

CURRICULUM / STATUTES & REGULATIONS

FOR 4 YEARS DEGREE PROGRAMME IN OBSTETRICS AND GYNAECOLOGY (MS Obstetrics and Gynaecology)



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Rawalpindi Medical University

Rawalpindi

STATUTES

Nomenclature of The Proposed Course

The name of degree programme shall be MS Obstetrics and Gynaecology. This name is well recognized and established for the last many decades worldwide.

Course Title:

MS Obstetrics and Gynaecology

Training Centers

Departments of Obstetrics and Gynaecology (accredited by RMU) in affiliated institutes of Rawalpindi Medical University, Rawalpindi.

Duration of Course

The duration of MS Obstetrics and Gynaecology course shall be four (4) years with structured training in a recognized department under the guidance of an approved supervisor. The clinical training shall be competency based to achieve the educational objective of the programme. There shall be generic and specialty specific competencies assessed by Continuous Internal Assessment. (Appendix F&G).

The Research Component and thesis writing shall be completed over the four years duration of the Programme.

Admission Criteria

Applications for admission to MS Training Programs will be invited through advertisement in print and electronic media mentioning closing date of applications and date of Entry Examination.

Eligibility: The applicant on the last date of submission of applications for admission must possess the:

- i) Basic Medical Qualification of MBBS or equivalent medical qualification recognized by Pakistan Medical & Dental Council.
- ii) Certificate of one year's House Job experience in institutions recognized by Pakistan Medical & Dental Council is essential at the time of closing date of application. At least 3 months of House Job in Obs/Gynae is mandatory.
- iii) Valid certificate of permanent or provisional registration with Pakistan Medical & Dental Council.

Registration and Enrollment

As per policy of Pakistan Medical & Dental Council the number of PG Trainees/ Students per supervisor shall be maximum 05 per annum for all PG programmes including minor programmes (if any).

Beds to trainee ratio at the approved teaching site shall be at least 5 beds per trainee.

The University will approve supervisors for MS courses.

Candidates selected for the courses after their enrollment at the relevant institutions shall be registered with RMU as per prescribed Registration Regulation.

Accreditation Related Issues of the Institution

A. Faculty

Properly qualified teaching staff in accordance with the requirements of Pakistan Medical and Dental Council (PMDC)

B. Adequate Space

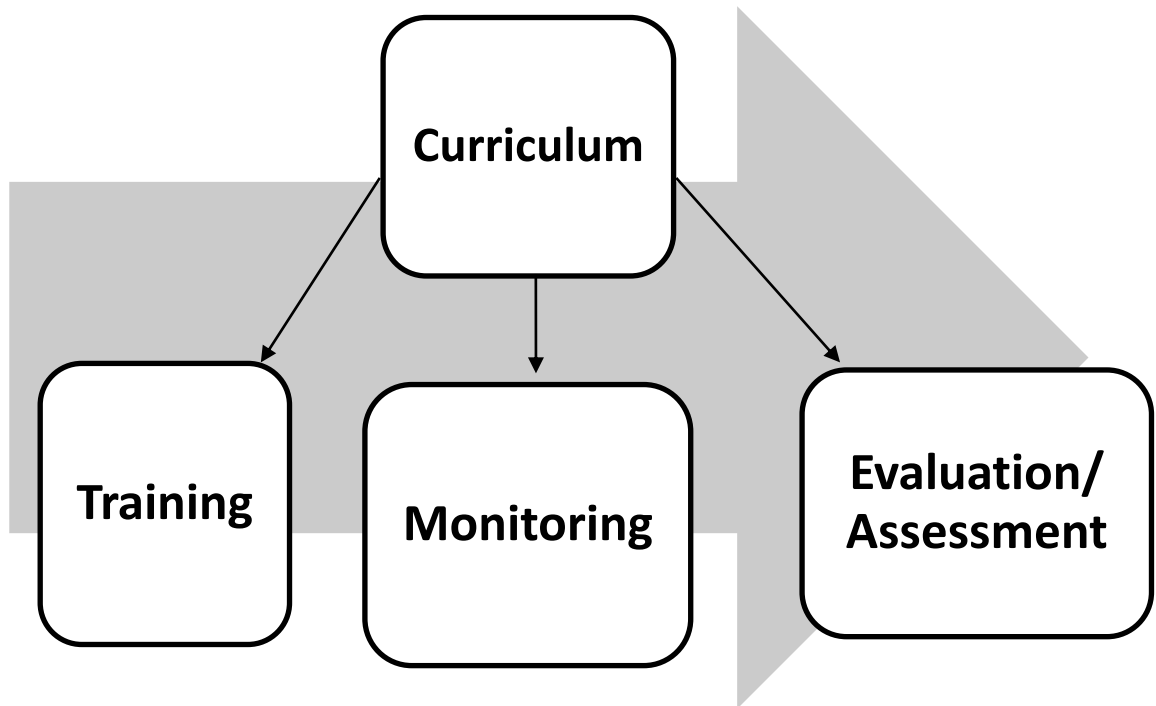
Including class-rooms (with audiovisual aids) demonstration rooms, computer lab and clinical pathology lab etc.

