

College of Surgeons of East, Central & Southern Africa



Regulations and Syllabus relating to
Fellowship Examination
In Paediatric Orthopaedic Surgery

FCS Paed-Ortho(ECSA)

2016 Edition

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COLLEGE OF SURGEONS OF EAST, CENTRAL AND SOUTHERN AFRICA

Regulations and Syllabus for Fellowship Examination in Paediatric Orthopaedic Surgery leading to the qualification of FCS Paed-Ortho(ECSA)

Table of Contents

<u>1. Introduction</u>	<u>1</u>
<u>2. Registration as a Trainee.....</u>	<u>1</u>
<u>3. Training Requirements.....</u>	<u>2</u>
<u>4. Logbook.....</u>	<u>3</u>
<u>5. Application to Sit Examinations.....</u>	<u>4</u>
<u>6. Examination Format and Conduct</u>	<u>4</u>
<u>7. Syllabus</u>	<u>6</u>
<u>Annex –Fellowship in Paediatric Orthopaedics Training Guidelines</u>	<u>10</u>

1. Introduction

The College of Surgeons of East Central and Southern Africa awards Membership (MCS(ECSA)) and Fellowship (FCS(ECSA)) qualifications. Approved trainee surgeons shall be trained in the hospitals of the region with guidance and support provided by the College.

The Fellowship examination in Paediatric Orthopaedic Surgery leads to the qualification of Fellow of the College of Surgeons of East, Central and Southern Africa, FCS Paed-Ortho(ECSA). This fellowship is recognition that the candidate has reached the level of knowledge, understanding and practice of surgery sufficient to practice independently at a consultant or specialist level. It should be recognised, however, that surgery is not a static art and fellows should continue to increase knowledge and skills by means of research, conferences, meetings and reading.

The information given in this document is intended as a guide to persons sitting the College examinations and shall not be deemed to constitute a contract or the terms thereof between the College and a candidate or any third party, or representations concerning same.

The College is not responsible and shall not be bound by errors in, or omissions from these regulations; the College reserves the right to revise, amend alter or delete academic regulations at any time by giving such notice as may be determined by COSECSA Council in relation to such changes.

2. Registration as a Trainee

Applications to register as a trainee must be made online on the COSECSA website. In order to register you will need an electronic copy of your primary medical qualification, your medical council (or equivalent) registration, a passport-style photo, and, if applicable, copies of any other surgical qualifications you may have. Applications will only be accepted online. Applications will be assessed by COSECSA, and if found suitable, applicants will be accepted to the training programme provisional upon payment of the programme entry fee.

The programme entry fee can be paid online, by bank transfer to the COSECSA Secretariat bank account in Arusha, Tanzania or to the COSECSA Country Representative.

On receipt of the registration fee, the Secretariat will send the candidate:

- Personal login details, which will allow access to the COSECSA Electronic Logbook and e-learning platform (School for Surgeons)
- Assessment forms to be filled in at the end of every training post by the trainee and the supervising consultant.
- A registration number, which remains unique to the candidate.

3. Training Requirements

All requirements below will need to be fulfilled without exception.

- 3.1. Before being eligible to sit for the fellowship examination in Paediatric Orthopaedic Surgery, candidates will be required to be registered with the College (see Section 2 above).
- 3.2. Candidates must be registered in the FCS Paediatric Orthopaedic Surgery training programme for at least two years before appearing in the FCS Paed-Ortho Examination. Registration by the end of February in a given year allows that year to count as a full year of training and will enable the candidate to sit the Clinical/Oral examination at the end of the following year.

Training Posts:

- 1st year – Formal Paediatric Orthopaedic/Trauma Education

Candidates will have to spend **1 full year** in a recognised supervised training post which has a COSECSA accredited Trainer. This year must involve the treatment of Paediatric Orthopaedic and trauma emergencies and Paediatric Orthopaedic and trauma elective conditions.

The Trainee and Trainer should fill in assessment forms for this training post.

