



**ALL INDIA INSTITUTE OF MEDICAL SCIENCES  
NAGPUR**

**Department of Obstetrics and Gynecology**

**SYLLABUS**

**Masters in Surgery (MS)**

**Obstetrics and Gynecology**

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**Masters in Obstetrics and Gynaecology or M.S. Obstetrics and Gynaecology is a three year postgraduate course.**

**1.0 Goal:**

The postgraduate course is a residency program to train a post graduate medical student who will be a competent consultant obstetrician and gynecologist providing services from basic to advanced care.

**2.0 Program Outcome :**

The program will focus on knowledge, skills and competencies through the syllabus which will include cognitive, affective and psychomotor domains of learning. The training will create a qualified consultant obstetrician and gynecologist who shows skills in application of medical knowledge, clinical skills and professional values in the provision of high-quality and patient-centered care.

- 2.1 Provides quality maternal care in the diagnosis and management of antenatal, intra-natal and postnatal period of normal and abnormal pregnancy, capable to manage obstetrical and early neonatal emergencies.
- 2.2 Provides services for reproductive tract infections, including sexually transmitted diseases and screening for gynecological malignancies.
- 2.3 Provides counseling and family welfare services including various methods of contraception and perform medical termination of pregnancy.
- 2.4 Has knowledge for interpretation of various laboratory investigations and other diagnostic modalities in Obstetrics and Gynaecology.
- 2.5 Trained in basic and advanced surgical skills for obstetrical, gynecological and allied surgeries
- 2.6 Trained in gynecological endocrinology and infertility, benign and malignant gynecological disorders.
- 2.7 Familiar with research methodologies and use of newer information technologies.
- 2.8 Knowledge of medico legal aspects in obstetrics and gynecology.
- 2.9 Keeps abreast with advances in the field of Obstetrics & Gynaecology.
- 2.10 Facilitates learning of medical / nursing students, para medical health workers as a teacher trainer.
- 2.11 Function as a productive member of a team engaged in health care, research and education.
- 2.12 Demonstrate empathy and humane approach towards patients and their families

### 3.0 Syllabus

Course content in the syllabus will be based on the curriculum goals wherein a postgraduate student is required to acquire knowledge of basic and applied sciences including anatomy, physiology, pharmacology, pathophysiology and microbiology related to reproductive system and be able to manage pathological states related to it by medical, surgical and other relevant modalities. The syllabus will be divided into four sections based on the formative assessment.

#### 3.1 Theory training program

##### 3.1.1 Basic and Applied Sciences

###### 1. Structure and function of the genome:

- Chromosomes
- Gene structure and function
- Molecular biology
- Epigenetics
- Mitochondrial DNA
- The 'post-genomic' era
- The molecular basis of inherited disease – DNA mutations

###### 2. Clinical genetics

- Chromosome abnormalities :Aneuploidy , Sex chromosome abnormalities
- Single gene disorders, Autosomal dominant diseases ,Autosomal recessive diseases , Sex-linked inheritance
- Mitochondrial inheritance and Multifactorial inheritance
- Genomic imprinting
- Genetic testing and interpretation of a genetic result Chromosome analysis
- Molecular cytogenetics: FISH and Mutation testing

###### 3. Embryology

- Oogenesis, spermatogenesis and organogenesis
- Early embryogenesis: fertilization, transportation and implantation
- Early development of the embryo
- Organogenesis
- Development of the genital organs
- Development of the placenta and placental bed
- Development of membranes and formation of amniotic fluid

###### 4. Fetal and placental physiology

- Fetal growth
- Fetal circulation , Renal function and amniotic fluid dynamics
- Amniotic fluid
- Fetal lung and brain development
- The placenta
- Fetal origins of adult disease

###### 5. Applied anatomy

- Body tissues and cells
- The nervous system, Anatomy of the brain
- The lymphatic system and vascular system
- Retroperitoneal organs and urinary tract
- The pelvis
- The perineum
- The ischioanal fossae and lateral pelvic wall
- Pelvic organs
- The rectum, anal canal
- The bladder
- The Breast

