

COLLEGE OF SURGEONS OF EAST, CENTRAL & SOUTHERN AFRICA



Training Curriculum Fellowship in General Surgery - FCSgen(EGSA)

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General Educational Objectives of the COSECSA training program

Educational strategies are developed to produce visual, oral, and hands-on learning opportunities. These strategies are based upon the principles of adult learning and include didactic lectures, teaching rounds, interactive online materials, reading assignments, simulation training, teaching rounds on the wards, and supervised practice in pre- and postoperative care as well as in the operating room, with increasing levels responsibility and autonomy. On completion of the COSECSA postgraduate training in Surgery, the trained surgeon is expected to develop the following;

1. Basic understanding of anatomy, physiology, biochemistry, pharmacology, pathology, oncology, radiology and microbiology as it applies to the practical practice of surgery
2. The ability to practice Surgery as a consultant without supervision. This means:
 - I. A good knowledge of the principles and theory of surgery
 - II. The ability to address the patient's surgical problem in a holistic manner in the community context.
 - III. The ability to determine the need for appropriate diagnostic modalities in a cost-effective way and to interpret the results in a patient-specific manner. These modalities include laboratory tests, radiological examinations (to include sonography and other more advanced modalities) and other diagnostic procedures.
 - IV. A fundamental knowledge of the principles of medicine and therapeutics to help the physician properly understand and manage o surgical patients.
 - V. An adequate knowledge of pre-, intra- and postoperative management of the patients with the intent of minimizing, expediently recognizing and properly treating co-morbidities and complications.
 - VI. A clear understanding of the risks involved in the operative procedures that he or she is competent to perform.
 - VII. The ability to perform common elective and emergent operative procedures in all systems of the body which are routinely within the purview of practitioners of general surgery.
 - VIII. Recognition of those conditions and procedures which are beyond the experience or ability of the surgeon so that they may be appropriately transferred for the required care.
3. The ability to cope with emergencies in other surgical specialties, including: Ophthalmology, Obstetrics and gynecology, Dentistry, Urology, Neurosurgery and others

4. The ability to give anesthesia and supervise anesthetists and anesthesia providers in giving anesthesia
5. The ability to teach surgery to medical students, residents and colleagues in nursing and medicine
6. The ability to undertake or participate in clinical research.
7. The resident should have basic understanding of:
 - Ward and department management
 - Management of the operating theatre, recovery area, central sterile supply and associated inventory.
 - Hospital management
 - Organization of the national medical services
 - The legal implication of doing Surgery
 - The legal implication of being an expert witness in the courts.
 - Basic principles of forensic pathology

Competencies Expected from the COSECSA trainee

Desired Competencies for COSECSA Residents include the areas of:

1. Patient Care
2. Medical Knowledge
3. Practice-based Learning and Improvement
4. Interpersonal and communication skills
5. Professionalism
6. Systems-based Practice

Progressive competency applies to each of the rotations and throughout residency training. It may be summarised as follows:

PATIENT CARE that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health of the whole person is the overall goal of each rotation.

OBJECTIVES in which the trainee will learn this goal:

1. Participation in the evaluation and diagnosis of patients in clinic
2. Participation in the preoperative preparation and postoperative care of patients
3. Participating and assisting in operative procedures in the operating theater and at the bedside.

MEDICAL KNOWLEDGE about established and evolving biomedical, clinical, and cognate (e.g.epidemiological and social-behavioral) sciences and the application of this knowledge to patient care. A detailed list of topics and procedures will be found in sections below.

OBJECTIVES in which the trainee will learn this goal:

1. Participation in direct patient care, rounds with consultants, and self-study with directed readings.
2. Attendance at educational conferences

PRACTICE-BASED LEARNING AND IMPROVEMENT that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.

OBJECTIVES in which the trainee will learn this goal:

1. Participation in direct patient care, rounds with attendings, and self study.
2. Assist in the implementation of “pathways” or “protocols” to standardize and optimize the delivery of patient care

INTERPERSONAL AND COMMUNICATION SKILLS that result in effective information exchange and teamwork with patients, their families, and other professionals.

OBJECTIVES in which the trainee should learn:

1. Participate in communication with consulting services and referring physicians regarding the plan of care for shared patients.
2. Facilitate communication among health professionals including nursing and ancillary staff. Improve communication with patients by discussing their diagnoses and plan of care including critical care and end of life issues.
3. Provide patients and their families with written information regarding the above.