- 2nd year – Continued hands-on training and completion of the logbook, Training workshops, Clinical research and Publication. This shall be completed by the exit examinations as indicated in section 5.

Forms to fill in for each training post are provided for each candidate.

- 3.3. Candidates for the fellowship examination in Paediatric Orthopaedic Surgery should normally have passed the Orthopaedic fellowship examination of this College and possess the qualification FCS(ECSA).
- 3.4. Exemption to the requirement of possessing the FCS(ECSA) qualification may be given to those who have passed an equivalent examination. In order to obtain an exemption, applicants must either:
 - 3.4.1. Have completed an MMed (Orthopaedics/Trauma) qualification in one of the constituent COSECSA countries or in a COSECSA accredited training centre outside the COSECSA region.
 - 3.4.2. Have completed FRCS, FCS(SA) in orthopaedics/traumatology or another similar qualification in orthopaedics and be working as a specialist surgeon in a COSECSA country. The orthopaedic surgical training examinations of other colleges and institutions may also be acceptable but each one will have to be reviewed by the Examination and accreditation Committee of the College before exemption can be given.

3.4.3. Candidates who are granted exemptions will be required to register with COSECSA by the end of February in the year in which they intend to start their formal training.

3.5. Candidates are required to have spent two years in supervised COSECSA accredited training posts.

4. Logbook

FCSPAed-Ortho candidates are required to use the COSECSA electronic logbook.

During the training period candidates must keep a logbook recording all of their training experience. The book should be available for inspection at any time by the Country Representatives. Consolidation sheets should be filled in every 6 months and a final consolidating sheet filled in to cover the whole training period. The logbook should also contain details of all courses attended and the trainee and post assessment forms for the whole training period.

More detail on completing logbooks is provided in the logbook itself.

Before submission for the examination the Country Representatives should check the logbook for completion, fill in and sign a checklist, which remains at the front of the logbook.

At the August council meeting of each year, the Country Representatives will hand over to the Panel head, appointed by the Examinations and Credentials Committee, a copy of the checklist together with copies of the Training post assessment form, Trainee assessment form and the final consolidation sheet (up to August) of all the candidates taking the examination that year.

The logbook should be submitted to the examination administration secretary before the start of the clinical and oral examinations. Candidates will not be allowed to sit for the examination if this is not done.

Candidates are required to log all operations for the duration of their training period in the electronic logbook.

In advance of the examinations, details from each candidate's electronic logbook will be made available to their Country Representatives and the COSECSA Examinations and Credentials Committee.

At the examinations, details from each logbook will be provided to the relevant oral examiners.

Only operative experience logged in the electronic logbook will be taken into account and candidates will not be allowed to sit for the examination if operative experience is not adequately recorded.

Before the start of the clinical and oral examinations, a print out of the electronic logbook operations list (signed by the trainee's supervisor) and consolidation sheet should be handed to the examination administration secretary.

5. Application to Sit Examinations

- 5.1. Candidates should submit the examination fee by the end of July in the year of their exam. Examination fees can be paid online, by bank transfer to the COSECSA Secretariat bank account in Arusha, Tanzania or to the COSECSA Country Representative.
- 5.2. On receipt of the examination fee, candidates will be informed of the precise times, dates and places for the exams.
- 5.3. By applying to the examination a candidate agrees to be bound by the rules and regulations of the College.
- 5.4. If a candidate withdraws from an exam not less than 12 weeks before the exam is due, then the fee can be transferred to the next exam date. Fees will not normally be returned if the candidate withdraws permanently, unless due to special circumstances as determined by the College Council.
- 5.5. Candidates must pass the examination within four years of their first attempt. After this they will not be allowed to re-sit. A total of four attempts only will be allowed.
- 5.6. Candidates who pass the written examination but fail the oral and clinical examinations, may attempt the oral and clinical examinations for a maximum of two more years without having to rewrite the written examination, all within a period of four years in total.