C. Library

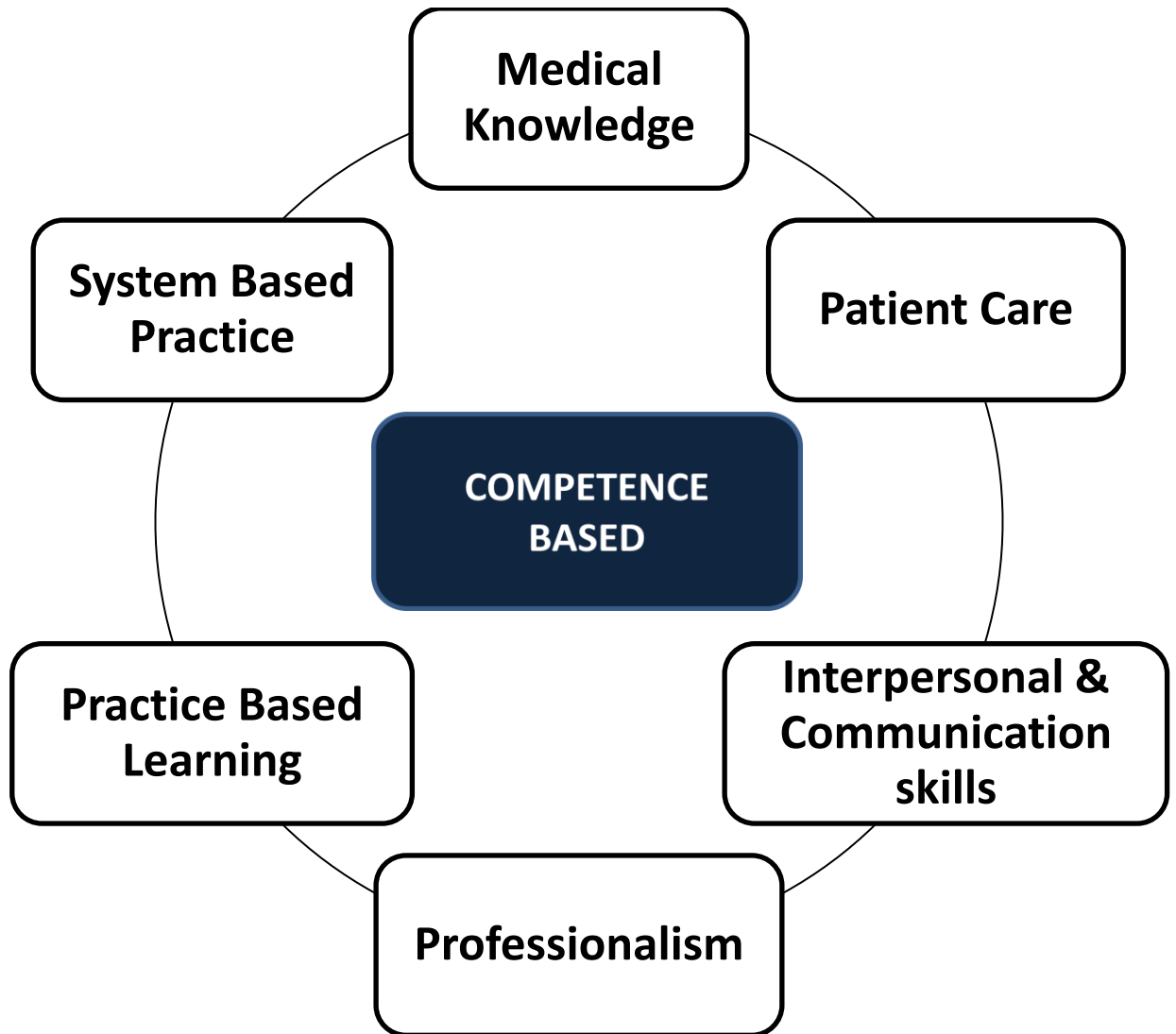
Departmental library should have latest editions of recommended books, reference books and latest journals (National and International).

- Accreditation of Obstetrics and Gynaecology training program can be suspended on temporary or permanent basis by the University, if the program does not comply with requirements for residents training as laid out in this curriculum.
- Program should be presented to the University along with a plan for implementation of curriculum for training of residents.
- Programs should have documentation of residents training activities in the form of candidate training portfolio / Log Book.
- To ensure a uniform and standardized quality of training and availability of the training facilities, the University reserves the right to make surprise visits of the training program for monitoring purposes and may take appropriate action if deemed necessary.

