



**MEMBERSHIP IN OBSTETRICS AND GYNAECOLOGY  
(MCOG – ECSA) CURRICULUM**

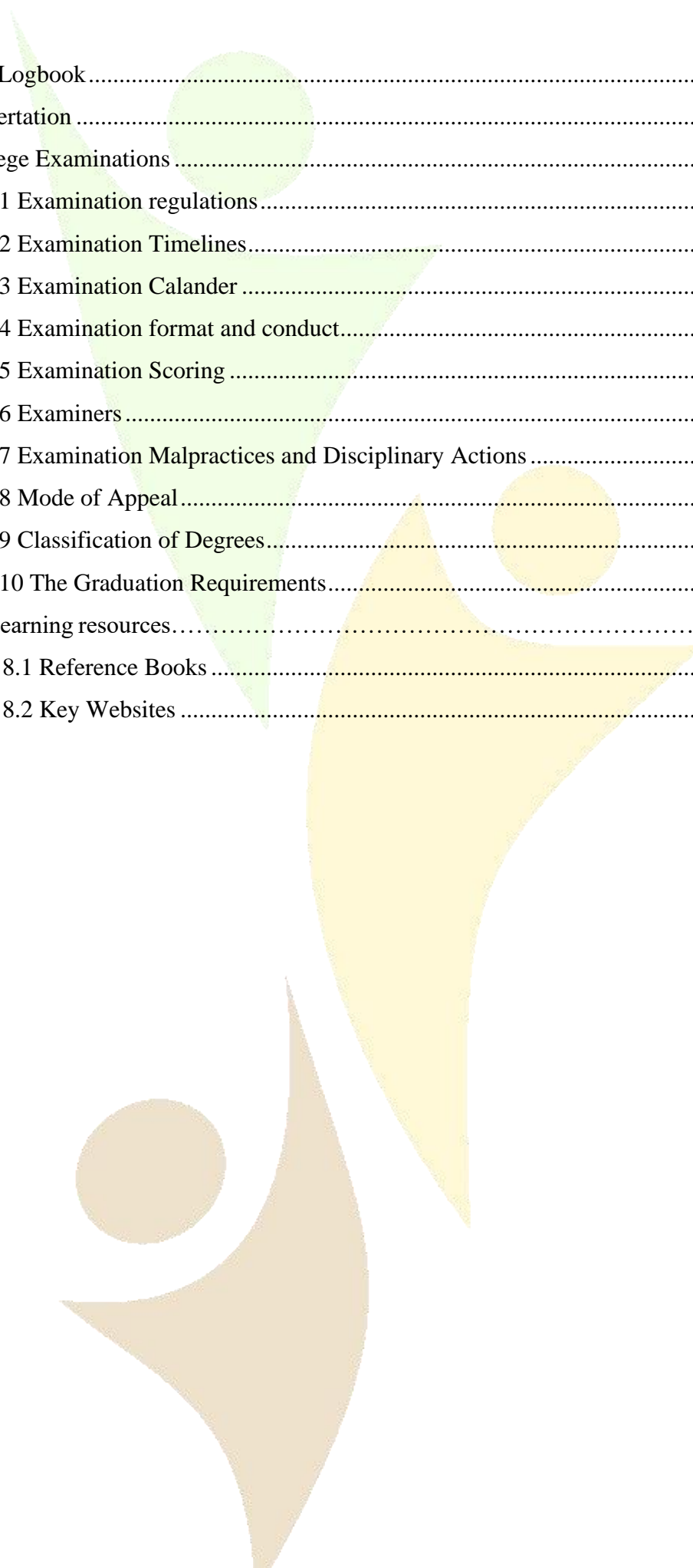
**A FRAMEWORK TO GUIDE THE  
TRAINING AND PRACTICE OF OBSTETRICS AND GYNECOLOGY**



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## ACRONYMS/ABBREVIATIONS

AC	Abdominal Circumference
ACE	Adverse Childhood Events
ACOG	American College of Obstetricians and Gynecologists
ADR	Adverse Drug Reaction
AFI	Amniotic Fluid Index
AFR	Adolescent Fertility Rate
AI/D/H	Artificial Insemination/Donor/Husband
AIDS	Acquired Immune-Deficiency Syndrome
ALSO	Advanced Life Support in Obstetrics
AMH	Anti-Mullerian Hormone
ANC	Antenatal Care
APGR	Annual Population Growth rate
APH	Ante-Partum Hemorrhage
ARM	Artificial Rupture of Membranes
ART	Assisted Reproductive Technology
ARVT	Anti-Retroviral Treatment (Therapy)
AS	Advanced Skills
BSO	Bilateral Salpingo-Oophorectomy
CAT	Continuous Assessment Test
CBC	Complete Blood Count
CEO	Chief Executive Officer
CIN	Cervical Intraepithelial Neoplasia
CIS	Carcinoma in Situ
CME	Continuous Medical Education
COG (SA)	College of Obstetricians and Gynecologists of South Africa
COPD	Chronic Obstructive Pulmonary Disease
COSECSA	College of Surgeons of East Central and Southern Africa
COVID-19	Corona Virus Disease 2019
CPAP	Continuous Positive Airway Pressure
CPE	Continuous Professional Education
CPR	Contraceptive Prevalence Rate
C/S	Caesarean Section
CTG	Continuous Tocography
CVA	Cerebrovascular Accident




D&C	Dilatation and Curettage
DIC	Disseminated Intravascular Coagulation
DM	Diabetes Mellitus
DVT	Deep Venous Thrombosis
ECSA	East, Central and Southern Africa
ECSA-HC	East, Central and Southern Africa Health Community
ECSA-CHS	East, Central and Southern Africa College of Health Sciences
ECSACOG	East, Central and Southern Africa College of Obstetrics and Gynecology
ECSAOGS	East, Central and Southern Africa Association of Obstetrical and Gynecological Societies
ED	Erectile Dysfunction
EmONC	Emergency Obstetric and Neonatal Care
EUA	Examination under Anesthesia
FBO	Faith Based Organization
FCOG	Fellow of the College of Obstetrics and Gynecology
FIGO	International Federation of Gynecology and Obstetrics
FSFI	Female Sexual Function Index
FL	Femur Length
FSB	Fresh Still Birth
FSD	Female Sexual Dysfunction
FWCW	Fourth World Conference on Women
GA	Gestational Age
GDM	Gestational Diabetes Mellitus
GS	Gestational Sac
HC	Head Circumference
HDU	High Dependence Unit
HIV	Human Immune Deficiency Virus
HRH	Human Resources for Health
HSG	Hysterosalpingogram
HSDD	Hypoactive Sexual Desire Disorder
HSIL	High-Grade Squamous Intraepithelial Lesion
HTN	Hypertension
ICPD	International Conference of Population and Development
ICSI	Intra-Cytoplasmic sperm injection
ICT	Information, Communication and Technology
ICU	Intensive Care Unit



I&D	Incision and Drainage
IRB	Institutional Review Board
IUI	Intra-Uterine Insemination
IVF-ET	In-Vitro Fertilization and Embryo Transfer
LAVH	Laparoscopic Assisted Vaginal Hysterectomy
LGBTQ	Lesbian, Gay, Bisexual, Transgender & Queer
LLQ	Left Lower Quadrant
LSIL	Low-Grade Squamous Intraepithelial Lesion
LUQ	Left Upper Quadrant
LUS	Lower Uterine Segment
LUSCS	Lower Uterine Segment Caesarean section
M.B Ch.B	Bachelor of Medicine; Bachelor of Surgery
MCOG	Member of the College of Obstetrics and Gynecology
MCQ	Multiple Choice Question
MD	Doctor of Medicine
MDGs	Millennium Development Goals
MDRSR	Maternal Deaths' Review, Surveillance and Response
M. Med.	Master of Medicine
MMR	Maternal Mortality Ratio
MNCAH	Maternal Newborn, Child and Adolescent Health
MoU	Memorandum of Understanding
MRP	Manual Removal of Placenta
MSB	Macerated Still Birth
MTCT	Maternal-To-Child Transmission
MVA	Manual Vacuum Aspiration
NGO	Non-Governmental Organization
NILM	Negative for Intraepithelial Lesion or Malignancy
NMR	Neonatal Mortality Rate
NPO	Nil by Mouth
NSR	Normal Sinus Rhythm of the Heart
OB-GYN	Obstetrics and Gynecology
OSCE	Objective Structured Clinical Examination
PAC	Post Abortion Care
PCOS	Polycystic Ovarian Syndrome
PLO	Program Learning outcome





PNC	Postnatal Care
PNMR	Perinatal Mortality Rate
PMTCT	Prevention of Maternal-To-Child Transmission
PPH	Post-Partum Hemorrhage
PRN	As needed
PROM	Premature Rupture of Membranes
PPROM	Pre-Term Premature Rupture of Membranes
RCOG	Royal College of Obstetricians and Gynecologists
RDS	Respiratory Distress Syndrome
RI	Resistive Index
RLQ	Right Lower Quadrant
RMNCAH	Reproductive, Maternal, Newborn, Child and Adolescent Health
RPoC	Retained Products of Conception
RUQ	Right Upper Quadrant
RVF	Recto-Vaginal Fistula
SAC	Safe Abortion Care
SB	Still Birth
SBA	Skilled Birth Attendance/Attendant
SDGs	Sustainable Development Goals
SLO	Student Learning Outcome
SRH	Sexual and Reproductive Health
SRMNACH	Sexual, Reproductive, Maternal, Neoantal, Adolescent & Child Health
SROM	Spontaneous Rupture of Membranes
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infection
SWOT	Strengths, Weaknesses, Opportunities and Threats
TAH	Total Abdominal Hysterectomy
TFR	Total Fertility Rate
UAE	Uterine Artery Embolization
UFMR	Under-Five Mortality Rate
UHC	Universal Health Coverage
UN	United Nations
UNICEF	United Nations International Children's Emergency
UNFPA	United Nations Fund for Population Activities
URTI	Upper Respiratory Tract Infection





USS	Ultrasound Scan
UTI	Urinary Tract Infection
UVF	Uretero-Vaginal Fistula
VBAC	Vaginal Birth After Caesarean Section
VIA	Visual Inspection with acetic acid
VILI	Visual Inspection with Lugol's Iodine
VVF	Vesico-Vaginal Fistula
WHO	World Health Organization
XRT	Radiotherapy

The background features three stylized human figures. The top figure is green, the middle one is yellow, and the bottom one is brown. Each figure consists of a circular head and a large, flowing, abstract body shape. They are arranged in a vertical line, with the green figure at the top, the yellow one in the middle, and the brown one at the bottom.

## FOREWORD

Development of this curriculum is one of the major milestones in the establishment of the East, Central and Southern Africa College of Obstetrics and Gynaecology (ECSACOG). It is a result of consultative work by numerous foundation fellows and members of the College.

We have attempted to include as much as possible here in. We are however cognizant of the fact that in order to remain relevant and in tandem with the ever-changing socio-demographic, healthy concerns globally, and evolving innovations and technology the curriculum will require regular updates and periodic reviews.

It will guide training within the College over the next several years. I am convinced that this curriculum will be useful to the trainers, for whom it will serve as training guide, our students as a learning guide and all related stakeholders.

I wish to register my appreciation to all individuals who in one way or the other contributed to the development of this document.

**Prof. Josephat Byamugisha**

**President, ECSACOG**

## **PREFACE**

This curriculum is a product of robust consultative efforts by members of the ECSACOG. Its development involved the preparation of a comprehensive draft curriculum in October 2017, by the Education, Scientific and Research Committee. The draft was subsequently subjected to detailed review by eminent senior obstetricians and gynecologists in the ECSA Region with long experience in training, practice and curriculum development. These reviews were interactive, mature and of high academic standards. It is therefore, believed that it is the very best that has been produced to pioneer the training of specialist obstetricians and gynecologists within the ECSA region.

The curriculum is aimed at producing specialist obstetricians and gynecologists over a minimum of four years of training. Upon successful completion of the programme, the graduates will be awarded Membership of the College of Obstetrics and Gynaecology of the East, Central and Southern Africa, (MCOG (ECSA)).

The curriculum details training methodologies, contents, elective period terms, research, and forms of assessment for one to qualify as MCOG (ECSA). It delves into fine details of the units that will have to be covered before one attains competency level expected of the graduates. It is my hope that this curriculum will be a useful tool to guide the training of specialists in the region and a platform for building partnerships within the sub-Saharan Africa and beyond.

Please join me in recognizing everyone who spent sleepless night to come up with such masterpiece product.

**Prof. Bellington Vwalika**  
Secretary General, ECSACOG

## **ACKNOWLEDGEMENT**

ECSACOG wishes to express its gratitude to the previous and current Education, Scientific and Research Committee members and Examinations and Credentials Committee members for the roles they played during the preparation of this curriculum. Special thanks go to Professor Valentino Lema for leading the initial development of this curriculum and Professor Dereje Negussie for working on finalization of the curriculum.

Special thanks also go to Prof. Japheth G. Mati, the father of obstetrics and gynecology and first African professor of obstetrics and gynecology in Kenya, Eastern, Central, and Southern Africa, a pioneer in many areas of the specialty in Africa, who reviewed the first draft and made invaluable comments therein. We are grateful for his time and contribution.

The college is immensely grateful to the senior colleagues (obstetricians and gynecologists) from across the region who, despite their busy schedules, found time to review the draft of the curriculum and made invaluable comments. Our gratitude goes to each and every individual who participated in one way or another at various stages in the process of making this curriculum a reality.

ECSACOG acknowledges the critical oversight roles played by Professors Josaphat B., Annette N., and Belington V. in their official capacities as Presidents and Secretary General of ECSACOG respectively, which ensured the successful production of this curriculum.

The College is greatly indebted to Professor Khama Odera Rogo and the World Bank/IFC team for their advisory and financial support, which made this work possible.

The college also wishes to thank Dr. Odongo Odiyo, our consultant, who coordinated the various activities that culminated in finalizing the curriculum.

# 1. INTRODUCTION

## 1.2

### 1.3 1.1 BACKGROUND

The East, Central and Southern Africa College of Obstetrics and Gynaecology (ECSACOG), is a collegiate training institution with a mandate to train specialists' obstetricians and gynecologists within the East Central and Southern Africa. The regional headquarter is based in Arusha Tanzania, with national chapters housed by the respective obstetrical and gynecological societies. The Regional Ministers of Health through a resolution passed in 2017 mandated the establishment of ECSACOG as an autonomous constituent college of ECSA-CHS, with the purpose of enhancing development and growth of skilled human resource in Obstetrics and Gynaecology.

The college was officially launched on 27 September 2017, in Kigali, Rwanda during the First Joint Conference of the Rwanda Society of Obstetricians and Gynecologists (RSOG) and the East, Central and Southern Africa Association of Obstetric and Gynecological Societies (ECSAOGS). The launch was a culmination of many years of concerted efforts by many senior colleagues, some of whom never lived to witness this historic moment.

The ECSA Region has some of the worst SRHMNACH indices in the world. SRHMNCAH care needs are constantly evolving because of demographic and social changes across the globe; expanded formal education; technological advances; increased awareness/information; migration (internal and external), among other factors. There is also an increasing emphasis on evidence-based and patient-centered health care principles. The College was established in response to the regional challenges in the healthcare system such as resource constraints, (human and financial), increasing demand for quality health services, with changing social and demographic patterns and economic profiles.

The establishment of the college was aimed at addressing some of the challenges on human resource for health (HRH) specifically specialist

obstetricians and gynecologists. It is geared towards training specialist obstetricians and gynecologists with requisite knowledge, skills and competences able to provide quality, state of the art and evidence-based, yet culturally sensitive and wholesome reproductive health care to the people of ECSA Region. The training is supposed to be standardized across the Region, and to remain a regional institution recognized by all the governments and regulatory bodies therein, such that the graduates of the College will be able to work across national borders without further vetting.

## **1.2. VISION, MISSION AND CORE VALUES OF ECSACOG**

### **1.4**

#### **Vision**

To be a **reference body** for reproductive, maternal, newborn health (RMNH) in the region of East, Central and Southern Africa and beyond

#### **Mission statement:**

To be a lead organization for **clinical excellence** in reproductive health in the region of East, Central and Southern Africa and beyond, and a **platform for shared experiences and skills transfer**

## **2. TRAINING SITES**

These will be health facilities within the member countries, which will have indicated interest in this training programme. Interested facilities will submit formal application to the College through their national association/society, after which the sites will be assessed for accreditation by the respective college committee using an approved accreditation tool. The College will work with the national O/G society/association and regulatory authority, in the evaluation and accreditation process. Once the committee is satisfied with the standards of the training sites, the college will enter into a Memorandum of Understanding (MOU) with the training site. A country can be allowed to register more than one site as long as each site

fulfills the accreditation requirements.

