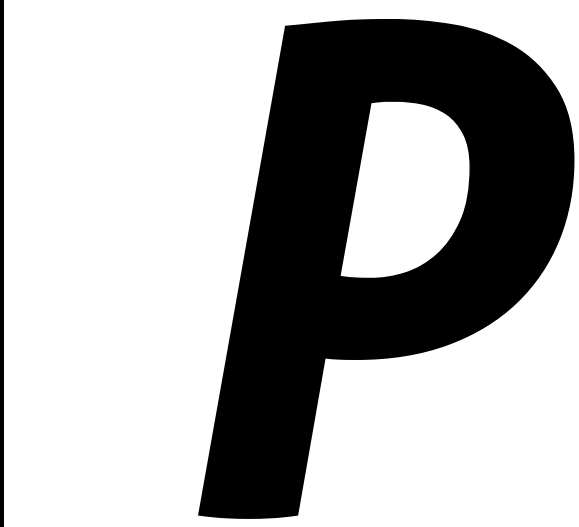
Paediatric Surgery

Requirements for Post IMM Fellowship Training



COLLEGE OF PHYSICIANS AND SURGEONS PAKISTAN

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ABOUT THE COLLEGE

The College was established in 1962 through an ordinance of the Federal Government. The objectives/functions of the College include promoting specialist practice of Medicine, Obstetrics & Gynaecology, Surgery and other specialties by securing improvement of teaching and training, arranging postgraduate medical, surgical and other specialists training, providing opportunities for research, holding and conducting examinations for awarding College diplomas and admission to the Fellowship of the College.

Since its inception, the College has taken great strides in improving postgraduate medical and dental education in Pakistan. Competency- based structured Residency Programs have now been developed, along with criteria for accreditation of training institutions, and for the appointment of supervisors and examiners. The format of examinations has evolved over the years to achieve greater objectivity and reliability in methods of assessment. The recognition of the standards of College qualifications nationally and internationally, particularly of its Fellowship, has enormously increased the number of trainees and consequently the number of training institutions and the supervisors. The rapid increase in knowledge base of medical sciences and consequent emergence of new subspecialties have gradually increased the number of CPSP fellowship disciplines to seventy three including specialties in dentistry. After completing two years of core training during IMM, the trainees are allowed to proceed to the advance phase of FCPS training in the specifi specialty of choice for 2-3 years. However, it is mandatory to qualify IMM examination before taking the FCPS-II exit examination The work performed by the trainee is to be recorded in the e-logbook on daily basis. The purpose of the e-log is to ensure that the entries are made on a regular basis and to avoid belated and fabricated entries. It will hence promote accuracy, authenticity and vigilance on the part of trainees and the supervisors.

The average number of candidates taking CPSP examinations each year is to a minimum of 32,000. The College conducts examinations for FCPS-I (11 groups of disciplines), IMM, FCPS II (73 disciplines), MCPS (22 disciplines), including MCPS in Health Professions Education and Health Care System Management. A large number of Fellows and senior medical teachers from within the country and overseas are involved at various levels of examinations of the College.

The College, in its endeavor to decrease inter-rater variability and increase fairness and transparency, is using TOACS (Task Oriented Assessment of Clinical Skills) in IMM and FCPS-II Clinical examinations. Inclusion of foreign examiners adds to the credibility of its qualifications at an international level. It is important to note that in the overall scenario of health delivery over 85% of the total functioning and registered health care specialists of the country have been provided by the CPSP. To coordinate training and examination, and provide assistance to the candidates stationed in cities other than Karachi, the College has established 14 Regional Centers (including fie Provincial Headquarter Centers) in the country.

The fie Provincial Headquarter Centers, in addition to organizing the capacity building workshops/short courses also have facilities of libraries, I.T, and evaluation of synopses and dissertations along with providing guidance to the candidates in conducting their research work. The training towards Fellowship can be undertaken in more than 198 accredited medical institutions throughout the country and 48 accredited institutions abroad. The total number of trainees in these institutions is over 17685 who are completing residency programs with around 3105 supervisors. These continuous efforts of the College have even more importantly developed a credible system of postgraduate medical education for the country. The College strives to make its courses and training programs 'evidence' and 'needs based' so as to meet international standards as well as to cater to the specialist healthcare needs not only for this country but also for the entire region.

Prof. Zafar Ullah Chaudhry
President
College of Physicians and Surgeons Pakistan

TRAINING AND EXAMINATIONS SUMMARY

The College lays down the training programs and holds examination for the award of Fellowship in the following disciplines:

Disciplines for 1st Fellowship

1. Anatomy
2. Anesthesiology
3. Biochemistry
4. Cardiac Surgery
5. Cardiology
6. Chemical pathology
7. Clinical Haematology
8. Community Medicine
9. Dermatology
10. Diagnostic Radiology
11. Emergency Medicine
12. Family Medicine
13. Forensic Medicine
14. Gastroenterology
15. General Medicine
16. General Surgery
17. Haematology
18. Histopathology
19. Immunology
20. Medical Oncology
21. Microbiology
22. Nephrology
23. Neurology
24. Neurosurgery
25. Nuclear Medicine
26. Obstetrics and Gynaecology
27. Operative Dentistry
28. Ophthalmology
29. Oral & Maxillofacial Surgery
30. Orthodontics
31. Orthopaedic Surgery
32. Otorhinolaryngology (ENT)
33. Paediatric Surgery
34. Paediatrics
35. Periodontology
36. Pharmacology
37. Physical Medicine & Rehabilitation
38. Physiology
39. Plastic Surgery
40. Prosthodontics
41. Psychiatry
42. Pulmonology
43. Radiotherapy
44. Thoracic Surgery
45. Urology
46. Virology

Disciplines for 2nd Fellowship

1. Child and Adolescent Psychiatry
2. Cardio-Thoracic Anesthesiology
3. Clinical Cardiac Electrophysiology
4. Community and Preventive Paediatrics
5. Critical Care Medicine
6. Developmental and Behavioural Paedaitrics
7. Endocrinology
8. Gynecological Oncology
9. Infectious Diseases
10. Interventional Cardiology
11. Maternal and Fetal Medicine (MFM)
12. Neonatal Paediatrics
13. Orbit & Oculoplastics
14. Paediatric Cardiology
15. Paediatric Gastroenterology Hepatology & Nutrition
16. Paediatric Haematology Oncology
17. Paediatrics Infectious Diseases
18. Paediatric Nephrology
19. Paediatric Neurology
20. Paediatric Ophthalmology
21. Pain Medicine
22. Reproductive Endocrinology and Infertility
23. Rheumatology
24. Surgical Oncology
25. Urogynaecology
26. Vitreo Retinal Ophthalmology
27. Vascular Surgery

Fellowship of the College of Physicians and Surgeons Pakistan is awarded to those applicants who have:

- a recognized medical degree;
- completed one year house job in a recognized institution
- passed the relevant FCPS Part I Examination;
- registered with the Registration & Research Cell (R&RC);
- undergone specified years of supervised accredited training on whole time basis.
- passed IMM examination in Surgery and Allied
- obtained approval of dissertation / two research articles (related to the specialty) published / accepted for publication in CPSP approved journal(s):
- completed entries in e-logbook along with validation by the supervisor;
- been declared successful in examinations carried out by the Examination Department of the CPSP; and
- been elected by the College Council

It is important to note that all applicants must undergo a formal examination before being offered Fellowship of the relevant specialty, except in case of Fellowship without examination.

GENERAL REGULATIONS

The following regulations apply to all the candidates taking the FCPS II examination Candidate will be admitted to the examination in the name (surname and other names) as given in the MBBS degree.CPSP will not entertain any application for change of name on the basis of marriage/divorce/deed.

ELIGIBILITY REQUIREMENTS FOR ENTERING THE FELLOWSHIP PROGRAMME IN PAEDIATRIC SURGERY

- Passed FCPS Part I in Surgery & Allied
- Completed two years of R&RC registered training of IMM in Surgery & Allied

EXEMPTION FROM FCPS PART-I

An application for exemption from FCPS Part-I must be submitted to the College with all the relevant documents and a bank draft for the prescribed fee.

After due verification, the College may grant exemption from FCPS Part-I to those applicants who have acquired any of the following qualifications in Paediatric Surgery / General Surgery:

- FRCS from any of the Royal Colleges of UK and Ireland.
- Diplomat American Board of Specialties.
- FCPS Part-I, Bangladesh.

In all other cases, after proper scrutiny and processing, the College shall decide acceptance or rejection of the request for exemption from FCPS-I on case to case basis. Candidates with FCPS-II/equivalent qualification (Recognized by CPSP Council) may be given exemption of two years IMM training in Surgery & Allied on application. All applicants who are allowed exemption will be issued an **EXEMPTION CERTIFICATE** on payment of exemption fee. A copy of this certificate will have to be attached with the application to the Registration & Research Cell (R&RC) of the CPSP, for registration as FCPS Part-II trainee and later with the application for appearing in FCPS Part-II examination.

DURATION OF TRAINING IN PAEDIATRIC SURGERY:

- Total duration of the training is 5 years, divided into two phases
    - o Intermediate Module in Surgery& allied for the first two years after which the resident becomes eligible to appear in the Intermediate Module examination. For further details about the Intermediate Module refer to the booklet "Intermediate Module in Surgery" published separately by the College
    - o Last three years consist of advanced training in Pediatric Surgery, known as FCPS II.