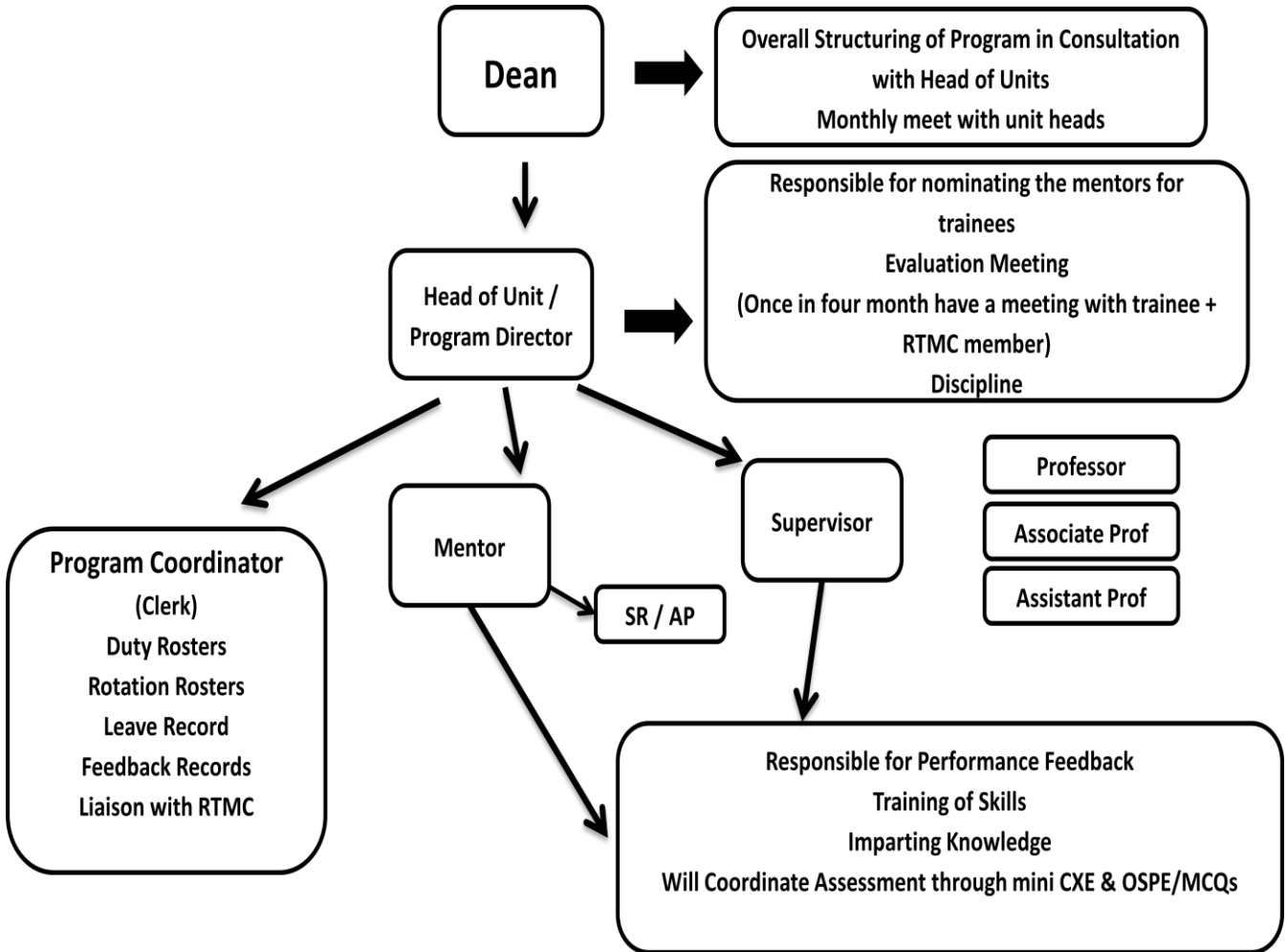
COMPONENTS OF TRAINING PROGRAM



SPECIFIC OBJECTIVES OF TRAINING PROGRAM



ORGANOGRAM OF UNIVERSITY TRAINING PROGRAM GYNAE / OBS



POSTGRADUATE UNIVERSITY TRAINING PROGRAM

- **Dean:** The head of department will be called a Dean of Ob/Gynae who is responsible for overall supervision of the training program.
 - Structuring the training program
 - Uniformity, standardization and validation of training in all departments.
 - Evaluation of training in each department.
 - Evaluation of faculty performance.
- This will be done by
 - Training department evaluation proforma.
 - Faculty evaluation by trainee.
 - Faculty evaluation by dean.
- **Program Director:** Head of Ob/Gynae unit will be program director. She / He is responsible for training in her / his unit.
 - Assign mentor to the trainee.
 - Assign rotations to the trainee.
 - Leave record and sanctioning of leave.
 - Organize Assessment Exam.
 - Make sure all feedback performas are properly filled.
 - Quarterly meeting with faculty and supervisors for trainee feedback.
 - Meeting with trainee after every 6 months for feedback to his / her performance.
 - Internal assessment of trainee.
 - Finalize the research/ thesis topic and proposals.

- **Program coordinator** will be a senior registrar who will help the program director in implementing the program like making rosters, leave records, keeping evaluation performas and assessment records.
- **Supervisor:** Faculty member like professor, associate professor and assistant professor will be supervisors.
- The will be responsible for :
 - Directly supervising training
 - Will be responsible for supervisor assessment proforma.
 - Responsible for medical record evaluation proforma.
 - Will get nurse and patient feedback of the trainee in wards , ER and Outpatient and OPD's.
 - Responsible for formal assessment.

RESEARCH UNIT OF RMU

- Post Graduate research will be monitored by the Research unit of RMU.
- The trainee will have three months rotation in research unit in 1st year.
- Topic Selection will be done during this time.
- Synopsis evaluation and approval will be done by Board of Advance Study and Research.
- Date collection will be done in 2nd and 3rd year.
- Thesis writing will be done in 4th year.
- This will be supervised by research unit of RMU.

LOG BOOK / PORTFOLIO

- Each candidate has to keep a complete record of patients in the log book according to the format.
- Portfolio will be optional as per program directors option.
- Combination

SCHEME OF THE COURSE

A summary of four years course in MS Obstetrics and Gynaecology is presented as

COURSE STRUCTURE	COMPONENTS	EXAMINATION
FIRST YEAR	09 Months and 15 days in Ob/Gynae 15 days in Research (1 st three workshops, appendix E) 02 Months Neonatology Research Project designed and synopsis prepared and approved by IRB	Continuous internal assessment, (appendix G)
SECOND YEAR	12 Months Ob/Gynae 04 th and 05 th workshops, (appendix "E") Thesis work started	Mid Level examination <ul style="list-style-type: none"> • Relevant Basic Sciences (Anatomy Physiology, Pharmacology, Pathology) • Obstetrics ,Neonatology , Research , Basic Surgical skills Continuous internal assessment, (appendix G)
THIRD YEAR	09 Months Ob/Gynae 6 th and 7 th workshops (Appendix "E") 03 Months Surgery Thesis Work	Continuous internal assessment, (appendix G)
FOURTH YEAR	10 Months and 15 days Ob/Gynae 01 Month and 15 days Research Thesis Work Thesis writing must be completed and thesis be submitted at least 6 months before the end of final year of the programme.	Final Examination <ul style="list-style-type: none"> ▪ Obstetrics and Gynaecology Continuous internal assessment, (appendix G) Thesis examination with defense at the end of fourth year

Clinical sessions (journal club , Lecture , Topic discussion, Audit , Case presentation) will be held once a week
 Morning meeting to be held daily or on alternate days to discuss cases managed over past day or two.

AIMS AND OBJECTIVES OF THE COURSE

AIM

The aim of four years MS programme in Obstetrics and Gynaecology is to train residents to acquire the competency of a specialist in the field so that they can become good teachers, researchers and clinicians in their specialty after completion of their training.