### 3. THE TRAINERS

Individuals who will be eligible to become trainers will be;

1. Fellows of the College (Obstetricians & Gynecologists who have attained a minimum of five years after qualification) – these will be the core trainers
2. Individuals with a minimum of specialist recognition within their respective medical areas that are relevant to the training (e.g. including gynecologists, pathologists, radiologists)
3. Specialists who are duly recognized by their relevant regulating bodies (e.g. lawyers, pathologists, anatomists, microbiologists, nutritionists, statisticians and anthropologists)
4. All the trainers will have to undergo training under the college structures

### 4. THE CURRICULUM

**The Philosophy of the Programme:** The philosophy behind this programme is to produce well-balanced obstetricians/gynecologists with requisite knowledge, skills, competencies, and professional qualities including attitudes and ethics, appropriate to the reproductive healthcare needs of people of all ages and gender in the Region.

**The Curriculum:** The social and cultural diversity of the region calls for a Human Resource for Health (HRH) training programme which is scientifically robust, flexible and cognizant of patterns and burdens of health conditions, their potential determinants (including socio-cultural, traditional practices), and preventive strategies. The changing socio-demographic and economic profiles and effects of globalization among other



factors as well as the rapidly evolving reproductive health scenario globally and demands thereto, necessitate a paradigm shift in the development of requisite human resources for health. A related training programme such as this must embrace scientific/medical advances, appropriate technologies as well as evidence-based practices.

This curriculum is designed with the foregoing in mind. It aimed at addressing a continuum of care with regards to obstetrics and gynecology (reproductive health), from pre-conception to geriatrics, reflected in life-cycle approach.

It is a framework to guide the training of specialist obstetricians and gynecologists in the East, Central and Southern Africa, through collegiate training. Its main aim is to equip future reproductive health specialists with the requisite knowledge, skills, competencies, and professional qualities including attitudes and ethics, appropriate to the reproductive healthcare needs of men and women of various age groups in the Region.

It encompasses an educational plan designed to bring about change. Skills and competency will be achieved through an incremental process of learning and professional development. Educational objectives are specified to provide clear information of the knowledge and relevant aspects of practice where competency and skills are required and will be assessed. It indicates ways in which learning will be conducted in the key areas of relevant knowledge, clinical expertise, academic abilities and professional qualities. It also specifies assessment formats to test the articulated objectives and ensure that all outcome expectations are seen as valued achievements. Assessment of knowledge base and competencies is structured to reflect the pathway of learning required throughout training.

## **1.5 4.1. LEARNING OUTCOMES**

### **1.6**

At the end of the training the grad and will have acquired the necessary knowledge, skills, competencies, and other professional attributes to;

- Provide essential, quality obstetric and gynecological services
- Teach/train other health professionals on obstetrics and gynecology.
- Carry out relevant operations research, clinical audits, analyse the data therefrom and disseminate it as well as advocate for appropriate utilization

of the results.

- Advocate for needed reproductive, maternal, newborn, child and adolescent (RMNCAH) care services in their respective localities, including but not limited to
  - Allocation of adequate resources for effective delivery of quality services in reproductive health,
  - Availability and accessibility of services within the realms of relevant international documents and national constitutional dispensation, legal provisions and policies and guidelines
- Management of health facilities and other relevant institutions for the provision of quality sexual, reproductive, maternal, newborn, child and adolescent (SRMNCAH) care services.
- Provide leadership in and advisory role/function to the local/national authorities on RMNCAH matters.

## **1.7 4.2. QUALIFICATION AND SALUTATION OF ECSACOG GRADUANDS**

### **1.8**

At the end of the training in ECSACOG the graduands will be referred to as “**Members of the College of Obstetrics and Gynecology of ECSA {MCOG (ECSA)}**”

## **1.9 4.3. THE PROGRAMME**

### **1.10**

#### ***4.3.1 The title***

This training programme will be known as the “**Membership of the East, Central and Southern Africa College of Obstetrics and Gynaecology {MCOG (ECSA)}**”

#### ***4.3.2 Goal and Objectives***

## Goal

To produce skilled and competent obstetricians and gynecologists who will contribute to the health care of women, men, newborns, children and adolescents as well as improve the indicators for SRMNCAH in the region.

## Objectives

- To train specialists able to practice quality, evidence-based, obstetrics and gynaecology (SRH) in line with global standards, regional and national legal provisions, policies and guidelines.
- To train specialists with the right attitude, culture and passion for continued pursuit of further learning even after they graduate (CPE).
- To train future trainers in obstetrics and gynecology within and outside the College
- To train specialists who will be leaders in and advocates for appropriate and responsive RMNAH care services for all peoples of the region

### 4.3.3 Rationale

The high maternal and perinatal morbidity and mortality in the ECSA Region calls for adequate number of appropriately trained, skilled and dedicated obstetricians and gynecologists to lead, guide and train requisite health workers as well as provide essential and relevant/appropriate (evidence-based; best practices) maternal and perinatal health care.

Reproductive Maternal Newborn and Adolescent Health situation in Sub-Saharan Africa region and ECSA included is poor. The region accounts for 66% of all maternal deaths globally.

The lifetime risk of maternal death for women in the region is 1 in 56, Most of these deaths are preventable if all women receive requisite healthcare when they need it. Adolescent fertility is also high in countries with high fertility in the region, being 102 births per 1,000 girls. More than a quarter of girls and women in the region cannot access family planning services, fueling unplanned pregnancies and maternal, infant and child mortality

and morbidity. One of the contributing factors to these poor indicators is shortage of skilled human resource. These gaps in skilled human resource are addressed through highly trained health providers, at the level of specialist

For several decades now, obstetricians and gynecologists in the region have been trained through university-based Master of Medicine {M.Med.(Obs/Gyn)} programmes either in-country or neighboring countries. A few countries send doctors for postgraduate training abroad. The countries are only able to train and produce a few specialist obstetricians and gynecologists at any given time through these approaches, which are not adequate to meet the demands. This type of training deprives the public health sector of the much-needed clinical services of these doctors for long periods of time in addition to the high cost of training and upkeep. A good proportion of the trained specialists opt to remain in the countries they are training in or seek better remuneration elsewhere. These compound an already dire situation. At the inception of the university-based M. Med specialist training it was agreed that this would be a temporary measure as the Countries worked out modalities of collegiate training programmes. It is envisaged that through this collegiate specialist-training programme which will be facility-based, we will not only retain the doctors in their workstations, but also minimize the risk of personnel attrition, improve the quality of care as well as reduce training costs.

#### ***4.3.4 Mode of Delivery***

This training programme will be delivered using different approaches as approved by the council:

#### **Lectures**

The students will be given regular lectures by the designated trainers on various areas, which are key to the specialist training. There will be mandatory units that will be covered during the lectures throughout the training course. The lectures will form a guide to the basic knowledge required, as students will be encouraged to use these as foundations to search for more knowledge on each subject matter. The lectures will be guided by the syllabus to be covered.

## **Group discussions**

For improved understanding of the subject matters, students will be encouraged to form discussion groups. These groups will enable an atmosphere of free and independent thinking, given them an opportunity to express oneself and gain confidence required of a specialist.

## **Group exercises**

The trainees will be given assignments that to be done in groups. This mode encourages students to appreciate various approaches used to solve a clinical problem. At the end of such an exercise the students may share their various experiences in a plenary, such as morbidity/mortality meetings; case presentations, journal clubs, etc.

## **Assignments**

These normally provoke wider and deeper thinking and search through further reading of various relevant documents.

## **Journal clubs**

Another mode of delivery will be the establishment of Journal Clubs. These encourage and nurture students to develop writing skills for publications and presentations at conferences. They will be encouraged to critically look at specific publications and to be analytical, which will enable them to develop the necessary skills for their own publications.

## **Evidence-based clinical seminars**

The programme will also include the development of evidence-based approaches to the topical issues in obstetrics and gynaecology. Seminars for

such evidence base will be nurtured and encouraged.

## **Practicum**

This programme by and large is competency-based. This means that the practical sessions will be the backbone of the training. The students will be supported to take practical sessions throughout the course to ensure they come out as hands-on specialists and be able to solve the topical problems. Rotation in other collaborative centres will be encouraged to broaden the practical skills.

### **4.3.5 Expectations**

At the end of the residency program, the graduate should be able to demonstrate the following essential competencies:

#### **Patient Care**

Residents are expected to provide patient care in obstetric and gynecologic conditions which is compassionate, appropriate and effective for the promotion of health, prevention of illness, treatment of disease and end of life care. The graduate is expected to:

- Gather accurate & essential information from all sources, including medical interviews, physical examinations, medical records and diagnostic/therapeutic procedures.
- Make informed recommendations about preventive, diagnostic and therapeutic options and interventions that are based on clinical judgment, scientific evidence, and patient preference.
- Develop, negotiate and implement effective patient management plans and integration of patient care.
- Perform competently the diagnostic and therapeutic procedures considered essential to the practice of obstetrics and gynecology.
- Communicate to the patient and family about end of life concerns, issues, and rights. Work with ancillary services to help with these issues.

#### **Medical Knowledge**

Residents are expected to demonstrate knowledge of established and evolving biomedical, clinical and social sciences, and the application of their knowledge to patient care and the education of others. They have to:

- Apply an analytical approach to acquiring new knowledge.
- Access and critically evaluate current medical information and scientific evidence.
- Develop clinically applicable knowledge of the basic and clinical sciences that underlie the practice of obstetrics and gynecology.
- Apply the acquired knowledge to clinical problem solving, clinical decision-making, and critical thinking in patient care.

### **Practice Based Learning and Improvement**


Residents are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices. They have to:

- Identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes and processes of care.
- Analyze and evaluate practice experiences and implement strategies to continually improve the quality of patient care.
- Develop and maintain a willingness to learn from professional mistakes and use these challenges to improve the system or processes of care.
- Use information technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education.
- Design and implement quality improvement (QI) projects.

### **Communication and Interpersonal skills**

Residents are expected to demonstrate interpersonal communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams. They have to:




- 
- Provide effective and professional consultation to other physicians and health care professionals and sustain therapeutic and ethically sound professional relationships with patients, their families, and colleagues.
  - Use effective listening, nonverbal, questioning, and narrative skills to communicate with patients and families.
  - Interact with the health care team in a respectful, appropriate manner.
  - Respect seniors' decisions for betterment of patient care.
  - Maintain comprehensive, timely, and legible medical and electronic records.
  - Work effectively as a member of the ward team and the clinic form.

### **Professionalism and Ethics**

Residents are expected to demonstrate behaviors that reflect a commitment to continuous professional development, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession, and society. They have to:

- Demonstrate respect, compassion, integrity, and altruism in relationships with patients, families, and colleagues.
- Demonstrate sensitivity and responsiveness to the gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviors and disabilities of patients and professional colleagues.
- Adhere to principles of confidentiality, scientific/academic integrity, and informed consent.
- Recognize and identify deficiencies in peer performance and advise for timely correction when and if appropriate.
- Remain professional in appearance and behavior in the performance of all duties.

### **System Based Practice**



Residents are expected to demonstrate both understanding of the contexts and systems in which health care is provided and the ability to apply this knowledge to improve and optimize health care. They have to:

- Recognize, access, and utilize the resources available, providers and systems necessary to provide optimal care.
- Evaluate the limitations and opportunities inherent in various practice types and delivery systems, and develop strategies to optimize care for the individual patient.
- Apply evidence-based, cost-effective strategies to prevention, diagnosis, and disease management.
- Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processes of care.
- Collaborate with the national champions in reproductive health.

## 5. Course Contents

### 5.1 Course Outline

YEAR ONE: SCIENTIFIC FOUNDATIONS OF OBSTETRICS AND GYNAECOLOGY	
Topics	Weeks
Applied Human anatomy in reproductive health	8
Reproductive biochemistry, physiology, immunology and laboratory medicine	8
Human Reproductive pathology, hematology and blood transfusion	4
Human Reproductive pharmaco-therapeutics and radiotherapy	4
Emergency and critical care in reproductive health	4
Human sexuality and social cultural issues in reproductive health	4
Reproductive epidemiology, statistics, research methods and evidence-based practice	4
Leadership in health systems management with emphasis in sexual and reproductive health care	4
Communication, ethics, and medico-legal issues in sexual and reproductive health care	4
Imaging in reproductive health	4
Clinical skills, surgical skills, nursing procedures, and infection prevention in reproductive health	4
Family planning, abortion care	4
Junior residency	120
<b>TOTAL</b>	<b>186</b>

Year (2) TWO CLINICAL SCIENCES IN OBSTETRICS AND GYNECOLOGY 1	
Topics	Weeks
Human Sexuality	4
Human Reproduction and Fertility	4
Infertility and reproductive endocrinology	4
Pre-conception, prenatal, intrapartum, postpartum and newborn care	4
Disorders during pregnancy	8
Pediatric and adolescent reproductive health	4
Benign gynecological conditions	4
Pre-malignant and malignant conditions in gynecology	4
Gynecological endoscopy	4
Senior residency	172
<b>TOTAL</b>	<b>190</b>

YEAR (3) THREE: ROTATIONS IN OBESTERICS AND GYNAECOLOGY	
Title/Topics	Weeks
Elective external rotations (Urological surgery; radiotherapy in Gynecology; Medical conditions in Obstetrics; Programme Management in RH)	12
Radiology rotation	6
General surgery	6
Palliative care	6
Health management	6
Neonatology	6
Anesthesia and critical care	6
Dissertation Writing	52
<b>TOTAL</b>	<b>100</b>

## Year 4. CLINICAL SCIENCES IN OBSTETRICS AND GYNECOLOGY 2

Topics	Weeks
Advanced foetal maternal medicine	75
Advanced emergency gynecology	34
Advanced surgical gynecology	30
Advanced gynecological oncology	24
Advanced Family planning and contraception	12
Advanced Infertility and Gynecological endoscopy	24
Pediatric and Adolescent gynecology	4
Family Formations, Structures and Reproductive Health	4
Postmenopausal & Andropause medicine	4
<b>Total units</b>	<b>207</b>

## 5.2 Course Description

<b>1. BASIC SCIENCES: APPLIED ANATOMY, REPRODUCTIVE BIOLOGY, PATHOLOGY, IMMUNOLOGY PHARMACOLGY, BIOCHEMISTRY HAEMATOLOGY, MICROBIOLOGY AND LABORATORY MEDICINE IN REPRODUCTIVE HEALTH</b>	
<b>Purpose</b>	<b>The learner is expected to acquire knowledge of the basic sciences related to reproductive health and its application in clinical practice</b>
<b>Learning outcomes</b>	<b>By the end of the course, the learner should be able to:</b> <ol style="list-style-type: none"><li><b>2. Discuss the principles of Cell Biology and Molecular Genetics.</b></li><li><b>3. Describe the anatomy of the abdomino-pelvic structures including the bony pelvis and organs, the breast and relevant endocrine glands.</b></li><li><b>4. Discuss Embryology, Fetal development and fetoplacental physiology</b></li><li><b>5. Discuss the anatomical, physiologic and biochemical changes associated with pregnancy, labour and the puerperium</b></li><li><b>6. Explain the physiology, biochemistry, and endocrinology relevant to reproductive health.</b></li><li><b>7. Discuss immunology of conception &amp; pregnancy, immunological changes in pregnancy and apply the basic principles of immunology relevant to reproductive health.</b></li><li><b>8. Discuss the basic principles of general pathology, microbiology and hematology relevant to reproductive health.</b></li><li><b>9. Demonstrate knowledge of the pharmacology of commonly used drugs in sexual and reproductive health.</b></li></ol>

<b>Course contents</b>	<ul style="list-style-type: none"> <li>▪ <b>Apply knowledge of histologic and gross structure and function of reproductive systems to address obstetric and gynecologic issues i.e Applied Anatomy in Reproductive Health.</b></li> <li>▪ <b>Apply knowledge and concept of embryogenesis, physiology and pathophysiology of the fetus, its development, and its environment to give meticulous care to pregnant women and to diagnose anomalies and diseases that affect the fetus and newborn i.e Reproductive Biochemistry, Physiology, Immunology and laboratory medicine.</b></li> <li>▪ <b>Apply knowledge of anatomical, physiological, metabolic and biochemical adaptations to pregnancy to identify the disease processes that can threaten women during pregnancy i.e Reproductive Pathology, Hematology and Blood transfusion.</b></li> <li>▪ <b>Apply knowledge of genes, heredity and pathogenesis of diseases that are genetic in origin to diagnose, manage and prevent gynecologic and obstetric problems.</b></li> <li>▪ <b>Apply knowledge of the basic principles of immunology as they relate to response to infection, immunization, establishment of feto-maternal tolerance and development of gynecologic diseases.</b></li> <li>▪ <b>Apply knowledge of biochemical, structural, and functional changes that occur in cells, tissues, and organs to identify causes and underlying mechanisms that result in obstetric and gynecologic diseases.</b></li> <li>▪ <b>Apply knowledge of the interaction in chemical and physical systems of the body and the effect of hormonal changes within the human body during puberty, reproductive age and menopause.</b></li> <li>▪ <b>Apply knowledge of impact of pregnancy on serum and tissue drug concentrations to ensure safety and efficacy of drugs in pregnancy.</b></li> <li>▪ <b>Apply knowledge of pharmacokinetics and pharmacodynamics principles of substances that are used to prevent, diagnose and treat gynecologic and obstetric diseases.</b></li> <li>▪ <b>Apply knowledge of teratogens, related manifestations and mechanisms of developmental toxicity to</b></li> </ul>
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	<p>provide therapeutic guidance and prevent untoward effect.</p> <ul style="list-style-type: none"> <li>▪ Apply knowledge of microbes and the molecular mechanisms of microbial diseases to approach problems in the field of obstetrics and gynecology.</li> <li>▪ Apply knowledge of the molecular, cellular and biochemical mechanisms that maintain the body's homeostasis in order to approach obstetrics and gynecologic diseases.</li> <li>▪ Apply knowledge of hemodynamic monitoring for diagnosis and management of obstetric and gynecologic patients.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>▪ Application of basic sciences in patient management</li> </ul>
<b>Mode of Delivery</b>	Overview lectures, Tutorials, Class discussions and Presentations
<b>Resources</b>	<ul style="list-style-type: none"> <li>▪ Core texts</li> <li>▪ Online resources and e-books</li> <li>▪ Library</li> <li>▪ Laboratory access</li> </ul>
<b>Course Assessment</b>	<ul style="list-style-type: none"> <li>▪ Individual assignments,</li> <li>▪ Written laboratory reports,</li> <li>▪ Class presentations,</li> <li>▪ MCQs, short essay questions, modified essay questions.</li> </ul>