APPROVED TRAINING CENTRES

Training mustbe undertaken in units/departments/institutions approved by the College. A current list of approved locations is available from the College and its regional offices, as well as on the College website: www.cpsp.edu.pk.

REGISTRATION AND SUPERVISION

All training must be supervised and undertaken on whole time basis. The trainees are required to register with the R&RC and submit the name of their supervisor(s) by the date indicated on the registration form. The supervisor will normally be a Fellow of the College. However, another supervisor may be accepted if no Fellow is available to offer appropriate supervision. Only that training will be accepted which is done under a CPSP approved supervisor. Normally, only one supervisor is nominated, and if the trainee spends significant periods working in an area where the supervisor has no personal involvement, the supervisor must certify that suitable supervision is being provided. The nomination of more than one supervisor is needed only if the trainee divides the year between two or more unrelated units, departments or institutions. The trainees are not allowed to work simultaneously in any other department/institutions for financial benefit and /or for another academic qualification.

RESEARCH

One of the training requirements is a dissertation or two research papers on a topic related to the field of specialization. Synopsis of the dissertation or research papers must be approved from the Registration & Research Cell (R&RC) of CPSP before starting the research work. The dissertation must be submitted for approval to the R&RC before or during the first six months of fifth year of training program.

E-LOGBOOK

The CPSP council has made e-logbook system mandatory for all Residency program residents inducted from July 2011. Upon registration with R&RC each resident is allotted a registration number and a password to log on and make entries of all work performed and the academic activities undertaken in e-logbook on a daily basis. The concerned supervisor is required to verify the entries made by the resident. This system ensures timely entries by the resident and prompt verification by the supervisor. It also helps in monitoring the progress of residents and the vigilance of the supervisors.

MANDATORY WORKSHOPS

It is mandatory for all residents to attend the following CPSP certified workshops in the fist two years of Intermediate Module training:

1. Introduction to Computer and Internet
2. Research Methodology Biostatistics and Dissertation Writing
3. Communication Skills
4. BLS (Basic Life Support) course
5. Primary Surgical Skills

Any other workshop/s as may be introduced by the CPSP

NOTE: 1) The workshops are conducted by the Department of Medical Education and the residents are advised to get registered online. The BLS course is conducted by the Advanced Skills Department (ASD) and the registration form is to be submitted with the ASD separately.

2) No resident will be allowed to appear in IMM examination without attending the abovementioned workshops and BLS course.

OPTIONAL ROTATIONS

An accredited Paediatric Surgical Unit should have adequate facilities for acquisition of competencies included in the curriculum. However, if the supervisor considers it necessary s/he may ask the resident for optional rotations in following specialties in 5th year:

- Pediatric Urology (2 Months)
- Pediatric Orthopedics (1 Month)
- Pediatric Plastic Surgery (1 Month)
- Pediatric Neurosurgery (1 Month)
- PICU/NICU (1 month)

ROLE AND RESPONSIBILITIES

Training held under the aegis of CPSP is compulsorily supervised. A supervisor is a CPSP fellow or a specialist with relevant postgraduate qualifications recognized by CPSP.
Supervision of a trainee is a multifaceted job. Arbitrarily the task is divided into the following components for the sake of convenience. This division is by no means exhaustive or rigid. It is merely meant to give semblance to this abstract and versatile role.

EXPERT TRAINER

- This is the most fundamental role of the supervisors. They have to not only ensure and monitor adequate training but also provide continuous helpful feedback (formative) regarding the progress of the training.
- This would entail observing the trainee's performance and rapport with all the people within his work environment.
- He / she should teach the trainee and help him/her overcome the hurdles during the learning process.
- It is the job of the supervisor to make the trainee develop the ability to interpret findings in his patients and act suitably in response.
- The supervisor must be adept at providing guidance in writing dissertation / research articles (which are essential components of training).
- Every supervisor is expected to participate actively in Supervisors' workshops, conducted regularly by CPSP, and do his/her best to implement the newly acquired information/ skills in the training. It is a basic duty to keep abreast of the innovations in their field of expertise and ensure that this information percolates to trainees of all years under them.

RELIABLE LIAISON

- The supervisor must maintain regular contact with the College regarding training and the conduct of various mandatory workshops and courses.
- It is expected that the supervisor will establish direct contact with relevant quarters of CPSP if any problem arises during the training process, including the suitability of trainee.
- They must be able to coordinate with the administration of their institutions/ organizations in order to ensure that their trainees do not have administrative problems hampering their training.

PROFICIENT ADMINISTRATOR

- He/she must ensure that the trainee's make regular entries in the e-logbook and that the entries are validated promptly.
- They must provide feedback reports to the College at the end of each quarter or training period. These reports are used to evaluate a trainee's performance and should indicate if training has been followed satisfactorily. The report must also contain positive and negative aspects of the trainee's performance and any extra academic e ndeavors made by them. Prolonged absences must also be mentioned in sufficient detail. It is essential that each report be discussed and signed by both the trainer and the trainee before it is sent to the College.
- The supervisor might be required to submit confidential reports on trainee's progress to the College.
- The supervisor should notify the College of any change in the proposed approved training program.
- In case the supervisor plans to be away for more than two months, he / she must arrange satisfactory alternate supervision during the period.

ROLE AND RESPONSIBILITIES

Given the provision of adequate resources by the institution, Trainees should

- Accept responsibility for his own learning and ensure that it is in accord with the relevant requirements.
- Investigate sources of information about the program and potential Supervisor and play an informed role in the selection and appointment of the Supervisor.
- Seek reasonable infrastructure support from their institution and Supervisor, and use this support effectively;
- Ensure that they undertake training diligently.
- Work with their supervisors in writing the synopsis/ research proposal and submit the synopsis/research proposal within six months of registration with the R&RC.
- Accept responsibility for the dissertation, and plan and execute the research within the time limits defined.
- Be responsible for arranging regular meetings with the supervisor to discuss any hindrances to progress and document progress etc. If the supervisor is not able/willing to meet with the student on a regular basis, the student must notify the College.
- Provide the supervisor with word-processed dated synopsis and dissertation drafts that have been checked for spelling, grammar and typographical errors, prior to submission.
- Prior to submission of dissertation, the student should ensure that the supervisor has all the raw data relevant to the thesis.
- Submit the completed Dissertation to R&RC or evidence of publication/acceptance for publication of two research papers in CPSP approved journal (s) or JCPSP six months before the completion of (last year of) training. The trainee should be the first or second author of both papers and the synopsis of both papers must have a prior approval of R&RC;

- Follow the College complaint procedures if serious problems arise
- Complete all requirements for sitting an examination
- Provide feedback regarding the training post to the College on the prescribed confidential form

TRAINING PROGRAME

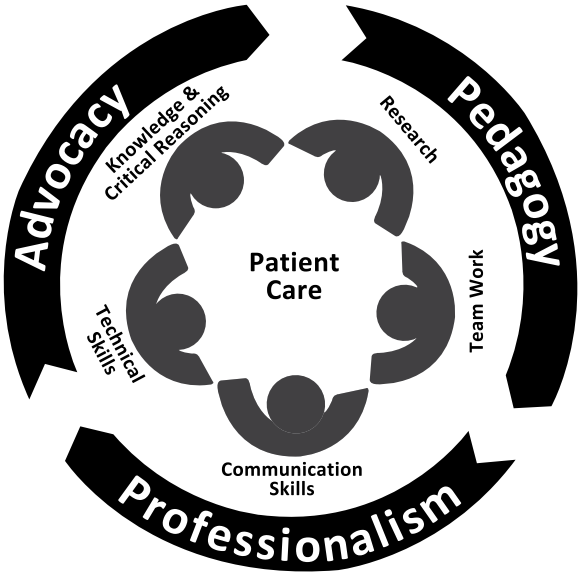
CURRICULUM

The aim of the Fellowship Programme in Paediatric Surgery is to produce specialists in the field who have attained the required competencies. By the end of the residency programme, the graduate will be able to

- Take appropriate histories
- Demonstrate proficiency in the requisite physical examinations
- Justify the ordering and interpretation of tests and investigations
- Appropriately diagnose and rule in and rule out contending conditions
- Manage the problem in a cost effective manner
- Apply the requisite knowledge and skills to think critically and solve problems
- Be an effective team player, leading the team if necessary
- Communicate effectively with:
- Patients and their attendants with empathy and compassion, in interviewing, counseling, breaking bad news, behavioural modification and shared decision-making, recognizing the impact of the condition on the patients and their families
- Seniors, peers, juniors, learners and other health professionals;
- Demonstrate risk analysis and emphasis on prevention
- Ensure patient safety
- Manage emergencies related to the specialty
- Present well in clinics, rounds and conferences
- Document concise and accurate histories, prescriptions, progress notes, discharge summaries and referrals
- Keep up to date and practice evidence based medicine
- Demonstrate putting patients first
- Demonstrate honesty, integrity and timeliness (punctuality and task completion)

- Maintain confidentiality, patient autonomy, take appropriate consent and do no harm
- Consults with colleagues and refer as necessary
- Demonstrates effective teaching skills
- Exhibit advocacy for their patients, practice (service/ department), profession (discipline/specialty) and population-based problems related to their specialty
- Participate in clinical governance and clinical audit
- Demonstrate research, and use of research in improving clinical practice
- Maintain highest standards of practice
- Demonstrate conflict resolution, management skills and leadership

The competencies outlined above have been reflected in the Competency model of the CPSP as depicted below:



Following is a global and extensive, yet not the total, list of learning outcomes recommended by the College.