GENERAL OBJECTIVES

MS Obstetrics and Gynaecology training should enable a student to:

1. Access and apply relevant knowledge to clinical practice:

- Maintain currency of knowledge
- Apply scientific knowledge in practice appropriate to patient need and context
- Critically evaluate new technology

2. Safely and effectively performs appropriate surgical procedures:

- Consistently demonstrate sound surgical skills
- Demonstrate procedural knowledge and technical skill at a level appropriate to the level of training
- Demonstrate manual dexterity required to carry out procedures
- Adapt their skills in the context of each patient and procedure
- Maintain and acquire new skills
- Approach and carries out procedures with due attention to safety of patient, self and others
- Critically analyze their own clinical performance for continuous improvement

3. Design and implement effective management plans:

- Recognize the clinical features, accurately diagnose and manage gynaecological as well as obstetric problems

- Formulate a well-reasoned provisional diagnosis and management plan based on a thorough history and examination.
- Formulate a differential diagnosis based on clinical and investigative findings
- Manage patients in ways that demonstrate sensitivity to their physical, social, cultural and psychological needs
- Effectively manage the care of patients with gynaecological or obstetric trauma including multiple system trauma working in collaboration with other departments.
- Effectively recognize and manage complications
- Accurately identify the benefits, risks and mechanisms of action of current and evolving treatment modalities
- Indicate alternatives in the process of interpreting investigations and in decision-making
- Manage complexity and uncertainty
- Consider all issues relevant to the patient
- Identify risk
- Assess and implement a risk management plan
- Critically evaluate and integrate new technologies and techniques.

4. Organize diagnostic testing, imaging and consultation as needed:

- Select medically appropriate investigative tools and monitoring techniques in a cost-effective and useful manner
- Appraise and interpret appropriate diagnostic imaging and investigations according to patients' needs

5. Critically evaluates the advantages and disadvantages of different investigative modalities. Communicate effectively:

- Communicate appropriate information to patients (and their family) about procedures, potentialities and risks associated with surgery in ways that encourage their participation in informed decision making
- Communicate with the patient (and their family) the treatment options including benefits and risks of each

- Communicate with and co-ordinate health management teams to achieve an optimal surgical environment
- Initiate the resolution of misunderstandings or disputes
- Modify communication to accommodate cultural and linguistic sensitivities of the patient

6. Recognize the value of knowledge and research and its application to clinical practice:

- Assume responsibility for self-directed learning
- Critically appraise new trends in Obstetrics and Gynaecology
- Facilitate the learning of others.

7. Appreciate ethical issues associated with Obstetrics and Gynaecology:

- Consistently apply ethical principles
- Identify ethical expectations that impact on medico-legal issues
- Be accountable for the management of their patients.
- Recognize the current legal aspects of informed consent and confidentiality

8. Professionalism by:

- Employing a critically reflective approach to Obstetrics and Gynaecology
- Adhering with current regulations concerning workplace harassment
- Regularly carrying out self and peer reviewed audit
- Acknowledging and have insight into their own limitations
- Acknowledging and learning from mistakes

9. Work in collaboration with members of an interdisciplinary team where appropriate:

- Collaborate with other professionals in the selection and use of various types of treatments assessing and weighing the indications and contraindications associated with each type
- Develop a care plan for a patient in collaboration with members of an interdisciplinary team

- Employ a consultative approach with colleagues and other professionals
- Recognize the need to refer patients to other professionals.

10. Management and Leadership

- Effective use of resources to balance patient care and system resources
- Identify and differentiate between system resources and patient needs
- Prioritize needs and demands dealing with limited system resources.
- Manage and lead clinical teams
- Recognize the importance of different types of expertise which contribute to the effective functioning of clinical team.
- Maintain clinically relevant and accurate contemporaneous records

11. Health advocacy:

- Promote health maintenance of patients
- Advocate for appropriate health resource allocation
- Promote health maintenance of colleagues and self scholar and teacher

SPECIFIC LEARNING OUTCOMES

On completion of the training programme, Obstetrics and Gynaecology trainees pursuing an academic pathway will be expected to have demonstrated competence in all aspects of the published syllabus. The specific training component would be targeted for establishing clearly defined standards of knowledge, skills and attitude required to practice Obstetrics and Gynaecology at secondary and tertiary care level with proficiency.

1. Describe embryology, applied anatomy, physiology, pathology, clinical features, diagnostic procedures and the therapeutics including preventive methods, (medical/surgical) pertaining to Obstetrics and Gynaecology
2. Perform medical interview and physical examination in both obstetrical and gynecological patient
3. Counsel about nutrition to patients from childhood through puberty, reproductive life, prepregnancy, preparation during pregnancy, lactation and post menopause including the role of Vit.D
4. Describe the physiological, physical and psychological change during pregnancy, labour and puerperium
5. Describe the development of the foetus from conception to term
6. Describe the needs of the mother during ante natal, intranatal and post natal period and promote positive health in normal and high risk cases.
7. Conduct normal labour and identify any major deviations from normal.
8. Provide care to the high-risk neonates, small for date & premature infants.
9. Counsel families about maternal and child health.
10. Differentiate causes of "acute abdomen" including conditions such as pelvic infection, ectopic pregnancy, adnexal torsion, appendicitis, diverticulitis, urinary calculi
11. Demonstrate awareness of population health; recognize social and health policy aspects of women's health, ethical issues, sterilization, abortion, domestic violence, adolescent pregnancy, and access to health care

12. Demonstrate newer knowledge about gynaecological or obstetric diseases in general, including technological (laser) and pharmacologic advances (medicines) and newer method of therapy for certain conditions
13. Interpret different imaging reports in Obstetrics and Gynaecology. There should be collaboration with Radiology department for such activities
14. Provide Antenatal care including assessment, general and obstetrical examination, pelvic examination and counseling about nutrition, antenatal exercises, mother craft and preventive obstetrics
15. Manage normal labour
 - Onset, physiological changes & psychological aspects of labour
 - Mechanism, induction and augmentation of labour
 - Monitoring & use of partogram
 - Observation and clinical diagnosis of patient in different stages of labour.
 - Episiotomy care
 - Analgesics and anaesthesia in labour
16. Manage normal puerperium
 - Physiological changes during puerperium
 - Care during puerperium – mother, neonate and family
 - Physiology of lactation and establishment of lactation and breast feeding
 - Post-natal-care – post natal exercises, follow up care.
 - Customs and beliefs in relation to confinement and puerperium
17. Provide care to New Born
 - Resuscitation &, immediate care of new born.
 - Normal characteristics and care of the new born
 - Asphyxia neonatorum, respiratory distress
 - Jaundice in new born
 - Haemorrhagic diseases of the newborn
 - Convulsions in new born

