills that weighs the pros and cons of the proposed interventions.
- b8. Recognize patients with life / organ threatening conditions and institute first aid and initial therapy.
- b9. Apply principles of sterilization and infection control regulations on hospital and community levels.
- b10. Perform independently various clinical procedures.
- b11. Recognize the essential steps and possible complications of common interventions.

c. Professional and practical skills:

By the end of the program the candidate will be able to:

- c1. Conduct patient and/ or parents' interviews that are characterized by patience and attentive listening.
- c2. Perform verbal and written communication with patients and/or their parents and colleagues with competence.
- c3. Explain to patients and their families the clinical investigations findings in relation to possible courses of therapy including indications, risks, benefits, and alternatives as well as plans for follow up.
- c4. Achieve consensus and obtain informed consent from the patient or the parents for the treatment plan.

- c5. Know when and how to ask for senior consultation.
- c6. Give accurate and clear oral summaries of the patient's illness.
- c7. Work collaboratively with other health professionals in other disciplines to maximize patient benefits and minimize the risk of errors.
- c8. Write clear and concise medical records including admission sheets, progress notes, and physician' orders, referrals for consultation, discharge summaries and follow up notes.
- c9. Identify his/her personal weaknesses through accurate self-assessment and/or supervisors and colleagues and actively set a clear learning plan to address these weaknesses.
- c10. Utilize the resources of biomedical information including the available electronic facilities to update his/her knowledge.

d. General and transferable skills:

By the end of the program the candidate will be able to:

- d1. Deliver compassionate and non-judgmental care for all patients with respect for their privacy and dignity.
- d2. Be aware of the ethical behavior expected of doctors towards patients with recognition of patients' rights, particularly with regard to confidentiality and informed consent.
- d3. Attain the honesty and integrity in all interactions with patients, families, colleagues and others with whom the physician must interact in their professional life.
- d4. Be aware of potential conflicts of interest that may arise in caring of the patients and a commitment to advocate the interest of one's patients over one's own interests at all times (physician must be altruistic).
- d5. Treat the patient as a person, not as a disease and understand that patients are human beings with beliefs, values, goals and concerns which must be respected.
- d6. Maintain a professional image in manner, dress, speech and interpersonal relationships that is consistent with the accepted contemporary medical profession standards.
- d7. Provide care to patients who are unable to pay and advocate access to health care for members of the underserved populations.
- d8. Respect the role of other health care professionals, and the need to collaborate with others in caring of individual patients.

- d9. Recognize her/his limits of knowledge and experience.
- d10. Do continued self-assessment of their current medical practice aiming to update and improve it.

3. Academic standards:

The master program in Pediatric Surgery will comply with local, national, and international Academic standards issued by the following authorities and organizations.

- The Board of Pediatric Surgery, Faculty of Medicine, Al-Azhar University.
- The Board of Department of Surgery, Faculty of Medicine, Al-Azhar University.
- Postgraduate Education & Research committee, Faculty of Medicine, Al-Azhar University.
- The Council of the Faculty of Medicine, Al-Azhar University.
- Postgraduate Education & Research committee, Al-Azhar University.
- The Council of Al-Azhar University.
- Egyptian Pediatric Surgical Association (EPSA).
- Saudi Board of Pediatric Surgery.
- Pan Arab Association of Pediatric Surgery.
- Pan African Association of Pediatric Surgery.
- Egyptian Board of Pediatric Surgery.
- Medical Sector of Ministry of High Education, ARE.

4. External References for Standards (Bench mark)

- Pediatric Surgery Fellowship University of Manitoba (Canada)
- Pediatric Surgery Fellowship, Royal College of surgeons

5. Program Structure and Contents

Compulsory Courses:

Courses of The 1st Part

Code	Subject	Credit Hours	Written Exam.	Written Marks	Oral Exam. Marks
Pedia. Surg. 9001	Anatomy.	1		30	20
Pedia. Surg. 9002	Embryology.	1		30	20
	Aggregate	2	1	60	40
Pedia. Surg. 9003	Pathology.	1		30	20
Pedia. Surg. 9004	Histology.	1/2		15	10
Pedia. Surg. 9005	Physiology.	1/2		15	10
	Aggregate	2	1	60	40
Pedia. Surg. 9006	Biochemistry.	1		30	20
Pedia. Surg. 9007	Bacteriology.	1/2		15	10
Pedia. Surg. 9008	Pharmacology.	1/2		15	10
	Aggregate	2	1	60	40
		6			