## 2. EPIDEMIOLOGY AND BIostatISTICS IN REPRODUCTIVE HEALTH

<b>Purpose</b>	<b>The learner shall be expected to understand epidemiology and biostatistics in reproductive health, as a preparation to facilitate the development of the concept notes, research proposals and dissertation</b>
<b>Learning outcomes</b>	<b>By the end of the course, the learner should be able to:</b> <ul style="list-style-type: none"> <li>▪ <b>Understand epidemiology and biostatistics in reproductive health</b></li> </ul>
<b>Course Contents</b>	<ul style="list-style-type: none"> <li>▪ <b>Epidemiology: Health indicators; statistics, measures of disease, frequency, mortality and morbidity rates, and trends.</b></li> <li>▪ <b>Reproductive health epidemiology: Concepts; safe motherhood, three delay model, Sustainable Development Goals 3 including Universal Health Coverage, maternal morbidity and mortality review, neonatal morbidity and mortality review, community strategy in health promotion.</b></li> <li>▪ <b>Statistics: Maternal indicators; birth rates, fertility rates, maternal mortality, case fatality rate, caesarean section rate, delivery by skilled providers, contraceptive prevalence rate, adolescent fertility rate. Neonatal indicators; stillbirths, perinatal mortality.</b></li> <li>▪ <b>Statistical analysis: variables, summary of data, display of data, distributions, tests of significance.</b></li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>▪ <b>None.</b></li> </ul>
<b>Mode of Delivery</b>	<ul style="list-style-type: none"> <li>▪ <b>Lectures,</b></li> <li>▪ <b>Group discussions</b></li> <li>▪ <b>Group exercises</b></li> <li>▪ <b>Assignments</b></li> <li>▪ <b>Journal clubs</b></li> </ul>

	<ul style="list-style-type: none"> <li>▪ Evidence based clinical seminars</li> <li>▪ Practicum</li> </ul>
<b>Instructional material/Resources</b>	<ul style="list-style-type: none"> <li>▪ Lecture rooms /conference rooms/classroom</li> <li>▪ Library</li> </ul>
<b>Course Assessment</b>	<ul style="list-style-type: none"> <li>▪ Written exam</li> </ul>

### 3. RESEARCH IN REPRODUCTIVE HEALTH: RESEARCH METHODS AND RESEARCH PROJECTS

<b>Purpose</b>	The learner shall be expected to develop a research proposal of their choice in obstetrics and gynecology, get ethics approval, collect data and write a dissertation
<b>Learning outcomes</b>	<p>By the end of the course, the learner should be able to:</p> <ul style="list-style-type: none"> <li>▪ Develop concept notes, proposals and write their dissertation</li> </ul>
<b>Course Contents</b>	<ul style="list-style-type: none"> <li>▪ Research methods: study populations, case definition, exposure and outcome definition.</li> <li>▪ Errors in measurement; confounding, effect modification, bias, internal and external validity, precision, sensitivity, specificity and predictive value.</li> <li>▪ Research methods; quantitative and qualitative.</li> <li>▪ Evidence based practices; literature search and databases, levels of clinical evidence, critical appraisal and systematic reviews Research ethics; historical perspectives, human subject protection and authorship.</li> <li>▪ Health indicators; statistics, measures of disease, frequency, mortality rates and trends. - Reproductive health epidemiology Concepts; safe motherhood, three delay model, Millennium</li> </ul>

	<p><b>Development Goals, maternal morbidity and mortality review, neonatal morbidity and mortality review, community strategy in health promotion.</b></p> <ul style="list-style-type: none"> <li>▪ <b>Statistics: Maternal indicators; birth rates, fertility rates, maternal mortality, casefatality rate, caesarean section rate, delivery by skilled providers, contraceptive prevalence rate, adolescent fertility rate.</b></li> <li>▪ <b>Prenatal indicators; stillbirths, perinatal mortality.</b></li> <li>▪ <b>Statistical analysis: variables, summary of data, display of data, distributions, tests of significance.</b></li> <li>▪ <b>Research methods: study populations, case definition, exposure and outcome definition Study designs; descriptive, analytic, interventional, implementation science, clinical audits, measures of effect and impact.</b></li> <li>▪ <b>Research ethics; historical perspectives, human subject protection and authorship.</b></li> <li>▪ <b>Proposal development and research writing: title, summary, literature review, rationale, research question, hypothesis, conceptual framework, objectives, methodology, ethical issues, results, discussion, conclusion, recommendations, references, dissemination, publication.</b></li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>▪ <b>Concept note writing</b></li> <li>▪ <b>Research proposal development</b></li> <li>▪ <b>Dissertation writing</b></li> <li>▪ <b>Thesis defense</b></li> <li>▪ <b>Manuscript preparation</b></li> </ul>

<b>Mode of Delivery</b>	<ul style="list-style-type: none"> <li>▪ Lectures</li> <li>▪ Group discussions and exercises</li> <li>▪ Assignments Journal clubs</li> <li>▪ Evidence based clinical seminars</li> <li>▪ Practicum</li> </ul>
<b>Instructional material/Resources</b>	<ul style="list-style-type: none"> <li>▪ Lecture/conference rooms/class room</li> <li>▪ Library</li> </ul>
<b>Course Assessment</b>	<ul style="list-style-type: none"> <li>▪ Proposal presentation</li> <li>▪ Dissertation presentation</li> </ul>

#### 4. EMERGENCY AND CRITICAL CARE IN REPRODUCTIVE HEALTH

<b>Purpose</b>	<b>The learner shall be expected to acquire in-depth knowledge and skills to be able to effectively handle obstetric and gynecologic emergencies as an individual and as part of an emergency response team</b>
<b>Learning outcomes</b>	<ol style="list-style-type: none"> <li>1. To Describe and manage gynaecological emergencies</li> <li>2. To Describe basic and comprehensive emergency obstetric care</li> <li>3. To Outline the principles of adult resuscitation</li> <li>4. To Outline principles of neonatal resuscitation</li> <li>5. To Perform maternal and neonatal resuscitation</li> <li>6. To Outline the basic principles of life support in critical care and their application</li> <li>7. To Outline the process of performing a maternal death review</li> </ol>
<b>Course Contents</b>	<ul style="list-style-type: none"> <li>▪ <b>EmON/ALSO: Pathophysiology and initial management of obstetric emergencies and complications including pre-eclampsia/eclampsia, haemorrhage, amniotic fluid embolism.</b></li> <li>▪ <b>Critical care: Respiratory system: Airway management including use of oral airways, face masks, laryngeal mask airways, tracheal intubation. Causes, diagnosis and management of respiratory failure. Indications for and methods of mechanical ventilation. Principles of weaning from mechanical ventilators. Principles of oxygen therapy. Cardiovascular system: Pathophysiology and management of cardiogenic and hypovolemic shock. Recognition of and management of basic dysrhythmias.</b></li> <li>▪ <b>Pharmacology of the common inotropic, chronotropic, vasodilator and vasoconstrictor drugs. Renal/Metabolic system: Diagnosis, prevention and management of acute renal failure. Fluid, electrolyte, and acid-base disorders. Gastrointestinal/Nutritional systems: Nutritional assessments and principles of adequate nutrition including enteral and parenteral nutrition. Prevention of stress ulceration</b></li> </ul> <p><b>-Management of acute gynaological and obstetric emergencies</b></p>

<b>Skills</b>	-Rapid assessment for shock, adult resuscitation, blood transfusion, MVA, C/S, IIAL; Uterine Tamponade management of pre-eclampsia/eclampsia, management of cord prolapse, breech delivery, vacuum extraction, craniotomy, manual removal of placenta, cervical tear repair, episiotomy repair, bimanual compression, aortic compression, new-born resuscitation, endotracheal intubation, critical care in ICU: fluid balance, electrolyte monitoring, central line insertion, inotropic support, ventilatory support, drug therapy, alimentation, waste management and body care.
<b>Mode of Delivery</b>	-Overview lectures, -Tutorials, -Class discussions and presentations.
<b>Instructional materials/Resources</b>	-Skills lab -Wards -ICU & HDU -Lecture/conference rooms/class room Library -Computer lab -Theatres
<b>Course Assessment</b>	Practical exams



<b>5. ICT IN HEALTH</b>	
<b>Purpose</b>	<b>The learner shall be expected to apply information and communication technology (ICT) in medical practice, research and advocacy.</b>
<b>Learning outcomes</b>	<p><b>By the end of the course, the learner should be able to:</b></p> <ol style="list-style-type: none"> <li><b>1. Apply information and communication technology in health care delivery</b></li> <li><b>2. Apply information and communication technology in medical research</b></li> <li><b>3. Apply information and communication technology in RH advocacy</b></li> <li><b>4. Appreciate and effectively use health information systems.</b></li> </ol>
<b>Course Contents</b>	<ul style="list-style-type: none"> <li><b>• Medical statistical software -EPI Info, SPSS, SAS.</b></li> <li><b>• Health informatics including databases, manual and electronic medical records,report generation including morbidity and mortality reports;</b></li> <li><b>• E-health and telemedicine.</b></li> <li><b>• Application of ICT in research, online literature searches and journal review (medline, Cochrane database).</b></li> <li><b>• Application of health information systems – data collection, storage, retrieval and statistical analysis including clinical decision support systems.</b></li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li><b>• Data collection, storage, retrieval and statistical analysis including clinical decision support systems.</b></li> </ul>
<b>Mode of Delivery</b>	<ul style="list-style-type: none"> <li><b>• Lectures</b></li> <li><b>• PBL and</b></li> <li><b>• Tutorials</b></li> <li><b>• Class discussions</b></li> </ul>

	<ul style="list-style-type: none"> <li>• <b>Demonstrations.</b></li> </ul>
<b>Instructional material/Resources</b>	<ul style="list-style-type: none"> <li>• <b>ICT equipment</b></li> <li>• <b>Learning Resource Centre</b></li> <li>• <b>Computer lab.</b></li> </ul>
<b>Course Assessment</b>	<ul style="list-style-type: none"> <li>• <b>Assignments</b></li> <li>• <b>Practicum</b></li> </ul>

## 6. LEADERSHIP, CLINICAL GOVERNANCE, MANAGEMENT AND COMMUNICATION

<b>Purpose</b>	<b>The learner shall be expected to acquire knowledge, skills and proficiency in leadership, clinical governance, management and communication relevant for effective decision-making, advocacy and positive influence in the field of reproductive health.</b>
<b>Learning outcomes</b>	<p><b>By the end of the course, the learner should be able to:</b></p> <ol style="list-style-type: none"> <li><b>1. Define and characterize the qualities in leadership</b></li> <li><b>2. Differentiate between leadership and management skills</b></li> <li><b>3. Develop leadership skills</b></li> <li><b>4. Deal with conflict management</b></li> <li><b>5. Participate in problem solving and decision making</b></li> <li><b>6. Collate leadership, management and clinical governance</b></li> </ol>

<p><b>Course Contents</b></p>	<p><b>To define and characterize the qualities in leadership:</b></p> <ul style="list-style-type: none"> <li>• <b>Leadership style (basic, Autocratic, bureaucratic, democratic, freelance, power and influential, transformational, transactional, servant); theories of styles (great man, trait, behavior, managerial, contingency, situational, fiedler nodel, path- goal model, participation model); leadership tools; leadership power bases (legitimate, coercive, reward, resource, information, referent, expert, connection); ladder of leadership (followership); leadership grid; Leadership process</b></li> <li>• <b>Types of leadership in healthcare systems</b></li> <li>• <b>Relationship of leadership and management</b></li> <li>• <b>The value of teamwork, integrity and mentorship</b></li> </ul> <p><b>To differentiate between leadership and management skills:</b></p> <ul style="list-style-type: none"> <li>• <b>attributes, skills, communication</b></li> </ul> <p><b>To develop leadership skills:</b></p> <ul style="list-style-type: none"> <li>• <b>Yourself as the leader, emotional intelligence, high individual performance (high potential criteria), high performance teams, strategic planning and leadership potential, guiding organizational change, developing organizational culture; Leadership substitute concepts</b></li> </ul> <p><b>To address conflict management:</b></p> <ul style="list-style-type: none"> <li>• <b>conflict styles, self-evaluation, situational use of various conflict styles and consequences, confronting conflict</b></li> </ul> <p><b>To participate in problem solving and decision making:</b></p> <ul style="list-style-type: none"> <li>• <b>formal techniques, brainstorming, synergistic decision making</b></li> </ul> <p><b>To collate leadership, management and clinical governance:</b></p> <p><b>Pillars of clinical governance; linkage of leadership, management and clinical governance</b></p>
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	<p><b>Application of leadership in health systems:</b></p> <ul style="list-style-type: none"> <li>• <b>Planning, monitoring, evaluation, policy formulation, policy implementation, innovation, levels in reproductive health care, strategic plan formulation, work management, resource management, staff development, documentation and translation, operations and policy decisions, institutional and individual conflict resolution, management of change, organizational development, performance contract, organogram, logistics and supplies, linkages with community, administrative structures, collaborations, gender mainstreaming.</b></li> </ul>
<b>Skills</b>	<b>Core competencies in leadership and relation to health system strengthening</b>
<b>Mode of Delivery</b>	<ul style="list-style-type: none"> <li>• <b>Didactics</b></li> <li>• <b>Role play</b></li> <li>• <b>Practical session in the health facility administration office and in the clinical areas</b></li> <li>• <b>Case reports</b></li> <li>• <b>Audio / visual</b></li> </ul>
<b>Instructional material/Resources</b>	<ul style="list-style-type: none"> <li>• <b>Lecture/conference rooms/class room</b></li> <li>• <b>Library</b></li> <li>• <b>Computer lab</b></li> </ul>
<b>Course Assessment</b>	<p><b>Log book evaluation MCQ</b>  <b>Short answer questions</b>  <b>Case scenario and OSCE</b></p>

## 7. BIOETHICS AND JURISPRUDENCE

<b>Purpose</b>	<b>The learner shall be expected to acquire knowledge on the application of bioethics and jurisprudence in patient management and research</b>
<b>Learning outcomes</b>	<p><b>By the end of the course, the learner should be able to:</b></p> <ol style="list-style-type: none"> <li><b>1. Discuss the constitutional provisions governing medical practice and research</b></li> <li><b>2. Describe the laws and codes governing the medical practice and research</b></li> <li><b>3. Apply ethical principles in patient care and research</b></li> <li><b>4. Acknowledge emerging issues and their relevance</b></li> </ol>
<b>Course Contents</b>	<p><b>Ethical principles and application in clinical practice;</b></p> <p><b>Physician ship:</b></p> <ul style="list-style-type: none"> <li><b>• Integrity; compassion, respect, availability, lifelong professional competence, continuing education.</b></li> </ul> <p><b>Theories of morality and ethics;</b></p> <ul style="list-style-type: none"> <li><b>• Ethical foundations: Hippocratic oath, Physician- patient and Physician-colleague relationship, conduct and practice, conflicts of interest, professional relations, societal responsibilities, consent, patient requests, decisional capacity, patient impairment, surrogate decision maker, dying and death, privacy, confidentiality, chaperons, withdrawal of treatment, substance abuse colleagues, autonomy, beneficence, non-maleficence, justice, data protection, research ethics</b></li> </ul> <p><b>Understand the principles of ethics:</b></p> <ul style="list-style-type: none"> <li><b>• beneficence; non-maleficence; autonomy; justice; dignity and truthfulness; Understand the nature of ethical thinking and the philosophical basis of ethics; Be able to frame an ethical argument</b></li> </ul>

**Be able to discuss the ethical considerations regarding:**

- **refusal of treatment; euthanasia; abortion; contraception; blood borne and sexually transmitted infections; genetic screening; human cloning; maternal-fetal conflict; health economics; inequalities in health care.**