- Birth injuries, congenital anomalies, infection of the newborn, vomiting in new born.
- Still birth – incidence, causes and prevention
- Care of Low birth weight babies in labour room and nursery

18. Manage common ailments of pregnancy

19. Manage high risk pregnancy

- Hyperemesis gravidarum
- Hydramnios
- Multiple pregnancy
- Prelabour rupture of membrane and preterm labour
- Intrauterine growth retardation
- Post-date pregnancy
- Abnormal Uterine Action
- Medical conditions associated with pregnancy:
- Anaemia in pregnancy
- Heart disease in pregnancy
- Pregnancy induced hypertension
- Venous thromboembolism
- Rh Incompatibility and amniocentesis
- Diabetes in pregnancy
- Pyelonephritis
- Infections, sexually transmitted diseases in pregnancy
- General surgery during pregnancy
- Pregnancy with previous history of Caesarean section
- Elderly primigravida
- Grand multipara
- Bad obstetric history
- Contracted pelvis

20. Manage gynaecological conditions in pregnancy :

- Ca cervix with pregnancy

- Fibroid with pregnancy
- Ovarian tumour in pregnancy
- Retroverted gravid uterus

21. Genital prolapse in pregnancy Manage complications in pregnancy

- Bleeding in early pregnancy
- Abortion, types, complication and management
- Ectopic pregnancy
- Trophoblastic tumours
- Ante partum haemorrhage
- Placenta praevia
- Abruptio placenta
- Hydatidiform mole
- Pregnancy induced hypertension (Pre eclampsia and eclampsia)
- Intrauterine death
- Induction of labour – Medical, surgical, combined
- Post maturity

22. Diagnose and manage Malposition, Malpresentation and Cord prolapse

- Occipito-posterior position – causes, diagnosis, antenatal care, course of labour and management
- Breech presentation – causes, diagnosis, types, antenatal care, course of labour and management
- Face and brow presentation – causes diagnosis, antenatal care, course of labour, and management
- Transverse lie, unstable lie
- Compound presentations
- Cord prolapse
- Prolonged labour, obstructed labour, dystocia caused by foetal anomalies
- Destructive operations

23. Diagnose and manage abnormalities of Puerperium

- Puerperal pyrexia and puerperal sepsis
- Puerperal venous thrombosis, thrombophlebitis, pulmonary embolism
- Urinary complications in puerperium
- Post partum haemorrhage
- Subinvolution, obstetric palsies
- Breast complications – Breast engorgement, breast abscess, acute mastitis cracked & retracted nipples, suppression of lactation
- Psychiatric disturbances in puerperium

24. Diagnose and manage obstetrical emergencies

- Uterine rupture, cervical tear, inversion of uterus, retained placenta

25. Perform operative obstetrics

- Obstetrical hysterectomy
- Dilatation and evacuation
- Suction evacuation
- Use of instruments – forceps, ventouse, Versions
- Caesarean section

26. Describe pharmacotherapeutics

- Oxytocics and prostaglandins used in obstetrics
- Indications and contraindications and rationale of drugs in pregnancy

27. Demonstrate gynaecological history taking and examination

28. Diagnose and manage menstrual disorders

- Amenorrhoeas
- Cryptomenorrhoea, oligomenorrhoeas
- Hypomenorrhoea, dysmenorrhoea
- Metrorrhagia, menorhagia
- Dysfunctional uterine bleeding

29. Menopause

- Manage sign and symptoms of menopause
- Prevention of osteoporosis

- Hormonal replacement therapy (HRT)
30. Diagnose and manage common genital infection
- Fungal infections – Vaginal discharges
 - Acute and chronic infections of genitalia
 - Pelvic inflammatory disease
31. Diagnose causes of and manage
- Low back ache
32. Diagnose and manage endometriosis / adenomyosis
33. Gynaecological oncology:
- Diagnose and manage tumours of the genital tract
 - Proliferative lesions and benign tumours; uterine leiomyoma, cervical polyp, ovarian cyst and tumours
 - Malignant tumours – vulval, vaginal, cervical, ovarian, endometrial and trophoblastic carcinomas
 - Basics of radio therapy and chemotherapy
34. Diagnose and manage uterine displacements
- Uterovaginal prolapse
 - Retroverted uterus
 - Anteverted uterus
35. Diagnose and Manage subfertility
- Primary and secondary subfertility
36. Diagnose and manage gynaecological emergencies
- Acute salpingo-oophoritis
 - Twisted ovarian cyst, pedunculated fibroma of the uterus
 - Ectopic pregnancy
37. Perform and interpret results of special diagnostic tests
- Pap smear
 - Ovulation tests, semen analysis

- Hysterosalpingography
 - Culdoscopy, colposcopy, Laparoscopy
 - Biopsy –cervical and endometrial
 - 3 swab test
38. Perform gynaecological procedures
- D&C
 - Abdominal hysterectomy
 - Vaginal hysterectomy
 - Laparotomy
39. Provide Pre and post operative care of patients undergoing gynaecological operations
40. Diagnose and manage patients with urinary complaints
41. Urogynaecology
- Diagnose and manage patients with urinary complaints
 - Interpret the results of urodynamic studies

Research Experience:

All residents in the program are required to complete an academic outcomes-based research project during their training. This project can consist of original bench top laboratory research, clinical research or a combination of both. The research work shall be compiled in the form of a thesis which is to be submitted for evaluation by each resident before end of the training. The designated Faculty will organize and mentor the residents through the process, as well as journal clubs to teach critical appraisal of the literature.