6. Examination Format and Conduct

The standards of the examination will be set by the Examinations and Credentials Committee of the College, which will recommend to Council those standards required by both examiners and candidates. A panel of examiners will be chosen by the Examinations and Credentials Committee from amongst Fellows of the College for each examination. A register of examiners will be kept by the chairman of the Examinations and Credentials Committee. An examination board will be constituted for each diet of examinations, comprising the chairman of the examination committee, two members from each examination panel and at least one external examiner who will be appointed by Council on recommendation of ECC. The role of the external examiner(s) is to:

- Moderate the written question papers

Assist with the examination of candidates

Provide external independent assessment of the examination

Report on the conduct of the examination to the College Council

The written FCS Paed-Ortho (ECSA) examination will be comprised of 2 papers.

The first paper will consist of single best answer multiple-choice questions. The second paper will consist of extended matching and/or short answer questions and/or single best answer multiple-choice questions.

- 6.1 Candidates who pass the written examination, will be invited by the Chairman of the Examinations and Credentials Committee to the clinical and oral examination. Candidates who do not pass the written section will not be invited to the clinical and oral examination.
- 6.2 There will be two 30-minute orals. A clinical examination takes place at the same time and at the same site as the oral. This will be comprised of six 20-minute cases.
- 6.3 Candidates have to pass the written examination and the clinical and oral examination in order to pass overall.
- 6.4 The written examination may be held in any of the countries of the region. In exceptional circumstances the examination committee may approve an examination site outside the region. The written examinations are held simultaneously on the first Wednesday of September, at a recognised examination centre with impartial invigilation. The COSECSA Country Representative shall be the Chief Examiner.
- 6.5 The examination papers will be set by members of the examination committee and independently moderated by an external examiner.
- 6.6 No details of marks will be issued to Country Representatives or candidates. Candidates should bring proof of identity. As discussed in Section 4, candidates using paper logbooks should bring these, and candidate using the COSECSA electronic logbook should bring signed printouts of these.
- 6.7 If a candidate fails their clinical examination then they may attempt the clinical examination for a maximum of 2 more years without having to rewrite the written examination.
- 6.8 The chairman of the examination panel will endeavour to minimise the chance of a candidate being examined by an examiner from their own training institution.
- 6.9 The panel of examiners will give the results to the Examination Board who will meet on the day of examination. The Board will then approve the results on behalf of Council and publish them.
- 6.10 For each candidate who fails the exam, the Board will allocate a Fellow of the College (usually a member of the panel of examiners) who will communicate with the candidate and offer advice as may be indicated. Details of marks will not be given.
- 6.11 Appeals against results must be made in writing to the Council within 60 days of the completion of the examination. The President of the College will then appoint an impartial Appeals Committee to investigate the appeal, and require a written report to be filed by the Chairmen of the panel of examiners and the Examination Board. The Appeals Committee

will then take all considerations and its own findings into account and recommend a decision, which will remain final and binding.

7. Syllabus

Syllabus Outline

The achievement of the FCS Paed-Ortho (ECSA) by examination denotes that the successful candidate is capable of holding the position of a consultant paediatric orthopaedic surgeon in the region, and of being accorded specialist status.

▪ Intended learning outcomes of the program:

- The graduate will be competent in the evaluation, diagnosis, non-operative and operative management of paediatric orthopaedic/trauma conditions prevalent in the East, Central and Southern African region.
- The candidate will develop qualities of leadership, teaching ability, and research skills appropriate for appointment in a University department of surgery in the region.
- He or she will be a super-specialist in paediatric orthopaedics/trauma surgery and will be expected to have the knowledge and competence of a good Paediatric Orthopaedic/trauma consultant.

It is not possible in this small booklet to list all that the candidate is required to know, but the following is a guide to the scope of the examination.