**Legal framework for practice:**

- **Medical regulatory bodies, licensure, fitness to practice, laws governing practice of medicine, medical certifications (birth and death notifications, mandatory post-mortems), notifiable disease, national and international codes.**

**Parliamentary law:**

- **understand the legislative process; know how to locate and state the statutes that impose obligations on doctors; be able to discuss issues on the basis of interpretation of legislation.**

**Duty of care:**

**Be able to describe the duty of care a doctor owes a patient; understand what breach of duty of care/ standard of care implies; how the courts can change what is understood by duty of care; gaining informed consent; the reasons why patients sue for breach of duty of care; how to communicate with patients who have lodged a claim.**

**Medical Board:**

**Understand the powers and limitations of medical boards; the public policy reasons for the existence of medical boards; how to respond to requests from medical boards; how to respond to complaints and how to use complaints to improve practice.**

**Medico-legal aspects:**

**Know how to review a patient file and provide a report; how to perform and report a medico-legal clinical examination (e.g. transport accident victim, patient involved in litigation, sexual assault victim); how to give evidence in court; the importance of a chain of evidence; the role and responsibilities of an expert witness; criminal and civil suits, professional malpractice and professional negligence, sexual harassment, Penal Code, HIV/AIDS Act, Sexual Offences Act, Legal and ethical issues in reproductive health among persons with mental handicaps and illnesses; Pregnancy in exceptional circumstances: rape, persons with mental handicap and illness.**

**Consent for procedures performed on minors and those deemed incompetent to consent.**

**Patient records:**

**understand the need for clear, contemporaneous notes for defending a claim; be aware of issues related to record retention and storage.**

**Privacy and confidentiality:**

**understand the importance of personal privacy to a patient, as well as privacy of personal information, the privacy and confidentiality legislation that applies in your jurisdiction, the potential areas of conflict between patient confidentiality and other overriding obligations such as mandatory reporting or criminal law.**

**Mandatory reporting:**

**understand what mandatory reporting refers to and why it exists; understand the reporting obligations of health professionals in their relevant jurisdiction.**

**Emerging issues:**

**DNA studies, assisted reproduction, gamete and embryonic storage and disposal, HIV and disclosure (physician to patient), reproductive options of HIV discordant couples, stem cell research and medicine, genetic modification, cloning, organ donation.**

<b>Skills</b>	<b>Proficiency in medico-legal documentation and testimony</b>
<b>Mode of Delivery</b>	<b>Overview lectures, Tutorials, Class discussions and Presentations</b>
<b>Instructional material/Resources</b>	<b>Lecture/conference rooms/class room Library Computer lab</b>
<b>Course Assessment</b>	<b>Individual assignments, written reports, class presentations, written examinations</b>



## 8. RADIOLOGY AND IMAGING

<b>Purpose</b>	The learner shall be expected to acquire knowledge and skills in medical imaging, relevant in the management of reproductive health patients.
<b>Learning outcomes</b>	<ol style="list-style-type: none"> <li>1. -Discuss the various types of imaging (scientific basis advantages and disadvantages).</li> <li>2. Interpret imaging output of various conditions in reproductive health.</li> <li>3. Carry out appropriate diagnostic imaging procedures in obstetrics and gynecology</li> <li>4. Discuss imaging hazards in reproductive health</li> </ol>
<b>Course Content</b>	<p><b>Definition; Medical imaging procedures- Scientific principles, Advantages, Disadvantages, Uses in reproductive health (Ultrasonography, Conventional radiology/X-Ray, Hysterography, Hysteroscopy, CT scan, MRI, PET, Mammography, Fluoroscopy);</b></p> <p><b>Imaging and telemedicine; (common conditions: Congenital diseases; Endometriosis; Benign and Malignancies the uterus and ovaries; Cervical cancer; Cysts; Inflammatory diseases) Ultrasonography skills including fetal viability, fetal presentation and biometry, placental localisation, biophysical profile and amniotic fluid assessment, umbilical artery Doppler, anomaly scans, transvaginal sonography ultrasound-guided amniocentesis and paracentesis. Extrauterine gravidity, 3-D Ultrasonography. Common artefacts</b></p> <p><b>X-ray radiation; bio-effects and safety of ultrasound; imaging procedure-related hazards.</b></p>
<b>Skills</b>	<p><b>-Perform basic gynaecological and obstetric ultrasound, performing and reporting on HSG Participate in performing and reporting on intravenous urography Participate in performing and writing on Urethrograms Participate in reporting relevant conventional radiographs Interpret mammographs Participate in basic CT scan and MRI anatomy of the pelvic organs.</b></p>

<b>Mode of Delivery</b>	<b>Lecturers, group discussions, presentations, assignments, journal clubs, clinical seminars, clinical rotations, Telemedicine</b>
<b>Instructional material/Resources</b>	<b>ICT materials, radiology machines</b>
<b>Course Assessment</b>	<b>CAT Logbooks</b>

## 9. CLINICAL SKILLS IN REPRODUCTIVE HEALTH

<b>Purpose</b>	<b>The learner shall be expected to develop clinical skills that will be useful in managing reproductive health patients</b>
<b>Learning outcomes</b>	<b>By the end of the course, the learners should be able to demonstrate competencies in selected clinical skills</b>
<b>Course Content</b>	<b>Clinical skills:</b> <b>Medical skills: history, examination, investigations, diagnosis, informed consent, treatment, follow-up, referral.</b> <b>Surgical skills: common surgical procedures, anaesthesia, analgesia, pre-operative care, surgical instruments, sutures, positioning, access, surgical techniques, adaptations, limitations, tissue handling, closure, post-operative care.</b> <b>Social and communication skills: problem identification, empathy, sympathy, counselling skills, assurance, professionalism, standard operating procedures.</b> <b>Nursing procedures: observations, patient comfort, bed making, care of the moribund and unconscious patient, wound care, catheterization, drug and fluid administration, blood transfusion, intravenous alimentation, Rye's tube, flatus tube, drains, postoperative management.</b> <b>Infection prevention and control: Universal precautions; hand hygiene, personal protective equipment, safe handling of sharps, handing biological material, management of occupational exposure to infective agents, post exposure prophylaxis, theatre environment, face mask, environmental management, patient flow, premises, cleaning, disinfection, sterilization, autoclaving, waste management, nosocomial infections, wound care.</b>

<b>Skills</b>	<b>Skills Lab:</b> <ul style="list-style-type: none"> <li>• <b>Instrument identification</b></li> <li>• <b>Infection prevention (3 buckets, waste management, 5 swab, instrument management, placenta disposal)</b></li> </ul> <b>Clinical procedures:</b> <ul style="list-style-type: none"> <li>• <b>Catherization</b></li> <li>• <b>Pre-op/post-op preparation</b></li> <li>• <b>Wound care</b></li> <li>• <b>Operation/procedure set setting (MVA, IUCD, Jadelle, delivery, CS, laparotomy)</b></li> </ul>
<b>Mode of Delivery Lecturers</b>	<b>Multimedia</b> <b>Skills lab demonstrations</b> <b>Small group discussions</b> <b>Demonstration</b>
<b>Instructional material/Resources</b>	<b>Lecture/conference rooms/class room</b> <b>Library</b> <b>Computer lab</b> <b>Skills lab</b> <b>Clinical wards</b> <b>Outpatient clinics</b>
<b>Course Assessment</b>	<b>Practicum</b>

## 10. FAMILY PLANNING AND ABORTION CARE

<b>Purpose</b>	<b>To equip learners with the necessary knowledge, skill, and attitude to provide comprehensive family planning and abortion care services.</b>
<b>Learning outcomes</b>	<b>By the end of the course, the learners should be able to:</b> <ol style="list-style-type: none"><li><b>1. Describe the health, social and economic burden of unsafe abortion and its contribution to maternal mortality.</b></li><li><b>2. Explain how social, political, economic, cultural, factors that affect abortion care and access to reproductive health care.</b></li><li><b>3. Recognize reproductive health rights and international and regional regulations.</b></li><li><b>4. Comply with the national laws concerning comprehensive abortion services and family planning.</b></li><li><b>5. Describe strategies to prevent unsafe abortion and its complications.</b></li><li><b>6. Counsel patient about all alternatives available to them for unplanned pregnancy.</b></li><li><b>7. Perform clinical assessment (history, physical examination and other investigations) for clients who need abortion care services.</b></li><li><b>8. Perform Comprehensive Abortion Care (CAC) service.</b></li><li><b>9. Identify and manage potential complications.</b></li><li><b>10. Provide counseling on all range of family planning options.</b></li><li><b>11. Provide all forms of family planning methods including long-acting reversible contraceptive methods and permanent methods.</b></li><li><b>12. Recognize health systems needs and logistics management for service delivery</b></li></ol>

<b>Course Content</b>	<p><b>Contraception/Family planning: relation to socioeconomic development, impact on environmental sustainability, national policies, organization of services, indicators of utilization, contraceptive methods, dispensation, skills, ethics, counselling, informed choice, special groups, advances, research, advocacy, outreach.</b></p> <p><b>Abortion care: Providing Comprehensive Abortion Care (CAC) which includes Post Abortion Care(PAC) and Safe Abortion Care (SAC) services in first and second trimesters of pregnancy, managing abortion complications and providing post abortion family planning.</b></p>
<b>Skills</b>	<p><b>Skills Lab and clinical procedures:</b></p> <ul style="list-style-type: none"> <li>• <b>Provide counselling for FP and Abortion care clients</b></li> <li>• <b>Jadelle insertion/removal</b></li> <li>• <b>Implanon insertion/removal</b></li> <li>• <b>IUCD (mirena, copper T, Multiload) insertion/removal</b></li> <li>• <b>Bilateral tubal ligation (immediate post-parum and interval)</b></li> <li>• <b>MA and Surgical abortions methods</b></li> </ul>
<b>Mode of Delivery</b>	<ul style="list-style-type: none"> <li>• <b>Lecturers</b></li> </ul>
	<ul style="list-style-type: none"> <li>▪ <b>Case based learning (SRH clinics, morning sessions, case presentations monthly FP and CAC audit)</b></li> <li>▪ <b>Management sessions/seminars</b></li> <li>▪ <b>Lectures (virtual or in person)</b></li> <li>▪ <b>Journal club/critical appraisal of evidences</b></li> <li>▪ <b>Demonstration (both in simulated and clinical settings)</b></li> <li>▪ <b>Supervised practice with feedback</b></li> <li>▪ <b>Value clarification for attitudinal transformation exercise</b></li> </ul>

<b>Instructional material/Resources</b>	<ul style="list-style-type: none"> <li>▪ <b>Skills lab and lecture hall</b></li> <li>▪ <b>Clinics with equipment and commodities</b></li> </ul>
<b>Course Assessment</b>	<ul style="list-style-type: none"> <li>▪ <b>Progressive assessment (Direct observation of procedural skills)</b></li> <li>▪ <b>Case-based discussion (patient record review)</b></li> <li>▪ <b>Multi-source feedback/360 degree</b></li> <li>▪ <b>Written Exam</b></li> <li>▪ <b>Clinical assessment</b></li> <li>▪ <b>Objective structured clinical examinations (OSCE)</b></li> <li>▪ <b>Logbook (paper based or e-logbook)</b></li> </ul>

## 11. MATERNAL-FETAL MEDICINE AND NEONATAL MEDICINE

<b>Purpose</b>	<p>The learner shall be expected to acquire advanced knowledge, experience and skills on pre- conception, early pregnancy, antepartum, intrapartum, postpartum and neonatal care.</p> <p>The learner is also expected to acquire basic knowledge and skills in resuscitation and ICU management in order to participate in management of normal and high-risk neonates.</p>
<b>Learning outcomes</b>	<p>By the end of the course, the learner should be able to:</p> <ol style="list-style-type: none"><li>1. The learner shall be expected to acquire advanced knowledge, experience and skills on preconception, early pregnancy, antepartum, intrapartum, postpartum and neonatal care.</li><li>2. The learner is also expected to acquire basic knowledge and skills in resuscitation and ICU management in order to participate in management of normal and high-risk neonates.</li></ol>
<b>Course Content</b>	<ul style="list-style-type: none"><li>▪ The normal course of labor and risk factors for abnormal labor.</li><li>▪ The appropriate role for and complications of the following interventions for abnormal labor: analgesia, amniotomy, augmentation of labor, uterine contraction monitoring, episiotomy, operative vaginal and abdominal delivery.</li><li>▪ Accurate history of a patient’s previous operative delivery</li><li>▪ Focused physical examination in postpartum patients.</li><li>▪ Immediate care for the newborn, including neonatal resuscitation, APGAR score assignment.</li><li>▪ Focused physical examination and perform/interpret appropriate tests for patients who present to triage for third trimester bleeding, pre-term labor, PROM and general medical concerns.</li><li>▪ Performance of spontaneous vaginal delivery and episiotomy under the supervision of attending staff and/or senior resident.</li><li>▪ Performance and interpret the following methods of fetal monitoring: intermittent auscultation,</li></ul>



	<p>electronic monitoring, fetal scalp stimulation, and vibroacoustic stimulation.</p> <ul style="list-style-type: none"> <li>▪ Causes for and clinical significance of bradycardia, tachycardia, increased variability, decreased/absent variability, decelerations (early, variable, and late) and the sinusoidal waveform</li> <li>▪ Assessment of the progress of labor.</li> <li>▪ Recognize and appropriately evaluate abnormal fetal presentations and positions.</li> <li>▪ Perinatal care of the new-born</li> <li>▪ Labour management including partograph, cardiotocography, foetal scalp sampling.</li> <li>▪ Neonatal assessment: Examination of the new-born, Apgar scoring and congenital abnormalities assessment.</li> <li>▪ Immediate and routine care of the new-born including drying, warmth, airway patency, oxygenation, vitamin K, eye care and neonatal feeding.</li> <li>▪ Emergency management of neonatal conditions including birth asphyxia; ABCD of resuscitation; cord blood sampling.</li> <li>▪ Basics of obstetric ICU management</li> <li>▪ Maternal death Review, various methods, including near miss</li> </ul>
<p><b>Skills</b></p>	<ul style="list-style-type: none"> <li>▪ Assessment of bleeding in early pregnancy, early pregnancy loss and hyperemesis gravidarum.</li> <li>▪ Evacuation of the uterus by suction curettage, dilatation and curettage of the uterus.</li> <li>▪ Laparotomy and laparoscopy for ectopic gestation.</li> <li>▪ Dilation and evacuation for second trimester foetal death.</li> <li>▪ Obstetric procedures:</li> <li>▪ Antepartum: Amniocentesis (for genetic diagnosis in 2nd trimester and for assessment of foetal lung maturity in 3rd trimester;</li> </ul>

- **Trans abdominal and transvaginal Chorionic villus sampling; Cordocentesis.**
- **Cervical cerclage.**
- **Antepartum Fetal assessment: Biophysical profile, Contraction stress test, Nonstress test, Vibroacoustic stimulation.**
- **Intrauterine transfusion; Amnioinfusion. Ultrasound examination, Abdominal ultrasonography, external cephalic version of breech.**
- **Intrapartum: Intrapartum Fetal assessment: Fetal heart rate monitoring (internal/external), Fetal scalp pH determination, Fetal scalp stimulation test. Amniotomy. Induction of labour: prostaglandins or oxytocin.**
- **Manual removal of the placenta; Curettage for adherent placenta.**
- **Vaginal delivery: Spontaneous vaginal delivery; Breech delivery; Forceps delivery; Vacuum extraction.**
- **Episiotomy and repair; Immediate repair of genital tract lacerations - cervical, perineal (second, third- and fourth-degree lacerations);**
- **Caesarean delivery: Classical, Low transverse, Low vertical; Caesarean hysterectomy; Skin incision Vertical, Transverse.**
- **Post-partum management: Balloon tamponade, B-Lynch technique, Uterine artery ligation, Hypogastric artery ligation, sub-total hysterectomy**
- **Anaesthetic/analgesic procedures, Administration of parenteral analgesics/sedatives, Administration of narcotic antagonists; Anaesthesia: Epidural, General, Spinal**
- **Postpartum: Haematoma evacuation – Intra-abdominal -Vulvar, Vaginal Neonatal resuscitation,**
- **Wound care- Debridement; Incision and drainage of abscess or hematoma; Repair of dehiscence, secondary closure.**

<b>Mode of Delivery</b>	<b>Overview lectures</b> <b>PBL Tutorials</b> <b>Class discussions</b> <b>Presentations</b> <b>Demonstrations</b>
<b>Instructional material</b>	<b>ICT equipment (laptops and LCDs)</b> <b>Whiteboard/chalkboard</b> <b>Learning Resource Centre (LRC)</b> <b>Hospital HMIS department</b> <b>Division of reproductive health (national and county levels)</b> <b>Patient clinics and wards</b> <b>Operating theatres</b> <b>Critical care units</b> <b>New-born unit Imaging department</b> <b>Resource persons</b> <b>Grand Rounds</b>
<b>Course Assessment</b>	<b>Log book of attendance and procedures</b> <b>MCQ and short answer questions</b> <b>Case reports</b> <b>Clerking long and short cases</b> <b>OSCE</b>