CONTENT OUTLINE

BASIC SCIENCES

Student is expected to acquire comprehensive knowledge of Anatomy, Physiology, Pathology and Pharmacology relevant to and appropriate for Obstetrics and Gynaecology

1. Anatomy

Embryology

- General Features of Human Development
- Features of mitotic and meiotic modes of cell division. Genetic consequences of meiotic division.
- Abnormal mitotic and meiotic divisions of clinical importance.
- Cellular differentiation and proliferation.
- Gametogenesis: origin of germ cells.
- Oogenesis: prenatal and postnatal development of ova.
- Spermatogenesis: proliferation and maturation of male germ cells. Abnormal gametes, their clinical significance.
- Ovulation, fertilization and the consequences of fertilization.
- Segmentation of the fertilized ovum
- Formation of embryo
- Fetal membranes and the placenta
- Implantation of the ovum
- Trophoblast
- Chorion
- Placenta: Development, type , abnormalities and function

Early Embryonic Development:

- Cleavage, morula and blastocyst formation and implantation.
- Formation of the three primary germ layers.
- Derivatives of the respective germ layers.

Extraembryonic Membranes:

- Development, functions and anomalies of yolk sac, amnion, chorion, allantois, umbilical cord and placenta.

Development of the External Body Form:

- Shaping of the abdomen and pelvic structures
- Development of the urogenital organs
- Development of the kidney & ureter
- Development of the uterus
- Development of genital glands
- Development of external genitalia.
- Development of breast and lactating ducts, changes during puberty, pregnancy, lactation and menopause
- Common developmental anomalies associated

Teratogenesis:

- Factors known to be involved in the development of congenital anomalies especially related to the Gynaecological and Obstetric system.
- Concept of critical periods.

Period of the Growing Fetus:

- Various stages and salient features of the fetus development
- Fetal circulation
- Fetal skull and its measurements

Histology

- Cell Biology: Cytoplasm – Cytoplasmic matrix, cell membrane, cell organelles, cytoskeleton, cell inclusions, cilia and flagella.

- Nucleus – nuclear envelope, nuclear matrix, DNA and other components of chromatin, protein synthesis, nucleolus, nuclear changes indicating cell death.

Structural and Functional Organization of the Tissues of Body

- Classification of tissues and identification of various tissues particularly those related to the reproductive system, in routine histological preparations under the light microscope.

The Epithelial Tissue

- General structure, functions and classification of epithelia
- Their location in the body
- General characters of serous and mucous membranes
- The Connective Tissue
- Key histological features of normal genitourinary and reproductive organs of male and female (including breast)

Surface and Imaging Anatomy with pathological and operative relevance

- The abdomen, peritoneum
- Stomach
- Small intestine
- Large intestine
- Rectum
- Anal canal
- Pancreas
- Liver
- Gall bladder
- Urogenital system
 - The kidneys
 - The ureters
 - The urinary bladder
 - The female urethra

- The female genital organs
 - Ovaries
 - Fallopian tubes
 - Uterus
 - Cervix
 - Ligaments of the uterus
- Ext. genital organs of female
 - Vulva
 - Vagina
 - Breasts
- Female pelvis: structure measurements and deviation
- Pelvic floor
- Detailed blood supply and nerve supply of pelvis
- Lymphatic drainage of the abdomen & pelvis
- Lymphatic drainage of the lower limb
- Related endocrine structures
 - Hypothalamus
 - Pituitary gland
 - Thyroid and parathyroid gland
 - Thymus and spleen
 - Adrenals

2. Physiology

- Physiology of puberty, adolescence, menstruation, & menopause
 - Physiology of menstruation and ovulation
 - Physiology of spermatogenesis
 - Physiological development and changes in breast
- Physiological adaptations during pregnancy & labor
- Normal pregnancy, labour & puerperium
- Endocrinology related to male and female reproduction
- Endocrinology of pregnancy
- Physiology & endocrinology of Placenta & Lactation

- Physiology & endocrinology of breast
- Immunology of pregnancy
- Reproductive Endocrinology of Female
- Primary amenorrhoea
- Polycystic ovarian syndrome
- Hirsutism /virilization
- Female subfertility
- Premature ovarian failure
- Menstrual disorders / Dysfunctional uterine bleeding
- Secondary amenorrhoea
- Menopause
- Contraception and hormone replacement therapy
- Ovarian tumors
- Reproductive Endocrinology of Male
- Testicular physiology
- Male hypogonadism
- Male infertility
- Gynaecomastia
- Erectile dysfunction
- Testicular tumors
- Autoimmune Polyglandular Failure Syndrome
- Androgen replacement therapy
- Endocrinology - hypothalamus pituitary, thyroid and adrenal glands and neurotransmitters
- Cardiovascular system
 - The heart and circulation
 - Regulation of blood vessels
 - Cardiac output
- Blood
 - RBC
 - Blood groups

- WBC
- Blood clotting
- Plasma
- Respiration
 - Lung volumes
 - Respiratory gases
 - Emergency resuscitation
 - Carriage of gases.
 - Blood gas tensions
 - Regulation of respiration.
- Digestion
 - Control of digestive secretions
 - Metabolic Pathways
 - Nutritional requirements
 - Fluid & electrolyte balance
- Kidney
 - Urine formation
 - Filtration & reabsorption of water
 - Renal failure
 - Skin & body temperature.
- Nutrition at following stages of life
 - Girl child
 - Puberty
 - Pre-pregnancy period
 - During pregnancy + lactation
 - Menopause and post menopause.
 - Diet of special conditions
 - Gestational DM
 - Hypertension in pregnancy
 - Obesity / PCOS.
 - Underweight.