###### 6. Pathology

- General pathological principles
  - Cellular injury and death
  - Pathology of gynecological tumors
  - Vulva
  - Vagina
  - Cervix
  - Endometrium
  - Myometrium
  - Ovary
  - Pathology of miscarriage and gestational trophoblastic disease
  - Pathology of common congenital abnormalities
  - Pathology of the placenta .
- 7. Microbiology and virology**
- Bacteriology, mycology and parasitology
  - Morphology and structure, Classification and typing and Pathogenesis
  - Laboratory identification : Specimen collection , Culture , Antigen, Antibody and Nucleic acid Detection
  - Virology : Introduction, Viral nucleic acid and Replication
- 8. The Immune System**
- Adaptive immune systems
  - Antibody molecules
  - Cells of the innate immune system
  - Regulation of the immune system
  - The fetus as an allograft
- 9. Biochemistry**
- Structure and function of the normal cell
  - Proteins, peptides and amino acids
  - Metabolism , Catabolism , Enzymes
  - Role of enzymes in digestion
  - Cell signaling and second messaging
- 10. Bio physiology**
- Distribution of water and electrolytes ,transport mechanisms and Acid–base balance
  - Cardiovascular system and Blood
  - Endothelium in pregnancy
  - Respiration , Urinary system , Gastrointestinal tract , Nervous system
  - Liver
- 11. Endocrinology**
- Mechanisms of hormone action and second messenger systems and Hormone types
  - Hypothalamus and pituitary and Pineal gland
  - Reproductive hormones, Leptin, Inhibin and activin
  - Puberty
  - Menstrual cycle
  - Pregnancy
  - Lactation
  - Menopause
  - Growth
  - Pancreas , Thyroid ,Adrenal gland, Calcium homeostasis
- 12 Drugs and drug therapy**
- Factors that influence drug action
  - Physiological changes that affect drug metabolism in pregnancy
    - The placental barrier
    - Some commonly used drugs
    - Antineoplastic drugs , Psychotropic drugs
    - Oral contraceptives
    - Drugs of choice in breastfeeding
- 13 Physics**
- Diagnostic ultrasound , Magnetic resonance imaging (MRI)
  - Radioactivity and X-rays , LASER

#### **14. Statistics and evidence-based healthcare**

- Basic statistical principles
- Data types, distribution assumptions and parametric tests
- Data collection and presentation

#### **15. Clinical research methodology**

- The clinical research process
- Consent, information
- Review of the literature
- Common statistical terms used in clinical trials
- References

### **3.1.2 Obstetrics and Neonatology**

#### **1. Prenatal Care**

- Pre conceptional counselling and Prenatal Care
- Nutrition During Pregnancy
- Drugs and Environmental Agents in Pregnancy and Lactation: Teratology, Epidemiology
- Obstetric Ultrasound: Imaging, Dating, Growth, and Anomaly
- Genetic Screening and Prenatal Genetic Diagnosis
- Antepartum Fetal Evaluation

#### **2. Identification and management of early pregnancy complications like**

- Abortion
- Recurrent Pregnancy loss
- Cervical Incompetence
- Ectopic Pregnancy
- Gestational Trophoblastic Disease
- Hyperemesis Gravidarum

#### **3. Identification and management of Obstetrical Complications**

- Hypertensive Disorders
- Obstetrical Hemorrhage
- Preterm birth
- Post term pregnancy
- Fetal growth restriction
- Multiple Pregnancy
- Anemia
- Rh incompatibility
- Hydramnios and Oligohydramnios
- Intrauterine death
- Pregnancy with previous caesarean delivery
- Bad obstetric history and other miscellaneous conditions

#### **4. Identification and management of medical and surgical complications**

- Cardiovascular Diseases
- Pulmonary Disorders
- Diabetes Mellitus
- Thromboembolic Disorders
- Renal and Urinary Tract Disorders
- Gastrointestinal Disorders
- Hepatic, Biliary and Pancreatic Disorders
- Hematological disorders
- Endocrine Disorders
- Connective Tissue disorders
- Obesity
- Neurological Disorders
- Dermatological Disorders
- Neoplastic disorders
- Acute abdomen (surgical emergencies – appendicitis and GI emergencies).

**5. Evaluation of fetal and maternal health** in complicated pregnancy by making use of diagnostic modalities including modern ones (USG, Doppler, Electronic monitors) and plan for safe delivery for mother and fetus. Identifying fetus at risk and its management.