## 12. MEDICAL DISORDERS IN PREGNANCY AND INFECTIOUS DISEASES IN REPRODUCTIVE HEALTH

<b>Purpose</b>	<ul style="list-style-type: none"><li>• The learner shall be expected to acquire knowledge and skills to appropriately manage individuals and couples with infectious diseases in RH and to prevent infectious diseases in the community.</li></ul>
<b>Objectives</b>	<ol style="list-style-type: none"><li>1. Describe and recommend management of diabetes mellitus in pregnancy.</li><li>2. Interpret screening tests for gestational diabetes.</li><li>3. Evaluate signs and symptoms of urinary tract pathology in pregnant women.</li><li>4. Describe the indications for the common diagnostic tests for renal disease in pregnancy.</li><li>5. Perform a focused history and physical examination in pregnant patients who have known or suspected infectious diseases.</li><li>6. Choose and perform laboratory tests to confirm the diagnosis of infection.</li><li>7. thrombocytopenia, deep vein thrombosis, and coagulopathy in pregnancy.</li><li>8. Describe the etiology, presentation, Investigation and Management of cardiopulmonary diseases in pregnancy.</li><li>9. Describe the indications for and interpret the results of common diagnostic tests for cardiopulmonary disease in pregnancy</li><li>10. Perform a history and physical examination for the diagnosis and management of gastrointestinal disease in pregnancy.</li><li>11. Describe the indications for and interpret the results of common diagnostic tests and management for gastrointestinal disease in pregnancy.</li></ol>

- 12. Describe the symptoms of common psychiatric disorders and management in pregnancy.**
- 13. Describe the etiology, presentation, Investigation and Management of chronic hypertension, preeclampsia and gestational hypertension and to assess the severity of chronic hypertension, gestational hypertension, and preeclampsia.**
- 14. Describe the etiology, presentation, Investigation and Management of Gestational Diabetes and Diabetes in Pregnancy**
- 15. Describe the etiology, presentation, Investigation and Management Thyroid Diseases in Pregnancy**
- 16. Describe the etiology, presentation, Investigation and Management of Connective Tissue disorders in Pregnancy**
- 17. Describe the factors that predispose to multiple gestation.**
- 18. Describe the physical findings suggestive of multiple gestation**
- 19. Describe the factors that predispose to fetal growth restriction.**
- 20. Evaluate the patient for causes of intrauterine growth restriction.**
- 21. Describe the possible causes of premature rupture of membranes (PROM) in preterm and term patients.**
- 22. Describe the etiology, presentation, Investigation and Management of anemia,**
- 23. Describe the clinical history indicative of fetal death.**
- 24. Describe the possible causes and Management of fetal death**
- 25. Evaluate the public health burden of reproductive tract infections**

	<p><b>26. To understand the epidemiology, pathophysiology, clinical features, prognosis and management of infections in RH</b></p> <p><b>27. Understand the principles of prevention, detection and isolation</b></p> <p><b>28. Understand therapy (immunization, prophylaxis, antibiotics and antivirals</b></p> <p><b>29. Manage communicable diseases in Reproductive Health including ruptured membranes, Chorioamnionitis, puerperal sepsis, mastitis, endometritis, urinary tract infections, wound infections, septic shock, malaria and other tropical infections/infestations</b></p> <p><b>30. Fetus and neonatal infections including streptococcus, gonococcus, syphilis, toxoplasma, listeria, haemophilus, chlamydia, mycoplasma, ureaplasma, herpes hominis, rubella, cytomegalovirus, varicella, hepatitis A, hepatitis B, hepatitis C, Parvovirus, influenza, human immunodeficiency virus, neonatal sepsis)</b></p>
<b>Course Content</b>	<p><b>-Prevalence and incidence, investigation of Medical Disorders in pregnancy and their management</b></p> <p><b>-Prevalence and incidence of Reproductive tract infections and their management.</b></p> <p><b>-Determinants of sexually-transmitted and non-sexually transmitted Reproductive tract infections,</b></p> <p><b>-Effects of and mortality associated with Reproductive tract infections, relation of Reproductive tract infections and HIV/AIDS.</b></p> <p><b>-Prevalence, diagnosis and treatment of ruptured membranes, Chorioamnionitis, puerperal sepsis, mastitis, endometritis, urinary tract infections, wound infections, septic shock, malaria and other tropical infections/infestations, leprosy, schistosomiasis and filariasis, brucellosis, toxoplasmosis.</b></p>
<b>Skills</b>	<p><b>Skills and clinical competence to address infectious diseases in RH and to prevent infectious diseases in the community.</b></p>

<b>Mode of Delivery</b>	<b>Overview lectures,</b> <b>Tutorials,</b> <b>Self-Directed Learning,</b> <b>Class discussions and Presentations,</b> <b>Bedside teachings, Ward Rounds,</b> <b>Theatre Practicum, Grand Rounds, Seminars and Conferences</b>
<b>Instructional material/Resources</b>	<b>ICT equipment, Learning Resource Centre, Resource persons, operating theatres, minor theatres, wards, outpatient clinics, internal medicine department, diagnostic laboratories, radiology and imaging department</b>
<b>Course Assessment</b>	<b>MCQs</b> <b>Log Book</b> <b>Practicum Short Essay questions MEQ</b> <b>OSCE , Case write-ups</b>

<b>13. HEALTH SYSTEMS AND PROGRAM MANAGEMENT</b>	
<b>Purpose</b>	<b>To understand the components of the health system and how it works, with an emphasis on health management.</b>
<b>Learning Outcome</b>	<ol style="list-style-type: none"> <li><b>1. To define and understand the health system building blocks</b></li> <li><b>2. To acquire skills in using the health system to critique existing programs and policies</b></li> <li><b>3. To apply the knowledge in delivering high-impact RH programs</b></li> </ol>
<b>Course Contents</b>	<p><b>Health Service Delivery e.g. Number and distribution of health facilities per 10 000 population, District and national databases of health facilities, Number and distribution of inpatient beds per 10 000 population.</b></p> <p><b>Health Workforce, eg Number and distribution of health workers per 10 000 population, Annual number of graduates of health specialization educational institutions per 100 000, deployment and retention.</b></p> <p><b>Health Information-Health information system performance index Review of national health information systems.</b></p> <p><b>Essential Medicines- availability of 14 selected essential medicines in public and private health facilities, Median consumer price ratio of 14 selected essential medicines in public and private facilities, supply chain.</b></p> <p><b>Health Financing- Total expenditure on health National Health Accounts (NHA), General government expenditure on health as a proportion of general government expenditure (GGHE/GGE), The ratio of out-of-pocket household payments for health to total expenditure on health.</b></p> <p><b>Leadership and Governance-in respective with reproductive, maternal, newborn, and adolescent health.</b></p>
<b>Skills</b>	<b>Skills in using the health system to critique existing programs and policies</b>
<b>Mode of Delivery</b>	<b>Didactic, lectures, practicum site, e-learning platform</b>
<b>Course Assessment</b>	<b>Logbook evaluation, MCQ, Short answer questions, Case scenario and OSCE.</b>



<b>14. NEONATOLOGY</b>	
<b>Purpose</b>	<b>Acquire knowledge, skills and competencies in the management of normal, high risk and sick neonates.</b>
<b>Learning Outcome</b>	<ol style="list-style-type: none"> <li><b>1. To examine and provide basic neonatal care and counsel for infant feeding choices</b></li> <li><b>2. To recognize and manage complications and abnormalities of the newborn and perform basic resuscitation.</b></li> <li><b>3. To manage high-risk neonates – premature babies, small for gestation babies, infants of diabetic mothers, rhesus incompatibility and birth asphyxia.</b></li> <li><b>4. To Understand the basics of ICU care for neonates</b></li> </ol>
<b>Course Contents</b>	<p><b>Perinatal care of the newborn: Neonatal assessment: Examination of the newborn, Apgar scoring and congenital abnormalities assessment. Immediate and routine care of the newborn includes drying, warmth, airway patency, oxygenation, vitamin K, eye care and Neonatal feeding. Emergency management of neonatal conditions, including birth asphyxia; ABCD of resuscitation; cord blood sampling. Basics of ICU management for neonates.</b></p> <p><b>Perinatal death reviews.</b></p>
<b>Instruction materials/ resources</b>	<p><b>ICT equipment (laptops and LCDs)</b></p> <p><b>Whiteboard/chalkboard Learning Resource Centre (LRC) Grand Rounds</b></p>
<b>Mode of delivery</b>	<b>Overview lectures PBL Tutorials Class discussions Presentations Demonstrations</b>
<b>Course Assessment</b>	<p><b>Logbook , MCQ and short answer questions</b></p> <p><b>Case reports Clerking long and short cases</b></p> <p><b>OSCE, CAT.</b></p>

<b>15. PAEDIATRIC AND ADOLESCENT REPRODUCTIVE HEALTH</b>	
<b>Purpose</b>	<b>The learner shall be expected to acquire knowledge, skills and experience to effectively manage pediatric and adolescent patients' reproductive health issues</b>
<b>Learning Outcome</b>	<b>To apply variances in embryology, anatomical and physiological development of male and females To Describe adolescent sexual and reproductive health for prevention, management and control</b>
<b>Course Content</b>	<p><b>Pediatric: ambiguous genitalia, intersex, vaginal discharge, pseudo-breast, nipple discharge, pre-pubertal vulvo-vaginal disorders, urethral prolapse, reproductive tract infections, urinary tract disorders, mother to child transmission, ovarian cysts, precocious puberty, sexual and gender-based violence, trauma of the reproductive tract, tumours, vaccinations.</b></p> <p><b>Adolescent: gonadal dysgenesis, genetic disorders, nutritional disorders, menstrual disorders; surgery for genital tract anomalies, sexuality and sexual dysfunction, pelvic pain, hirsutism, polycystic ovarian disease, endometriosis, breast abnormalities, tumours, mental health.</b></p> <p><b>Adolescent sexuality: legislature, policies, Maslow's needs hierarchy; adverse childhood experiences; Adolescent health indicators, youth friendly services, contraception, reproductive tract infections, adolescent pregnancy, rites of passage, sexual and gender based violence, gender mainstreaming, drugs and substance abuse, healthy relationships, life skills, adolescent sexual health and rights, health education health promotion, primary prevention, screening, prophylaxis, responsibility; re- integration in family and society .</b></p>
<b>Skills</b>	<b>Knowledge, skills and clinical competence to address pediatric and adolescent reproductive health</b>

<b>Mode of Delivery</b>	<b>Didactics</b> <b>Case studies</b> <b>Clinical demonstration of obtaining history and physical examination of the pediatric and adolescent.</b> <b>Radiological and imaging unit</b> <b>Laboratory access</b> <b>Laparoscopic theatre</b>
<b>Instructional material/Resources</b>	<b>Lecture/conference rooms/class room</b> <b>Library</b> <b>Computer lab</b> <b>Wards Clinics</b>
<b>Course Assessment</b>	<b>Log book of attendance in the respective resource laboratories and auxiliary service delivery points</b> <b>MCQ and short answer questions</b> <b>OSCE with presentation of:</b> <b>Slides, pictures or videos</b> <b>Role play of counseling session marked against a checklist</b>

<b>16. BENIGN GYNAECOLOGICAL CONDITIONS</b>	
<b>Purpose</b>	The learner is expected to acquire knowledge and skills in pathophysiology, pathology and presentation of benign disorders in reproductive health and their management
<b>Learning Outcome</b>	<ol style="list-style-type: none"> <li>1. Explain the pathophysiology, diagnosis and management of menstrual disorders</li> <li>2. Explain pathology, diagnosis and management of benign uterine, ovarian, fallopian tube and uterine lesions/ neoplasms.</li> <li>3. Explain pathology, diagnosis and management of vulval dystrophy and benign vulvovaginal neoplasms</li> <li>4. Explain the pathophysiology diagnosis and management of endometriosis and adenomyosis.</li> <li>5. Explain pathophysiology, pathology, diagnosis and management of congenital anomalies of the reproductive tract</li> <li>6. Explain pathophysiology, pathology, diagnosis and management of benign breast disorders</li> </ol>
<b>Course Content</b>	<p>Pathophysiology, investigation, diagnosis and management of menstrual disorders. Pathology, investigations and management of uterine, ovarian and fallopian tube benign lesions/tumours (fibroids, adenomyosis, endometrial hyperplasia, endometrial polyps, fibromas, cervical polyps). Pathology, investigations, diagnosis and management of vulval dystrophies and benign vulvo-vaginal lesions/tumours (vaginal cysts, vulval swellings, ulcerations). Pathology, investigation, diagnosis and management of endometriosis and adenomyosis. Pathophysiology investigations, diagnosis and management of congenital anomalies (ambiguous genitalia, absent vagina,</p>

	<b>imperforate hymen, vaginal septum, mullerian duct dysgenesis- cervical duplex, unicornuate uterus, bicornuate uterus, rudimentary horns, tunners syndrome, hermerphroditism). Pathophysiology investigations, diagnosis and management of benign breast conditions</b>
<b>Skills</b>	<b>Assessment and management of menstrual disorders, vulval dystrophy, benign vulvovaginal tumours, benign ovarian tumours, benign fallopian tube tumours, adenomyosis, congenital abnormalities of the reproductive tract. Identify breast lesions and refer for appropriate management. Proficiency in performing vulvo- vaginal biopsy, abdominal and vaginal hysterectomy, myomectomy, adnexal surgery, identification of post-operative complications. Basic skills in laparoscopic ovarian biopsy, endometriosis surgery, laparoscopic ovarian cystectomy and salpingo-oophorectomy, hysteroscopic resections.</b>
<b>Mode of Delivery</b>	<b>Overview Lectures, Tutorials, Self-Directed Learning, Class discussions and Presentations, Bedside teachings, Ward Rounds, Theatre Practicum, Grand Rounds, Seminars, Conferences</b>
<b>Instructional material/Resources</b>	<b>ICT equipment, Learning Resource Centre, Resource persons, operating theatres, minor theatres, wards, outpatient clinics.</b>
<b>Course Assessment</b>	<b>MCQs Log Book Practicum Short Essay questions MEQ OSCE Case write-ups</b>



<b>17. PRE-MALIGNANT AND MALIGNANT GYNAECOLOGICAL CONDITIONS</b>	
<b>Purpose</b>	<b>The learner is expected to acquire in-depth knowledge and skills in pathophysiology, pathology, presentation and prevention in order to be able to provide appropriate management of premalignant and malignant disorders in reproductive health.</b>
<b>Learning Outcome</b>	<ol style="list-style-type: none"> <li><b>1. Describe screening of gynaecological cancer</b></li> <li><b>2. Investigate, diagnose and manage premalignant lesions.</b></li> <li><b>3. Investigate, diagnose and manage malignant lesions</b></li> <li><b>4. Describe pathology of malignant tumours of vulva, vagina, cervix, uterus, fallopian tube and ovary.</b></li> <li><b>5. Diagnose, investigate, and manage malignant gynaecological tumours, and refer appropriately.</b></li> <li><b>6. Describe the principles of chemotherapy in treatment of malignancies</b></li> <li><b>7. Describe the principles of radiation therapy</b></li> </ol>
<b>Course Content</b>	<p><b>Epidemiology, clinical presentation, pathogenesis and pathology: Vulval cancer, vaginal cancer, uterine cancer, ovarian cancer, breast and gestational trophoblastic disease.</b></p> <p><b>Principles of chemotherapy and Radiation therapy; Surgical intervention; Terminal care for advanced gynecological malignancy: basic principles of palliative care; Effect of pregnancy on tumours; Effect of tumors on pregnancy; Effect of therapy on fetus and future fertility.</b></p> <p><b>Vulval intraepithelial neoplasia, Vaginal intraepithelial neoplasia, Cervical intraepithelial neoplasia; Endometrial hyperplasia, screening tests including Pap Smears, colposcopy; tumor markers, imaging including mammograms, cytology and histopathology, genetic studies.</b></p> <p><b>Screening for gynecological cancer – pap smear, unaided visual inspection, HPV, Doppler ultrasound, tumour markers, Investigations, diagnosis and management of premalignant lesions of vulva, cervix, uterus and ovaries –</b></p>