- IDA

3. Pharmacology

- British Pharmacopoeia
- Receptors
- Mechanisms of Drug Action
- Pharmacokinetics
 - Pharmacokinetic Process
 - Absorption
 - Distribution
 - Metabolism
 - Desired Plasma Concentration
 - Volume of Distribution
 - Elimination
 - Elimination rate constant and half life
 - Creatinine Clearance
- Drug Effect
 - Beneficial Responses
 - Harmful Responses
 - Allergic Responses
- Drug Dependence, Addiction, Abuse and Tolerance
- Drug Interactions
- Drug use in pregnancy and lactation
- 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 Obstetrics & Gynaecology.
- Role of hormones in Obstetrics & Gynaecology.
- Drugs affecting the autonomic nervous system
 - Cholinergic agonists
 - Cholinergic antagonists
 - Adrenergic agonists

- Adrenergic antagonists
- Drugs affecting the CNS
 - Anxiolytic and hypnotic Drugs
 - CNS stimulants
 - Antidepressants drugs
 - Neuroleptic Drugs
 - Opioid analgesics and antagonists
- Drugs affecting CVS
 - Treatment of congestive heart failure.
 - Antiarrhythmic drugs
 - Antihypertensives
- Drug affecting blood
 - Drugs to treat bleeding
 - Drugs to treat anemia
 - Anti coagulants
 - Thrombolytic drugs
- Diuretic drugs
- GI drugs (drugs used to treat peptic ulcer and constipation)
- Hormones of the pituitary and thyroid
- Insulin and oral hypoglycemic drugs
- Steroid hormones
 - Estrogens
 - Progestogens
 - Oral contraceptive pills
 - Androgens
 - Adrenal corticosteroid
- Ergot alkaloids
- Related to Obstetrics and Gynaecology;
 - Antinflammatory drugs
 - Antibiotics
 - Antifungal drugs

- Antiviral drugs
- Anticancer drugs
- Urinary tract antiseptics

4. Pathology

Pathological alterations at cellular and structural level in infection, inflammation, ischaemia, neoplasia and trauma affecting the gynaecological and obstetric management

Cell Injury and adaptation

- Reversible and Irreversible Injury
- Fatty change, Pathologic calcification
- Necrosis and Gangrene
- Cellular adaptation
- Atrophy, Hypertrophy,
- Hyperplasia, Metaplasia, Aplasia

Inflammation

- Acute inflammation
- Cellular components and chemical mediators of acute inflammation
- Exudates and transudate
- Sequelae of acute inflammation
- Chronic inflammation
- Etiological factors and pathogenesis
- Distinction between acute and chronic (duration) inflammation
- Histologic hallmarks
- Types and causes of chronic inflammation, non-granulomatous & granulomatous

Haemodynamic disorders

- Etiology, pathogenesis, classification and morphological and clinical manifestations of Edema, Haemorrhage, Thrombosis, Embolism, Infarction & Hyperaemia

- Shock; classification etiology, and pathogenesis, manifestations.
- Compensatory mechanisms involved in shock
- Pathogenesis and possible consequences of thrombosis
- Difference between arterial and venous emboli

Neoplasia

- Dysplasia and Neoplasia
- Benign and malignant neoplasms
- Etiological factors for neoplasia
- Different modes of metastasis
- Tumor staging system and tumor grade

Immunity and Hypersensitivity

- Immunity
- Immune response
- Diagnostic procedures in a clinical Immunology laboratory
- Protective immunity to microbial diseases
- Tumour immunology
- Immunological tolerance, autoimmunity and autoimmune diseases.
- Transplantation immunology
- Hypersensitivity
- Immunodeficiency disorders
- Immunoprophylaxis & Immunotherapy

Microbiology

- Role of microbes in various Gynaecological and Obstetric disorders
- Normal and abnormal microbiology of genital tract - bacterial, viral & parasitical infections responsible for maternal, fetal and gynaecological disorders
- Infection source
- Nosocomial infections
- Bacterial growth and death
- Pathogenic bacteria

- Vegetative organisms
- Spores
- Important viruses
- Important parasites
- Surgically important microorganisms
- Sources of infection
- Asepsis and antisepsis
- Sterilization and disinfection
- Infection prevention
- Immunization
- Personnel protection from communicable diseases
- Use of investigation and procedures in laboratory
- Basics in allergy and immunology

Special Pathology

- Pathophysiology of ovaries, fallopian tubes, uterus, cervix, vagina and external genitalia in healthy and diseased conditions.
- Pathology of placenta, umbilical cord, amniotic fluid and fetus.
- Humoral and cellular immunology in Obstetrics & Gynaecology
- Menstrual disorders and their etio-pathogenesis
- Inflammatory and infective lesions of the genitourinary system in male and female.
- Classification and sub-classification of benign and malignant genitourinary tumors.
- Endometriosis and adenomyosis, cervical carcinomas and CIN, endometrial carcinoma, its clinical presentation and morphology, leiomyomas and their clinical effects
- Gestational trophoblastic disease with special emphasis on hydatidiform mole and choriocarcinoma.
- Markers in Obstetric & Gynaecology – non neoplastic and neoplastic diseases
- Inflammatory lesions of the breast
- Benign and malignant breast tumors

- Gynaecomastia
- Pathologic findings of thyroiditis, adrenocortical adenoma, pheochromocytoma, diabetes mellitus, and pituitary malfunction in the gynaecological and obstetric disorders
- Disturbances of endocrine function
- Pathology and clinical symptoms of acute and chronic pyelonephritis.
- Calcium metabolism
- Temperature regulation
- Fluid & electrolyte imbalance
- Blood grouping & blood transfusion
- Indications for and interpretation of results of common biochemical and haematological tests
- Iron Metabolism
- Anemia in pregnancy

PRINCIPLES OF GENERAL SURGERY

- History of surgical patient
- Preparing a patient for surgery
- Principles of operative surgery: asepsis, sterilization and antiseptics
- Surgical infections and antibiotics
- Basic principles of anaesthesia and pain management
- Acute life support and critical care:
 - Pathophysiology and management of shock
 - Fluids and electrolyte balance/ acid base metabolism
 - Haemostasis, blood transfusion
- Wound healing and wound management
- Nutrition and metabolism
- Principles of laparoscopy and endoscopy
- Informed consent and medicolegal issues

Common Surgical Skills

- **Incision of skin and subcutaneous tissue:**
 - Langer's lines
 - Healing mechanism
 - Choice of instrument
 - Safe practice
- **Closure of skin and subcutaneous tissue:**
 - **Knot tying:**
 - Choice of material
 - Single handed
 - Double handed
 - Superficial
 - Deep
- **Tissue retraction:**
 - Choice of instruments
 - Placement of wound retractors
 - Tissue forceps
- **Use of drains:**
 - Indications Types
 - Insertion
 - Fixation
 - Management/removal
- **Incision of skin and subcutaneous tissue:**
 - Ability to use scalpel, diathermy and scissors
- **Closure of skin and subcutaneous tissue:**
 - Accurate and tension free apposition of wound edges
- **Haemostasis:**