#### **6. Infections in pregnancy (bacterial, viral, fungal, protozoal)**

- Malaria, toxoplasmosis
  - Viral – rubella, CMV, herpes, HIV, hepatic viral infections
  - Sexually transmitted infections (STIs)
  - Mother to fetal transmission of infection
7. **Gynecological disorders associated with pregnancy –**
- Congenital genital tract developmental anomalies
  - Gynaecology pathologies – fibroid uterus, cancer cervix, genital prolapse
8. **Intrapartum**
- Normal Labor**
- Normal labor and delivery
  - Intrapartum fetal monitoring
  - Induction of labor
  - Obstetric Analgesia and Anesthesia
- Abnormal Labor**
- Abnormal uterine action in labor
  - Abnormal labor patterns, prolonged labor, obstructed labor, Dystocia
  - Contracted pelvis
  - Malposition and malpresentations
  - Abnormalities of placenta, cord, amniotic fluid and membranes
  - Complications of the third stage of labor
  - Injuries to birth canal
9. **Postpartum**
- Identification and management of genital tract trauma – perineal tear, cervical / vaginal tear, episiotomy complications, rupture uterus.
  - Management of critically ill woman.
  - Postpartum shock, sepsis and psychosis.
  - Postpartum contraception.
  - Breast feeding practice; counseling and importance of breast-feeding. Problems in breast-feeding and their management, baby friendly practices.
  - Normal and abnormal puerperium – sepsis, thrombophlebitis, mastitis, psychosis
  - Hematological problems in obstetrics including coagulation disorders. Use of blood and blood components / products.
10. **Operative obstetrics**
- Early Pregnancy Operations: Suction and evacuation, Manual vacuum aspiration
  - Obstetrics Forceps and Ventouse
  - Episiotomy
  - Cesarean Delivery
  - Versions
  - Hysterotomy
11. **Miscellaneous and current topics**
- Audit , medicolegal aspects, PC PNDT act, ethics , communication, Counseling, Skilled Training and Bio Medical waste management in Obstetrics
  - Safe Motherhood, Epidemiology of Obstetrics, Maternal and Perinatal Mortality and Morbidity , Vital Statistics and Reproductive Morbidity and Health Programme in Obstetrics
  - Imaging in obstetrics
  - Obstetric Instruments, Specimens, Drugs , spots and Laboratory tests
12. **Newborn**
- Care of newborn: Normal and high risk new born (including NICU care).
  - Examination of New born
  - Asphyxia and neonatal resuscitation.
  - Neonatal sepsis – prevention, detection and management.
  - Neonatal hyper-bilirubinemia – investigation and management.
  - Birth trauma – detection and management.
  - Detection and management of fetal / neonatal malformation.
  - Management of common neonatal problems.

### 3.1.3 Gynaecology and Family welfare

1. **Epidemiology and enteropathogenesis of gynecological disorders.**
2. **Clinical anatomy of the pelvis and reproductive tract**
3. **Diagnostic modalities and management of common benign and malignant gynecological diseases**
  - Fibroid uterus
  - Endometriosis and adenomyosis
  - Abnormal Uterine Bleeding
  - Endometrial hyperplasia
  - Genital prolapse (uterine and vaginal)
  - Cervical erosion, cervicitis, cervical polyps, cervical neoplasia
  - Vaginal cysts, vaginal infections, vaginal neoplasia (VIN)
  - Benign ovarian pathologies
  - Malignant genital neoplasia: ovary, fallopian tubes, uterus, cervix, vagina, vulva, gestational trophoblastic diseases
  - Diseases of the Breast
4. **Diagnosis and surgical management of clinical conditions related to congenital malformations of genital tract**
5. **Intersex, ambiguous sex and chromosomal abnormalities.**
6. **Health of Adolescent Girls**
  - Recognize importance of good health of adolescent.
  - Identification and management of health problems of adolescents.
  - Understanding and planning and intervention program of social, educational and health needs of adolescent girls.
  - Education regarding rights and confidentiality of women's health, specifically related to reproductive function, sexuality, contraception and safe abortion
7. **Infertility – Evaluation and management**
  - Methods of ovulation induction
  - Tubal (micro) surgery
  - Management of immunological factors of infertility
  - Male infertility
  - Obesity and other infertility problems
  - Advanced Assisted Reproductive Techniques (ART)
8. **Reproductive tract infections:**
  - HIV infections in pregnancy, its effects and management.
  - Sexually Transmitted Diseases
  - Genital tuberculosis
  - Other infections
9. **Principles of radiotherapy and chemotherapy in gynecological malignancies**
10. **Diagnosis and management of endocrinal abnormalities such as:**
  - Menstrual abnormalities
  - Endometriosis
  - Abnormal uterine bleeding
  - Polycystic ovarian disease,
  - Hyperprolactinemia
  - Amenorrhea (primary / secondary)
  - Hyperandrogenism
  - Thyroid, pituitary and adrenal disorders.
11. **Urological problems in gynecology – Diagnosis and management**
  - Urinary tract infection
  - Urogenital injury and fistulae
  - Urinary Incontinence
  - Other urological problems
12. **Menopause: management (HRT) and prevention of its complications**
13. **Endoscopy : Laparoscopy , hysteroscopy**
14. **Diagnostic and simple therapeutic procedure**