LEARNING OUTCOMES RELATING TO:
COGNITION
The learning outcomes will all be at the application level since that is the gold standard. Therefore, the candidate will be able to:

- Relate how body function gets altered in diseased states
- Request and justify investigations and plan management for medical disorders
- Assess new medical knowledge and apply it to their setting
- Apply quality assurance procedures in their daily work.

SKILLS
WRITTEN COMMUNICATION SKILLS
The candidates will be able to:

- Correctly write updated medical records, which are clear, concise and accurate.
- Write clear management plans, discharge summaries and competent letters for outpatients after referral from a general practitioner.
- Demonstrate competence in academic writing.

VERBAL COMMUNICATION SKILLS
The candidates will be able to:

- Establish professional relationships with patients and their relatives or caregivers in order to obtain a history, conduct a physical examination and provide appropriate management.
- Demonstrate usage of appropriate language in seminars, bedside sessions outpatients and other work situations
- Demonstrate the ability to communicate clearly, considerately and sensitively with patients, relatives, other health professionals and the public.
- Demonstrate competence in presentation skills.

EXAMINATION SKILLS

The candidates will be able to:

- Perform an accurate physical and mental state examination in complex medical problems often involving multiple systems.
- Interpret physical signs after physical examination so as to formulate further management.

PATIENT MANAGEMENT SKILLS

The candidates will be able to:

- Interpret and integrate the history and examinations findings and arrive at an appropriate differential diagnosis and diagnosis.
- Demonstrate competence in problem identification, analysis and management of the problem at hand by the use of appropriate resources, interpretation of lab results.
- Prioritize different problems within a time frame.

SKILLS IN RESEARCH

The candidates will be able to:

- Use evidence based medicine and evidence based guidelines
- Conduct research individually by using appropriate research methodology and statistical methods.
- Correctly guide others in conducting research by advising about study designs, research methodology and statistical methods that are applicable.
- Interpret and use results of various research articles.

ATTITUDES
TOWARDS PATIENTS

The candidates will be able to:

- Establish a positive relationship with all patients in order to ease illness and suffering.
- Facilitate the transfer of information important to the management and prevention of disease.
- Demonstrate awareness of bio-psycho-social factors in the assessment and management of a patient.

- Demonstrate sensitivity in performing internal examination. It is important to explain to the patient why an intimate examination is necessary and what the examination will involve. The patient's permission must be obtained and, where possible, the patient should be invited to bring a relative or friend. The patient should have privacy to dress and undress. The discussion should be kept relevant and avoid unnecessary personal
- Comments. Questions and feedback should be encouraged.
- Consistently show consideration of the interests of the patient and the community as paramount with these interests never subservient to one's own personal or professional interest.

TOWARDS SELF DEVELOPMENT

The candidate will be able to:

- Demonstrate, consistently, respect for every human being irrespective of ethnic background, culture, socioeconomic status and religion.
- Deal with patients in a non-discriminatory and prejudice-free manner.
- Deal with patients with honesty and compassion.
- Demonstrate flexibility and willingness to adjust appropriately to changing circumstances.
- Foster the habit and principle of self-education and reflection in order to constantly update and refresh knowledge and skills and as a commitment to continuing education.
- Recognize stress in self and others
- Deal with stress and support medical colleagues and allied health workers.
- Handle complaints including self-criticism or criticism by colleagues or patients.
- Understand the importance of obtaining and valuing a second opinion.

TOWARDS SOCIETY

The candidate will be able to:

- Understand the social and governmental aspects of health care provision.
- Offer professional services while keeping the cost effectiveness of individual forms of care.
- Apply an understanding of hospital and community-based resources available for patients and care givers in rural areas.
- Demonstrate an understanding of health service management and health economics in rural areas.
- Understand the use of 'telemedicine' in practicing health.

OBJECTIVES

At the end of the training a candidate shall be able to:

1. Initially assess the patients seeking advice for paediatric surgical problems by:

- obtaining pertinent history.
- performing physical examinations correctly.
- formulating a working diagnosis.
- deciding whether the patient requires.
- ambulatory care or hospitalization.
- referral to other health professionals.
- Emergency care including life saving measures.

2. Manage patients requiring treatment by a paediatric surgeon:

- Plan an enquiry strategy i.e. order appropriate investigations and interpret the results.
- When required perform specified surgical procedures independently and competently.
- Deal effectively and promptly with complications which may occur during the course of disease.
- Maintain records of patients.

3. Undertake research and publish findings.

4. Acquire new information; assess its utility and make appropriate applications.

5. Recognize the role of teamwork and function as an effective member/leader of the team.

6. Advice the community on matters related to promoting health and preventing disease.

7. Train paraprofessionals and other junior members of the team.

PROCEDURAL COMPETENCIES

The clinical skills, which a specialist must have, are varied and complex. A complete list of the same necessary for residents and trainers is given below. It is arranged year wise and the level of competence to be achieved each year is arranged as follows:

1. Observer status
2. Assistant status
3. Performed under supervision
4. Performed independently

PROCEDURES	THIRD YEAR								
	3 Months		6 Months		9 Months		12 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
A) Patient Management									
Taking Pertinent History (observing respect for dignity of patients and confidentiality)	3	12	4	12	4	12	4	12	48
Performing Physical Examination (including observing privacy)	3	12	4	12	4	12	4	12	48
Requesting Investigations	3	12	4	12	4	12	3	12	48
Interpreting Results	2	12	3	12	3	12	3	12	48
Planning Management	1	12	2	12	3	12	3	12	48
Maintaining Follow up	3	12	4	12	4	12	4	12	48
Obtaining Informed Consent (Assent in older children as well)	3	12	4	12	4	12	4	12	48
Dealing with End of Life Issues (e.g. Withholding and Withdrawing Treatment)	1	2	2	2	2	2	3	2	8
Declaring Conflict of Interest (including relationship with pharmaceutical industry)	2	2	3	2	4	2	4	2	8
Antenatal counseling for congenital anomalies	1	2	2	2	3	2	3	2	8
B) Head and Neck Procedures									
Excision of Thyroglossal duct cyst and sinus	2	1	2	1	2	1	2	1	4
Excision of Branchial cyst and sinus	2	1	2	1	2	1	2	1	4
Release of Torticollis	2	1	2	1	2	1	2	1	4
Preauricular sinus and cyst excision	2	1	2	1	2	1	2	1	4
Thyroid Surgery (excision of nodule/cyst, partial/complete thyroidectomy etc)	-	-	-	-	-	-	2	1	1
Tracheostomy	-	-	-	-	2	1	2	1	2
C) Plastic Surgery Procedures									
Repair of Cleft Lip	2	1	2	1	2	1	2	1	3
Repair of Cleft Palate	2	1	2	1	2	1	2	1	3
Skin Grafting / Flaps	2	1	2	1	2	1	2	1	3
Burns Contracture Release	2	1	2	1	2	1	2	1	3
Burns Wound Debridement	2	2	2	2	3	2	4	2	8

PROCEDURES	THIRD YEAR								
	3 Months		6 Months		9 Months		12 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
D) Thoracic Surgery Procedures									
Repair of Oesophageal Atresia (with or without Tracheoesophageal Fistula) including oesophagostomy	2	-	-	-	2	1	2	1	4
Repair of Diaphragmatic Hernia	-	-	-	-	2	1	2	1	2
Plication of Eventration of Diaphragm	-	-	-	-	2	1	2	1	2
Pulmonary Lobectomy	-	-	-	-	2	1	2	1	2
Excision of Mediastinal Masses	-	-	-	-	2	1	2	1	2
Decortication of Empyema	-	-	-	-	-	-	2	1	2
Oesophageal Substitution	-	1	2	1	3	1	3	1	1
Tube Thoracostomy	2	-	2	1	2	1	2	1	
E) Abdominal Procedures									4
Gastrostomy/Feeding jejunostomy	-	-	2	1	2	1	2	1	3
Ileostomy	-	2	2	2	2	2	2	1	3
Colostomy	2	1	2	1	2	1	2	2	8
Closure of Colostomy	2	4	2	4	2	4	2	1	4
Laparotomy for Peritonitis Intestinal perforation Gangrene / volvulous Gastrointestinal Obstruction Small bowel atresia Meconium ileus Pyloromyotomy Intussusception	2	1	2	1	2	1	2	4	16