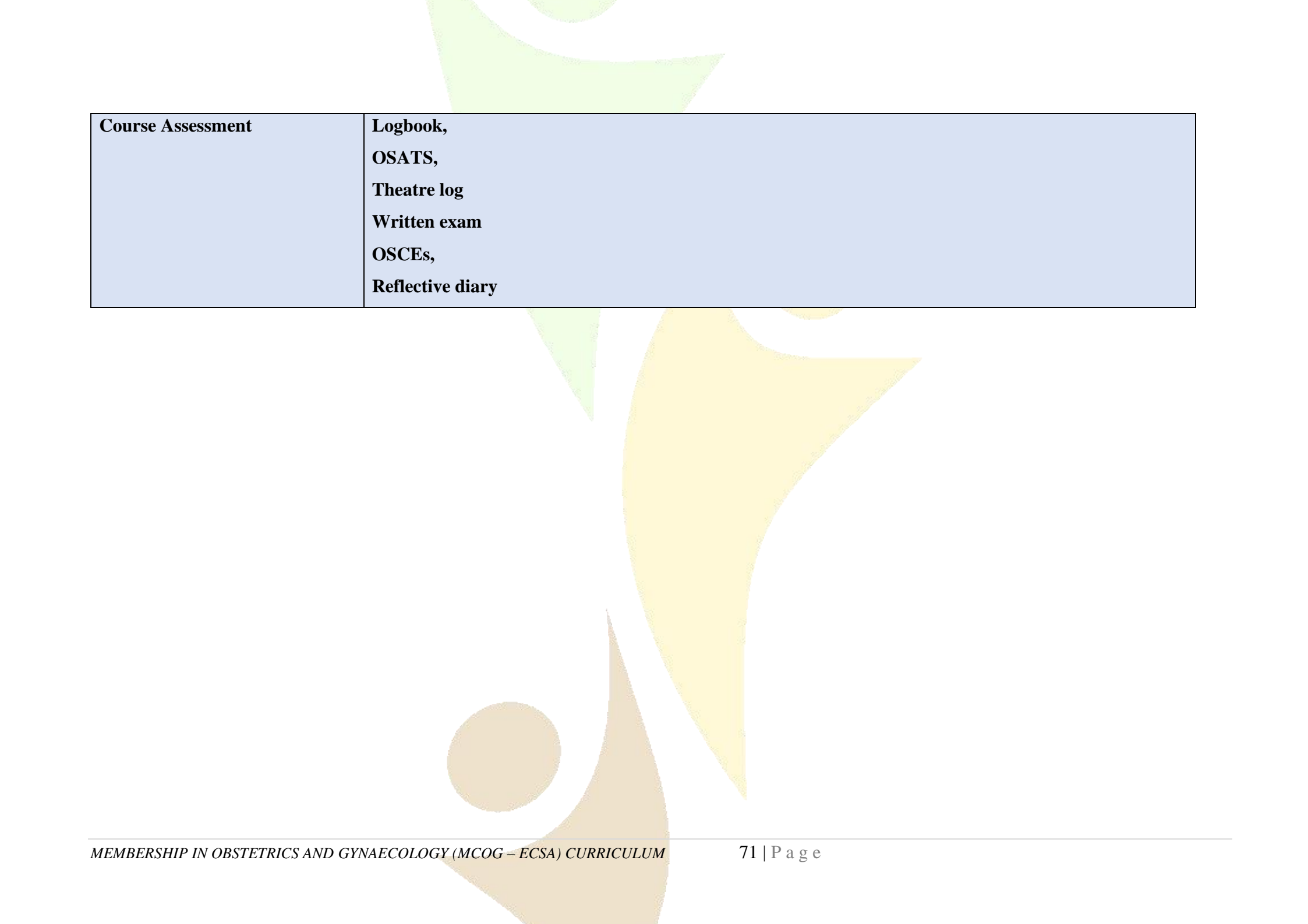
	<b>colposcopy, Doppler ultrasound, pipple biopsies, tumour markers. Pathology of vulva, vaginal, cervical, uterine, tubal, ovarian malignancies and choriocarcinoma.</b>
<b>Skills</b>	<b>Overview lectures, Tutorials, Class discussions and Presentations</b>
<b>Mode of Delivery</b>	<b>Overview lectures, Tutorials, Self-Directed Learning, Class discussions and Presentations, Bedside teachings, Ward Rounds, Theatre Practicum, Grand Rounds, Seminars, Conferences</b>
<b>Instructional material/Resources</b>	<b>ICT equipment, Learning Resource Centre, Resource persons, operating theatres, minor theatres, colposcopy suite, labs, radiotherapy unit</b>
<b>Course Assessment</b>	<b>MCQs Log Book Practicum Short Essay questions MEQ OSCE Case write-ups</b>



## 18. INFERTILITY AND ENDOCRINOLOGY

<b>Purpose</b>	<b>The learner shall be expected to acquire the knowledge and skills necessary to appropriately manage infertile/subfertile individuals and couples and prevent infertility in the community.</b>
<b>Learning Outcome</b>	<ol style="list-style-type: none"><li><b>1. Discuss causes of infertility/subfertility (anatomical and endocrinology)</b></li><li><b>2. Take a comprehensive infertility history and perform relevant examination</b></li><li><b>3. Request and interpret relevant investigations for the infertile couple</b></li><li><b>4. Communicate and counsel the infertile couple on diagnosis and management</b></li><li><b>5. Understand management and complication of infertility and subfertility treatment including basic principles of Artificial Reproductive Technology</b></li><li><b>6. Appreciate psychological and cultural impact of sub/infertility</b></li><li><b>7. Legal and ethical issues related to infertility</b></li></ol>

<b>Course Content</b>	<p><b>Aetiology; male, female, epidemiology, socio-economic impact, psychological impact, socio cultural issues, human immunodeficiency virus infection.</b></p> <p><b>Male infertility investigations; semenalysis, semen-mucus interaction tests, post-coital tests, hormonal assay, testicular ultrasound, vasogram, testicular biopsy Female infertility; hysterosalpingogram, ultrasound, hormonal assay, semen-mucus interaction tests, post-coital test, role of magnetic resonance imaging. Treatment; ovulation induction, luteal phase support, diagnostic and operative laparoscopy, myomectomy, tubal surgery, endometriosis surgery, ovarian drilling, diagnostic and operative hysteroscopy.</b></p> <p><b>Assisted reproductive technology; historical aspects, scope, semen processing, intrauterine insemination, ovulation induction, intra-uterine insemination, semen bank, cryopreservation, in vitro fertilization and embryo transfer, intracytoplasmic sperm injection, endometrial preparation, testicular sperm aspiration, testicular sperm extraction, embryo cryopreservation, gamete and embryo donation, pre-implantation genetic determination, surrogacy, adoption, socio-cultural issues, legal and ethical aspects</b></p>
<b>Skills</b>	<p><b>Detailed assessment for the infertile couple</b></p> <p><b>Counselling of the infertile couple, appreciating the psychological and cultural impact of infertility, respect a woman’s dignity and need for confidentiality.</b></p> <p><b>Perform hystero-salpingography, perform diagnostic hysteroscopy and laparoscopy, assess for tubal patency, and stage endometriosis.</b></p>
<b>Mode of Delivery</b>	<p><b>Tutorials, small group sessions, overview lectures, subfertility clinics, bed side teaching, training courses</b></p>
<b>Instructional material/Resources</b>	<p><b>Library, Faculty, skills lab, laparoscopy/hysteroscopy course, online resources</b></p>



<b>Course Assessment</b>	<b>Logbook, OSATS, Theatre log Written exam OSCEs, Reflective diary</b>
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<b>19. MINIMALLY INVASIVE SURGERY</b>	
<b>Purpose</b>	<b>The learner shall be expected to able to use various endoscopic procedures for diagnosis and treatment of reproductive tract disorders</b>
<b>Learning outcomes</b>	<ol style="list-style-type: none"> <li><b>1. Describe the different endoscopic techniques including their basic principles, uses, advantages and disadvantages hysteroscopy, laparoscopy, cystoscopy and emerging techniques.</b></li> <li><b>2. Perform endoscopic procedures in different settings</b></li> </ol>
<b>Course Outline</b>	<b>Endoscopic techniques, procedures, approaches, indications, advantages and complications.</b>
<b>Skills</b>	<b>Demonstrate skills in diagnostic laparoscopy and hysteroscopy, Laparoscopic sterilization, Laparoscopic aspiration of simple ovarian cyst, Laparoscopic pelvic adhesiolysis, laparoscopic tuboplasty, Laparoscopic diathermy treatment of endometriosis, laparoscopic linear salpingostomy/salpingotomy for ectopic pregnancy, Laparoscopic salpingectomy for ectopic pregnancy, Laparoscopic salpingo-oophorectomy ovarian cystectomy, hysterectomy.</b>
<b>Mode of Delivery,</b>	<b>Tutorials, small group sessions, overview lectures, bed side teaching,</b>
<b>Instructional material/Resources</b>	<b>Library, online sources, faculty, skills lab, theatre</b>
<b>Course Assessment</b>	<b>EMI/MCQs, log book, theatre log (OSATs) etc</b>

<b>20. ABDOMINAL SURGERY AND UROLOGY</b>	
<b>Purpose</b>	The learner shall be expected to acquire advanced knowledge and skills in urology and abdominal surgery. This will be covered in collaboration with the Department of Surgery.
<b>Learning outcomes</b>	<ol style="list-style-type: none"> <li>1. To Diagnose and manage intraoperative complications such as bladder, ureteric and bowel injuries</li> <li>2. To Diagnose and initiate management of acute intra-abdominal surgical conditions in a pregnant woman.</li> </ol>
<b>Course Contents</b>	<p>Principles of managing the acute intra-abdominal surgical conditions in reproductive health. Laparotomy, types and indications for colostomy Assist in resection and anastomosis of the small and large gut, colostomy, appendicectomy, splenectomy, ureteric anastomosis, repair of the bladder, repair of perforations of intestines, appendicectomy.</p> <p>Emergency surgical conditions in pregnancy, trauma (accidents, stabs, fractures)</p>
<b>Skills</b>	Assist in resection and anastomosis of small and large gut, colostomy, appendicectomy, splenectomy, ureteric anastomosis, repair of bladder, repair of perforations of intestines, Cystoscopy.
<b>Mode of Delivery</b>	<p>Overview lectures, Tutorials, Self-Directed Learning, Class discussions and Presentations, Bedside teachings, Ward Rounds, Theatre Practicum, Grand Rounds, Seminars.</p>
<b>Instructional material/Resources</b>	ICT equipment, Learning Resource Centre, Resource persons, operating theatres, minor theatres, wards, outpatient clinics

<b>Course Assessment</b>	<b>Reflective write up, OSATS, demonstrations</b>
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<b>21. UROGYNAECOLOGY</b>	
<b>Purpose</b>	<b>The learner shall be expected to acquire skills in management of a woman with lower urinary tract disorders and pelvic floor disorders.</b>
<b>Learning outcomes</b>	<ul style="list-style-type: none"> <li>• <b>Acquire skills in managing a woman with lower urinary tract and pelvic floor disorders.</b></li> </ul>
<b>Course Content</b>	<p><b>Common urogynecology disorders:</b></p> <p><b>Urinary incontinence, voiding dysfunction, Recurrent UTIs, Pelvic organ prolapse, Fistula</b></p> <p><b>History taking and physical examination; Indications and limitations of the various tests employed in investigating women with pelvic floor dysfunction, including urine MSSU, ultrasound, MRI, urodynamics, dye tests, take a comprehensive urogynaecological history, interpret investigations, Initiate general. Medical management of common conditions in Urogynaecology.</b></p> <p><b>Perform simple Urogynaecology procedures, including fascial plications, cystoscopy and perineal repairs, under the direct supervision and assist in complex ones. Perform various fistula repairs. Appreciate the psychological aspects and counsel a patient with urogynaecological disorders</b></p>
<b>Skills</b>	<p><b>Discuss common urogynaecological disorders</b></p> <p><b>Take a comprehensive urogynecology history and order appropriate tests and interpret the results</b></p> <p><b>Evaluate and treat voiding disorders</b></p> <p><b>Assess and initiate non-surgical management of pelvic organ prolapse.</b></p> <p><b>Under direct supervision, undertake fascial plication for simple prolapse.</b></p> <p><b>Participate in the placement of mid-vaginal slings (TVTs) and other complex procedure</b></p>

<b>Mode of Delivery</b>	<b>Lecturers</b> <b>Group discussions</b> <b>Presentations</b> <b>Assignments</b> <b>Journal clubs</b> <b>Clinical seminars</b> <b>Clinical rotations</b>
<b>Instructional material/Resources</b>	<b>ICT equipment, Learning Resource Centre, Resource persons, operating theatres, minor theatres, outpatient clinics</b>
<b>Course Assessment</b>	<b>Theatre log books</b> <b>Clinical long case</b> <b>MCQ</b> <b>OSCE</b>

<b>22. REHABILITATIVE AND PALLIATIVE CARE</b>	
<b>Purpose</b>	The learner shall be expected to acquire advanced knowledge, experience and skills on rehabilitative and palliative care for patients with obstetric and gynecological problems.
<b>Learning outcomes</b>	By the end of the course, the learner should be able to: <ul style="list-style-type: none"> <li>• Provide rehabilitative and palliative care</li> <li>• Institute appropriate referral</li> </ul>
<b>Course Outline</b>	Principles and concepts of palliative care in obstetrics and gynaecology; Pain and symptom management including post-operative complications. Communication (including breaking bad news); Patient and family counselling; Care of the carers, including clinicians. End of life care: Ethical issues: Care of women with neonates and infants with life-threatening illnesses.
<b>Skills</b>	Counselling, breaking bad news, rational use of analgesics and other supportive care
<b>Mode of Delivery</b>	Overview lectures, Tutorials, Class discussions and Presentations, Ward Rounds, Bedside Teachings, Seminars, Grand rounds
<b>Instructional material/Resources</b>	ICT equipment, Learning Resource Centre, Resource persons, wards, outpatient clinics, palliative care centre
<b>Course Assessment</b>	MCQs Log Book Practicum



	<b>Short Essay questions Case write-ups</b>
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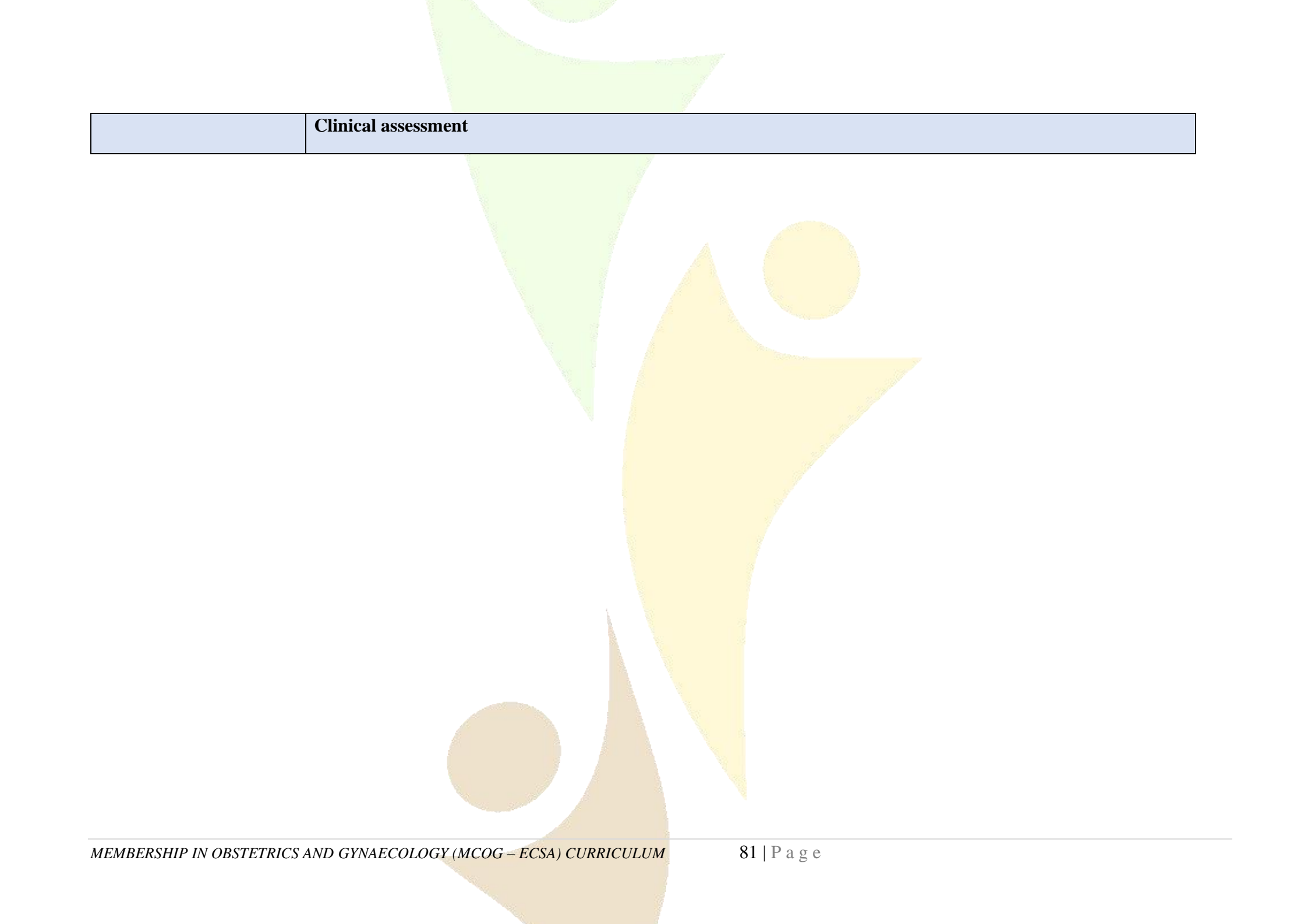
### 23. ANESTHESIA AND CRITICAL CARE

