

SYLLABUS FOR THE MEMBERSHIP IN OBSTETRICS AND GYNAECOLOGY GHANA COLLEGE OF PHYSICIANS & SURGEONS

1 GENERAL INFORMATION

1.1 Aim

The aim of the Membership Programme is to produce a high level specialist who can proficiently manage the obstetrical and gynaecological problems seen in Ghana, and promote and advocate women's reproductive health in Ghana.

1.2 Terminal Objectives

The Member of the Ghana College of Physicians and Surgeons:

- Will be specialist-eligible on successful completion of his/her training.
- Will be able to proficiently manage all categories of obstetrical and gynaecological conditions in Ghana, except those requiring the services of a sub-specialist.
- Will be able to work at both the district level and in the tertiary referral centres, that is, in the teaching and regional hospitals.
- Will be able to train other health workers in obstetrics and gynaecology to promote and provide women's reproductive health services.
- Will have the communication skills and motivation to promote and advocate reproductive health of women in Ghana. The Member will be able to:
 - Promote family health education at the individual, family, and community levels.
 - Identify the important and common obstetrical and gynaecological problems in the community and work out preventive measures and treatment schedules for them.
 - Identify avoidable factors in maternal morbidity and mortality and in perinatal mortality and be able to design measures to prevent them.
 - Encourage and mobilize community leaders to initiate and promote community activities which will improve the health of the community.
- Will be able to collaborate with individuals and with institutions to carry out clinical research. The Member will:
 - Appreciate the importance and usefulness of good record-keeping and of epidemiological research in the acquisition of medical knowledge and provision of better medical services.
- Will appreciate the importance of continuing education and take responsibility for his personal continuing education and professional development.
- Will receive adequate preparation towards fellowship training if desired.

1.3 Duration and Components of the Training

The Membership (*Obstetrics & Gynaecology*) training programme is a three-year (36 months) course consisting of:

1.3.1 30 months in Obstetrics & Gynaecology

1.3.2 12 months' rotation through the following:

- General Surgery – 3 month (4.15)
- Urology – 2 month (4.16)
- Anaesthesia – 2 month (4.17)
- Neonatology – 2 month (4.18)
- Radiology /Ultrasound Scan – 1 month (4.19)

1.5 Entry Requirements

The training is designed for fully registered medical practitioners within Ghana. The prospective trainee must be able to satisfy the Ghana College of Physicians and Surgeons that his/her training and experience fit him to undertake the programme of study.

A vetting procedure, which will consist passing of the Part 1 exam and passing the interview, will be used to assess the suitability of the candidate. The vetting procedure will be as prescribed by the College from time to time.

The enrolled postgraduate will be known as a *Resident*.

1.6 Training Institutions

Training can take place in any institution specifically accredited by the College for training for the Membership in Obstetrics and Gynaecology, taking into consideration the fact that the training includes rotations in Neonatology, Anaesthesia and General Surgery/Urology. The sites of the training will be the Departments of Obstetrics & Gynaecology (O&G) of the Korle-Bu Teaching Hospital (KBTH) and the Komfo Anokye Teaching Hospital (KATH) and any regional hospital that is adjudged suitable for training by the College. However, at the start of the programme, the training will be limited to the KBTH and KATH.

1.7 Continuous Assessment

The Resident's performance will be continuously assessed, using logbooks and standardised assessment forms.

1.7.1 Logbook of Operative Procedures

The Resident must keep a log of all surgical procedures that he/she performs or assists with. The standard logbook must be used for this purpose (Appendix 1). Logbooks will be inspected and signed by the Resident's Consultant/Lecturer at the end of every 2 months.

1.7.2 Logbook of Seminars and Tutorials

The Resident must keep a log of seminars and tutorials that he/she attends. The standardised logbook must be used for this purpose (Appendix 2). At the end of a seminar/tutorial, the Resident will give his/her logbook to his/her Supervisor. The Supervisor will record and sign the assessment of the Resident's performance in the logbook. Logbooks will be inspected and signed by the Resident's Consultant/Lecturer at the end of every two months.