PROCEDURES	THIRD YEAR								
	3 Months		6 Months		9 Months		12 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
Malrotation/Bands Meckel's anomalies Duplication cyst Mesenteric cyst									
Bowel resection and anastomosis	2	2	2	2	3	1	3	1	4
Appendectomy	2	1	2	1	2	1	2	1	6
Operation for Anorectal Malformations Anoplasty PSARP/ASARP	2	1	2	1	2	1	2	1	4
Operation for Hirschsprung's Disease Rectal biopsy Definitive procedure	2	-	-	-	-	-	2	1	4
Splenectomy	-	-	-	-	2	1	2	1	1
Choledochal cyst	-	-	-	-	2	1	2	1	2
Cholecystectomy	-	-	-	-	2	1	2	1	2
Portoenterostomy	-	-	-	-	2	1	2	1	2
Hepatic cyst / abscesses etc	-	-	-	-	2	1	2	1	2
Antireflux procedure (for GERD & Achalasia Cardia)	-	-	-	-	2	1	2	1	2
Surgery on Pancreas (pseudocyst etc) Adrenal (cyst/adenoma excision)	-	2	3	2	4	2	4	1	2
Rectal Polypectomy	2	2	3	2	4	2	4	2	8
Injection sclerotherapy for Rectal Prolapse	2	1	2	1	2	1	2	2	8

PROCEDURES	THIRD YEAR								
	3 Months		6 Months		9 Months		12 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
F) Abdominal Wall / Inguinoscrotal Anomalies									
Repair of Omphalocele and Gastroschisis	2	2	2	2	3	1	3	1	4
Umbilical anomalies repair	2	2	2	2	3	1	3	1	6
Inguinal herniotomy	2	2	2	2	3	1	3	1	6
Ligation of PPV	2	2	2	2	3	1	3	1	6
G) Genitourinary system									
Orchiopexy	2	-	-	-	2	1	2	1	6
Torsion Testis / Appendages	-	-	-	-	2	1	2	1	2
Ovarian cyst excision	-	2	2	2	2	2	2	1	2
Repair of Hypospadias (single or multi staged procedures including crippled hypospadias repair)	2	-	-	-	2	1	2	2	8
Repair of Epispadias	-	-	-	-	2	1	2	1	2
Repair of EctopiaVesicae	-	-	-	-	-	-	2	1	2
Ureter Re implantation	-	-	-	-	2	1	2	1	1
Vesicostomy	-	1	2	1	2	1	2	1	2
Suprapubic cystostomy	2	1	2	1	2	1	2	1	4
Cystolithotomy	2	-	2	1	2	1	2	1	4
Pyelolithotomy	-	-	-	-	2	1	2	1	3
Ureterolithotomy	-	-	2	1	2	1	2	1	2
Pyeloplasty	-	-	-	-	2	1	2	1	3
Nephrectomy	-	2	2	2	3	2	3	1	2
Circumcision	2	-	-	-	2	1	2	2	8
Feminine Genitoplasty / Urogenital Sinus anomaly / Vaginal atresia	-	1	2	1	2	1	2	1	2

PROCEDURES	THIRD YEAR								
	3 Months		6 Months		9 Months		12 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
H) Endoscopic Procedures									
Bronchoscopy	2	1	2	1	2	1	2	1	4
Oesophagoscopy& dilatation	2	1	2	1	2	1	2	1	4
Sigmoidoscopy/colonoscopy	2	1	2	1	2	1	2	1	4
Gastrodudenoscopy	2	1	2	1	2	1	2	1	4
Cystoscopy including Fulguration of PUV	2	1	2	1	2	1	2	1	4
I) Surgical Oncology									
Wilms' Tumour	2	1	2	1	2	1	2	1	4
SacrococcygealTeratoma	2	1	2	1	2	1	2	1	4
Neuroblastoma	2	1	2	1	2	1	2	1	4
Gonadal Tumours (GCTs)	2	-	-	-	2	1	2	1	4
Rhabdomyosarcoma	-	1	2	1	2	1	2	1	2
Lymphomas	2	-	-	-	-	-	2	1	4
Hepatoblastoma	-	2	2	2	3	2	3	1	1
J) Traumatology									
Management of Trauma patients according to ATLS protocol	2	1	2	1	2	1	2	2	8
Laparotomy for Penetrating Trauma Blunt Trauma	2	2	2	2	2	2	2	1	4
K) Minimally Invasive Surgery									
Laparoscopy	2	-	-	-	2	1	2	2	8
Thoracoscopy	-	1	2	1	2	1	2	1	2

PROCEDURES	THIRD YEAR								
	3 Months		6 Months		9 Months		12 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
L) Neurosurgical Procedures									
Repair of Neural Tube Defects (Myelomeningocele, Encephalocele)	2	1	2	1	2	1	2	1	4
VP shunt for Hydrocephalus									
M) Musculoskeletal Surgery	2	1	2	1	2	1	2	1	4
TalipesEquinovarus surgery and splint application	2	1	2	1	2	1	2	1	4
Arthrotomy/drainage	2	1	2	1	2	1	2	1	4
Osteomyelitis drainage of pus	2	1	2	1	2	1	2	1	4
Hip spica application	2	2	2	2	2	2	2	1	2
Application of POP cast for Fractures	2	1	2	1	3	1	3	2	8
N) Miscellaneous Procedures									
Excision of superficial lumps	2	2	3	2	4	2	4	1	4
Drainage of deep abscesses	3	2	3	2	4	2	4	2	8
Lymph node Biopsy	2	1	2	1	2	1	2	2	8
Cystic Hygroma (excision /Sclerotherapy)	2	1	2	1	2	1	2	1	4
Haemangioma (Sclerotherapy/excision)	2	1	2	1	2	1	2	1	4
Central line Insertion	2	1	2	1	2	1	2	1	4

PROCEDURES	FOURTH YEAR								
	15 Months		18 Months		21 Months		24 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
A) Patient Management									
Taking Pertinent History (observing respect for dignity of patients and confidentiality)	4	12	4	12	4	12	4	12	48
Performing Physical Examination (including observing privacy)	4	12	4	12	4	12	4	12	48
Requesting Investigations	4	12	4	12	4	12	4	12	48
Interpreting Results	4	12	4	12	4	12	4	12	48
Planning Management	4	12	4	12	4	12	4	12	48
Maintaining Follow up	4	12	4	12	4	12	4	12	48
Obtaining Informed Consent (Assent in older children as well)	4	12	4	12	4	12	4	12	48
Dealing with End of Life Issues (e.g. Withholding and Withdrawing Treatment)	4	2	4	2	4	2	4	2	8
Declaring Conflict of Interest (including relationship with pharmaceutical industry)	4	2	4	2	4	2	4	2	8
Antenatal counseling for congenital anomalies	4	2	4	2	4	2	4	2	8
B) Head and Neck Procedures									
Excision of Thyroglossal duct cyst and sinus	2	1	2	1	3	1	3	1	4
Excision of Branchial cyst and sinus	2	1	2	1	3	1	3	1	4
Release of Torticollis	2	1	2	1	3	1	3	1	4
Preauricular sinus and cyst excision	2	1	2	1	3	1	3	1	4
Thyroid Surgery (excision of nodule/cyst, partial/complete thyroidectomy etc)	2	1	2	1	2	1	2	1	4
Tracheostomy	2	1	2	1	3	1	3	1	4
C) Plastic Surgery Procedures									
Repair of Cleft Lip	2	1	2	1	2	1	3	1	4
Repair of Cleft Palate	2	1	2	1	2	1	3	1	4
Skin Grafting / Flaps	2	1	2	1	2	1	3	1	4
Burns Contracture Release	2	1	2	1	2	1	3	1	4
Burns Wound Debridement	3	2	4	2	4	2	4	2	8

PROCEDURES	FOURTH YEAR								
	15 Months		18 Months		21 Months		24 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
D) Thoracic Surgery Procedures									
Repair of Oesophageal Atresia (with or without Tracheoesophageal Fistula) including oesophagostomy	2	1	2	1	2	1	3	1	4
Repair of Diaphragmatic Hernia	2	1	2	1	2	1	3	1	4
Plication of Eventration of Diaphragm	2	1	2	1	2	1	3	1	4
Pulmonary Lobectomy	2	1	2	1	2	1	2	1	4
Excision of Mediastinal Masses	2	1	2	1	2	1	2	1	4
Decortication of Empyema	2	1	2	1	2	1	3	1	4
Oesophageal Substitution	2	1	2	1	2	1	2	1	4
Tube Thoracostomy	3	2	4	2	4	2	4	2	8
E) Abdominal Procedures									
Gastrostomy/Feeding jejunostomy	2	1	3	1	3	1	4	1	4
Ileostomy	2	1	3	1	3	1	4	1	4
Colostomy	3	1	3	1	4	1	4	1	4
Closure of Colostomy	2	1	3	1	3	1	4	1	4
Laparotomy for Peritonitis Intestinal perforation Gangrene / volvulous Gastrointestinal Obstruction Small bowel atresia Meconium ileus Pyloromyotomy Intussusception	3	3	3	3	4	2	4	2	10