PROFESSIONALISM, as manifested through commitment to carrying out professional responsibilities, adherence to ethical principles and sensitivity to a diverse patient population.

OBJECTIVES in which trainees will learn this goal:

1. Evaluating patients in a timely manner
2. Maintaining continuity of patient care
3. Completing documentation in timely manner
4. Communicating with consultants in timely fashion
5. Interacting respectfully with colleagues, patients and families
6. Professional attire and attitude

SYSTEMS BASED PRACTICE as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care, and the ability to effectively utilize system resources to provide care that is of optimal value.

OBJECTIVES in which this will be taught:

1. Assisting in the development of “pathways” and “protocols” to standardize and optimize delivery of patient care for patients with that diagnosis
2. Understanding what makes a patient diverge from that pathway.



Training Methods used during the COSECSA residency program

Teaching- Learning Methods and Materials

Live patients and simulations shall be used for demonstrations and to develop knowledge and skills. Standard surgical textbooks, operative surgery books relevant to each surgical unit, reputable journals from the Internet or medical libraries shall be used as reference materials. LCD and overhead projectors, transparencies, computers, and other audiovisual aids shall be used for preparing and delivering presentations, lectures, tutorials, and sessions. The teaching-learning strategy is as follows:

1. Progressive apprenticeship:

This takes place under close supervision in the OPD, wards and operating theatre during the different attachments to units of the department of surgery. The trainee shall proceed from 1st-5th year residency program from closely supervised to a more independent work.

2. Didactic Lectures:

Lectures will be included in a limited scale, to cover certain fields, which could not easily be taught using other instructional means. These may be conducted in the form of guest lectures on special fields by honorary and visiting professors.

3. Tutorials:

Tutorials should be used during the first year to discuss general principles of surgery (See course details).

4. Seminars:

Residents prepare and present on assigned topics with a consultant surgeon as a convener, mainly during the Training Program in general principles of surgery.

5. Management sessions and case presentations:

During the 3rd- 5th year attachments, there will be sessions of presentations by residents on relevant clinical topics including operative techniques, live cases and current surgical literature followed by discussions moderated by consultants.

6. Clinical conferences:

Monthly clinical conferences shall be given on rotation by the different units. The conferences should be open for participation for all interested.

7. Surgical audit, mortality and morbidity meetings:

Meetings on clinical audit, morbidity and mortality will be held regularly on a monthly basis.

8. Clinical-pathological conferences:

In collaboration with the department of pathology, a monthly clinical-pathological conference shall be held regularly whenever applicable.

9. Radiology sessions:

Regular weekly discussion sessions on relevant X- ray films and other imaging studies shall be conducted in the radiology department whenever applicable.

10.Attachment to accessory specialties:

As outlined in year-by-year Program

11.Surgical Skills laboratory:

Residents are expected to attend specific simulated procedure and practical session organized by the surgical skills lab whenever available. This is expected to increase the residents' exposure and involvement in simulation and lab learning. Developing a simulation and skills lab curriculum will supplement learning outside of the wards and operating room.

12.Outpatient surgical clinics:

Residents shall be assigned to surgical clinics on rotation to see referred patients and their own surgical follow-ups. At least one faculty member is present to supervise these clinics.

13.Surgical grand rounds and Specialty lectures

The Program Director or assignee is responsible to organise this 60 minute conference each week to cover a topic in the curriculum in depth. Some programs may be assigned to senior level residents to improve their knowledge and presentation skills. These lectures are usually given as PowerPoint presentations.

14. Teaching in the operating theater

Residents are expected to read prior to all cases in which they participate regardless of their level. According to their level, they should be appropriately involved in the operation. The faculty member should delegate increasing, graduated levels of responsibility to residents in order to optimize patient care and resident education.

15. Journal club

Journal club meetings are held either biweekly or monthly to review relevant surgical articles in the literature and teach residents how to analyze and critique research studies and reports and review articles. Other objectives are to familiarize residents with the most relevant surgical journals and to help them develop habits of reading surgical journals on their own.

16. External Educational Conferences

Educational conferences that are held by other surgical societies may be offered to residents. Educational and surgical conferences held by COSECSA and regional surgical societies will be offered to residents as decided upon by the site Program Director.