- Pap Smear
- Wet smear examination
- Endometrial Biopsy
- Endometrial Aspiration
- Dilatation and Curettage/Fractional Curettage / Polypectomy
- Cervical Biopsy
- Cryocauterisation / Electrocautery of Cervix
- Hysterosalpingography
- Colposcopy
- Basic ultrasound / TVS
- Vulval Biopsy
- Intra Uterine Contraception Device Insertion / removal

#### 15. Operative Gynecology-

- Abdominal incisions, suture material, instruments and knotting
- Abdominal and vaginal hysterectomy
- Surgical procedures for genital prolapse, fibromyoma, endometriosis, ovarian adnexal, uterine, cervical, vaginal and valval pathologies.
- Surgical treatment for urinary and other fistulae, urinary incontinence
- Diagnostic and Operative endoscopy

#### 16. Family Welfare and Demography

- Demography and Population dynamics
- Statistics regarding maternal mortality/morbidity, perinatal mortality / morbidity, birth rate, fertility rate.
- National Health Policies and Programs, in relation to population and family welfare safe childbirth.
- Knowledge of contraceptive techniques both female & male, including recent developments.
- Medical termination of pregnancy: act, its implementation, providing safe and adequate services. .

### 3.1.3 Recent Advances:

The topics will be updated according to the current advances and developments in the field of Reproductive Health. The following are a guide to the areas of interest.

#### 1. Obstetrics

- a) Genetic counseling and prenatal testing
- b) Screening and prevention of pre-eclampsia
- c) Changing practices in the management of first-trimester miscarriage
- d) Recurrent pregnancy loss
- e) Obesity and pregnancy
- f) Prediction of pre term labor: Fetal fibronectin and cervical USG
- g) Extreme preterm birth: Role of corticosteroids and magnesium sulfate
- h) Induction of labor : who, when, how and where?
- i) Fetal monitoring during labor
- j) Advances and updates in the management of post partum hemorrhage
- k) Role of operative deliveries : Minimizing complications
- l) Fetal therapy and surgery
- m) Pregnancy after assisted reproductive techniques
- n) Newer respiratory viral infections, including COVID-19
- o) Rational Antibiotic policy in pregnancy
- p) Minimally invasive surgery in pregnancy
- q) Domestic violence and its relevance in obstetrics
- r) Substance abuse during pregnancy

#### 2. Gynaecology

- a) Medical management of endometriosis
- b) Immunotherapy for ovarian cancer
- c) SPRMs in gynecology
- d) The future of cervical screening
- e) Laparoscopy and cystoscopy in chronic pelvic pain and bladder pain
- f) Enhanced recovery in obstetric and gynecological surgery
- g) New reproductive health guidelines for patients with systemic rheumatic diseases

- h) Management of tubal ectopic pregnancy
- i) Controversies in female genital cosmetic surgeries
- j) Tissue extraction in gynecologic surgeries: past, present and future.
- k) The use of robotics in gynecologic surgeries
- l) Urinary incontinence , its evaluation and management
- m) Oral treatment for heavy menstrual bleeding related to uterine fibroids
- n) Treatment for recurrent bacterial vaginosis
- o) Newer contraceptives
- p) C- reactive protein and T-O abscess
- q) Contemporary diagnosis and treatment of heavy menstrual bleeding
- r) Pediatric and adolescent gynecology
- s) Sexual abuse
- t) HPV vaccination and CIN recurrence
- u) Management of abnormal cervical cytology results during COVID-19 pandemic
- v) Pap smear screening and HPV vaccination in low income countries.
- w) Palliative care consultation for high-risk surgical patients
- x) Sentinel lymph nodes and precision surgery in gynecologic cancer
- y) Preventing ovarian cancer in high risk women
- z) FIGO classification of benign and malignant diseases

### 3.2 Practical Training Program

Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training will be skills oriented. The practical training program will be in a phased manner, learning from basics to advanced skills.