PROCEDURES	FOURTH YEAR								
	15 Months		18 Months		21 Months		24 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
Malrotation/Bands Meckel's anomalies Duplication cyst Mesenteric cyst									
Bowel resection and anastomosis	2	1	3	1	3	1	3	1	4
Appendectomy	3	2	4	2	4	2	4	2	8
Operation for Anorectal Malformations Anoplasty PSARP/ASARP	2	2	3	1	3	1	3	1	5
Operation for Hirschsprung's Disease Rectal biopsy Definitive procedure	2	2	3	1	3	1	3	1	5
Splenectomy	-	-	-	-	2	1	2	1	2
Choledochal cyst	2	1	2	1	2	1	3	1	4
Cholecystectomy	2	1	3	1	3	1	3	1	4
Portoenterostomy	2	1	2	1	2	1	3	1	4
Hepatic cyst / abscesses etc	2	1	2	1	2	1	3	1	4
Antireflux procedure (for GERD & Achalasia Cardia)	2	1	2	1	2	1	3	1	4
Surgery on Pancreas (pseudocyst etc) Adrenal (cyst/adenoma excision)	2	1	2	1	2	1	3	1	4
Rectal Polypectomy	4	2	4	2	4	2	4	2	8
Injection sclerotherapy for Rectal Prolapse	4	2	4	2	4	2	4	2	8

PROCEDURES	FOURTH YEAR								
	15 Months		18 Months		21 Months		24 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
F) Abdominal Wall / Inguinoscrotal Anomalies									
Repair of Omphalocele and Gastroschisis	2	1	3	1	3	1	4	1	4
Umbilical anomalies repair	3	1	3	1	4	1	4	1	4
Inguinal herniotomy	3	2	3	2	4	2	4	2	8
Ligation of PPV	3	2	3	2	4	2	4	2	8
G) Genitourinary system									
Orchiopexy	3	2	3	2	4	2	4	2	8
Torsion Testis / Appendages	3	1	3	1	4	1	4	1	4
Ovarian cyst excision	2	1	3	1	3	1	4	1	4
Repair of Hypospadias (single or multi staged procedures including crippled hypospadias repair)	2	1	3	1	3	1	4	1	4
Repair of Epispadias	2	1	2	1	3	1	3	1	4
Repair of EctopiaVesicae	2	1	2	1	2	1	3	1	4
Ureter Re implantation	2	1	2	1	2	1	3	1	4
Vesicostomy	3	1	3	1	4	1	4	1	4
Suprapubic cystostomy	3	1	3	1	4	1	4	1	4
Cystolithotomy	3	1	3	1	4	1	4	1	4
Pyelolithotomy	2	1	3	1	3	1	3	1	4
Ureterolithotomy	2	1	3	1	3	1	3	1	4
Pyeloplasty	2	1	3	1	3	1	3	1	4
Nephrectomy	2	1	3	1	3	1	3	1	4
Circumcision	4	2	4	2	4	2	4	2	8
Feminine Genitoplasty / Urogenital Sinus anomaly / Vaginal atresia	2	1	2	1	3	1	3	1	4

PROCEDURES	FOURTH YEAR								
	15 Months		18 Months		21 Months		24 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
H) Endoscopic Procedures									
Bronchoscopy	3	1	3	1	3	1	4	1	4
Oesophagoscopy& dilatation	3	1	3	1	3	1	4	1	4
Sigmoidoscopy/colonoscopy	3	1	3	1	3	1	4	1	4
Gastrodudenoscopy	3	1	3	1	3	1	4	1	4
Cystoscopy including Fulguration of PUV	3	1	3	1	3	1	4	1	4
I) Surgical Oncology									
Wilms' Tumour	2	1	2	1	3	1	3	1	4
SacrococcygealTeratoma	2	1	2	1	3	1	3	1	4
Neuroblastoma	2	1	2	1	3	1	3	1	4
Gonadal Tumours (GCTs)	2	1	2	1	3	1	3	1	4
Rhabdomyosarcoma	2	1	2	1	3	1	3	1	4
Lymphomas	2	1	2	1	3	1	3	1	4
Hepatoblastoma	2	1	2	1	2	1	2	1	4
J) Traumatology									
Management of Trauma patients according to ATLS protocol	3	2	4	2	4	2	4	2	8
Laparotomy for Penetrating Trauma Blunt Trauma	2	1	2	1	3	1	3	1	4
K) Minimally Invasive Surgery									
Laparoscopy	2	1	2	1	3	1	3	1	4
Thoracoscopy	2	1	2	1	3	1	3	1	4

PROCEDURES	FOURTH YEAR								
	15 Months		18 Months		21 Months		24 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
L) Neurosurgical Procedures									
Repair of Neural Tube Defects (Myelomeningocele, Encephalocele)	3	1	3	1	3	1	3	1	4
VP shunt for Hydrocephalus	3	1	3	1	3	1	3	1	4
M) Musculoskeletal Surgery									
TalipesEquinovarus surgery and splint application	3	1	3	1	3	1	3	1	4
Arthrotomy/drainage	3	1	3	1	3	1	3	1	4
Osteomyelitis drainage of pus	3	1	3	1	3	1	3	1	4
Hip spica application	3	1	3	1	4	1	4	1	4
Application of POP cast for Fractures	3	1	3	1	4	1	4	1	4
N) Miscellaneous Procedures									
Excision of superficial lumps	3	2	4	2	4	2	4	2	8
Drainage of deep abscesses	4	2	4	2	4	2	4	2	8
Lymph node Biopsy	4	2	4	2	4	2	4	2	8
Cystic Hygroma (excision /Sclerotherapy)	3	2	4	2	4	2	4	2	8
Haemangioma (Sclerotherapy/excision)	3	2	4	2	4	2	4	2	8
Central line Insertion	3	2	4	2	4	2	4	2	8

PROCEDURES	FIFTH YEAR								
	27 Months		30 Months		33 Months		36 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
A) Patient Management									
Taking Pertinent History (observing respect for dignity of patients and confidentiality)	4	12	4	12	4	12	4	12	48
Performing Physical Examination (including observing privacy)	4	12	4	12	4	12	4	12	48
Requesting Investigations	4	12	4	12	4	12	4	12	48
Interpreting Results	4	12	4	12	4	12	4	12	48
Planning Management	4	12	4	12	4	12	4	12	48
Maintaining Follow up	4	12	4	12	4	12	4	12	48
Obtaining Informed Consent (Assent in older children as well)	4	12	4	12	4	12	4	12	48
Dealing with End of Life Issues (e.g. Withholding and Withdrawing Treatment)	4	4	4	4	4	4	4	4	16
Declaring Conflict of Interest (including relationship with pharmaceutical industry)	4	4	4	4	4	4	4	4	16
Antenatal counseling for congenital anomalies	4	4	4	4	4	4	4	4	16
B) Head and Neck Procedures									
Excision of Thyroglossal duct cyst and sinus	4	1	4	1	4	1	4	1	4
Excision of Branchial cyst and sinus	4	1	4	1	4	1	4	1	4
Release of Torticollis	4	1	4	1	4	1	4	1	4
Preauricular sinus and cyst excision	4	1	4	1	4	1	4	1	4
Thyroid Surgery (excision of nodule/cyst, partial/complete thyroidectomy etc)	3	1	3	1	3	1	4	1	4
Tracheostomy	4	1	4	1	4	1	4	1	4
C) Plastic Surgery Procedures									
Repair of Cleft Lip	3	1	3	1	4	1	4	1	4
Repair of Cleft Palate	3	1	3	1	4	1	4	1	4
Skin Grafting / Flaps	3	1	3	1	4	1	4	1	4
Burns Contracture Release	3	1	3	1	4	1	4	1	4
Burns Wound Debridement	4	4	4	4	4	4	4	4	16

PROCEDURES	FIFTH YEAR								
	27 Months		30 Months		33 Months		36 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
D) Thoracic Surgery Procedures									
Repair of Oesophageal Atresia (with or without Tracheoesophageal Fistula) including oesophagostomy	3	1	3	1	4	1	4	1	4
Repair of Diaphragmatic Hernia	3	1	3	1	4	1	4	1	4
Plication of Eventration of Diaphragm	3	1	3	1	4	1	4	1	4
Pulmonary Lobectomy	3	1	3	1	3	1	4	1	4
Excision of Mediastinal Masses	3	1	3	1	3	1	4	1	4
Decortication of Empyema	3	1	3	1	4	1	4	1	4
Oesophageal Substitution	2	1	2	1	2	1	3	1	4
Tube Thoracostomy	4	4	4	4	4	4	4	4	16
E) Abdominal Procedures									
Gastrostomy/Feeding jejunostomy	3	1	4	1	4	1	4	1	4
Ileostomy	4	1	4	1	4	1	4	1	8
Colostomy	4	2	4	2	4	3	4	3	10
Closure of Colostomy	3	2	4	2	4	2	4	2	8
Laparotomy for Peritonitis Intestinal perforation Gangrene / volvulous Gastrointestinal Obstruction Small bowel atresia Meconium ileus Pyloromyotomy Intussusception	4	4	4	4	4		4	4	16

