

Syllabus

Course Contents:

Paper I

1. Basic Sciences

- Normal and abnormal development, structure and function (female and male) urogenital system and female breast.
- Applied Anatomy of genito-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 and physiology of urinary and lower GI (Rectum / anal canal) tract.
- Development, structure and function of placenta, umbilical cord and amniotic fluid.
- Anatomical and physiological changes in female genital tract during pregnancy.
- Anatomy of fetus, fetal growth and development, fetal physiology and fetal circulation.
- Physiological and neuro-endocrinal changes during puberty, adolescence, menstruation, ovulation, fertilization, climacteric and 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 and labor.
- 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 labor, 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 and Gynaecology.
- **Markers in Obstetrics & Gynaecology** - Non-neoplastic and neoplastic diseases
- Pathophysiology of ovaries, fallopian tubes, uterus, cervix, vagina and external genitalia in healthy and diseased conditions.
- Normal and abnormal pathology of placenta, umbilical cord, amniotic fluid and fetus.
- Normal and abnormal microbiology of genital tract. Bacterial, viral and parasitic infections responsible for maternal, fetal and gynaecological disorders.
- Humoral and cellular immunology in Obstetrics & Gynaecology.
- Gametogenesis, fertilization, implantation and early development of embryo.
- Normal Pregnancy, physiological changes during pregnancy, labor and 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 and counseling.

Paper II

Clinical obstetrics

1. Antenatal Care:

- Prenatal care of normal pregnancy including examination, nutrition, immunization and follow up.
- Identification and management of complications and complications of pregnancy – abortion, ectopic pregnancy, vesicular mole, Gestational trophoblastic Diseases, hyperemesis gravidarum, multiple pregnancy, antipartum hemorrhage, pregnancy induced hypertension, preeclampsia, eclampsia, Other associated hypertensive disorders, Anemia, Rh incompatibility, diabetes, heart disease, renal and hepatic diseases, preterm - post term pregnancies, intrauterine fetal growth retardation,
- Neurological, hematological, dermatological diseases, immunological disorders and other medical and surgical disorders/problems associated with pregnancy, Multiple pregnancies, Hydramnios, Oligoamnios.
- Diagnosis of contracted pelvis (CPD) and its management.
- High-risk pregnancy
 - Pregnancy associated with complications, medical and surgical problems.
 - Prolonged gestation.
 - Preterm labor, premature rupture of membranes.
 - Blood group incompatibilities.
 - Recurrent pregnancy wastage.
- 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. Prenatal diagnostic modalities including modern ones.
- Infections in pregnancy (bacterial, viral, fungal, protozoan)
 - Malaria, Toxoplasmosis.

- Viral – Rubella, CMV, Herpes, HIV, Hepatic viral infections (B, C etc)
- Sexually Transmitted Infections (STDs)
- Mother to fetal transmission of infections.
- Identification and management of fetal malpositions and malpresentations.
- Management of pregnancies complicated by medical, surgical (with other specialties as required) and gynecological diseases.
- Anemia, hematological disorders
- Respiratory, Heart, Renal, Liver, skin diseases.
- Gastrointestinal, Hypertensive, Autoimmune, Endocrine disorders.
- Associated Surgical Problems.
Acute Abdomen (surgical emergencies - appendicitis and GI emergencies).
Other associated surgical problems.
- Gynaecological disorders associate with pregnancy - congenital genital tract developmental anomalies, Gynaec pathologies - fibroid uterus, Ca Cx, genital prolapse etc.
- Prenatal diagnosis (of fetal problems and abnormalities), treatment – Fetal therapy
- M.T.P, PC & P.N.D.T Act etc
- National health MCH programs, social obstetrics and vital statistics
- Recent advances in Obstetrics.

2. Intra-partum care:

- Normal labor - mechanism and management.
- Partographic monitoring of labor progress, recognition of abnormal labor and its appropriate management.
- Identification and conduct of abnormal labor and complicated delivery - breech, forceps delivery, caesarian section, destructive operations.
- Induction and augmentation of labor.