Courses of The Second Part

		Credit Hours.	Written Exam	Written Marks.
Pedia. Surg. 9009	General Pediatric and neonatal Surgery	1		
Pedis Surg 90010	Head and Neck Surgery in Pediatrics.	1/2		
Pedia. Surg. 90011	GIT Surgery in Pediatrics.	2		
			Paper one	200
Pedia. Surg. 90012	Genito Urinary Surgery in Pediatrics.	1		
Pedia. Surg. 90013	Plastic and Reconstructive Surgery in Pediatrics.	1/2		
Pedia. Surg. 90014	Thoracic surgery.	1/2		
Pedia. Surg 90015	Neurosurgery.			
Pedia. Surg 90016	Orthopedic Surgery in Pediatrics.			
Pedia. Surg. 90017	Pediatric Oncologic Surgery.	1/2		
Pedia. Surg. 90018	MIS in Pediatrics.	1/2		
Pedia. Surg. 90019	Pediatric Traumatology.			
Pedia. Surg. 90020	Basic ICU care In Pediatrics and Neonates.	1/2		
			Paper Two	200
	Practical Training.	3		
	Scientific Activities.	2		
	Clinical Training.	4.5		
		17		

Elective Courses.

<u>E9001</u>	<u>Medical Laws and Ethics Course</u>
<u>E9003</u>	<u>Medical Genetics Course</u>

<u>E90016</u>	<u>Molecular Biology Course</u>
<u>E90017</u>	<u>Child Psychology and Mental Health Course</u>
<u>E90048</u>	<u>Hospital Administration Course</u>

5-Training Program

- According to bylaws for post graduate programs, all the students should have a surgical training for 2 years.

6-Scientific Activities:

- The candidate should participate in the scientific activities of the departments such as:
Journal club (presenting scientific articles) once every two weeks.
Seminars (including recent topics and controversial issues) once weekly.
- Students are expected to participate in the scientific discussions.
- Scientific meetings arranged by the department.
- Attendance of Thesis discussions (2 per year).
- Courses in basic and advanced laparoscopy, stapling, sutures
- Courses in basic and advanced trauma life support.

NB: Each activity will be monitored and given credit points registered in a logbook. The Candidate should collect the required points before being allowed to sit for final exam.

C-Teaching Methods

1 st	Master of Pediatric surgery Compulsory courses 1st part	Methods of Education
1	Anatomy. Embryology.	<ol style="list-style-type: none"> 1. Illustrated Lectures 2. Power point presentation 3. Seminars 4. Tutorials 5. Assignment
2	Pathology.	<ol style="list-style-type: none"> 1. Illustrated Lectures 2. Power point presentation

		<ol style="list-style-type: none"> 3. Seminars 4. Tutorials 5. Assignment
3	Histology.	<ol style="list-style-type: none"> 1. Illustrated Lectures 2. Power point presentation 3. Seminars 4. Tutorials 5. Assignment
4	Physiology.	<ol style="list-style-type: none"> 1. Illustrated Lectures 2. Power point presentation 3. Seminars 4. Tutorials 5. Assignment
5	Biochemistry.	<ol style="list-style-type: none"> 1. Illustrated Lectures 2. Power point presentation 3. Seminars 4. Tutorials 5. Assignment
6	Bacteriology.	<ol style="list-style-type: none"> 1. Illustrated Lectures 2. Power point presentation 3. Seminars 4. Tutorials 5. Assignment
7	Pharmacology.	<ol style="list-style-type: none"> 1. Illustrated Lectures 2. Power point presentation 3. Seminars 4. Tutorials 5. Assignment

2nd	Master of Pediatric surgery Compulsory courses 2nd part	Methods of Education
1	-Pediatric and neonatal general surgery	-Academic lectures:- each lectures should have (objectives, pre and after test and its ILOS)