PROCEDURES	FIFTH YEAR								
	27 Months		30 Months		33 Months		36 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
Malrotation/Bands Meckel's anomalies Duplication cyst Mesenteric cyst									
Bowel resection and anastomosis	3	2	4	1	4	1	4	1	5
Appendectomy	4	2	4	2	4	2	4	2	8
Operation for Anorectal Malformations Anoplasty PSARP/ASARP	3	2	4	1	4	1	4	1	5
Operation for Hirschsprung's Disease Rectal biopsy Definitive procedure	3	1	3	1	4	1	4	1	4
Splenectomy	3	1	3	1	4	1	4	1	4
Choledochal cyst	2	1	3	1	3	1	4	1	4
Cholecystectomy	3	1	4	1	4	1	4	1	4
Portoenterostomy	2	1	3	1	3	1	4	1	4
Hepatic cyst / abscesses etc	3	1	4	1	4	1	4	1	4
Antireflux procedure (for GERD & Achalasia Cardia)	3	1	4	1	4	1	4	1	4
Surgery on Pancreas (pseudocyst etc) Adrenal (cyst/adenoma excision)	3	1	4	1	4	1	4	1	4
Rectal Polypectomy	4	2	4	2	4	2	4	2	8
Injection sclerotherapy for Rectal Prolapse	4	2	4	2	4	2	4	2	8

PROCEDURES	FIFTH YEAR								
	27 Months		30 Months		33 Months		36 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
F) Abdominal Wall / Inguinoscrotal Anomalies									
Repair of Omphalocele and Gastroschisis	3	1	4	1	4	1	4	1	4
Umbilical anomalies repair	4	1	4	1	4	1	4	1	4
Inguinal herniotomy	4	2	4	2	4	2	4	2	8
Ligation of PPV	4	2	4	2	4	2	4	2	8
G) Genitourinary system									
Orchiopexy	4	2	4	2	4	2	4	2	8
Torsion Testis / Appendages	4	1	4	1	4	1	4	1	4
Ovarian cyst excision	3	1	4	1	4	1	4	1	4
Repair of Hypospadias (single or multi staged procedures including crippled hypospadias repair)	3	1	4	1	4	1	4	1	4
Repair of Epispadias	3	1	3	1	3	1	4	1	4
Repair of EctopiaVesicae									
Ureter Re implantation	3	1	3	1	3	1	4	1	4
Vesicostomy	3	1	3	1	3	1	4	1	4
Suprapubic cystostomy	4	2	4	2	4	2	4	2	8
Cystolithotomy	4	2	4	2	4	2	4	2	8
Pyelolithotomy	3	1	3	1	4	1	4	1	4
Ureterolithotomy	3	1	3	1	4	1	4	1	4
Pyeloplasty	3	1	3	1	4	1	4	1	4
Nephrectomy	3	1	3	1	4	1	4	1	4
Circumcision	4	2	4	2	4	2	4	2	8
Feminine Genitoplasty / Urogenital Sinus anomaly / Vaginal atresia	3	1	3	1	4	1	4	1	4

PROCEDURES	FIFTH YEAR								
	27 Months		30 Months		33 Months		36 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
H) Endoscopic Procedures									
Bronchoscopy	3	2	4	2	4	2	4	2	8
Oesophagoscopy& dilatation	3	2	4	2	4	2	4	2	8
Sigmoidoscopy/colonoscopy	3	2	4	2	4	2	4	2	8
Gastrodudenoscopy	3	2	4	2	4	2	4	2	8
Cystoscopy including Fulguration of PUV	3	2	4	1	4	1	4	1	5
I) Surgical Oncology									
Wilms' Tumour	3	1	4	1	4	1	4	1	4
SacrococcygealTeratoma	3	1	4	1	4	1	4	1	4
Neuroblastoma	3	1	4	1	4	1	4	1	4
Gonadal Tumours (GCTs)	3	1	4	1	4	1	4	1	4
Rhabdomyosarcoma	3	1	3	1	4	1	4	1	4
Lymphomas	3	1	4	1	4	1	4	1	4
Hepatoblastoma	2	1	2	1	3	1	3	1	4
J) Traumatology									
Management of Trauma patients according to ATLS protocol	4	3	4	3	4	3	4	3	12
Laparotomy for Penetrating Trauma Blunt Trauma	4	1	4	1	4	1	4	1	4
K) Minimally Invasive Surgery									
Laparoscopy	3	1	4	1	4	1	4	1	4
Thoracoscopy	3	1	3	1	4	1	4	1	4

PROCEDURES	FIFTH YEAR								
	27 Months		30 Months		33 Months		36 Months		Total Cases Third Year
	Level	Cases	Level	Cases	Level	Cases	Level	Cases	
L) Neurosurgical Procedures									
Repair of Neural Tube Defects (Myelomeningocele, Encephalocele)	4	1	4	1	4	4	4	1	4
VP shunt for Hydrocephalus	4	1	4	1	4	4	4	1	4
M) Musculoskeletal Surgery									
TalipesEquinovarus surgery and splint application	4	1	4	1	4	4	4	1	4
Arthrotomy/drainage	4	1	4	1	4	4	4	1	4
Osteomyelitis drainage of pus	4	1	4	1	4	4	4	1	4
Hip spica application	4	1	4	1	4	1	4	1	4
Application of POP cast for Fractures	4	2	4	2	4	2	4	2	8
N) Miscellaneous Procedures									
Excision of superficial lumps	4	2	4	2	4	2	4	2	8
Drainage of deep abscesses	4	2	4	2	4	2	4	2	8
Lymph node Biopsy	4	2	4	2	4	2	4	2	8
Cystic Hygroma (excision /Sclerotherapy)	4	2	4	2	4	2	4	2	8
Haemangioma (Sclerotherapy/excision)	4	2	4	2	4	2	4	2	8
Central line Insertion	4	2	4	2	4	2	4	2	8

SYLLABUS

Applied Basic Sciences

knowledge and understanding of:
Molecular Genetics and Gene Therapy including Clinical Genetics: assess child with congenital anomaly, pattern of inheritance, counseling and screening in familial diseases.

Embryology: describe mechanisms leading to the development of congenital malformations with possible causation.

Anatomy: basic and applied related to surgical patients.

Physiology and Biochemistry: appreciate the relationship between surgical diseases/ injuries on functioning of various body systems.

Pathology: principles of immunology and microbiology relevant to paediatric surgical practice.

Pharmacology: actions and toxic effects of drugs commonly used in the management of surgical patients.

Epidemiology and Statistics: critical appraisal of publications and reviews. Perform surgical audits.

Principles of General Surgery and its application to Paediatric Population

Surgical Infections and their Prevention

- Surgically important micro-organisms
- pathophysiology of the body's response to infection
- septic shock
- sources of surgical infection-prevention and control
- principles of asepsis and antisepsis
- aseptic techniques; sterilisation; antibiotic prophylaxis and therapy of infections.
- Precautions in hepatitis and HIV carriers-special precautions; avoidance of infections transmitted by blood and body fluids.

Surgical Technique and Technology

- Skin preparation
- incisions and their closure
- suture and ligature materials
- patients' positioning; dressings
- disorders of coagulation and haemostasis
- diathermy-principles and precautions
- alternative energy sources; lasers-principles and precautions;
- pathophysiology of wound healing; classification of surgical wounds; principles of wound management; scars and contracture; wound dehiscence;excision of cysts and benign tumors of skin and subcutaneous tissues
- principles and techniques of biopsy and cytological sampling
- modalities of tissue probe sampling for frozen section and paraffin histology,cytology and bacteriology; sampling of body fluids and/ or body excretions for laboratory investigation, interpretation of results
- drainage of superficial abscesses
- basic principles of bowel, urinary tract and blood vessel anastomosis.

Organ Transplantation

- The knowledge of the problems related to organ transplantation
- the possibilities and limitations of this option
- the pathologies that can lead to a transplantation
- the technical aspects of the operation
- the alternatives and contraindications
- pharmacological treatment of rejection
- follow-up of transplanted children.

Pediatrics

Pediatrics / Neonatology

- Awareness of common paediatric and neonatal medical conditions related to surgical patients (like neonatal sepsis, surgical problems of prematurity low birth weight, principals of neonatal ventilation etc) and investigations and recognizing the related surgical complications; ability to assess patient and differentiate surgical from non-surgical conditions.
- Understanding the relationships between medical and surgical pathologies of the child.
- knowledge of high care, intensive care and artificial ventilation and management of critically ill pediatric and neonatal patients.

Pediatric Anesthesia

Anesthesiology Techniques including Airway Assessment

- understanding of different techniques of general anesthesia; their indications and contra-indications
- local and regional anesthesia
- explosive hazards relating to general anesthesia and endoscopic surgery
- central venous catheterization
- fluid replacement, infusion therapy and parenteral alimentation
- blood transfusion and serology; blood coagulation disorders and substitution measures blood gas analysis and acid base balance.

Critical Surgical illness and Intensive Care Medicine

The applied basic science relevant to the clinical assessment of critically ill children and to the

- understanding of disorders of function caused by
- haemorrhage, shock and sepsis
- posttraumatic, preoperative, perioperative and postoperative intensive care medicine
- cardiopulmonary and pharmacological resuscitation
- single organ failure (heart, liver, kidney)

- multiple system organ failure (pathophysiology and treatment)
- respiratory failure
- pulmonary oedema "shock lung"
- acute respiratory distress syndrome
- septic inflammatory response syndrome;
- malignant hyperthermia.

Pediatric surgery

Pediatric surgical activity covers acute and non-acute diseases and injuries and acute and elective procedures in children in their pre-, peri- and postoperative aspects.