17. Online curriculum

The COSECSA e-learning online platform is called “School for Surgeons” and contains a wide variety of surgical training resources which are useful for all COSECSA candidates. This curriculum is a very important format for the delivery of the basic sciences and Basic of surgical principles course that needs to be covered during the first two years of the training (MCS years). Each year, case studies are also posted for MCS and FCS General Surgery. Candidates enrolled in these programmes must complete a minimum of 6 case studies, out of a total of 10. MCS candidates must also complete Surgery in Africa Journal club cases.

Record Keeping

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 the 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.

At the August council meeting of each year, the Country Representatives will hand over to the Examinations and Credentials Committee Panel head, a copy of the Training post assessment form and Trainee assessment form. Proof of attendance at an approved Basic Surgical Skills course, Basic Surgical Science course and Critical Care or Trauma Course should be brought to the oral examination. The panel head reviews the operative case logs and required submissions to ensure a candidate has sufficient experience to sit for the exam.

Admission and Graduation Requirements

A) Admission requirements for the MCS training

Academic requirements:

- The candidate should be a holder of doctor of medicine degree from a recognized university.
- The candidate must be a registered practitioner by the Ministry of Health of the country with an active license to practice
- Foreign applicants must hold doctor of medicine degree and must produce their professional license and a letter of good standing from their local accreditation body.

Non-academic requirement

- Applicants must be in acceptable physical and mental health without any serious health conditions that would limit the ability to cope with the requirements of the training program and service. The college reserves the right to deny admission to unfit candidates as determined by the ECC.
- Should not be older than 40 years of age
- Female candidates are strongly encouraged and given special consideration.

Proficiency in English

The COSECSA curriculum is taught in English. English proficiency is also a requirement for training and graduation. This is to ensure that residents can take full advantage of the lectures and intra-operative instruction given by professors in the various surgical specialties, textbooks and journals written in English, web-based didactics in English, and international medical conferences, both during and after their training. From a practical viewpoint, the COSECSA examination is also in English.

B) Admission requirements for the FCS training

Successful completion of the MCS training

Successfully passing both the MCS Part I and Part II examination

Requirements for completion of the MCS training

The following are mandatory requirements for completion and to be legible for certification as an MCS

A. Program requirements:

- Completion of two years (24 months) of training with one month leave each year in a COSECSA accredited training institution
- A progressive assessment report from the two years of training
- Submission of a well-kept counter signed and approved log book with a minimum of 200 surgeries attended.
- Successful completion of all basic sciences and principles of surgery modules
- Completion of a minimum of 6 case studies, out of a total of 10 at SfS.
- Completion of the 6 Surgery in Africa modules
- Successful completion (PASS) of the both MCS examination

B. Courses and workshop requirements:

- Basic Surgical Skills course (During Year I)
- A certified trauma course (once during the two years).

Requirements for completion of the FCS training

The following are mandatory requirements for completion and to be legible for certification as an FCS

A. Program requirements:

- Completion of three years (36 months) or 4 years (48 months) of training with one month leave each year.
- Submission of a well-kept counter signed and approved e-log book with a minimum of 500 cases attended (including the MCS level log book)
- A progressive assessment report from the four or five years of training
- Submission of a non-thesis research paper completed at least three months prior to the Part II exam.
- Completion of a minimum of 6 case studies, out of a total of 10 at SfS.
- Successful competition (PASS) of both FCS exams

Mandatory course

- Research Methodology
- Non Operative Technical Skills for the Surgeon (Or similar leadership course)

Optional courses

- Basic laparoscopy course
- Basic endoscopy course

Operative Experience and skill requirements:

To sit for the final qualification examination at the FCS level, the resident must have been involved in a minimum of 500 major operative procedures, including at least 100 operative procedures in the final year of residency. The procedures must include operative experience in each of the content areas listed in the definition of each discipline of training. The list of procedures must be clearly documented in the individual logbooks of the residents. Residents must also indicate their level of responsibility for the procedures listed.

Research projects

The Program Director or other surgical faculty supervises each resident in one or more original research projects during the resident's five years of training. The resident develops his or her project, collects data, and under the supervision of his Program Director or other COSECSA faculty, prepares a presentation of his results to present at one or several surgical conferences, including the annual meetings of COSECSA. It is expected that the resident will present his or her research at least once at an international surgical conference, and that he or she will publish at least one article in a peer-reviewed scientific journal.