Paediatric Orthopaedics

A wide knowledge of orthopaedic disease in children that includes congenital and genetically determined disorders, metabolic disorders, degenerative diseases and disturbances, and disabilities resulting from disorders of the central and peripheral nervous systems. This knowledge should extend from clinical diagnosis through management of rehabilitation.

Topics Covered:

GENERAL

- Clinical Examination of the Child
- Musculoskeletal System Imaging
- Embryology, growth, and development of the musculoskeletal system.
- Skeletal dysplasias
- Orthopaedic Genetics and Syndromes of Orthopaedic Importance
- Metabolic Bone Disease in Children
- Musculoskeletal Infection
- Bone and Soft tissue tumours
- Cerebral Palsy
- Myelodysplasia
- Child Abuse

REGIONAL

- Spinal Disorders in Childhood and Adolescence
 - Upper limb – congenital anomalies and brachial plexus
 - Developmental Hip Dysplasia and Dislocation
 - Perthe's Disease and Slipped Epiphysis
 - Lower extremity Deformity – congenital anomalies, angular, rotational, limb length discrepancy
 - Clubfoot
- A sound knowledge of the standard operative procedures used and their complications.
 - Knowledge of the standard investigative techniques used in orthopaedics.
 - A knowledge of specialized areas such as the spine, the hand etc.

Paediatric Trauma

A sound knowledge of the care of childhood musculoskeletal trauma:

- Initial resuscitation and paediatric assessment
- Management of polytrauma (Multiple injuries and the principles of shock and resuscitation)
- Musculoskeletal trauma which includes:
 - o Fractures of the limbs and joint injuries
 - o Epiphyseal injuries
 - o Spinal injuries including neurological damage
 - o Pelvic fractures
 - o Injuries to the muscles, tendons, ligaments and nerves
 - o Hand injuries
- Reconstructive surgery
- Complications and their management
- Relevant aspects of rehabilitation.

Appendix A

List of Paediatric Orthopaedic procedures for logbook:

Key Operative Procedures

UL Trauma

1. Proximal Humerus Fracture Percutaneous Pin Fixation
2. Humeral Supracondylar Fractures – reduction and percutaneous pinning
3. Lateral Condyle Fracture open reduction and internal fixation
4. Radial Neck Fracture ORIF
5. Forearm Fractures fixation
6. Distal radius fracture reduction and fixation
7. Open fracture debridement

LL Trauma

1. Hip Spica Casting for Femur Fractures
2. Flexible Intramedullary Nailing of the femur
3. Plating of femoral fractures
4. Surgery for epiphyseal injuries of the proximal femur
5. Surgery for epiphyseal injuries of the distal femur
6. Proximal femur fracture fixation
7. Debridement of open fractures
8. Tibia fracture fixation

LL Orthopaedic

Hip Disorders

1. Open Reduction of Congenital Hip Dislocation
2. Peri-acetabular Osteotomy
3. Varus Derotation Osteotomy (VDRO)
4. Percutaneous Pinning of Slipped Capital Femoral Epiphysis
5. Hip dysplasia surgery (Salter/Dega Osteotomy e.t.c)
6. Femoral limb lengthening
7. Bone grafting for defects
8. Angular deformities correction

Tibia Disorders

1. Blount's disease
2. Surgical correction for Valgus deformities

3. Surgical correction for Varus deformities
4. Bone grafting for defects
5. Tibial limb lengthening
6. Growth modulation procedures
7. Tumour/oncologic surgery
8. Bone transport

Pediatric Infection

1. Septic joint Irrigation/debridement
2. Osteomyelitis

Pediatric Foot Conditions

1. Calcaneonavicular Coalition Excision
2. Tarsal Coalition Resection
3. Midfoot Osteotomy
4. Calcaneal Lengthening Osteotomy
5. Gastrocnemius Recession
6. Operative Treatment of Resistant Clubfoot
7. Split Anterior Tibial Tendon Transfer
8. Surgical Treatment of Cavus Foot