PS includes surgical pathologies of the central and peripheral nervous system; head, neck and face; respiratory system; gastrointestinal tract; genitourinary system; vascular and musculoskeletal system (including skin); endocrine system; lymphoreticular system; orthopedic, traumatology. Basic understanding of the principles of these subspecialties is required. Same applies to pediatric cardiac surgery about which an awareness of surgical pathologies in this area is required.

Preoperative and postoperative care

Screening programs and prenatal diagnosis

- pre- and postnatal screening for the early diagnosis of congenital malformations, preventable diseases and tumours.
- prenatal diagnosis of surgical malformations, modes of presentation, and indications for pre-natal intervention, as well as the ability to plan post-natal management.

Laboratory tests

- haematological, immunological, biochemical and histo-pathological changes that accompany paediatric surgical diseases.
- interpret and relate knowledge and results to clinical scenarios.

Imaging

- indications, and interpretation of, imaging techniques such as conventional X-rays, sonography, Doppler sonography, CT / MRI / PET scans and radio-isotope techniques in the investigation of the pediatric surgical diseases. Understanding of safety measures in Radiology.
- Knowledge of radiation-sparing indications for X-ray investigations.

Endoscopic techniques

- indicationsfor employing various endoscopic techniquessuch as gastrointestinal, respiratory and urologic endoscopy for diagnostic and therapeutic purposes.
- Handling of endoscopes and sterilizationmeasures Other instrumental techniques
- indications required for employing instrumental techniques in functional diagnosis, such as anal manometry, urodynamics, etc.

Neonatal Surgery

- Surgical care of the neonate, pre-term or full term, including comprehensive management of complex congenital malformations in close cooperation with all professionals involved; deep knowledge of fluid-electrolyte management of the baby.
- Knowledge of incidences of associated anomalies and complications and risks of transfer from one unit to another.
- Understanding the place of operative and non-operative managements and outcome in short and long-terms.

Emergency Surgery

- Care of critically ill children with underlying conditions including coordinated multidisciplinary management
- clinical assessment of severely injured children and to the understanding of disorders of function caused by trauma, thermal injuries, hemorrhage and shock.

- Diagnosis and treatment of the battered / abused child.
- Principles of hospital care;
    - clinical assessment of critically ill and severely injured children - scoring systems
    - management of the unconscious child
    - monitoring of vital functions in critically ill or severely injured children
    - initial management of children with multiple trauma
    - resuscitation and haemodynamic support
    - haemorrhage and shock
    - maintenance of airway in severely injured and unconscious patients
    - management of cranial, thoracic, abdominal and pelvic trauma; management of soft tissue trauma.

General Pediatric Surgery

Central and peripheral nervous systems

- surgical anatomy and pathology and treatment options of
    - spina bifida
    - hydrocephalus
    - myelomeningocele
    - ventriculo-peritoneal shunts, together with their relationship with other organ systems such as gastrointestinal or genitourinary (i.e., neurogenic dysfunctional urinary bladder).

Head and neck surgery

- surgical anatomy and pathology of
    - head and neck
- embryology of the congenital malformations of the area including labiopalatine clefts
- regional lymph nodes
- access to the great vessels of the neck.

Thoracic surgery

- surgical anatomy and pathology of tracheobronchial tree, chest wall, diaphragm and thoracic viscera
- applied cardio-respiratory physiology
- interpretation of investigations and understanding of disorders of cardio-respiratory function caused by disease, injury and surgical intervention.

Gastrointestinal surgery

- surgical anatomy of the abdomen and its viscera
- applied physiology of the alimentary system
- interpretation of investigations, for the understanding of disorders and treatment of congenital and acquired abdominal diseases including infectious and communicable diseases like tuberculosis, parasitic diseases and typhoid fever.

Genitourinary surgery

- surgical anatomy of the genito-urinary system
- appliedpathophysiology relevant to: clinical examination, interpretation of special investigations, understanding of disordered function and principles of the surgical treatment of congenital and acquired genito-urinary disease and injuries.

Orthopedic& traumatology

- Musculo-skeletal anatomy
- pathophysiology relevant to the locomotor system
- understanding of disordered locomotor function with emphasis on the effects of trauma Pathophysiology of fracture healing, non-union, delayed union, complications, principles of surgical treatment, principles of bone grafting.
- Principles of conservative and operative treatment of fractures.

- Principles of nerve regeneration and nerve repair; peripheral nerve lesions;
- Principles of tendon repair
- Soft tissues trauma; traumatic oedema and the compartment syndromes.
- Knowledge of common orthopedic conditions like clubfoot, joints pathologies and infections.

Tumor Surgery

- Surgical oncology, including coordinated multidisciplinary management of the child affected by tumors
- applied basic sciences relevant to the understanding of the clinical behavior, diagnosis and treatment of neoplastic disease.
- The role of cancer registers; clinico-pathological staging of cancer and premalignant states
- Principles of cancer treatment by: surgery, radiotherapy, chemotherapy, immunotherapy, hormone therapy
- Terminal care of cancer patients, pain relief.
- Oncological surgical emergencies ie superior mediastinal syndrome, tumour lysis syndrome, neutropenic fever.

Endocrine Surgery

- Interpretation of special investigations
- Assessment and management of children with thyroid, parathyroid, adrenal and pancreatic conditions. Minimally invasive surgery
- Knowledge and skills of therapeutic intraluminal endoscopy, thoracoscopy, and laparoscopy.

Day case surgery

- Understanding of the clinical, surgical and organizational implications of the routine surgical pathologies amenableto be treated as day cases.

Teaching and Research

Acquire teaching experience

- Demonstrate the ability to teach medical and paramedical staff by experience and attending specific courses.

Develop research experience

- Analysis of data and understanding of the principles and practice of clinical research, literature research and review.

ASSESSMENT

ELIGIBILITY REQUIREMENTS FOR FCPS PART-II EXAMINATION

The eligibility requirements for candidates appearing in FCPS Part II are:

- To have passed FCPS Part-I in Surgery and allied, or been granted official exemption.
- To have undertaken two years training in Intermediate Module in Surgery and Allied.
- To have undertaken three years of specified training in Peadiatric Surgery.
- To provide certificate of having passed Intermediate Module Examination in Surgery and Allied.
- Completion of entries in e-logbook along with validation by the supervisor
- To provide a certificate of approval of dissertation or acceptance of two research papers which must accompany the application form.
- To provide a certificate of attendance of mandatory work-shops.

EXAMINATION SCHEDULE

- The FCPS Part-II theory examination will be held twice a year.
- Theory examinations are held in various cities of the country usually at Abbottabad, Bahawalpur, Faisalabad, Hyderabad, Islamabad, Karachi, Lahore, Larkana, Multan, Peshawar, Quetta and Rawalpindi, centres. The College shall decide where to hold oral/practical examination depending on the number of candidates in a city and shall inform the candidates accordingly.
- English shall be the medium of examination for the theory/ practical/ clinical and viva examinations.
- The College will notify of any change in the centres, the dates and format of the examination.
- A competent authority appointed by the College has the power to debar any candidate from any examination if it is satisfied that such a candidate is not a fit person to take the College examination because of using unfair means in the examination, misconduct or other disciplinary reasons.

- Each successful candidate in the Fellowship examination shall be entitled to the award of a College Diploma after being elected by the College Council and payment of registration fees and other dues.

EXAMINATION FEES

- Fees deposited for a particular examination shall not be carried over to the next examination in case of withdrawal/ absence/exclusion.
- Applications along with the prescribed examination fees and required documents must be submitted by the last date notified for this purpose before each examination. In complete applications will not be processed.
- The details of examination fee and fees for change of centre, subject, etc. shall be notified before each examination.

REFUND OF FEES

- If, after submitting an application for examination, a candidate decides not to appear, a written request for a refund must be submitted before the last date for withdrawal with the receipt of applications. In such cases a refund is admissible to the extent of 75% of fees only. No request for refund will be accepted after the closing date for receipt of applications.

If an application is rejected by the CPSP, 75% of the examination fee will be refunded, the remaining 25% being retained as a processing charge. No refund will be made for fees paid for any other reason, e.g. late fee, change of centre/subject fee, etc.

FORMAT OF EXAMINATIONS

Every candidate vying for the Fellowship of the College of Physicians and Surgeons Pakistan must pass both parts of the Fellowship examination unless exemption is approved. Since the College is continually seeking to improve its examinations, changes are likely from time to time and candidates will be notified in advance of such changes.

The College in it's endeavor to improve and upgrade it's examination system and make it more fair and candidate friendly will be introducing TOACS (Task Oriented Assessmentof Clinical Skills) and MCQ's in the near future.However any such changes will be notified well in advance to candidates.

PART-I THEORY EXAMINATION
Two papers each of 3 hours duration:

Theory Examination:
Paper- I: 10 Short Answer Questions (SAQs) 3hours
Paper- II: 10 Short Answer Questions (SAQs) 3hours

Candidates who have passed the theory examination are allowed to appear in the clinical examination three times out of four consecutively available chances without appearing in the theory examination.