- Management of abnormal labor - Abnormal pelvis, soft tissue abnormalities of birth canal, mal-presentation, mal-positions of fetus, abnormal uterine action, obstructed labor and other dystocias.
- Analgesia and anaesthesia in labor.
- Maternal and fetal monitoring in normal and abnormal labor (including electronic fetal monitoring).
- Identification and management of intrapartum complications, Cord presentation, complication of 3rd stage of labor - retained placenta, inversion of uterus, rupture of uterus, post partum hemorrhage.

3. Post Partum

- Complication of 3rd stage of labor retained placenta, inversion of uterus, post partum hemorrhage, rupture of uterus, Management of primary and secondary post-partum hemorrhage, retained placenta, uterine inversion. Post-partum collapse, amniotic fluid embolism
- Identification and management of genital tract trauma - perineal tear, cervical/vaginal tear, episiotomy complications, rupture uterus.
- Management of critically ill woman.
- Post partum 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.
- Problems of newborn - at birth (resuscitation), management of early neonatal problems.
- Normal and abnormal puerperium - sepsis, thrombophlebitis, mastitis, psychosis. Hematological problems in Obstetrics including coagulation disorders. Use of blood and blood components/products.

4. Operative Obstetrics:

- Decision-making, technique and management of complications.
- Vaginal instrumental delivery, Caesarian section, Obst. Hysterectomy, destructive operations, manipulations (External/internal podalic version, manual removal of placenta etc)
- Medical Termination of Pregnancy - safe abortion - selection of cases, technique and management of complication. MTP law.

5. 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 and management.
4. Neonatal hyper - bilirubinemia - investigation and management.
5. Birth trauma - Detection and management.
6. Detection and management of fetal/neonatal malformation.
7. Management of common neonatal problems.

Paper III

Clinical Gynaecology and Fertility Regulation

- Epidemiology and etiopathogenesis of gynaecological disorders.
- Diagnostic modalities and management of common benign and malignant gynaecological diseases (diseases of genital tract):
 - Fibroid uterus
 - Endometriosis and adenomyosis
 - 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 - of ovary, Fallopian tubes, uterus, cervix, vagina, vulva and Gestational Trophoblastic diseases, Cancer 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 and other Infertility problems.
 - **(Introductory knowledge of)** Advanced Assisted Reproductive Techniques (ART)
- Reproductive tract Infections: prevention, diagnosis and treatment.
 - STD
 - HIV
 - Other Infections
 - Genital Tuberculosis.
- Principles of radiotherapy and chemotherapy in gynaecological malignancies. Choice, schedule of administration and 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 - pituitary - 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 and simple therapeutic procedures (PG students must be trained to do these procedures)
 - Recent advances in gynaecology - Diagnostic and therapeutic
 - Pediatric, Adolescent and Geriatric Gynaecology
 - **Introduction to Advance Operative**

procedures. Operative Gynaecology

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

Family Welfare and 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 and

- programs, in relation to population and family welfare including RCH.
- Various temporary and permanent methods of male and female contraceptive methods.
 - Knowledge of in contraceptive techniques (including recent developments).
 1. Temporary methods
 2. Permanent Methods.
 3. Recent advances in contraceptive technology
 - Provide adequate services to service seekers of contraception including follow up.
 - Medical Termination of Pregnancy: Act, its implementation, providing safe and adequate services.
 - Demography and population dynamics.
 - Contraception (fertility control)

Male and Female Infertility

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

MAPPING OF PROGRAMME OUTCOMES [POs] AND COURSE OUTCOMES [COs] OF PG PROGRAMMES

MS (SURGERY) PROGRAMME OUTCOMES

Sr. No	By the end of the programme, the Medical Postgraduate Will have
PO 1	Knowledge and Skills
PO 2	Planning and problem solving abilities
PO 3	Communication
PO 4	Research Aptitude
PO 5	Professionalism and Ethics
PO 6	Leadership
PO 7	Societal Responsibilities
PO 8	Environment and Sustainability
PO 9	Lifelong Learner