	<p>-Head and Neck Surgery in Pediatrics. -GIT Surgery in Pediatrics. - Pediatric Oncologic Surgery.</p>	<p>-Case based learning (CBL) -Problem based learning (PBL) -Group discussion and open discussion -Simulation based learning (SBL): -Social media and video lectures (e-learning): These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era. -Observational learning: for Surgical procedures. -Peer assisted learning: for Surgical procedures.</p>
2	<p>Pediatric Genito Urological surgery</p>	<p>Academic lectures:- each lectures should have (objectives, pre and after test and its ILOS) -Case based learning (CBL) -Problem based learning (PBL) -Group discussion and open discussion -Simulation based learning (SBL): -Social media and video lectures (e-learning): These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era. -Observational learning: for Surgical procedures. -Peer assisted learning: for Surgical procedures.</p>
3	<p>Pediatric Plastic and Reconstructive surgery</p>	<p>-Academic lectures:- each lectures should have (objectives, pre and after test and its ILOS) -Case based learning (CBL) -Problem based learning (PBL) -Group discussion and open discussion -Simulation based learning (SBL): -Social media and video lectures (e-learning): These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era. -Observational learning: for Surgical procedures. -Peer assisted learning: for Surgical procedures.</p>
4	<p>-Pediatric Thoracic surgery Neurosurgery.</p>	<p>Academic lectures:- each lectures should have (objectives, pre and after test and its ILOS) -Case based learning (CBL) -Problem based learning (PBL) -Group discussion and open discussion -Simulation based learning (SBL): -Social media and video lectures (e-learning): These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era. -Observational learning: for Surgical procedures. -Peer assisted learning: for Surgical procedures.</p>

5	-Orthopedic Surgery in Pediatrics.	Academic lectures:- each lectures should have (objectives, pre and after test and its ILOS) -Case based learning (CBL) -Problem based learning (PBL) -Group discussion and open discussion -Simulation based learning (SBL): -Social media and video lectures (e-learning): These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era.
6	MIS in Pediatrics. Pediatric Traumatology	-Academic lectures:- each lectures should have (objectives, pre and after test and its ILOS) -Case based learning (CBL) -Problem based learning (PBL) -Group discussion and open discussion -Simulation based learning (SBL): -Social media and video lectures (e-learning): These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era.
7	General Principles of Pediatrics and Neonatal Intensive care	-Academic lectures:- each lectures should have (objectives, pre and after test and its ILOS) -Simulation based learning (SBL): -Social media and video lectures (e-learning): These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era.
	Elective Courses	Methods of Educations
1	Medical ethics	-Academic lectures:- each lectures should have (objectives, pre and after test and its ILOS)
2	Medical Genetics	-Simulation based learning (SBL):
3	Molecular Biology	-Social media and video lectures (e-learning): These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era.
4	Child psychology and mental health	These online communities are helpful to circulate information, thoughts, and various other contents also this method was very helpful during Covid-19 Pandemic Era.

5	Hospital administration	
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D-Program admission requirements

According to Bylaws of the Faculty of Medicine, Al-Azhar University for the Post Graduate Programs.

E-Student Assessment Methods

4.1 written exam to assess knowledge, understanding and skills (, Short essay and problem-solving Q -MCQs)

4.2 Practical exam to assess operative skills.

4.3 Oral exam to assess Knowledge, General and transferable skills

4.4 Clinical exam to assess understanding and clinical skills.

Weighing of assessment

4.1 written exam

4.2 Practical

4.2 oral exams

4.4 Clinical exam

F. Program Evaluation methods:-

Evaluator	Tool	Sample
Senior Students	Questionnaire at the end of the program	All the Pediatric surgery students
Stakeholders	A meeting arranged during the annual conference of the department.	Representatives from -National medical insurance -Medical syndicate -Ministry of health
External Evaluators	-Review the program and courses. -Attend the final exam.	-Once before implementation -annual report
Quality Assurance committee	A committee will be formed headed by a senior professor and representatives of each surgical unit to monitor the learning process (trainees and trainers abiding by the training plan increments and log book in reality) and make the necessary adjustments. The committee will present its report to the council.	

رئيس قسم جراحة الأطفال

أ.د. أشرف حامد صديق