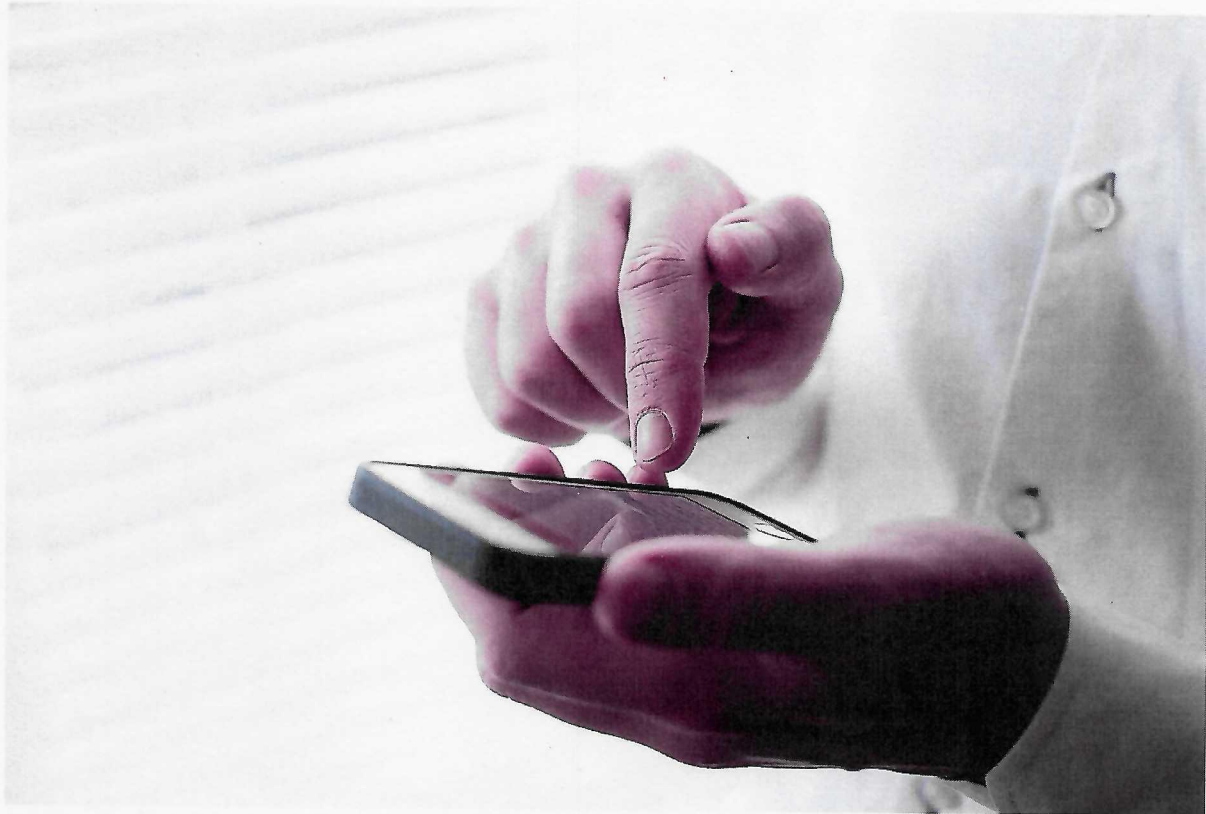


Syllabus for MS (Obstetrics & Gynaecology) Programme

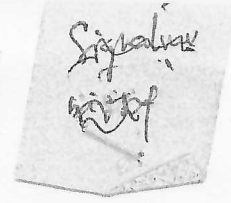


Guru Gobind Singh Indraprastha University

A State University established by the Govt. of NCT of Delhi

University School of Medicine and Allied Health Sciences

MD/ MS Obstetrics and Gynaecology



Programme Objectives

The goal of MD course in Obstetrics and Gynaecology is to produce a competent Obstetrician and Gynaecologist who:-