#### A. Cognitive Domain

1. Provide effective prenatal care depending on the clinical condition of the mother, including nutrition, immunization and risk assessment.
2. Learn in greater detail about common problems like hypertension complicating pregnancy, intrauterine growth restriction, cephalopelvic disproportion, obstructed labour and puerperal sepsis.
3. Appreciate the indications and methods of induction of labour
4. Acquire thorough knowledge of gynecologic conditions of public health importance such as cancer cervix and other gynecologic diseases likely to affect pregnancy.
5. Gain knowledge of other branches of medicine which are relevant to Obstetrics and Gynaecology with special stress on Diabetes mellitus, Hypertension, Cardiac Disease, Anemia, Lower urinary tract disorders and Medical and surgical causes of acute abdomen.
6. Aware of medico-legal aspects of practice of Obstetrics and Gynaecology.
7. Able to diagnose and manage normal pregnancy, labour and puerperium and recognize any departure from normal in the above.
8. Able to competently manage cases of abortion, spontaneous and induced including ectopic gestation and gestational trophoblastic diseases.
9. Diagnose and manage preterm labour and assess the fetal well being, maturity and birth weight and to use that information in deciding the obstetric management.
10. Develop decision making skills by utilizing the clinical and laboratory data.
11. Able to diagnose and manage acute abdomen, hemorrhage in obstetrics & Gynaecology and other emergencies i.e eclampsia.
12. Able to medically treat common gynecologic diseases specially using
  - i) Antibiotics
  - ii) Hormone therapy including contraception
  - iii) Ovulation inducing agents
  - iv) Antineoplastic drugs
13. Understand the need for common obstetric operative interventions i.e episiotomy, forceps, ventouse, caesarean section, dilatation and evacuation etc.
14. Understand the importance of population control, contraception and different methods of contraception
15. Understand the physiology of menstruation and manage common menstrual abnormalities

16. Identify common adolescent and pediatric gynecological problems and their management
17. Learn common causes of infertility and their management and assisted reproductive techniques
18. Acquire knowledge about common gynecological problems like leucorrhoea, sexually transmitted infections, displacements, fibroid, endometriosis etc
19. Learn about screening and diagnosis of gynecological malignancies including that of breast
20. Acquaint oneself with common gynecological operative procedures
21. Learn the proper method of handling data and presenting statistics in a scientific and orderly fashion in seminars, symposia and papers.
22. Utilize journals and reference works effectively.

#### **B. Affective Domain**

1. Appreciate the fact that women and children are especially a vulnerable group as regards health problems.
2. Appreciate particularly the problem of patients of advanced and terminal disease and to develop a sympathetic attitude to them and their relatives.
3. Understand the psychological aspects of gynecologic diseases in general and infertility and unwanted pregnancy in particular.
4. Develop the ability to view the patient's condition in a wider social perspective and to adjust therapy to suit her social and financial reality.
5. Understand the importance of good clinical practice in preventing most of the morbidity and mortality in obstetrics and gynecology.
6. Develop skills to communicate with patients and their relatives and to elicit a thorough history and explain regarding investigations and management
7. Understand that obstetrics and gynecology forms a hotbed for ethical issues and follow necessary precautions needed for an ethical practice
8. Consultations with other department to have a multidisciplinary approach.
9. Discuss problematic cases in ward with consultants.