1.7.3 Continuous Assessment Form

The Resident's course work, i.e. his/her performance during the training, will be continuously assessed using a standardized form (Appendix 3). Every 6 months, the Supervisor will report the Resident's progress to the College. The Resident will be given a copy of this report.

1.7.4 A Resident whose course work was not satisfactory will not be judged to have successfully completed the training and will not be allowed to take the Final Examination.

1.8 Examinations

The Examinations prescribed for award of the Membership shall be in 2 parts:

- The Primary Examination
- The Final Examination

1.8.1 The Primary Examination

This is an examination in the Basic Sciences as applied to the Practice of Obstetrics & Gynaecology. Candidates will be examined in the prescribed subjects/topics in the Faculty Syllabus.

Components of Primary Examination

This is a written Examination. The questions will be Multiple Choice Questions (MCQs). Two papers, Paper 1 and Paper 2.

1.8.2 Final Examination

Candidates cannot proceed to the Final Examination until they have passed the Primary Examination. The examination will be taken after 3 years (36 months) training in an accredited institution(s). Only candidates whose performance during the training has been certified as satisfactory will be registered to sit for the Final Examination.

Components of Final Examination

The components of the Examination shall be as follows:

- Written papers
 - MCQ Paper
 - Two Essay Papers
- Clinical
 - Obstetrics
 - Gynaecology
- Oral in Obstetrics & Gynaecology

To pass the Final Examination, a candidate must pass the clinical examination and obtain an overall mark of not less than 50 percent in the examination.

2 Content of Training

2.1 Basic Sciences as Applied to the Practice of Obstetrics & Gynaecology

The first 6 months of the training will concentrate on the Basic Sciences as applied to the Practice of Obstetrics and Gynaecology. However, the Resident will do some clinical work during this period. The Resident is expected to take the Primary Examination after the Basic Sciences Course. The Basic Sciences Course will include:

Paper A

- Anatomy /Embryology
- Physiology
- Biochemistry and Chemical Pathology

Paper B

- Pathology
- Pharmacology
- Microbiology
- Basic Epidemiology / Research Methodology and Elementary Statistics

Part II

- Hospital Management
- Medical Ethics
- Communication Skills

2.2 Clinical Obstetrics & Gynaecology

The training will include outpatient and in-patient care of patients and elective and emergency obstetrical and gynaecological surgical procedures. Throughout the training, the Resident will be under the direct supervision of his/her Supervisor. *Throughout the clinical training, emphasis will be laid on the acquisition of knowledge and skills to competencies commensurate with independent work in general obstetrics and gynaecology*

Training will take place at the:

Gynaecology Outpatient Clinic and Gynaecology Wards

Antenatal/Postnatal Clinics

Antenatal and Postnatal Wards

Labour Ward

Family Planning Clinic

The Obstetrics and Gynaecology Operating Theatres

- **Rotations outside OB/Gyn Department/Unit**

An obstetrician/gynaecologist, practicing in Ghana, who has no ready access to specialists in neonatology, anaesthesia, general surgery, and urology should be able to manage the clinical conditions in these specialties which he is likely to come across in

his practice. The aim of the Rotations is to equip the Resident with competent skills to manage such clinical problems. The time spent in ob/gyn histopathology and radiology/ultrasound will help the Resident appreciate what these units have to offer ob/gyn and their limitations.

3 Syllabus for the Basic Sciences: Primary Examination

This syllabus is designed to cover areas of Basic Sciences as applied to the practice of Obstetrics and Gynaecology.

3.1 Embryology

- Oogenesis and spermatogenesis
- Embryological development of the urogenital tract in both female and male
- Development, structure and function of the placenta and of the fetal membranes
- Formation and removal of amniotic fluid
- Teratogenesis: The general pattern and timing of organogenesis. The effect of drugs and other teratogens at various periods of organogenesis
- Factors concerned in the determination of fetal sex: Sexual differentiation