- Recognizes the health needs of women and adolescents and carries out professional obligations in keeping with principles of National Health Policy and professional ethics
- Has acquired the competencies pertaining to Obstetrics and Gynaecology that are required to be practiced in the community and at all levels of health system
- Has acquired skill in effectively communicating with the family and the community
- Is aware of the contemporary advances and developments in medical sciences as related to Obstetrics and Gynaecology.
- Is oriented to principles of research methodology
- Has acquired skill in educating medical and paramedical professional

Specific Learning Objectives

At the end of the MD/MS Course in Obstetrics and Gynaecology, the student should be able to:

- a. Provide quality care to the community in the diagnosis and management of antenatal, Intra-natal & Post natal period of Normal and abnormal pregnancy.
- b. Provide effective & adequate care to the Obstetrical and neonatal diseases.
- c. Manage common Gynecological problems & Emergencies.
- d. Provide counseling and delivery of fertility regulation methods and perform medical termination of pregnancy.
- e. Organize and implement the "National Health Programs" pertaining to Women's health.
- f. Develop adequate surgical skills to manage common Obstetrical & Gynecological problems.
- g. Have knowledge of the basic principles of anesthesiology and resuscitative measures.
- h. Properly maintain medical records and know the Medico legal aspects and acts in respect of Obstetrical & Gynecological practice.
- i. Plan and carry out scientific research (clinical / experimental) in specialty of Obstetrics & Gynecology.
- j. Keep abreast with advances in the field of Obstetrics & Gynecology.

- k. Involved in educational program in Obstetrics & Gynecology (with seniors) for medical & paramedical staff and also for the society.
- l. Be familiar with modern methods of teaching.
- m. Develop communication skill and demonstrate compassionate attitude towards the patients.

Postgraduate Training

Should be imparted to the students through:

- Lectures, seminars, symposia, Inter & intra departmental meetings (clinic-pathological, radio-diagnosis, radiotherapy, anesthesia, Pediatrics/Neonatology), Maternal morbidity/mortality meetings and journal club. Records of these are to be maintained by the department.
- By encouraging and allowing the students to attend and actively participate in CMEs, Conferences by presenting papers.
- Entrusting to carry out a research project.
- Maintenance of log book
- Writing thesis / Dissertation (only for P.G. degree course)
- Active involvement in undergraduate teaching.

Practical & clinical training

- Emphasis should be self learning, group discussions and case presentations.
- Student should be trained about proper History taking, Clinical examination, advising / ordering relevant necessary investigations, their interpretation and instituting medical / surgical management by posting students in OPD, specialty clinics, wards, operation theaters, Labour room, family planning clinics and other departments like anesthesiology, neonatology, radiology/radiotherapy.
- Details of 3 years posting in Resident program (6 semester of 6 months each)

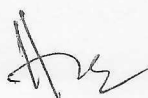
a. Allied posts should be done during the course – for 8 weeks

- i. Neonatology – 2 weeks
- ii. Anaesthesia – 2 weeks
- iii. Radiology/Radiotherapy – 2 weeks
- iv. Surgery – 2 weeks

b. Detailed of training in the subject during resident posting

The student should attend to the duties (Routine and emergency):

Out patient Department and special clinics



Inpatients

Operation Theater.

Labour Room

Writing clinical notes regularly and maintains records.

- 1st Semester working under supervision of senior residents & teaching faculty
- 2nd & 3rd semester - Besides patient care in O.P.D., wards, Casualty and labour-room, carrying out minor operations under supervision & assisting in major operation.
- 4th 5th & 6th semester - independent duties in management of patient (including major operations under supervision of teaching faculty)

c. Surgeries to be done during PG training. (Details in the Syllabus)

2. Topic of thesis/Dissertation should be decided by the student in consultation with the teacher.
3. Thesis/ Dissertation should be complete and should be submitted to the Board before the final examination.
3. Acceptance of the Thesis/Dissertation should be prerequisite to appear for the final Examination.