#### **C. Psychomotor Domain**

1. Able to select cases for the following obstetric procedures and able to perform them independently and confidently: -  
Obstetric Operations and procedures
  - i) Lower segment caesarean section including cases of obstructed labour and malpresentations.
  - ii) Outlet and low forceps delivery
  - iii) Vacuum extraction
  - iv) Assisted Breech Delivery
  - v) External cephalic/ internal podalic version.
  - vi) Manual removal of placenta and exploration of uterine cavity
  - vii) Management of atonic and traumatic Post-Partum Hemorrhage
2. Able to perform safe and effective Medical termination of Pregnancy up to 20 weeks of gestation using the methods of (Family welfare posting )
  - i) Suction Evacuation / MVA
  - ii) Menstrual Regulation
  - iii) Extra amniotic instillations & other newer methods like medical abortion
  - iv) Minilaprotomy tubectomy
3. Able to perform the following gynecological surgical procedures:-
  - i) Dilation and Evacuation
  - ii) Polypectomy
  - iv) Vaginal Hysterectomy with pelvic floor repair
  - v) Abdominal Hysterectomy for benign uncomplicated indications
  - vi) Salpingectomy for ectopic pregnancy ; Salpingo-ovariotomy,
  - vii) Amputation of Cervix/Manchester repair/Conisation
4. Able to competently assist in the following:

- i) Gynecological Oncology surgery
- ii) Gynecological-urological surgery
- iii) Tubal microsurgery
- iv) Caesarean Hysterectomy
- v) Hysterectomy in \_difficult cases'
- vi) Minilaparotomy tubectomy, laparoscopic sterilization
- vii) Diagnostic Laparoscopy
- viii) Colpocentesis /colpotomy, laparotomy for septic abortion
- ix) Cervical cerclage

5. Able to manage the post-operative and intra-operative complications.

6. Able to assist/perform the following investigations;-

- i) Obstetric Ultrasonography for
  - Pregnancy diagnosis, pregnancy dating
  - Early pregnancy bleeding
  - Antepartum Hemorrhage
  - Biophysical profile
  - fetal anomalies
- ii) Gynecological USG for adnexal mass, uterine pathology and follicular monitoring
- iii) Hysterosalpingography/ sono-hysterosalpingography
- iv) Colposcopy
- v) Cystoscopy

7. Posting in neonatology: Able to resuscitate asphyxiated new born by emergency measures and recognize signs of requiring admission to specialized neonatal intensive care unit

8. Posting in Anesthesia and critical care: Able to manage critically ill patients in an intensive care set up.

9. Posting in Radiology and radiotherapy: Understands the plan for management of gynecological oncology cases based on radiotherapy and medical oncology.

#### **4.0 Training Program:**

#### 4.1 Schedule of posting:

The postgraduate resident will undergo a graded training with postings schedule as follows:

<b>First Year</b>	Unit Posting	6 months	
	Labor ward posting	6 months	
<b>Second Year</b>	Inter-departmental Rotation	10 weeks	Neonatology: 2 weeks Anesthesia and critical care: 4 weeks Surgery: 2 weeks Radiodiagnosis and Radiotherapy: 2 weeks
	Rural Health centre	2 weeks	
	Family welfare	6 weeks	
	Specialty clinics	6 weeks	
	Labor ward posting	3 months	
	Unit Posting	3 months	
<b>Third Year</b>	Unit Posting	6 months	
	Unit Posting	6 months	

**4.2.Academic Activities:** Learning in postgraduate program is essentially self-directed and from clinical and academic work. The formal sessions are meant to supplement this core effort.

1. Bed side Teaching rounds \_\_\_\_\_ Daily
2. Clinical case discussions \_\_\_\_\_ Once a week
3. Seminars / Journal Club/ Statistical meetings \_\_\_\_\_ Once a week
4. Dissertation Review: Total 5, At submission of synopsis(1), Interim result(3) and at final submission(1)
5. Mortality meetings: Maternal and Perinatal \_\_\_\_\_ Once a month
6. Inter-departmental Meetings / Integrated Seminars \_\_\_\_\_ Bimonthly
7. Guest Lectures / CME/workshops/seminars \_\_\_\_\_ Once in three months
8. Workshops on : Biostatistics, Research Methodology, Teaching Methodology, Health Economics, Medical Ethics and legal issues \_\_\_\_\_ Once during the program

## 5.0 Dissertation

- Topic of dissertation should be decided by the student in consultation with the guide who is recognized postgraduate teacher.
  - The candidates shall report the progress of the dissertation work to the concerned guide periodically and obtain clearance for the continuation of the dissertation work.
  - Dissertation should be completed and submitted by the stipulated date.
  - Acceptance of the dissertation will be a prerequisite to appear in the final examination.
- Timeline for dissertation:
- Synopsis submission and approval:** Process to be completed within six months of admission to MS program

SN	Activity	July admission	January admission
1	Selection of topic in consultation with PG Guide	September / October	March / April
2	Approval by Department PG Committee		
3	Institute Scientific Committee approval	November / December	May / June
4	Institute Ethics Committee approval		
5	Final approval letter by Academics Section	31 <sup>st</sup> December	30 <sup>th</sup> June

### **Submission of Dissertation:**

The Dissertation will be submitted to Academic Section at least six months prior to the scheduled examination, i.e. by 31<sup>st</sup> December for June examination and by 30<sup>th</sup> June for December examination

## **6.0 Documentation :**

The work done during the three years based on the above areas will be documented in a Log Book . The performance of the Postgraduate student during the training period will be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student.