3.2 Anatomy

- A detailed knowledge of the gross structure, ossification, and landmarks of the pelvic bones and their associated joints
- Shape and dimensions of the normal female pelvis and its commoner variants. The influence of pelvic architecture on labour and delivery
- A knowledge of the bones, sutures, fontanelles and important diameters of the fetal skull
- A detailed knowledge of the gross structure, histology, blood supply, nerve supply, lymphatic drainage of all intra-pelvic structures
- Topographical anatomy of all intra-abdominal structures, including the nerve supply, blood vessel supply, and lymphatics. A detailed knowledge of the anterior abdominal wall and its nerve and blood supply
- Detailed structure, course, relations, and blood supply of the ureter
- Detailed gross anatomy of the inguinal canal, femoral canal, anal triangle, deep and superficial perineal pouches and the vulva
- Development, gross anatomy, and microscopic structure of the female breast. Blood supply, lymphatic drainage of the breast
- Gross and microscopic anatomy of the adrenal glands, hypothalamus, the pituitary gland, and the thyroid gland
- A knowledge of the major sensory and motor pathways within the central nervous system with particular regard to the nervous connections of the pelvic organs
- The lymphatic drainage of the lower limbs and vulva

3.3 Physiology

- A detailed knowledge of all aspects of female and male reproductive physiology
- Physiology of menstruation
- Physiology of lactation: Exclusive breast feeding

- Control of micturition: urinary continence in the female
- Control of blood pressure, heart rate, blood flow
- Normal renal function
- Control of body fluids: volume and osmolarity
- Acid base balance and electrolyte balance
- Respiration, oxygen, and carbon dioxide transport mechanisms
- Control and mechanism of transport of substances between mother and fetus via the placenta
- Relationship between the hypothalamus, pituitary, and ovary or testis
- Functions of the hypothalamus
- The working and arrangements of somatic and autonomic nervous systems including the chemical transmission of nerve impulses
- Alimentary tract, including absorption of food substances, electrolytes and trace elements
- The constitution of normal diet and requirements of pregnancy
- The hormones of the placenta: especially chorionic gonadotrophin, estrogens, human placental lactogen and progesterone. Their production, secretion and the significance of each

3.4 Endocrinology

- Hormones of hypothalamus, anterior and posterior pituitary; their control and secretion
- Other hormones secreted by the brain, e.g. endorphins
- Pituitary, ovarian and testicular hormones, their control and secretion during childhood, puberty, reproductive years, and menopause
- Adrenal gland; the cortical and medullary hormones; their metabolic pathways. The basis of intersex
- The pancreatic hormones and their involvement in carbohydrate metabolism, e.g. insulin and
- Detailed knowledge of thyroid hormones
- Hormones of the placenta, viz estrogens, HPL, progesterone: the mechanisms of their production; their functions
- The endocrinology of the polycystic ovary syndrome

3.5 Biochemistry

- Carbohydrate, protein and fat: their general properties and metabolic pathways
- Nucleic acid metabolism and pathways
- Metabolism of steroids
- Enzymes, their general properties, and relationship to intermediary metabolism
- Iron, folic acid, vitamin B12 requirements and metabolism; the haemoglobin molecule; haemopoiesis
- Sickle cell haemoglobin biology and other abnormal haemoglobins
- Detoxification of metabolites in general
- Chemistry of steroid hormones: oestrogens, progesterone, and androgens
- Nutrition and obesity

3.6 Cell Biology and Genetics

- Structure and function of the normal cell
- Detailed knowledge of mitosis and meiosis, including the cell cycle
- Principles of the genetic code. Genetic engineering
- Mechanism of inheritance of genetically determined abnormalities, e.g. Down's syndrome, Patau and Edward's syndromes
- Genetic counselling
- Transfer of substances across the cell membranes including active and passive transport
- The effect of ionising radiations on the cell

3.7 Haematology

- Detailed knowledge of haemopoiesis
- Detailed knowledge of coagulation factors. Mechanism of coagulation and its derangements
- Thromboembolism
- Knowledge of anaemias and leukaemias
- Blood group systems and method of inheritance in respect to ABO and Rh systems
- Blood transfusion and its complications

3.8 Microbiology

- A knowledge of the behaviour and characteristics of bacteria, viruses, fungi, protozoa, and parasites that cause disease of the female reproductive tract and fetus
- Principles of the control of infection: antiseptics, disinfectants, sterilisation, isolation, epidemic control.
- The principles underlying the use of chemotherapeutic agents and antibiotics
- Principles underlying the identification of bacteria, parasites, and viruses of medical importance, including staining, culture, serology; sensitivity tests
- Tropical parasitology as related to obstetrics/gynaecology