PAPER (Theory)

- I Applied Basic Sciences
- II Obstetrics including Social Obstetrics and diseases of New born
- III Gynaecology including gynae pathology & operative gynaecology
- IV Recent Advances in Obstetrics and Gynaecology

PRACTICAL EXAMINATION

OBSTETRICS:


Clinical

Long Case: 1 case

Short Case/Spot Case: 1 case

Viva including

- i. Instruments
- ii. Pathology specimens
- iii. Drugs & X-rays, Sonography etc.
- iv. Dummy Pelvis



GYNAECOLOGY

Clinical

Long Case: 1 case

Short Case/Spot: 1 case

Viva including

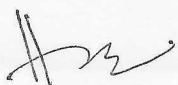
- i. Instruments
- ii. Pathology specimens
- iii. Drugs & X-rays, Sonography etc.
- iv. Family planning

Course Content

Paper I

1. Basic Sciences

- Normal & abnormal development structure and function (female & male) urogenital system and female breast.
- Applied Anatomy of genitor-urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, upper thigh (inguinal ligament, inguinal canal, vulva, rectum and anal canal).
- Physiology of spermatogenesis.
- Endocrinology related to male and female reproduction. (Neurotransmitters).
- (Anatomy &) physiology of urinary & lower GI (Rectum/anal canal) tract.
- Development, structure & function of placenta, umbilical cord & amniotic fluid.
- Anatomical & physiological changes in female genital tract during pregnancy.
- Anatomy of fetus, fetal growth & development, fetal physiology & fetal circulation.
- Physiological & Neuro-endocrinal changes during puberty, adolescence, menstruation, ovulation, fertilization, climacteric & menopause.
- Biochemical and endocrine changes during pregnancy, including systemic changes in cardiovascular, hematological, renal hepatic, renal, hepatic and other systems.
- Biophysical and biochemical changes in uterus and cervix during pregnancy & labour.
- Pharmacology of identified drugs used during pregnancy, labour, post partum period in reference to their absorption, distribution, excretion, (hepatic) metabolism, transfer of the drugs across the placenta, effect of the drugs (used) on labour, on fetus, their excretion through breast milk.



- Mechanism of action, excretion, metabolism of identified drugs used in the management of Gynaecological disorder.
- Role of hormones in Obstetrics & Gynaecology.
- *Markers in Obstetric & Gynaecology*_ Non neoplastic and Neoplastic Diseases
- Pathophysiology of ovaries, fallopian tubes, uterus, cervix, vagina and external genitalia in healthy and diseased condition.
- Normal and abnormal pathology of placenta, umbilical cord, amniotic fluid and fetus.
- Normal and abnormal microbiology of genital tract. Bacterial, viral & parasitical infections responsible for maternal, fetal and gynaecological disorders.
- Humoral and cellular immunology in Obstetrics & Gynaecology.
- Gametogenesis, fertilization, implantation & Early development of embryo.
- Normal Pregnancy, physiological changes during pregnancy, labour & puerperium.
- Immunology of pregnancy.
- Lactation.

2. Medical Genetics

- Basic medical genetics including cytogenetics.
- Pattern of inheritance
- Chromosomal abnormalities _ types, incidence, diagnosis, management and recurrence risk.
- General principles of Teratology.
- Screening, counseling and prevention of developmental abnormalities.
- Birth defects – genetics, teratology & counseling.

Paper II

CLINICAL OBSTETRICS

1. Antenatal care:

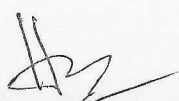
- Prenatal care of normal pregnancy including examination, nutrition, immunization & follow up.
- Identification and management of complications and complications of pregnancy- abortion, ectopic pregnancy, vesicular mole, Gestational Trophoblastic Disease, hyperemesis gravidarum, multiple pregnancy, antepartum hemorrhage, pregnancy induced hypertension, preeclampsia, eclampsia, Other associated hypertensive disorders, Anemia, Rh incompatibility, diabetes, heart disease, renal & hepatic diseases, preterm _ post term pregnancies, intrauterine fetal growth retardation,