### **6.1 Clinical Skills :**

1. Labor ward work performance: Normal Labor
2. Labor ward work performance: Abnormal Labor
3. Operative Obstetrics
4. Gynecology Operations
5. Obstetric procedures
6. Gynecology Procedures
7. Family welfare: contraception prescription
8. Family welfare: MTP procedure
9. Allied subjects posting: Neonatology
10. Allied subjects posting: Anesthesia and critical care
11. Allied subjects posting: Radiodiagnosis and radiotherapy
12. Allied Surgery
13. Attendance report

### **6.2 Academic performance:**

1. Case presentation
2. Academic Activity: Seminars
3. Academic Activity: Journal Club
4. Academic Activity: Dissertation review
5. Maternal and Perinatal death Audits
6. Academic Activity: CME, Workshop, Conferences, Presentations, Publications

## **7.0 Assessment**

### **General Principles :**

- The assessment will be valid, objective, and reliable.

- It covers cognitive, psychomotor and affective domains.
- Formative, continuing and summative (Term and Final ) assessment
- Thesis will also be assessed separately.
- Assessment will be done every 6 monthly, five times during the program and the results documented in the log book.

**7.1 Formative Assessment:** The formative assessment is continuous as well as periodical. Formative assessment will provide feedback to the candidate.

Continuous assessment will be based on the feedback from the senior residents and the consultants concerned.

Periodical assessment will held every six monthly and graded by the consultant in-charge during the particular posting and academic assignment.

### 1. Personal attributes

- Behavior and Emotional Stability: Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.
- Motivation and Initiative: Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
- Honesty and Integrity: Truthful, has ethical conduct, exhibits good moral values, loyal to the institution.
- Interpersonal Skills and Leadership Quality: Has compassionate attitude towards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

### 2. Clinical Work:

- Availability: Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
- Diligence: Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
- Academic ability: Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.
- Clinical Performance: Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

Assessment will be done by grading the performance for the personal and clinical attributes as follows:

**\*Grade A (≥ 80%)      B (65-79%)      C (50-64%)      D (<50%)**

**3. Internal Assessment :** End of term examination will be conducted as per the following schedule:

SN	Timing	Theory Marks	Practical Marks
1	End of 1 <sup>st</sup> Year	100	100
2.	End of 2 <sup>nd</sup> Year	100	100
3.	2yr&9month(Pre-Prof)	200	200

The Internal assessment will be presented to the Board of examiners for due consideration at the time of Final Examinations.

## 7.2 ) Final Summative Assessment:

### General Principles:

#### 1. Eligibility for Final Summative:

1. Attendance:  $\geq 80\%$  in each 6 monthly term
2. Overall Grade for performance :Based on 6 monthly assessments, a satisfactory remark for 4 out of 5
3. Dissertation: Acceptance
4. Presentation of Scientific Poster (1) and Paper (1) at National Meeting
5. Publication : Original research in indexed Journal: Sent/accepted/published
6. Minimum 50% in research methodology exam

#### 2. Pattern of exam and marks distribution

#### A. Theory examination (Total = 400 marks)

Paper	Title	Marks	Marks Distribution
Paper 1:	Basic and Applied Sciences	100	Short Answer questions:4X 10=40
Paper 2:	Obstetrics including diseases of Neonates	100	
Paper 3:	Gynaecology and Family welfare	100	Long Answer questions: 4X 15=60
Paper 4:	Recent Advances in Obstetrics & Gynaecology	100	Essay: Ten questions , 10 marks each