3.9 Pharmacology

The principles underlying the mode of action and side effects of the following groups of drugs:

- Anaesthetic, analgesics, and sedatives
- Chemotherapeutic agents and antibiotics
- Anti-mitotic drugs
- Immuno-suppressive drugs
- Drugs acting on the sympathetic and parasympathetic systems; antihypertensives
- The teratogenic dangers of drugs and other drug hazards to the fetus
- Pharmacology of drugs acting on the female reproductive system
- Steroids and anti-emetics

3.10 Pathology

- The general histological and pathological patterns of inflammation, neoplasia and degeneration

- Features affecting pathology of wound healing and wound infection
- Common diseases of the cardiovascular, respiratory, alimentary, endocrine, musculo-skeletal, and central nervous systems
- Diseases of the Female Genital tract and the Breast
- Effects of radiation on tissues.

3.11 Elementary Statistics and Basic Epidemiology

An understanding of the basic statistical techniques, with knowledge of the meaning of terms such as median, mean, mode, standard deviation, and normal distribution. An understanding of the principles that lie behind test of significance and the levels of probability which are normally accepted as demonstrating significance between populations. Principles of research design.

4 Syllabus for the Final Obstetrics & Gynaecology – PART II

4.1 Normal Obstetrics

- Physiologic Changes (Adaptations) in Pregnancy
- Use of Drugs in pregnancy
- Placental development and physiology
- Endocrinology of pregnancy
- Fetal development and physiology
- Antepartum care
- Management of normal labour and delivery
- Obstetric analgesia and anaesthesia
- Puerperium/Postnatal care.
- Lactation

4.2 Abnormal Obstetrics

- Abortion and ectopic pregnancy
- Second-Trimester pregnancy loss
- Late pregnancy bleeding
- Medical conditions complicating pregnancy especially common diseases such as malaria, sickle cell disease, anaemia, urinary tract infection, cardiac disease, diabetes, hepatitis, tuberculosis etc.
- Surgical conditions complicating pregnancy, such as appendicitis, typhoid perforation, intestinal obstruction
- Hypertensive diseases of pregnancy
- Alloimmunization
- Multiple pregnancy
- Fetal growth restriction
- Premature rupture of the membranes
- Infectious diseases, sexually transmitted infections (STI), HIV/AIDS, amniotic infection
- Preterm labour
- Induction of labour

- Dystocia, CPD, contracted pelvis, abnormal lie, abnormal presentation, uterine rupture
- fetal heart rate monitoring
- Postpartum haemorrhage and obstetric shock
- Puerperal morbidity
- Maternal mortality
- Perinatal mortality and morbidity
- Prenatal diagnosis
- Genetic counselling
- Fetal and placental abnormalities
- Newborn
 - Examination and Resuscitation
 - Birth injuries: causes, diagnosis, management

4.3 Obstetric Operations

The Resident will be able to perform the following obstetric operations:

- Instrumental vaginal delivery:
 - Vacuum extraction
 - Forceps delivery
- Caesarean delivery
- Other obstetric operations:
 - Repair of cervical tear
 - Repair of episiotomy and perineal tears (1st, 2nd, and 3rd degrees)
 - Caesarean hysterectomy
 - Repair of ruptured uterus
 - Repair of bladder

4.4 Control of Fertility and Management of Infertility

- Elementary knowledge of population dynamics
- Population control
- Family planning methods
- Infertility and its management
- Sexuality
 - Development of identity
 - Anatomy and physiology of sex
 - Sexual dysfunction
 - Sexual variations
 - Sexual assault: physical, emotional and psychological

4.5 Gynaecology

- Normal development of urogenital tract
- Disorders of development
- STI and inflammation and infections of the vulva, vagina, uterus and adnexa
- Inflammations and infections of the urinary tract
- Endometriosis

- Dysmenorrhea
- Pelvic relaxation
- Uterine fibroids, benign pelvic tumours
- Pelvic injuries and trauma