<b>Purpose</b>	<b>Acquire in-depth knowledge, skills and competency in anaesthesia and critical care in obstetrics and gynaecology</b>
<b>Learning outcomes</b>	<ol style="list-style-type: none"> <li>1. <b>To describe the principles of anaesthesia and analgesia.</b></li> <li>2. <b>To Discuss the physiology of pain.</b></li> <li>3. <b>To Manage pain in obstetric and gynecologic patients</b></li> <li>4. <b>To Outline the principles and perform adult resuscitation</b></li> <li>5. <b>To Outline principles of and perform neonatal resuscitation</b></li> <li>6. <b>To Outline the basic principles of life support in critical care and their application.</b></li> </ol>
<b>Course Content</b>	<p><b>Pathophysiology of pain and pain management, different techniques of anaesthesia, drug delivery and use in anaesthesia and analgesia and their mode of action; the various methods of analgesia/anaesthesia. Anaesthesia for operative delivery; regional techniques: paracervical and pudendal blocks, spinal and epidural anaesthesia; general anaesthesia. Perioperative anaesthetic care and analgesia. Peripartum analgesia. Complications of analgesia and anaesthesia. Pain management in gynaecological conditions and malignancies.</b></p> <p><b>Critical care: Respiratory system: Airway management includes oral airways, face masks, laryngeal mask airways, and tracheal intubation. Causes, diagnosis and management of respiratory failure. Indications for and methods of mechanical ventilation. Principles of weaning from mechanical ventilators. Principles of oxygen therapy.</b></p> <p><b>Cardiovascular system: Pathophysiology and management of cardiogenic and hypovolemic shock. Recognition</b></p>

	<p><b>of and management of basic dysrhythmias. Pharmacology of the common ionotropic, chronotropic, vasodilator and vasoconstrictor drugs.</b></p> <p><b>Renal/Metabolic system: Diagnosis, prevention and management of acute renal failure. Fluid, electrolyte, and acid-base disorders.</b></p> <p><b>Gastrointestinal/Nutritional systems: Nutritional assessments and principles of adequate nutrition, including enteral and parenteral nutrition. Prevention of stress ulceration.</b></p>
<b>Skills</b>	<b>Proficiency in identifying appropriate analgesic and anaesthetic options for a patient, performing pudendal block, paracervical block, spinal anaesthesia, epidural, general anaesthesia, preparing a pain management care plan for chronic pain in gynaecological patients.</b>
<b>Mode of Delivery</b>	<b>Lecture, Ward and grand rounds, mortality and morbidity meetings, Self-directed learning</b>
<b>Instructional material/Resources</b>	<b>ICT equipment, Learning Resource Centre, Resource persons, operating theatres, minor theatres, palliative care department.</b>
<b>Course Assessment</b>	<b>CAT, Assignments Logbooks MCQ/OSCE</b>



<b>24. AGEING IN REPRODUCTIVE HEALTH, MENOPAUSE AND ANDROPAUSE</b>	
<b>Purpose</b>	<b>The learner is expected to understand and effectively manage disorders associated with menopause and andropause</b>
<b>Learning outcomes</b>	<b>By the end of the course, the learner should be able to:</b> <ol style="list-style-type: none"> <li><b>1. Describe the pathophysiology of the various changes associated with menopause</b></li> <li><b>2. Describe the pathophysiology of the various changes associated with andropause</b></li> <li><b>3. Manage menopause</b></li> <li><b>4. Manage andropause</b></li> </ol>
<b>Course Content</b>	<b>Age of onset, magnitude, clinical features and complications of menopause and andropause.</b> <b>The psycho-socio-cultural aspects of menopause and andropause.</b> <b>Public health implication and burden of old age.</b> <b>Oestrogen deficiency state: osteoporosis, urogenital atrophy, cardiac diseases, psychosexual disorders, psychomotor symptoms, arthralgic disorders</b> <b>Replacement therapy: hormonal and nonhormonal.</b> <b>Principles of therapy: indications and contraindications, monitoring, complications.</b>
<b>Skills</b>	<b>Evaluate Menopausal changes and rationally administer Hormonal replacement therapy.</b>
<b>Mode of Delivery</b>	<b>Overview lectures,</b> <b>PBL Tutorials,</b> <b>Class discussions,</b> <b>Presentations,</b> <b>Demonstrations.</b>
<b>Instructional material/Resources</b>	<b>ICT equipment (laptops and LCDs), whiteboard/chalkboard, Learning Resource Centre (LRC), Patient clinics and wards, Resource persons, Grand Rounds</b>
<b>Course Assessment</b>	<b>Continuous Assessment Tests (Individual assignments, Written reports/presentations, Term paper),</b>



	<b>Clinical assessment</b>
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## 25. GENDER, SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS AND BEHAVIOURS

<b>Purpose</b>	The learner shall be expected to develop an understanding of human sexuality, gender and reproductive rights so as to be make an effective advocate for the same
<b>Learning outcomes</b>	<p>By the end of the course, the learner should be able to:</p> <ol style="list-style-type: none"><li>1. Explain human sexuality and psychosexual development</li><li>2. Explain gender identities/ sexual identities, sexual orientation roles, experiences and social context in relation to Reproductive Health</li><li>3. Manage patients with sexual disorders</li><li>4. Discuss sexual and reproductive health rights; international and local conventions and charters in sexual and reproductive health.</li><li>5. Explain the roles of various environmental factors in human sexual behaviors, orientation, etc and impact/effects on health</li></ol>
<b>Course Content</b>	<ul style="list-style-type: none"><li>• Human sexuality: Anatomy and physiology specific to human sexuality, Sexual response, Stages I to VII of psychosexual development, Development of secondary sexual characteristics, Sexual variations, Sexual dysfunctions, sexual orientation, paraphilias,</li><li>• Gender and its attributes: Gender roles, stereotypes, sensitivity, response. Dimensions of sexuality; Gender inequality and inequity, discrimination. Gender mainstreaming: Social construction of gender, Gender issues in reproductive health. Gender and development: production, reproduction, community and gender division of labour. Gender relations: Complementarity, interdependency, exploitation. Types of gender issues: Poverty; marriage practices; low social, legal and economic status; Sexual and gender-based</li></ul>

	<p>violence.</p> <ul style="list-style-type: none"> <li>• <b>Sexual disorders: Dyspareunia, anorgasmia, ED,</b></li> <li>• <b>Global regional and local charters, laws and policies governing reproductive and sexual rights: Human Rights Charter; Sexual and Reproductive Health and Rights; International Conference on Population and Development, +5,+10; Maputo protocol, Abuja declaration.</b></li> <li>• <b>Family formation and structural impact on RH-The types of families - Single parenthood, Lesbian/Gay/Bisexuals, divorcees; widowed and impact on RH.</b></li> </ul>
<b>Skills</b>	<b>History taking in patients with sexual disorders, counselling, community sensitization Gender advocacy</b>
<b>Mode of Delivery</b>	<p>Overview lectures,</p> <p>Tutorials, Class discussions and Presentations</p> <p>Role play for demonstration of counselling session: Class debates on gender and rights</p>
<b>Instructional material/Resources</b>	<b>ICT equipment, Learning Resource Centre, Resource persons</b>
<b>Course Assessment</b>	<b>Individual assignments, written reports, class presentations, written examinations</b>

## 26. INFECTIOUS DISEASES IN REPRODUCTIVE HEALTH

<b>Purpose</b>	The learner shall be expected to acquire knowledge and skills to appropriately manage individuals and couples with infectious diseases in RH and to prevent infectious diseases in the community.
<b>Learning outcomes</b>	<b>By the end of the course, the learner should be able to:</b> <ol style="list-style-type: none"><li>1. Evaluate the public health burden of reproductive tract infections</li><li>2. To understand the epidemiology, pathophysiology, clinical features, prognosis and management of infections in RH</li><li>3. Understand the principles of prevention, detection and isolation</li><li>4. Understand therapy (immunization, prophylaxis, antibiotics and antivirals</li><li>5. Manage communicable diseases in Reproductive Health including ruptured membranes, Chorioamnionitis, puerperal sepsis, mastitis, endometritis, urinary tract infections, wound infections, septic shock, malaria and other tropical infections/infestations</li><li>6. Fetus and neonatal infections including streptococcus, gonococcus, syphilis, toxoplasma, listeria, haemophilus, chlamydia, mycoplasma, ureaplasma, herpes hominis, rubella, cytomegalovirus, varicella, hepatitis A, hepatitis B, hepatitis C, parvovirus, influenza, human immunodeficiency virus, neonatal sepsis)</li><li>7. Plan and implement strategies for the prevention of mother-to-child transmission of HIV/AIDS</li></ol>
<b>Course Contents</b>	Prevalence and incidence of Reproductive tract infections and their management. Determinants of sexually-transmitted and non-sexually transmitted Reproductive tract infections, Effects of and mortality associated with Reproductive tract infections, relation of Reproductive tract infections and HIV/AIDS. Prevalence, diagnosis and treatment of ruptured membranes, Chorioamnionitis, puerperal sepsis, mastitis, endometritis, urinary tract infections, wound infections, septic shock, malaria and other tropical infections/infestations, leprosy, schistosomiasis and filariasis, brucellosis, toxoplasmosis.



<b>Skills</b>	<b>History taking, physical examination and investigations in Reproductive tract infections/HIV/AIDS and opportunistic infections associated with HIV/AIDS, Voluntary counseling and testing, Behavior change communication. Planning, organizing, monitoring and evaluation of Prevention of Mother to Child Transmission of HIV/AIDS.</b>
<b>Mode of Delivery</b>	<b>Overview lectures, Tutorials, Self-Directed Learning, Class discussions and Presentations, Bedside teachings, Ward Rounds, Theatre Practicum, Grand Rounds, Seminars Conferences</b>
<b>Instructional material/Resources</b>	<b>ICT equipment, Learning Resource Centre, Resource persons, operating theatres, minor theatres, wards, outpatient clinics, internal medicine department, diagnostic laboratories, radiology and imaging department.</b>
<b>Course Assessment</b>	<b>MCQs Log Book Practicum Short Essay questions MEQ OSCE Case write-ups</b>

**27. INFECTION PREVENTION AND CONTROL**

<b>Purpose</b>	<b>The learner is expected to acquire knowledge of infection prevention and control in relation to the practice of obstetrics and gynaecology</b>
<b>Learning outcomes</b>	<p><b>By the end of the course, the learner should be able to:</b></p> <ol style="list-style-type: none"> <li><b>1. Develop a cross-sectional, multidisciplinary initiative for Prevention and Control of infections associated with healthcare.</b></li> <li><b>2. Provide support to help prevent spread of infectious diseases through evidence-based infection control measures in health care settings.</b></li> <li><b>3. Provide support for infection control preparedness and response to public health emergencies of potential international concern.</b></li> </ol>
<b>Course Contents</b>	<p><b>Develop a cross-sectional, multidisciplinary initiative for Prevention and Control of infections associated with healthcare.</b></p> <p><b>Strategic global, national and institutional programs , financial resource mobilization and health system strengthening; evidence based decision making ; assessing economic impact of infection control assessment and response ; infectious disease categories; surveillance and reporting for communicable diseases and infectious diseases; data quality review; policies and protocols; health personnel preventive strategy (vaccination); marketing strategy for IPC measures from community to health Institutions; antibiotic stewardship; comprehensive unit based safety programs</b></p> <p><b>Providing support to help prevent spread of infectious diseases through evidence-based infection control measures in health care settings.</b></p> <p><b>Infection cycle; Universal precautions (health personnel personal protective equipment; Hand hygiene,</b></p>

	<p>preparations for hand hygiene, patient care equipment, injection safety ), environmental hygiene ; screening and cohorting patients; patient and health personnel handling and management with infectious diseases (e.g. respiratory, TB, Ebola, malaria, HIV); post exposure prophylaxis; nasocomial infections; wound care; continuum of care environments-.inter- department/ surgical disciplines, daycare, long term care, home based care; surgical instrument processing ( cleaning, disinfection, sterilization, autoclaving); solid waste management; high level disinfection preparations; socio- cultural practices and IPC; patient and health worker empowerment</p> <p>Provide support for infection control preparedness and response to public health emergencies of potential international concern.</p> <p>Public safety: meningococcal, whooping cough, bioterrorism, TB, legislature and quarantine; emergency medical services; handling of research biological material; International travel and infectious disease; medical examiner infectious disease surveillance report; protocol for evaluation (cause, case reporting, specimen collection and testing, statistics)</p>
<p><b>Skills</b></p>	<p>prevention of infection – Universal precautionary measures and waste disposal, Processing of instruments, prophylactic medications and vaccination</p> <p>Case reporting and notification</p> <p>Isolation for patient and health personnel safety</p> <p>Specimen collection</p> <p>Surveillance</p> <p>Use of the various checklists and job aids</p>
<p><b>Mode of Delivery</b></p>	<p>Didactic sessions</p> <p>Case studies</p>

	<b>Audio/ Video training on IPC</b> <b>Practical session in the health facility</b>
<b>Instructional material/Resources</b>	<b>Wards</b> <b>CSSD</b> <b>Skills lab</b> <b>Lecture/conference rooms/class room Library</b> <b>Computer lab</b>
<b>Course Assessment</b>	<b>Log book observation and conducting of IPC practices such as: Hand washing, gowning, gloving and Instrument processing in CSSD</b> <b>MCQ and Short answer structured questions</b> <b>OSCE with demonstration of: waste disposal, Gloving, Gowning.</b>

<b>28. MEDICAL EDUCATION</b>	
<b>Purpose</b>	<b>The learner shall be expected to acquire knowledge, skills, and attitudes to provide appropriate teaching, learning opportunities, appraisal, assessment and mentorship.</b>
<b>Learning outcomes</b>	<ol style="list-style-type: none"> <li><b>1. Demonstrate knowledge of the principles of adult learning, mentoring and giving feedback</b></li> <li><b>2. Apply a range of teaching strategies and learning methods, appropriate to audience and context</b></li> <li><b>3. Provide mentorship and effective feedback</b></li> <li><b>4. Utilize available resources for effective educational practice</b></li> </ol>
<b>Course Contents</b>	<p><b>Concepts of teaching and learning:</b></p> <p><b>Principles of teaching and learning, learning models, principles of adult learning and experiential learning. Traditional medical education; Innovative medical education; Models and approaches – SPICES, outcome based, evidence based, CAL, PRISMS, competence based and mastery; Educational objectives: Bloom’s taxonomy (cognitive, psychomotor, and affective).</b></p> <p><b>Teaching strategies/methods: Didactic lectures, small group learning, large-group learning, problem based learning, journal clubs and case studies, bedside teaching, practical procedures, Seminar, Symposium, Panel Discussion, Role Plays, Computer assisted/E-Learning; Work based learning; Advantages and disadvantages of each of the above as a teaching/ learning method; Competence and mastery; Principles of evaluation and Assessment; Assessment of clinical competence; Assessment methods: Long case, Short cases, OSCE, OSPE, MEQs’, computer assisted assessment (CAA).</b></p> <p><b>Mentoring and feedback; Giving and Receiving feedback; Mentoring and mentorship; Career support; Continuing professional development (CPD) and life-long learning</b></p> <p><b>Resources for effective practice:</b></p> <p><b>Human, Financial, Infra-structure, Books and learning materials, Time</b></p>

<b>Skills</b>	<b>Presentation skills (different audiences and different settings)</b> <b>Provide teaching sessions for junior colleagues and other health workers</b> <b>Mentorship and feedback</b> <b>Facilitate learning of practical procedures</b> <b>Evaluation and assessment skills</b>
<b>Mode of Delivery</b>	<b>Overview lectures, Tutorials, Class discussions and Presentations</b>
<b>Instructional materials/Resources</b>	<b>Lecture/conference rooms/class room Library</b> <b>Computer lab</b>
<b>Course Assessment</b>	<b>Individual assignments, written reports, class presentations, written examinations</b>

<b>29. COMMUNITY HEALTH AND HARMFUL PRACTICES IN REPRODUCTIVE MEDICINE</b>	
<b>Purpose</b>	<b>The learner shall be expected to understand community health and harmful practices in reproductive health</b>
<b>Learning outcomes</b>	<p><b>By the end of the course, the learners should be able to:</b></p> <ol style="list-style-type: none"> <li><b>1. gain entry into the community</b></li> <li><b>2. provide health education</b></li> <li><b>3. advocate for reproductive health issues</b></li> <li><b>4. conduct outreach activities</b></li> <li><b>5. contextualize socio-cultural determinants of reproductive health</b></li> </ol>
<b>Course Content</b>	<p><b>Community entry: Gate keepers. Key informants, interpersonal relations, focus group discussions, lead champions, community health workers.</b></p> <p><b>Health education: information, education, communication.</b></p> <p><b>Advocacy: policy dialogue.</b></p> <p><b>Outreach: preventive, curative, rehabilitative services in reproductive health, STIs, MCH, FP, PMTCT, cervical cancer screening, lifestyle modification, contraception, ITP/ITN, Public health.</b></p> <p><b>Reproductive Health Anthropology: cultural and social practices in reproductive health, enabling practices, harmful practices (including female genital mutilation)</b></p>
<b>Skills</b>	<p><b>Communication skills</b></p> <p><b>Giving health talk</b></p> <p><b>Prepare an IEC material</b></p>
<b>Mode of Delivery</b>	<p><b>Didactic lectures</b></p> <p><b>Small group discussions</b></p> <p><b>Demonstration</b></p>