- Neurological, hematological, dermatological diseases, immunological disorders and other medical & surgical disorders/problems associated with pregnancy, Multiple pregnancies, Hydramnios, Oligiamnios.
- Diagnosis of contracted pelvis (CPD) and its management.
- High-risk pregnancy-
 - ✓ Pregnancy associated with complications, medical & surgical problems.
 - ✓ Prolonged gestation.
 - ✓ Preterm labour, premature rupture of membranes.
 - ✓ Blood group incompatibilities.
 - ✓ Recurrent pregnancy wastage.
- Evaluation of fetal & 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 & its management.
- Infections in pregnancy. (Bacterial, viral, fungal, protozoal)
 - ✓ Malaria, Toxoplasmosis.
 - ✓ Vial-Rubella, CMV, Herpes, HIV, Hepatic viral infections (B, C etc)
 - ✓ Sexually transmitted infections. (STDs)
 - ✓ Mother to fetal transmission of infections.
 - ✓ Mother to fetal transmission of infections.
- Identification & management of fetal malpositions and malpresentations.
- Management of pregnancies complicated by medical, surgical) with other specialties as required) & gynecological diseases.
 - ✓ Anemia, hematological disorders
 - ✓ Respiratory, Heart, Renal, Liver, skin diseases.
 - ✓ Gastro Intestinal, Hypertensive, Autoimmune, Endocrine disorders.
 - ✓ Associated Surgical Problems.

Acute Abdomen (surgical emergencies–appendicitis & GI emergencies).

Other associated surgical problems.

- ✓ Gynecological disorders associated with pregnancy – congenital genital tract, developmental anomalies, Gynaec pathologies – fibroid uterus, CaCx, genital prolapsed etc.



- ✓ Prenatal diagnosis (of fetal problems & abnormalities), treatment _ Fetal therapy
- ✓ M.T.P, P.N.D.T. act et
- ✓ National health MCH programs, Social obstetrics and vital statis
- ✓ Recent advances in Obstetrics.

2. Intrapartum care:

- Normal labour – mechanism & management.
- Partographic monitoring of labour progress, recognition of abnormal labour and its appropriate management.
- Identification and conduct of abnormal labour and complicated deliver _ breech, forceps delivery, caesarian section, destructive operations.
- Induction and augmentation of labour.
- Management of abnormal labour – abnormal pelvis, soft tissue abnormalities of birth canal, mal0-presentation, mal-positions of fetus, abnormal uterine action, obstructed labour and other distocias.
- Analgesia & anaesthesia in labour.
- Maternal & fetal monitoring in normal & abnormal labour (including electronic fetal monitoring).
- Identification and management of intrapartum complications, Cord presentation, complication of 3rd stage of labour- retained placenta, inversion of uterus, rupture of uterus, post partum hemorrhage.

3. Post Partum

- Complication of 3rd stage of labour-retained placenta, inversion of uterus, post partum hemorrhage, rupture of uterus, Management of primary & secondary post partum hemorrhage, Retained placenta, uterine inversion. Post-partum collapse, amoniotic fluid embolism
- Identification & management of genital tract trauma – perineal tear, cervical/vaginal tear, episiotomy complication, rupture uterus.
- Management of critically ill woman.
- Post partum shock, sepsis & psychosis.
- Post partum contraception.
- Breast feeding practice; counseling & importance of breast-feeding. Problems in breast-feeding and their management, Baby friendly practices.
- Problems of newborn – at birth (resuscitation), management of early neonatal problems.

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- Normal and abnormal puerperium – sepsis, thrombophlebitis, mastitis, psychosis.
1. Hematological problems in Obstetrics including coagulation disorders.
Use of blood and blood components/products.

OPERATIVE OBSTETRICS: PG students must have performed reasonable routine procedures and assisted/observed uncommon procedures.

- Decision-making, technique & management of complications;
- Vaginal instrumental delivery, Caesarian section, Obst. Hysterectomy, destructive operation, manipulations (External/internal podalic version, manual removal of placenta etc)
- Medical Termination of pregnancy – safe abortion- selection of case, technique & management of complication. MTP law.

NEW BORN

1. Care of new born: Normal and high risk new born (including NICU care).
2. Asphyxia and neonatal resuscitation.
3. Neonatal sepsis – prevention, detection & management.
4. Neonatal hyper-bilirubinemia – investigation & management.
5. Birth trauma – Detection & management.
6. Detection and management of fetal/neonatal malformation.
7. Management of common neonatal problems.