**SURGERY COURSE OUTCOME – PGSUBJECT
CODE –01280301**

Sr.No	By the end the Course, the student will be able to
1	Recognize the importance to the concerned surgery in the context of the health needs of the community and the national priorities in the health section.
2	Practice the surgery concerned ethically and in step with the principles of primary health care.
3	Demonstrate sufficient understanding of the basic sciences relevant to the surgery specialty.
4	Identify social, economic, environmental, biological and emotional determinants of health in a given case, and take them into account while planning therapeutic, rehabilitative, preventive and primitive measure/strategies.
5	Diagnose and manage majority of the conditions in the surgery concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.
6	Plan and advise measures for the prevention and rehabilitation of patients suffering from disease and disability related to the surgery specialty.
7	Demonstrate skills in documentation of individual case details as well as morbidity and mortality rate relevant to the assigned situation.
8	Demonstrate empathy and humane approach towards patients and their families and exhibit interpersonal behavior in accordance with the societal norms and expectations.
9	Play the assigned role in the implementation of national health programme, effectively and responsibly.
10	Organize and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation
11	Develop skills as a self-directed learner, recognize continuing education needs; select and use appropriate learning resources
12	Demonstrate competence in basic concepts of research methodology and epidemiology and be able to critically analyze relevant published research literature.
13	Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.
14	Function as an effective leader of a health team engaged in health care, research or training.

MS OBSTETRICS AND GYNAECOLOGY PROGRAMME

Course Code	Course Title
01280301	MS Obstetrics and Gynaecology

CO No.	At the end of the course, the learner should be able to:	Mapped Programme Outcomes
CO 1	Provide quality care to the community in the diagnosis and management of Antenatal, Intra-natal and Post-natal period of normal and abnormal pregnancy and labor.	PO1,PO2,PO3, PO4, PO5, PO6, PO7, PO8, PO9
CO 2	Provide quality care to the community in the diagnosis and management of gynaecological problems including basic management of gynecological endocrinal disorders, infertility, screening and basic management of gynecological cancers, basic management of common breast diseases	PO1,PO2,PO3, PO4, PO5, PO6, PO7,PO8, PO9
CO 3	Manage effectively all obstetrical and gynecological emergencies and if necessary, make appropriate referrals wherever necessary	PO1,PO2, PO3, PO5, PO6, PO7, PO9
CO 4	Manage adolescent and geriatric gynecological problems	PO1,PO2,PO3, PO4, PO5, PO6,PO7, PO9
CO 5	Ability to interpret various laboratory investigations and other diagnostic modalities in Obstetrics & Gynecology	PO1,PO3,PO5, PO6, PO7, PO9
CO 6	Have basic knowledge of anesthesiology related to Obstetrics & Gynecology	PO1,PO3,PO5, PO6,PO9
CO 7	Be aware of Reproductive and Child Health, family welfare national guidelines and manage reproductive tract infections including STDs and AIDS	PO1,PO2,PO3, PO4, PO5, PO6, PO7, PO8, PO9

CO No.	At the end of the course, the learner should be able to:	Mapped Programme Outcomes
CO 8	Remain updated on vital statistics in Obstetrics & Gynecology	PO1, PO3, PO4, PO5 PO6, PO7, PO9
CO 9	Be conversant with asepsis, sterilization and disposal of medical waste	PO1, PO3, PO4, PO5, PO6, PO7, PO8, PO9
CO 10	Have knowledge and awareness of medico-legal aspects in Obstetrics and Gynecology	PO1, PO2, PO3, PO5, PO6, PO8, PO9
CO 11	Be able to effectively communicate with the patient, her family and the community	PO1, PO2, PO3, PO5, PO6, PO9
CO 12	Remain updated of the contemporary advances and developments as related to Obstetrics and Gynaecology	PO1, PO3, PO4, PO5, PO6, PO9
CO 13	Plan a research project and demonstrate the skills to critically appraise scientific data and literature	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9
CO 14	Have the basic skills in educating medical and paramedical professionals	PO1, PO3, PO5, PO6, PO9