	<b>Practicum</b> <b>Multimedia channels</b> <b>Community/field attachments</b>
<b>Instructional material/Resources</b>	<b>Lecture/conference rooms/class room Library; Computer lab</b> <b>Skills lab</b> <b>Clinical wards, Community attachments</b>
<b>Course Assessment</b>	<b>Logbook</b>



<b>30. MENTAL HEALTH IN REPRODUCTIVE HEALTH</b>	
<b>Purpose</b>	The learner shall be expected to acquire the knowledge, skills and competencies to effectively manage mental disorders related to sexuality, fertility issues, pregnancy losses, continuing pregnancy, childbirth, puerperium and postnatal periods.
<b>Learning outcomes</b>	By the end of the course, the learner should be able to: <ol style="list-style-type: none"> <li>1. Outline mental disorders.</li> <li>2. Appreciate the relationship between mental health and sexuality, fertility, pregnancy and pregnancy losses, childbirth, puerperium and the postnatal periods</li> <li>3. Discuss the principles of management including preventive strategies of these mental disorders.</li> <li>4. Appreciating the legal and ethical issues related thereto</li> </ol>
<b>Course Contents</b>	<p><b>Mental health disorders in reproductive health:</b> postpartum blues, puerperal psychosis, postnatal depression, infanticide, schizophrenia, Bipolar mood disorders, depression and substance abuse, women with special intellectual needs.</p> <p><b>Management of mental health disorders in reproductive health:</b> safety of psychiatric therapeutic interventions in pregnancy: pharmacological and non-pharmacological.</p> <p><b>Multi-disciplinary approach in the management of mental health patients</b></p>
<b>Skills</b>	Proficiency in taking a comprehensive psychiatric history, participation in multi- disciplinary care of patients with mental health issues.
<b>Mode of Delivery</b>	Overview lectures, Tutorials, Class discussions and Presentations
<b>Instructional material/Resources</b>	ICT equipment writing boards, Learning Resource Centre, Resource persons, mental health department Clinics and wards
<b>Course Assessment</b>	Individual assignments, written reports, class presentations, written examinations

### 5.3 Summary of Course Units Offered

LEARNING OUTCOMES	YEAR 1		YEAR 2		YEAR 3		YEAR 4	
PROGRAMME LEARNING OUTCOMES								
	Courses	Credit/ Lecture Hours	Courses	Credit/ Lecture Hours	Courses	Credit /Lecture Hours	Courses	Credit /Lecture Hours
PLO 1	F01	16						
	F02	16						
	F03	8						
	F04	8						
	F05	8						
	F06	8						
	F07	8						
	F08	8						
	F09	8						
	F10	8						
	F11	8						
	F12	8						
	F13	240						
PLO2			C01	8				
			C02	16				
			C03	8				
			C04	8				
			C05	8				
			C06	8				
			C07	8				
			C08	8				
			CO9					

<b>SPECIALIZATION LEARNING OUTCOME</b>								
<b>Specialization 1</b>								
<b>SLO 1.1</b>					<b>R01</b>	<b>24</b>		
					<b>R02</b>	<b>12</b>		
					<b>R03</b>	<b>12</b>		
<b>SLO 1.2</b>					<b>R04</b>	<b>12</b>		
					<b>R05</b>	<b>12</b>		
					<b>R06</b>	<b>12</b>		
					<b>R07</b>	<b>12</b>		
<b>SLO 1.3</b>					<b>R08</b>	<b>104</b>		
<b>Specialization 2</b>								
<b>SLO 2.1</b>							<b>AS 01</b>	<b>150</b>
<b>SLO 2.2</b>							<b>AS 02</b>	<b>68</b>
							<b>AS 03</b>	<b>60</b>
<b>SLO 2.3</b>							<b>AS 04</b>	<b>48</b>
							<b>AS 05</b>	<b>24</b>
							<b>AS 06</b>	<b>48</b>
							<b>AS 07</b>	<b>8</b>
							<b>AS 08</b>	<b>8</b>

AS- Advanced Skills

C01- Course No.1

SLO—Student Learning Outcome

PLO-Program Learning Outcome

R01-Rotation 1, R02- Rotation 2 etc.

## **6. ACADEMIC REGULATIONS FOR THE PROGRAMME**

Admission to the programme is open to all qualified, registered medical doctors who fulfill the requisite professional requirements.

### **9.2 6.1 Eligibility Criteria**

#### **9.3**

The Common Regulations for the admission to contemporary specialty programme in Obstetrics and Gynecology in the Region and elsewhere where similar programmes are conducted will apply.

An applicant must:

- i. Be a holder of at least a degree in medicine such as Bachelor of Medicine and Bachelor of Surgery (M.B,Ch.B.) or similar degree e.g. Doctor of Medicine (MD), from a recognized university by the respective national professional regulatory body.
- ii. Further training/qualifications especially in reproductive health, epidemiology, community or public health, will be an advantage but not mandatory.
- iii. Have practiced clinical medicine for at least one-year post-internship with exposure to reproductive health practice in a recognized clinical or relevant research setting.
- iv. Be registrable as a medical practitioner in both the native country and in the country of intended training.
- v. Possess certificate of good professional conduct from the regulatory authority of the country of origin or current country of practice.

### **9.4 6.2 Application Process**

Applications will be invited online through the ECSACOG website. Interested individuals will be required to apply Online through the ECSACOG website, providing:

- i. Copies of the relevant academic certificates,
- ii. Copies of current practice license,
- iii. A letter of good standing from the national professional regulatory authority,
- iv. Brief Curriculum Vitae,
- v. Two recommendation letters from two verifiable practitioners of specialist status, and
- vi. A non-refundable processing of 100 USD fee.

## **9.5 6.3 Selection process**

### **9.6**

- Shortlisted applicants will be invited for a selection interview.
- Successful applicants will be notified accordingly in writing.
- Unsuccessful applicants will equally be notified in writing.

### **9.7**

## **6.4 Structure and Duration**

### **9.8**

This will be a full-time training program of a minimum of four (4) calendar years from enrolment to graduation. It will be:

- Undertaken during the first to fourth academic year and involves acquisition of requisite knowledge of the scientific foundations of obstetrics and gynecology. One has to successfully complete each academic year before being allowed to proceed to the part two of the programme. During this period, one is expected to continue doing clinical work under supervision.

## **7. STUDENT ASSESSMENT**

### **9.9 7.1 Policy/Principles**

#### **9.10**

- Assessment is an integral part of the training programme. To be meaningful and useful to the trainee, it must be continuous, supportive, objective and predictable.
- Trainees must be informed about the time, duration, what they are being assessed on, when, how and why.
- The assessment should be on a regular basis.
- The CATs will be taken twice in a year (February and August).
- The supervisors' comments will be documented in the student's academic records, for reference.
- The trainees' scores will be recorded in the student's College academic records.
- One must have completed all the relevant components of the training programme and be successfully adjudged as such before appearing for the final examinations.

## **9.11 7.2 Areas to be assessed on**

### **9.12**

The areas to be assessed will include, but not limited to the following:

- Basic science knowledge and its relevance to clinical practice
- Clinical knowledge base
- Clinical skills
  - Patient evaluation, history-taking skills, physical examination skills and interpretation of findings.
  - Relevant investigative procedures and interpretation of results thereto interpersonal communications,
- Surgical skill
- Decision making and their implementation and follow up
- Patient counseling and education.
- Teaching, learning, research and community service.
- Advocacy, leadership and clinical governance.

### **9.13 7.3 The Logbook**

- Each trainee will be provided with a logbook on which s/he will document all surgical and clinical procedures carried out or assisted at.
  - These will be detailed and must be signed or approved by the supervisor soon after they are performed.
- At the end of each academic year the logbook must be submitted by the trainee to the college for evaluation.
- Details from each candidate's logbook will be made available to the College Examinations and Credentials Committee in advance of the final examinations.
  - Only procedures logged therein will be taken into account.
  - The trainee must have attained all the minimum requirements as detailed in the logbook before s/he can appear for the final college examinations.
- The trainee may be asked questions on some of the procedures documented in the logbook during the oral examinations.

## **9.14 7.4 Dissertation**

### **9.15**

#### **Regulations for Dissertation**

The writing of dissertation for the award of the MCOG-ECSA will be done and submitted before the final examinations. It will be guided the college regulations and the research proposal must have been approved by the respective College Committee and National/local review board

- The dissertation will be marked by both internal and external examiners.
- The candidate should submit at least two manuscripts and receive confirmation of acceptance for publication in order for the dissertation to qualify for examination.

## **9.16 7.5 College Examinations**

### **9.17**

#### ***7.5.1 Examination regulations***

- A trainee shall take the College Examinations as approved by the Senate.
- A trainee shall have completed all the programme components before the examinations.
- The dissertation shall be examined in the fourth academic year.
- The logbook shall be examined at the end of the each academic year.
- A student must pass with an overall score of at least 60% in addition to achieving at least 60% in the clinical examination.
- A candidate who fails to sit the examination at the appropriate time may be allowed to do so at the next scheduled examinations.
- CATS will contribute to 40% while the final examinations will contribute 60% of the overall score.
- A candidate who fails an examination qualifies to re-sit it twice, after which they will be discontinued from the college upon the third failure.

#### ***7.5.2 Examination Timelines***

The first CAT will be taken at the middle of the first trimester and the second taken at the end of the first trimester of year one. The third CAT will be taken at the middle of second trimester of year one. The end of part two will be taken at the end of second trimester. The student will not be allowed to proceed to year two before s/he passes examination. At the end of second trimester (year two) students will be assessed on the competencies gained through signing off from clinical experiences. In year two students will be assessed through OSCE on both clinical and rotations. There will be one CAT at the middle of seventh and eighth trimester. End of part two examination will be taken at the end of mid of August.



Code	Examination	Type	Duration
CA 01	First Continuous assessment Y1	Written: MCQ & Essay, oral and clinical practical exam	2 days
CA 02	End of semester Assessment Y2	CAT and Clinical practical exam	2 days
CA 03	First Continuous Assessment Y 3	CAT and Clinical practical exam	2 days
FE 04	Final year examination Y 4	Written (MCQ, Essay), Oral and clinical practical exam (long & short cases-OSCE), dissertation.	2 days

### 7.5.3 Examination Calendar

The following Examination Calendar Schedule was adopted

- A. 2023 - 1ST CAT - 29th March 2023, 2ND CAT - 14TH June 2023. Time 10hrs EAT
- B. Subsequent years CAT - Last Wednesday of month of January and Last Wednesday of month of May
- C. Final Yearly Examination - Second Week of month of August
- D. Final Yearly Results shall be released within 2 weeks of End of Exam.

### 7.5.4 Examination format and conduct

This will be a formal College Examination consisting of written papers assessing basic scientific knowledge of the human body related to obstetrics and gynecology.

These will be conducted at the end of Year 1 of the programme.

It will consist of:

Two papers - one on MCQs, and one on short answer questions. These shall be followed by

- Clinical examination and
- Oral examination

### 7.5.5 Examination Scoring

Each year examination aggregate will be marked out of 100% (Both written and practical where applicable-Year I and IV and only practical exam for years II and III).

The student/candidate must pass each component of the evaluations with a score of at least 60%.



### **Examination grading system:**

<60%: Fail	(D)
60% - 67%: Pass	(C)
68% - 74%: Credit	(B)
≥ 75%: Distinction	(A)

#### **7.5.6 Examiners**

A panel of examiners will be chosen by the Examination and Credentials Committee from amongst Fellows of the College for each examination.

An examination board will be constituted for each set 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 written question papers
- Assist with the clinical examination of candidates
- Provide externally independent assessment of the examination, and quality of performance
- Submit a written report on the conduct of the examination to the College Council.

#### **7.5.7 Examination Malpractices and Disciplinary Actions**

Examination and Credentials Committee (ECC) will oversee all the examination procedures and malpractices. Cases of malpractice will be punished in line with the policy and regulations. These may take the form of reprimand, disqualification, suspension or cancelation, or arrest and prosecution depending on the nature and the committee's discretion.

#### **7.5.8 Mode of Appeal**

The appeal application must be made within 10 days of the decision of the committee. On receipt of a written appeal, an enquiry will be conducted by an appointed member of the committee who is not involved in the internal assessment decision. The enquiry will be fair and just and will be made in line with the Codes of Practice. Considerations will be made on whether the marks given are fair and just, comparing with other students' work to help determine a correct and appropriate mark. An

appeal against the decision of the committee on malpractice will be deemed invalid and not held if it is based purely on the academic judgment of the examiners; extenuating circumstances affecting performance; and the candidate's lack of awareness of examination regulations and procedures.

A written response to the appeal will be sent to the candidate within 10 working days of the college receiving the appeal. A written record of the appeal and the outcome will be kept on file with the awarding body being informed of any amendments. If a candidate is not happy with the written response, a letter requesting a personal hearing will be sent to the registrar, and a date for a hearing shall be given to the candidate and any trainer /examiner involved in the assessment. The new panel will consist of a least two individuals who have not previously dealt with the particular case. The College will make a written record of the hearing, which should include the outcome of the appeal and the reasons for that outcome.

### ***7.5.9 Classification of Degrees***

As in all medical degrees there will be no classification of the degree. The candidate will be deemed to have passed the examinations and qualified as a Member of the College of Obstetrics and Gynecology of ECSA.

### ***7.5.10 The Graduation Requirements***

The candidate will qualify for the award of the Member of Obstetrics and Gynecology of the East Central and Southern Africa (MCOG-ECSA) after going through all the course work and examinations including part one and part two and gaining a minimum pass of 60% in all categories of competency based course work and written examinations.

## 8. LEARNING RESOURCES

### 9.18 8.1 Reference Books

#### 9.19

1. Leon Speroff, Robert H. Glass, Nathan G. Kase (2011). Clinical Gynaecologic Endocrinology and Infertility. The University of Michigan, Williams & Wilkins.
2. Elliot Philipp & Marcus Setchell (1991), Scientific Foundations of Obstetrics and Gynaecology. Oxford; Boston: Butterworth-Heinemann.
3. D.C Dutta. (2011) Textbook of Obstetrics including perinatology and contraception; Calcutta, India: New Central Book Agency Ltd.
4. D.C. Dutta. (2011) Textbook of Gynaecology including contraception. Calcutta, India: New Central Book Agency Ltd.
5. D.C.Dutta. (2012) A guide to clinical Obstetrics and Gynaecology. Calcutta, India: New Central Book Agency Ltd.
6. Alan DeCherney, Martin L. Pernoll (2012). Current Obstetrics and Gynaecologic diagnosis and treatment; McGraw-Hill Medical, A Lange Medical Book.
7. Cunnigham, MacDonald, Gant (2009). Williams Obstetrics, McGraw-Hill Professional
8. Robert Shaw, David Luesley and Ash Monga. (2003) Gynaecology United States: CHURCHILL LIVINGSTONE (NJ/IL).
9. Sabarantnam Arulkumaran, V Sivanesaratnam, Alokendu Chatterjee, Pratyap Kumar (2011), Essentials of Gynaecology New Delhi: Jaypee Brothers; Tunbridge Wells, UK: Anshan, JAPPEE Publication.
10. B D Chaurasia (2010). Anatomy regional and applied Dissection and clinical Volume 2 Lower limb, abdomen and pelvis. India book stores, CBS Publisher
11. Keith L Moore, T V N Persaud, (2011). The Developing Human: Clinically Orientated Embryology
12. John Howkins, Christopher N. Hudson Churchill Livingstone (2002), Shaws Textbook of operative Gynaecology, Lippincott Williams & Wilkins,
13. P.R. Weather H.G. Birkitt and V.G Daniels (2002) Functional Histology, A text and colour atlas. Edinburgh: Churchill Livingstone.
14. Michael Swash, Michael Glynn (2012). Hutchinsons Clinical Methods an integrated approach to clinical Practice. Saunders Ltd.
15. WHO resource materials: [www.who.int/reproductive](http://www.who.int/reproductive) health/publications.
16. William's Gynaecology (3rd Edition).

17. Telinde's Gynecology (10th Edition).

N.B. The students are encouraged to get the latest version of each of the recommended reference books. These form the core only. For specialist training reading as widely as possible is always advisable and essential. N.B. This list is by no means exhaustive.

## 8.2 Key Websites

ACOG ----- <https://www.acog.org/>

WHO----- <https://www.who.int/>

FIGO----- <https://www.figo.org/>

ICOG----- <https://icogacc.com/>

UNFPA----- <https://www.unfpa.org/>

UNICEF----- <https://www.unicef.org/>

RCOG ----- (Australia and New Zealand)- <https://ranzcog.edu.au>

RCOG (UK)-- <https://www.rcog.org.uk/>

GLOWM----- <https://www.glowm.com/>

EAMJ----- <https://www.ajol>

ECSACOG--- <https://ecsacog.org/>



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