Paper III

CLINICAL GYNAECOLOGY

- Epidemiology and etiopathogenesis of gynaecological disorders.
- Diagnostic modalities and management of common benign and malignant gynaecological diseases (disease of genital tract):

Fibroid uterus

Endometriosis & adenomyosis

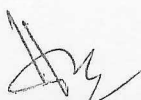
Endometrial hyperplasia

Genital prolapse (uterine & vaginal)

Cervical erosion, cervicitis, cervical polyps, cervical neoplasia.

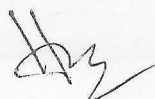
Vaginal cysts, vaginal infections, vaginal neoplasia (VIN)

Benign Ovarian pathologies



Malignant genital neoplasia – of Ovary, Fallopian Tubes, Uterus, Cervix, Vagina, Vulva and Gestational Trophoblastic diseases, Ca Breast.

- Diagnosis and surgical management of clinical conditions related to congenital malformations of genital tract. Reconstructive surgery in gynaecology.
- Intersex, ambiguous sex and chromosomal abnormalities.
- Reproductive endocrinology: Evaluation of Primary/secondary amenorrhea, management of Hyperprolactinemia, Hirsutism, Chronic an-ovulation, PCOD, thyroid and other endocrine dysfunctions.
- Infertility – Evaluation and management
 - ✓ Methods of Ovulation Induction
 - ✓ Tubal (Micro) surgery
 - ✓ Management of immunological factors of Infertility
 - ✓ Male infertility
 - ✓ Obesity & other Infertility problems.
 - ✓ (Introductory knowledge of) advanced Assisted Reproductive Techniques (ART)
- Reproductive tract Infections: prevention, diagnosis & treatment.
 - ✓ STD
 - ✓ HIV
 - ✓ Other Infections
 - ✓ Genital Tuberculosis.
- Principles of radiotherapy and chemotherapy in gynaecological malignancies. Choice, schedule of administration & complications of such therapies.
- Rational approach in diagnosis and management of endocrinal abnormalities such as: menstrual abnormalities, amenorrhea (primary/secondary), dysfunctional uterine bleeding, polycystic ovarian disease, hyperprolactinemia (galactorrhea), hyperandrogenism, thyroid – adrenal disorders, menopause and its treatment (HRT).
- Urological problems in Gynaecology – diagnosis and management.
 - ✓ Urinary tract infection
 - ✓ Urogenital Fistulae
 - ✓ Incontinence
 - ✓ Other urological problems
- Orthopedic problems in Gynaecology.
- Menopause: management (HRT) and prevention of its complications.



- Endoscopy (Laparoscopy _ Hysteroscopy)
 - ✓ Diagnostic & simple therapeutic procedures (PG students must be trained to do these procedures)
 - ✓ Recent advance in gynaecology – diagnostic & therapeutic
 - ✓ Pediatric, Adolescent & Geriatric Gynaecology
 - ✓ **Introduction to Advance Operative procedures.**

OPERATIVE GYNAECOLOGY

- ✓ Abdominal & Vaginal Hysterectomy
- ✓ Surgical Procedures for genital prolapsed, fibromyoma, endometriosis, ovarian, adenexal, uterine, cervical, vaginal and vulval pathologies.
- ✓ Surgical treatment for urinary & other fistulae, Urinary incontinence
- ✓ Operative Endoscopy

FAMILY WELFARE & DEMOGRAPHY

- ✓ Definition of demography and its importance in Obstetrics and Gynaecology.
- ✓ Statistics regarding maternal mortality, perinatal mortality/morbidity, birth rate, fertility rate
- ✓ Organizational and operational aspects of National health policies & programs, in relation to population and family welfare including RCH
- ✓ Various temporary and permanent methods of male and female contraceptive methods.
- ✓ Knowledge of contraceptive techniques (including recent developments).
 1. Temporary methods
 2. Permanent Methods.
 3. Emergency Contraceptive
 4. Recent advances in contraceptive technology
- ✓ Provide adequate counseling and services to service seekers of contraception including follow up.
- ✓ Medical termination of pregnancy: act, its implementation, providing safe and adequate services for medical and surgical abortion.
- ✓ Demography & population dynamics.
- ✓ Contraception (fertility control)



LE & FEMALE INFERTILITY

- ✓ History taking, examination and investigation.
- ✓ Causes and management of male infertility.
- ✓ Indications, procedures of Assisted Reproductive Techniques in relation to male infertility problem.