COSECSA Trainee Assessment Strategies

- A. During the MCS training (the first two years), each candidates is expected to complete one basic sciences module every two weeks. At the end of each module, each candidate is expected to complete MCQ questions and participate in case discussions. The compiled marks from each module (34 modules) will be used as progressive assessment.

- B. Each program director in each training site is expected to perform monthly progressive assessment of each candidate. A standardised assessment format is to be used.
- C. Residents are required to maintain a computerised case log consistent with the requirements of COSECSA. Candidates are required to record and enter all of their operative cases into the COSECSA electronic log-book. These case logs are evaluated by the Program Director on a yearly basis and adjustments are made in resident rotations to improve experience in weak areas.
- D. Residents to receive COSECSA accreditation will be required to take and pass both the MCS (Member of College of Surgeons) exam and the FCS (Fellow of the College of Surgeons) exam. These examinations are divided as Part I (120 MCQ questions) and Part II (Structured short, OSCE and Viva). The examination formats can be modified as decided by the ECC, ESRC and approved by council.
- E. Every six months the Program Director or designated faculty formally evaluates and counsels each resident. Areas covered in this evaluation include:
- Attendance and punctuality
 - Professional appearance
 - Concern for patients
 - Interpersonal skills and initiative
 - Patient evaluation and history-taking skills
 - Physical examination skills
 - Clinical knowledge base
 - Completion of reading assignments
 - Monitoring and therapeutic skills
 - Surgical technical and procedural skills
 - Documentation
 - Work ethic
 - Respect for authority and discipline, including resident, faculty, and senior leadership levels of authority
 - Leadership ability.

General Regulations and guidelines of Qualification

The College of Surgeons of East Central and Southern Africa (COSECSA) awards Membership (MCS) and Fellowship (FCS) qualifications after a candidate has passed through the prescribed training program and examinations. Approved trainee surgeons shall be trained in hospitals that are accredited by COSECSA for training in the region with guidance and support provided by the College (See annex for accreditation guidelines and requirements).

The Fellowship examination leads to the qualification of Fellow of the College of Surgeons of East Central and Southern Africa, FCS GS (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 update knowledge and skills by means of research, conferences meetings and reading.

2. Training requirements

2.1 Academic

Candidates who apply for registration into the FCS program should have passed the membership examination of this College and possess the diploma MCS (ECSA). After qualification as an MCS, each candidate must complete three years (four years for Neurosurgery and Cardiothoracic Surgery) of training to be qualified to sit for the FCS exams. Exemption to this requirement to sit for the FCS examination may be given to:

1. those who have passed an equivalent examination as MMed (Surgery) or its equivalent in recognised universities of the constituent countries of COSECSA. Such candidates need to be discussed on individual basis and approved by the ECC.
2. Fellows of the Royal Colleges of Surgeons of England, Scotland, Edinburgh, Ireland, Australia, USA, WACS, CMSA or other equivalent colleges.

The basic surgical training examinations (or MCS) of these colleges and institutions may also be acceptable but each one will have to be reviewed by the Examination and Credentials Committee of the College before exemption can be given. Applicants with an MMed who wish to sit for the FCS examination must have spent equivalent period of training as MMED trainee to sit for the exams at the year of their graduating year. Otherwise, they need to spend at least one year at a COSECSA accredited hospital under a COSECSA accredited trainer after they receive their MMed degree.

2.2: Training posts

Candidates will have to spend 3 years of continuous training (4 years for neurosurgery and cardio-thoracic surgery) at accredited supervised training posts after qualifying as an MCS. Six months of the FCS years may be spent outside the region in a post that has been prospectively agreed with the Examination and Credentials Committee (ECC). This post may be in an elective unit. Candidates are reminded that it is in their interests to experience a wide spectrum of surgical disciplines.

Candidates are mandatorily required to participate in the school-for-surgeons e-learning during their MCS training to complete the 40 basic sciences modules and the case discussion. FCS candidates are also required to participate at the school-for-surgeons learning as final year of their training to be approved to sit for the FCS examination.