CLINICAL EXAMINATION
The Clinical examination consists of two components

First component:
- One long case
- Four short cases

Second component:
- Viva voce

FORMAT OF LONG CASE
Each candidate will be allotted one long case and allowed 20 minutes for history taking and clinical examination.
Candidates should take a careful history from the patient (or relative) and after a thorough physical examination identify the problems which the patient presents with. During the period a pair of examiners will observe the candidate. In this section the candidates will be assessed on the following areas:

INTERVIEWING SKILLS
- Introduces one self. Listens patiently and is polite with the patient.
- Is able to extract relevant information.

CLINICAL EXAMINATION SKILLS

- Takes informed consent
- Uses correct clinical methods systematically (including appropriate exposure and re-draping).

CASE PRESENTATION/ DISCUSSION

- Presents skillfully
- Gives correct findings
- Gives logical interpretations of findings and discusses differential diagnosis.
- Enumerates and justifies relevant investigations.
- Outlines and justifies treatment plan (including rehabilitation).
- Discusses prevention and prognosis.
- Has knowledge of recent advances relevant to the case.
- During case discussion the candidate may ask the examiners for laboratory investigations which shall be provided, if available. Even if they are not available and are relevant, candidates will receive credit for the suggestion.

FORMAT OF SHORT CASES

- Candidates will be examined in at least four short cases for a total of 60 minutes jointly by a pair of examiners.
- Candidates will be given a specific task to perform on patients, one case at a time.

During this part of the examination, the candidate will be assessed in:

CLINICAL EXAMINATION SKILLS

- Takes informed consent.
- Uses correct clinical methods including appropriate exposure and re-draping.
- Examines systematically.

DISCUSSION

- Gives correct findings.
- Gives logical interpretations of findings.
- Justifies diagnosis.

As the time for this section is short, the answers given by the candidates should be precise, succinct and relevant to the patient under discussion.

FORMAT OF TOACS

TOACS will comprise of 12 to 20 stations of 6 minutes each with a change over time of one minute for the candidate to move from one station to the other. The stations may have an examiner, a patient or both. Structured clinical tasks will be set at each station. There will be two types of stations: static and interactive. On static stations the candidate will be presented with patient data, a clinical problem or a research study and will be asked to give written responses about the questions asked. At the interactive stations the candidate will have to demonstrate a competency, for example, taking history, performing a clinical examination, counseling. It will also include one station on dissertation/research paper and other on e-log. One examiner will be present at each interactive station and will either rate the performance of the candidate or ask questions testing reasoning and problem solving skills.

College is encouraging to have all stations to be interactive and expects that the static stations will soon be phased out. Candidates have to pass the theory examination to be eligible to take the TOACS examination.

NOTE

The candidate is required to fill a self-explanatory 'feedback proforma at the end of the examination. This will help the College in making future examination more candidate friendly.

It is the responsibility of the candidate to seek information concerning the current requirements for certification in each discipline

THE COLLEGE RESERVES THE RIGHT TO ALTER/AMEND ANY RULES/REGULATIONS

Any decision taken by the College on the interpretation of these regulations will be binding on the applicant.

FCPS

PAEDIATRIC SURGERY

Guidelines for Formative Assessment

FORMATIVE ASSESSMENT:

College of Physicians and Surgeons Pakistan, in order to implement competency based education in letter and spirit, is introducing Work Placed Based Assessment (WPBA) in addition to institutional/ departmental assessments. To begin with college is introducing Mini-CEX and DOPS to ensure that the graduates are fully equipped with the clinical competencies.

Mini Clinical Evaluation Exercise (Mini-CEX)

During Post-IMM training in FCPS Paediatric Surgery, at least one Mini- CEX in each year is to be conducted as specified below (the frequency of Mini-CEX encounter(s) will increase after a certain period of time and Residents will be intimated accordingly about the change):

- Mini-CEX is entirely a formative tool of assessment and is to be accompanied with constructive feedback
- Each Mini-CEX encounter extends for about 20 minutes with 05 minutes for feedback and further action plan
- Topics given below are to be covered accordingly.
- The resident has the onus to report to the supervisor when he/she is prepared to appear for Mini-CEX.
- The supervisor will arrange for the session of WPBA and after completing the session will retrieve online prescribed assessment form (sample given below), fill it and make entries online (e-portal).
- In case of unsatisfactory performance of the resident, a remedial has to be completed within stipulated time frame
- Non-compliance by the resident has to be reported in quarterly feedback.

Topics for Mini-CEX

Mini-CEX encounters will be arranged (by the Supervisor) to cover/assess skills essential to provision of good clinical care including History taking, Physical Examination, Communication skills, Diagnosis & Management planning.

***3rd Year (R3)1st and 2nd Quarters*:**

- Head/Neck Examination

***4th Year (R4)1st and 2nd Quarters*:**

- Abdominal Mass Examination

***5th Year (R5)1st and 2nd Quarters*:**

- Anorectal Malformation (ARM) / Hirschsprumg Disease (HD)

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MINI CLINICAL EVALUATION EXERCISE (CEX)

Specialty: FCPS PAEDIATRIC SURGERY

Time Duration = 20 mins (15 mins assessment and 5 mins feedback)

PLEASE COMPLETE THE QUESTIONNAIRE BY FILLING/CHECKING APPROPRIATE BOXES

Assessor: _____ Assessment Date: _____

Resident's Name: _____

Hospital Name: _____ R&RC Number: _____

Year of Residency: □ R3 □ R4 □ R5

Quarter: □ 1st □ 2nd □ 3rd □ 4th

Setting: □ Ward □Outdoor (Hospital/Community) Others: _____

Diagnosis of Patient: _____ Patient Age: _____ Sex: _____

Clinical Area: _____

Complexity of Case/ Procedure: □ Low/Easy □ Moderate/Average □ High/Difficult □ N/A

Focus of Clinical Encounters: □ History taking □ Physical Examination □ Management
□ Communication Skills □ Other

Please grade the following areas on the given scale:	**Not Observed / Applicable**	**Below Expectation**		**Satisfactory**	**Above Expectation**	**Excellent**
		1	2	3	4	5
Informed Consent of patient						
Interviewing Skills						
Systematic Progression						
Presentation of positive & significant negative findings						
Justification of actions						
Professionalism						
Organization/Efficiency						
Overall clinical competence						

Assessor's Satisfaction with Mini-CEX:

(Low) 1 2 3 4 5 (High)

Resident's Satisfaction with Mini-CEX:

(Low) 1 2 3 4 5 (High)

Strengths	Suggestions for Improvement

Encounter to be repeated □ YES □ NO

Assessor's Sign

Direct Observation of Procedural Skills (DOPS):

During Post-IMM training in FCPS Paediatric Surgery, at least one DOPS in each year is to be conducted as specified below (the frequency of DOPS encounter(s) will increase after a certain period of time and Residents will be intimated accordingly about the change):

- DOPS is entirely a formative tool of assessment and is to be accompanied with constructive feedback
- Each DOPS encounter extends for about 20 minutes with 05 minutes for feedback and further action plan
- Topics given below are to be covered accordingly.
- The resident has the onus to report to the supervisor when he/she is prepared to appear for DOPS.
- The supervisor will arrange for the session of WPBA and after completing the session will retrieve online prescribed assessment form (sample given below), fill it and make entries online (e-portal).
- In case of unsatisfactory performance of the resident, a remedial has to be completed within stipulated time frame
- Non-compliance by the resident has to be reported in quarterly feedback.

Topics for DOPS

***3rd Year (R3) 3rd and 4th Quarters*:**

- Chest Intubation

***4th Year (R4) 3rd and 4th Quarters*:**

- Inguinal Herniotomy

***5th Year (R5) 3rd and 4th Quarters*:**

- Stoma Formation

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DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)

Specialty: FCPS PAEDIATRIC SURGERY

Time Duration = 20 mins (15 mins assessment and 5 mins feedback)

PLEASE COMPLETE THE QUESTIONNAIRE BY FILLING/CHECKING APPROPRIATE BOXES

Assessor: _____ Assessment Date: _____

Resident's Name: _____

Hospital Name: _____ R&RC Number: _____

Year of Residency: □ R3 □ R4 □ R5

Quarter: □ 1st □ 2nd □ 3rd □ 4th

Setting: □ O.T □ Procedure Room □ Other:

Diagnosis of Patient: _____ Patient Age:_____ Sex : _____

Name of Procedure: _____

Complexity of Case/ Procedure: □ Low/Easy □ Moderate/Average □ High/Difficult □ N/A

Number of times procedure performed by Resident: _____

Please grade the following areas on the given scale:	**Not Observed / Applicable**	**Below Expectation**		**Satisfactory**	**Above Expectation**	**Excellent**
		1	2	3	4	5
Indications, anatomy & steps of procedure						
Informed consent, with explanation of procedure and complications						
Preparation for procedure						
Use of Anesthesia, Analgesia or sedation						
Observance of asepsis						
Safe use of instruments						
Use of accepted techniques						
Management of unexpected event (or seeks help)						
Post-procedure instructions to patient and staff						
Professionalism						
Overall ability to perform whole procedure						

Assessor's Satisfaction with DOPS:

(Low) 1 2 3 4 5 (High)

Resident's Satisfaction with DOPS:

(Low) 1 2 3 4 5 (High)

Strengths	Suggestions for Improvement

Encounter to be repeated □ YES □ NO

Assessor's Signature

29 December 2017

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