#### B. Practical & Viva voce examination (Total = 400 marks)

SN	Subject	Type	Marks Distribution
1	Obstetrics	Long case (1) 75 marks and Short case (1) 20 marks Simulation of normal and abnormal labor on a model (5 marks)	100
2	Gynaecology	Long cases (1) 75 marks and Short case (1) 20 marks Simulation of Gynaecology examination, Cu-T insertion etc. (5 marks)	100
3	Obstetrics and Neonatology	Viva voce	75
4	Gynaecology and Family welfare	Viva voce	75
5	OSCE (OB,GY &FW)	5 spots, 5 marks each	25
6	Grand rounds	Obstetrics and Gynaecology (5 cases, 5 marks each)	25

3. Ratio of marks in theory and practical will be equal.

4. Candidate will have to pass theory and practical examinations separately.

5. The pass percentage for practical exams will be 50%.

6. The pass percentage for theory will be 50% ,with at least 40% score in each paper independently.

## 8.0 Recommended Textbook, Reference Books, Journals

### 8.1 Textbooks

1. Williams Obstetrics – Gary Cunningham et al – McGraw Hill
2. Obstetrics Normal and Problem pregnancies. Steven Gabbe Jennifer Niebyl Joe Simpson Mark Landon
3. Basic Science in Obstetrics and Gynaecology, 4th Edition, Phillip Bennett & Catherine Williamson
4. Practical Guide to High-risk pregnancy & delivery Fernando Arias –S. Daftary Elsevier
5. Practical Obstetric problems (Ian Donald)- – BI Publication, Delhi
6. Mudaliar & Menon's Clinical Obstetrics –S. Gopalan & Orient Longman
7. Manual of Obstetrics – Shirish Daftary & Sudip Chakravarti Elsevier
8. High Risk Pregnancy: Management Options David K James, Philip J Steer, Carl P Weiner, Bernard Gonik
9. Current Diagnosis & Treatment Obstetrics & Gynecology, (LANGE CURRENT Series)
10. Berek & Novak's Gynecology (Berek and Novak's Gynecology) by Jonathan S. Berek
11. Shaw's Text Book of Gynaecology -. – Elsevier
12. Shaw's Text Book of Operative Gynaecology —Elsevier
13. Jeffcoate's Principles of Gynaecology – International Edition
14. Te Linde's Operative Gynaecology – Victoria L Handa
15. Williams Gynecology, by Barbara Hoffman , John Schorge , et al Lippincott

### 8.2 Reference Books:

1. Creasy and Resnik's Maternal-Fetal Medicine: Principles and Practice, Robert Resnik MD
2. Callen's Ultrasonography in Obstetrics and Gynaecology, Mary E Norton MD
3. Turnbull's Obstetrics by Chamberlain - – Churchill Livingstone Harcourt Publisher
4. Medical Disorders in Obstetric Practice – –Michael de Swiet – Blackwell
5. Danforth's Obstetrics & Gynaecology — Lippincott Williams & Wilkins
6. Clinical Gynecologic Endocrinology and Infertility - Speroff & Fritz, Lippincott
7. Clinical Gynecologic Oncology: Disaia JP, Creasman TM, The C.V. Mosby Company,
8. Atlas of Pelvic Anatomy and Gynecologic Surgery 4th Edition by Michael S. Baggish MD, Mickey , Karram
9. Recent Advances in Obstetrics & Gynaecology. Bonnar
10. Textbook of Assisted Reproductive Techniques Two Volume Set, by David Gardner et al
11. Operative Endoscopy and Minimally Invasive Surgery by Daniel B Jones

### 8.3 Other resources:

1. NICE guidelines
2. RCOG Green top Guidelines
3. ACOG guidelines

4. FIGO guidelines
5. WHO handbooks
6. Cochrane systematic reviews

#### **8.4 Journals**

1. Journal of Obstetrics & Gynaecology of India
2. International Journal of obstetrics & Gynaecology
3. European Journal of Obstetrics and Gynecology and Reproductive Biology
4. British Journal of Obstetrics & Gynaecology
5. American Journal of Obstetrics and Gynaecology
6. Obstetrics and Gynaecology
7. BMC Pregnancy and Childbirth
8. Gynecologic Oncology
9. Fertility and Sterility
10. Journal of Minimally Invasive Gynaecology
11. Ultrasound in Obstetrics and Gynecology
12. Fetal Diagnosis and Therapy
13. Human Reproduction Update
14. New England Journal of Medicine
15. British Medical Journal
16. The Lancet
17. Obstetric and Gynecology Clinics of North America
18. Clinical Obstetrics & Gynaecology