PRACTICAL TRAINING

Operative Skills In Obstetrics & Gynaecology

- Adequate proficiency in common Minor & Major operations, post operative management and management of their complication.

Operative procedures which must be done by P G students during training Period (In graded manner- By Assisting, Operating with senior person, Assisting, Operating under supervision)

(Operations MUST BE DONE/OBSERVED during PG residency & log book maintained)

1. Obstetrics:

Venesection, culdocentesis

Conduct normal deliveries

Perineal infiltration and pudendal block

Epidsiotomy and its repair

Amniotomy

Amnioinfusion

Ventous and Forceps Delivery

Carry out caesarian section delivery (10)

Manual removal of placenta

Management of genital tract obstetrical injuries.

Post partum sterilization / Minilap tubal ligation (20 must be Done)

Medical termination of pregnancy – various methods (20 must be done)

2. Gynaecology:

Endometrial / cervical biopsy.

cauterisation



Dilatation & curettage
Endometrial Aspiration
Hysterosalpingogram
Coldocentesis, Colpotomy
Opening and closing of abdomen (10 must be done)
Operations for vaginal wall prolapsed
Ovarian cyst operation (2)
Operation for ectopic pregnancy (2)
Vaginal & abdominal hysterectomy (2)

Operations must be OBSERVED &/OR ASSISTED when possible:

Internal podalic version
Caesarean Hysterectomy
Internal iliac artery ligation
Destructive obstetrical operations
Tubal microsurgery
Radical operations for gynaec malignancies
Repair of genital fistulae
Operations for incontinence
Myomectomy
Laparoscopic surgery

DIAGNOSTIC PROCEDURES

- Interpretation of x-rays – Twins, common fetal malformations / mal-presentations, abnormal pelvis (pelvimetry), Hysterosalpingigraphy
- Sonographic pictures at various stages of pregnancy – normal and abnormal pregnancies, Fetal biophysical profile, common gynaecological pathologies.
- Amniocentesis
- Fetal surveillance methods – Electronic fetal monitoring and its interpretation
- Post coital test



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-
Urine pregnancy test

Wet smear examination

Vaginal Papa Smear

- Colposcopy
- Endoscopy – Laparo & Hysteroscopy.
-


HEALTH OF ADOLESCENT GIRLS AND POST MENOPAUSAL WOMEN

- Recognise importance of good health of adolescent and postmenopausal women.
- Identification and management of health problems of postmenopausal women.
- Understanding and planning and intervention program of social, educational and health needs of adolescent girls & menopausal women.
- Education regarding rights and confidentiality of women's health, specifically related to reproductive function, sexuality, contraception and safe abortion.
- Geriatric problems.

REPRODUCTIVE TRACT AND 'HIV' INFECTION

- Epidemiology of RTI and HIV infection in Indian women of reproductive age group.
- Cause, effect and management of these infections.
- HIV infections in pregnancy, its effects and management.
- Relationship of RTI & HIV with gynaecological disorders.
- Planning and implementation of preventive strategies.

MEDICOLEGAL ASPECTS

- Knowledge and correct application of various acts and laws while practicing obstetrics and gynaecology, particularly MTP act and sterilization, Preconception and P.N.D.T. Act.
 - Knowledge of importance of proper recording of facts about history, examination findings, investigation reports and treatment administered in all patients.
 - Knowledge of steps recommended for examination and management of rape cases.
 - Knowledge of steps taken in the event of death of a patient.
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ENVIRONMENT AND HEALTH

- Concept of safe disposal of human body fluids and other materials.
- Universal precautions need to be taken in examination and surgical procedures for the prevention of HIV and other diseases.
- Effect of environment on pregnancy outcome.

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