3. Log books

During the training period, candidates must keep an online logbook prospectively recording all their training experience. The COSECESA log book (available from the COSECESA website) should be available for inspection at any time by the COSECESA Country Representative (CR), program director or chairs of ECC and ESRC. Other online log books may be accepted, subject to prior approval by the ECC. Consolidation sheets should be compiled at the end of every post or annually for posts longer than one year, and a final consolidating sheet for 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. For MMED candidates, a paper based logbook may be allowed. It is the duty of the CR and training program director to peruse the logbook in detail and make sure the candidate has fulfilled all the requirements to sit for the examinations.

The Examinations and Credentials Committee Panel heads, need to go through the consolidation sheet list together with copies of the Training post assessment form, Trainee assessment form and the final consolidation sheet of the past 3 or 4 years of training. This is a prerequisite for approval to sit for the examinations.

4. Application to sit for examinations

Candidates who are registered as trainees may sit the examination at the end of their third year of FCS training provided that they have completed 36 months of training by that time. This shall be 4 years (48 months) for neurosurgery and Cardiothoracic surgery. The deadline for application to sit for the examination is **March 31st** of the year of the examination. Candidates must complete the application online and pay the prescribed examination fee online. Upon confirmation of the registration by the CR and the COSECSA secretariat, the candidates will be informed about the precise times dates and places for the exams.

By applying to the examination, a candidate agrees to be bound by the rules and regulations of the College. If a candidate withdraws from an exam more than 6 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.

Candidates must pass any examination within five years of their first attempt. After this, they will not be allowed to re-sit. A total of three attempts only will be allowed to pass the examinations (including the first exam).

5. Examination format and Conduct

The standards of examinations will be set by the COSECSA Court of Examiners drawn from members of the council of the college. A panel of examiners will be chosen by the examination and credentials committee from amongst Fellows of the College for each examination. A register of examiners will be kept by the chairman of the examination committee. An examination board will be constituted for each diet of examinations, comprising the chairman of the examination committee, members of the court of examiners, two members from each examination panel and at least one external examiner. The role of the external examiner(s) is to:

1. Moderate the written question papers
2. Assist with the examination of candidates
3. Provide external independent assessment of the examination
4. Report on the conduct of the examination to the examination committee

The FCS and MCS examination

The exam for both MCS and FCS trained comprises of Part I (written) and Part II (clinical/oral) components. A candidate must complete two years of MCS training to qualify for the MCS examination, and an FCS candidate must complete the prescribed duration of training as per the individual program syllabi. The Part I written exam:

The part I exam consists of two papers:

Each paper consists of 60-75 single best answer questions.

The Written examinations will be held in any of the countries of the region. In exceptional circumstances the ECC 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. Candidates will be informed about their result within no later than the last day of September by the registrar of the college. Only candidates who pass the written exam will be invited to sit for the Part II exam.

Candidates are allowed only three attempts at the written examination to pass. Any candidates who fails to pass at the third attempt will be disqualified from the training program. Candidates who pass the written exam need to pass the clinical examination within two years of passing the written exam. If a candidate fails to succeed at the clinical examinations within two years of the written exam, he/she needs to repeat the written examination.

The Part II exam

The Part II MCS exam shall consist of 1) A Clinical (OSCE, Structured short or any appropriate examination format) and 2) An oral (Viva Voce) examination. These examinations will take place approximately 3 months after the part I examination, in a country and at a site designated by the college. The ECC reserves the right to modify or change the format of the examination as deemed necessary. However, such change will be communicated to all candidates and trainers ahead of time, and needs to be approved by council. Candidates have to pass the written examination to qualify for admission to the clinical and oral part of the examination. The chairman of the examination panel will endeavor to minimize the chance of a candidate being examined by an examiner who has been involved in the candidate's training or to whom the candidate is personally known. The panel of examiners of each FCS program 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 through the registrar.

For each candidate who fails the exam, the panel will allocate a Fellow of the College (usually a member of the panel) who will communicate with the candidate and offer advice as may be indicated. If a candidate fails his clinical and oral examination then he may attempt the clinical and oral examination for a maximum of 2 more years without having to rewrite the written examination.

Appeals against results must be made in writing to the Council within 30 days of the completion of the examination. The President of the College will then appoint an impartial committee to investigate the appeal, and require a written report to be filed by the Chairmen of the examinations panel and 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

This document is effective as of January 1, 2018.

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