4.6 Gynaecologic Endocrinology

- Female reproductive cycle
- Abnormal menstruation
- Puberty disorders
 - Precocious puberty
 - Primary amenorrhea
 - Secondary amenorrhea
- Hirsutism
- Galactorrhea
- Menopause
- Infertility

4.7 Gynaecologic Oncology

Benign and malignant tumours of the pelvic organs, epidemiology, aetiological and promotional factors, prevention, early diagnosis, management (surgery, radiotherapy, chemotherapy), prognosis:

- Vulva
- Vagina
- Cervix
- Endometrium
- Fallopian tube and ovary
- Trophoblastic disease
- Breast

4.8 Urogynaecology

- Urinary incontinence
 - Types, causes and management
 - Urinary fistulae
- Pelvic floor disorders

4.9 Paediatric and Adolescent Gynaecology

FGM, Sexual assault & unsafe abortion,

4.10 Reproductive Health

- Safe motherhood concept
- Adolescent reproductive health
- Gender-based violence
- Unsafe abortion and post-abortion care
- Organisation of maternity health services

4.11 Management, Ethics and Communication Skills.

4.12 Gynaecologic Operations

The Resident will be able to perform the following gynaecological operative procedures:

4.12.1 External genital

- Local excisions and incisions
- Biopsy
- Simple vulvectomy
- Bartholin's cyst marsupialization
- Urethral prolapse repair
- Hymeneal operations, including imperforate hymen
- Repair of old perineal lacerations

4.12.2 Operations on pelvic side walls

- Exposure and ligation of internal iliac artery

4.12.3 Upper abdominal exploration

Inspection/palpation of:

- Liver and gallbladder
- Spleen and pancreas
- Stomach, duodenum, and intestines
- Kidneys and adrenal
- Para-aortic nodes
- Diaphragm

4.12.4 Breast

- Outpatient evaluation; management of breast abscess

4.12.5 Transvaginal procedures

- Vaginal cysts – excision
- Suburethral diverticulum – repair
- Suction curettage
- Safe termination of pregnancy
- Colposcopy and cervical biopsy
- Cervical cautery, cryosurgery, and laser therapy
- Cervical conization
- Cervical suture for incompetent cervix
- Posterior colpotomy for drainage of pelvic abscess
- Vaginal hysterectomy, with and without pelvic floor repairs
- Vesicovaginal and recto-vaginal fistulae
- Hysteroscopy/hysteroscopic surgery

4.12.6 Transabdominal procedures

- Abdominal incisions
- Abdominal hysterectomy, including supracervical and total
- Diagnostic laparoscopy/simple operative laparoscopy

- Myomectomy
- Salpingectomy
- Oophorectomy and salpingo-oophorectomy
- Salpingostomy & Salpingotomy
- Ovarian cystectomy
- Drainage of pelvic abscess

4.12.7 Post-operative Complications

The Resident will be able to recognise and manage following postoperative complications:

- Wound infection and wound dehiscence
- Ileus
- Intestinal obstruction
- Thrombo-embolic disease
- Atelectasis
- Pneumonia

4.13 Other surgical operations

The Resident should be able to state the indications for the following operations, the major steps in the operative technique, the principles of post-operative care, and the common complication and their management:

- Radical vulvectomy
- Radical hysterectomy with and without lymph node dissection
- Bowel resection and anastomosis
- Colostomy
- Urinary diversion, e.g. ureteral transplant, ileal bladder
- Repair of major vessels

4.14 Infection Prevention in Obstetrics & Gynaecology

Use and misuse of antibiotics in Ob/Gyn

4.15 Syllabus for the Rotation in General Surgery

Duration of Rotation: 3 months

4.15.1 Main Objective

At the end of the rotation, the Resident should be able to competently perform a laparotomy and specific abdominal surgical procedures.

4.15.2 Specific Objectives

- Abdominal incisions and closure, including insertion of drainage tubes
- Repair of various abdominal incisional hernias
- Omentectomy
- Small and large bowels
 - o Repair of injuries
 - o Appendicectomy

- Identify the indications for and perform intestinal resection at laparotomy
- Upper abdominal exploration
 - Liver and gall bladder
 - Spleen and pancreas
 - Stomach, duodenum and intestines
 - Para-aortic nodes

4.16 Syllabus for the Rotation in Urology

Duration of Rotation: 8 weeks

4.16.1 Main objective

At the end of the rotation, the Resident should be able to competently perform a laparotomy and specific abdominal surgical procedures.