Spinal Conditions

1. Posterior Spinal Deformity Instrumentation and Fusion
2. Spinal Fracture Instrumentation and Fusion
3. Spondylolisthesis Fusion

Appendix B

Fellowship in Paediatric Orthopaedics Training Guidelines

Methodology

Program title:Fellowship in Paediatric Orthopaedics (FCS Paed-Ortho)

1.0 Teaching and learning approaches:

The primary approach to learning the clinical and technical skills is through direct participation in patient care in a setting designed to provide:

- 1.1. An appropriate variety and adequate number of cases
- 1.2. Direct supervision and feedback
- 1.3. Increasing independence and responsibility in practice self guided learning around the clinical practice
- 1.4. Learning through teaching of orthopaedic residents, students and allied healthpractitioners.

Learning of the knowledge base in paediatric orthopaedics and its application will be accomplished through scheduled activities based on the curriculum content.

- a) The activities will include topic based and case based rounds and seminars 1-2 times per week.
- b) In addition to the local seminar format, online distance learning will be used where appropriate to ensure access to leading international resources.

2.0 Trainee Assessment Strategies:

- i In training evaluation reports (reports from accredited surgeon trainers)
- ii Internal trainee progress assessment by multiple-choice questions at the end of year 1.
- iii Formal Written,Clinical and Oral examination (summative) at exit (year 2)
- iv Individual case e-logbooks documenting increasing skill level participation in repeat (same) surgeries and handling increasing case complexity.
- v Procedure based preceptor evaluations for 25 selected key technical operative procedures (**Appendix A**)(graded at 5 levels of advancing skill)
- vi Preparation of surgical indications rounds and clinical presentations
- vii Evaluation of teaching leadership output (participation in teaching rounds and clinical - teaching of residents, medical students, etc.)

3.0 Governance and Management of the Programme

The local Head of the Orthopaedic department shall be responsible for governing the programme including administration of the curriculum, monitoring of surgical experience and supervision, testing and ensuring that adequate hospital resources are available so that the trainee can complete the required emergency and elective operations.

4.0 Training Faculty

- 4.1. Competent Paediatric Orthopaedic surgery-trainers will work in concert with, and take direction from the training site's Orthopaedic Head as per agreed curriculum.
- 4.2. Multiple Paediatric Orthopaedic surgery trainers will provide a full, uninterrupted year of training. They shall assist in providing weekday educational activities in all clinical settings including patient clinics, operating theatre, ward and the various planning and academic rounds.

5.0 Trainees' Responsibilities

Trainee duties, responsibilities, schedules will be balanced to ensure quality safety and maximum academic gain and will be provided by the COSECSA Accredited Trainer.

6.0 Educational Resources

Multiple electronic educational resources shall be secured for this programme

- *Primary Resource textbooks:* (at least 20 e-textbooks available for download at pedorthoacademy.org)
- Lovell and Winter's Paediatric Orthopaedics
- Morrissy and Weinstein's Atlases of Paediatric Orthopaedic Surgery
- Rockwood and Wilkin's Fractures in Children

Other Books:

- American Academy of Orthopaedic Surgeons (AAOS) Comprehensive Orthopaedic Review, Instructional Course Lectures, Orthopaedic Knowledge Updates.

Surgical Videos:

- Multiple available from AAOS "Orthopaedic Video Theatre" via established agreement. Multiple other accessible resources: Pedorthoacademy.org

7.0 Indicators of Quality and Standards

Surgical Experience: It is understood that individuals acquire surgical acumen at different rates based on a multitude of factors. Trainers will acknowledge this and amend target case volumes as necessary to ensure each fellow attains a safe level of proficiency in each case type.

8.0 Knowledge Base

The trainee will demonstrate breadth of clinical knowledge by attaining a minimum mark of 70 out of 100 using a variety of testing methods including paediatric orthopaedic self-assessment examinations from the American Academy of Orthopaedic Surgeons or Orthobullets or an equivalent local examination. However, the exit exam is as in 6 above.