4.16.2 Specific objectives

- Bladder and ureter
 - Cystoscopy
 - Repair of bladder laceration
 - Cystostomy
 - Reimplantation of ureter into bladder
 - Surgical prevention of ureteric injuries

4.17 Syllabus for the Rotation in Anaesthesia

Duration of rotation: 2 months

4.17.1 Main Objective

At the end of the rotation, the Resident will be conversant with the theory and practice of all forms of anaesthesia, and will be able to perform local and regional anaesthesia for emergency laparotomy and for operations on the pelvic organs and perineum.

4.17.2 Specific Objectives

- Principles of sedation and analgesia
- Sedation and analgesia in labour
- Regional analgesia
- Local anaesthetic agents
- Spinal and epidural analgesia
- Inhalation anaesthesia
- Anaesthetic gases, e.g. N₂O
- Volatile anaesthetics
- Intravenous anaesthetics
- The anaesthetic machine
- Principles and practice of endotracheal intubation
- Anaesthesia for caesarean section
- Prevention of accidents in Obstetric and Gynaecological anaesthesia
- Blood transfusion and anaesthesia
- Cardiopulmonary Resuscitation (CPR)

4.18 Syllabus for the Rotations in Neonatology

Duration of rotation: 2 months

4.18.1 Main Objective

At the end of the rotation in Neonatology the Resident will have become knowledgeable and competent in discussing and practising the principles underlying the following topics:

- Neonatal assessment
- The physiology of transition
- Resuscitation and Monitoring the Newborn
- Early neonatal diseases related to asphyxia
 - o RDS
 - o Meconium aspiration
 - o Intraventricular haemorrhage
 - o Effect of asphyxia on the newborn nervous system
- Heart disease in the early neonatal period
- Congenital GIT complications
 - o Imperforate anus
 - o Oesophageal atresia
- Early urinary tract disorders
- Neonatal jaundice
 - o Exchange transfusion
 - o Hyperbilirubinaemia, bilirubin toxicity; kernicterus
 - o Management of neonatal jaundice
- Haemorrhagic diseases of the newborn
- Birth trauma
- Birth defects
- Drug effects in the newborn
- Neonatal infections
 - o Neonatal sepsis, predisposing conditions
 - o Sources of infectious organisms
 - o Specific infections
 - ❖ Group B streptococci
 - ❖ Staphylococci
 - ❖ STD's: N. gonorrhoea, Chlamydia trachomatis, Syphilis
 - ❖ Candida albicans
 - ❖ Viruses
 - perinatal chicken pox, measles, hepatitis
 - Coxsackie virus, echovirus
 - HIV/AIDS
- Newborn feeding
 - o Lactation; drugs in breast milk
 - o Methods of feeding; hypoglycaemia
 - o Exclusive breastfeeding

- High risk babies: preterm, post-term, diabetic baby, Rh alloimmunisation, assisted vaginal delivery, caesarean section, small and large for dates etc.

4.19 Radiology and ultrasound scanning

Candidates should be skilled in basic obstetric and gynaecologic ultrasound scanning. Specifically,

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Appendix 3. Continuous Clinical Assessment Form							
Name of Resident _____		Date _____					
Hospital _____							
GRADE	6	5	4	3	2	1	X
<i>ATTITUDINAL ASSESSMENT</i>							
General appearance							
Relationship with patients							
Relationship with nursing staff							
Relationship with junior staff							
Relationship with senior staff							
Applied Basic Sciences knowledge							
<i>CLINICAL SKILLS ASSESSMENT</i>							
History-taking skill							
Physical examination skill							
Clinical judgement							
Surgical skills							
Industry							
Reliability							
Overall score							

GRADES: Please tick the appropriate column

Excellent=6 Very good=5 Good=4 Satisfactory=3 Unsatisfactory=2

Very unsatisfactory=1 Insufficient contact with student to judge=X

Name of evaluating Supervisor _____

Signature of evaluating Supervisor _____ Date _____

Signature of Resident _____ Date _____

Resident's Comments: _____