- Control of bleeding vessel (superficial)
- Diathermy
- Suture ligation
- Tie ligation
- Clip application
-

Pre-operative assessment and management:

- Cardio-respiratory physiology
- Diabetes mellitus
- Renal failure
- Pathophysiology of blood loss
- Pathophysiology of sepsis
- Risk factors for surgery
- Principles of day surgery
- Management of comorbidity

Intraoperative care:

- Safety in theatre
- Sharps safety
- Diathermy, laser use
- Infection risks
- Tourniquets
- Principles of local, regional and general anaesthesia

Post-operative care:

- Monitoring of postoperative patient
- Postoperative analgesia
- Fluid and electrolyte management
- Detection of impending organ failure
- Initial management of organ failure
- Complications specific to particular operation

- Critical care

Blood products:

- Components of blood
- Alternatives to use of blood products
- Management of the complications of blood product transfusion

Antibiotics:

- Common pathogens in surgical patients
- Antibiotic sensitivities
- Antibiotic side-effects
- Principles of prophylaxis and treatment

Technical Skills:

- Central venous line insertion
- Bleeding diathesis & corrective measures, e.g. warming, packing
- Clotting mechanism;
 - Effect of surgery and trauma on coagulation
 - Tests for thrombophilia and other disorders of coagulation
 - Methods of investigation for suspected thromboembolic disease
 - Anticoagulation, heparin and warfarin
 - Role of V/Q scanning, CT angiography and thrombolysis
 - Awareness of symptoms and signs associated with pulmonary embolism and DVT
 - Role of duplex scanning, venography and d-dimer measurement
 - Initiate and monitor treatment

OBSTETRICS AND GYNAECOLOGY COMPONENT

Students should be familiar with typical clinical presentation, key physical findings, radiological findings and differential diagnosis, initial treatment, and referral indications for common Gynaecological and Obstetric diseases.

OBSTETRICS:

- Basic sciences of Reproduction & Applied Anatomy of genitourinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, breast in obstetrics
- Reproductive Anatomy
- Gametogenesis fertilization, implantation & early development of human embryo
- Fetal growth & development
- Birth defects, Genetics & teratology & counseling
- Prenatal diagnosis and genetics
- Fetal medicine in clinical practice
- Physiological changes during pregnancy.
- Endocrinology of pregnancy.
- Pre-conception counseling
- Normal pregnancy, labour & puerperium.
- Antenatal care
- Fetal surveillance (prenatal and intrapartum)
- Breast feeding, baby friendly initiative
- Early recognition and prompt management of pregnancy complications
- Hyperemesis gravid arum
- Ectopic pregnancy
- Hydatidiform mole
- Pre-eclampsia
- Eclampsia
- Antepartum hemorrhage

- Miscarriages and abortions
- Recurrent miscarriage
- Multiple pregnancy
- Post partum haemorrhage
- Preterm labour
- Prelabour rupture of membranes
- Polyhydramnios
- Oligohydramnios
- Prolonged labour
- Ectopic pregnancy
- Trophoblast disease
- Management of pregnancies complicated by medical, surgical or gynaecological diseases, in consultation with the concerned specialties by team approach.
- Anemia
- Heart disease
- Diabetes mellitus
- Liver disorders
- Respiratory diseases
- Renal diseases
- Haematological problems in pregnancy.
- Neurological conditions
- Rheumatology
- Dermatoses of pregnancy
- Psychiatric disorders
- Hypertensive disorders
- Acute abdomen
- Acute appendicitis
- Intestinal obstruction,
- Fibroids
- Ovarian tumors
- Carcinoma cervix
- Genital prolapse.

- Infections in pregnancy.
 - Malaria
 - Toxoplasmosis
 - Viral infections(Rubella, CMV, Hepatitis B, Herpes)
 - Syphilis and other sexually transmitted infections including HIV.
- Parents to child transmission of HIV infection
- Evaluation of the fetal and maternal health in complicated pregnancy by making use of available diagnostic modalities and plan for safe delivery of the fetus and safeguarding the maternal health.
- Prenatal diagnosis of fetal abnormalities
- Partographic monitoring of labour progress
- Early recognition of dysfunctional labour and appropriate interventions during labour including active management of labour.
- Obstetrical analgesia and anesthesia.
- Induction and augmentation of labour.
- Management of abnormal labour
- Abnormal pelvis and soft tissue abnormality in maternal passage
- Malpresentation and Malpositions of fetus
- Abnormal uterine action
- Obstructed labour
- Cervical dystocia.
- Third stage complications
- PPH including surgical management
- Retained placenta
- Uterine inversion
- Post partum collapse
 - Amniotic fluid embolism
 - Abnormal puerperium
 - Puerperal sepsis
 - Thrombophlebitis
 - Mastitis
 - Puerperal venous sinus thrombosis
 - Psychosis.
- National Health Programmes to improve the maternal and child health, social obstetrics and vital statistics.

- Drugs used in obstetric practice including prostaglandins.
- Coagulation disorders in obstetrics, Blood and component therapy
- Operative obstetrics - decision making, technique, recognition and management of complications – caesarian section, instrumental delivery, obstetrics hysterectomy, history of destructive surgery. Manipulations - version, MRP etc.
- Intensive care in obstetrics for critically ill patient . Fluid and electrolyte balance, volume status maintenance, protecting vital organ function.
- Termination of pregnancy
- Provision of safe abortion services, selection of case, techniques, and management of complications

OBSTETRIC STATISTICS

- Live birth
- Still birth
- Maternal mortality rate and ratio
- Perinatal mortality rate
- Infant and neonatal mortality rate
- Factors that may reduce maternal and perinatal mortality

NEONATOLOGY:

- Care of newborn
- Care of preterm
- Infants of diabetic mother
- Asphyxia & neonatal resuscitation.
- Neonatal sepsis - prevention, early detection & management
- Neonatal hyperbilirubinemia, investigation and management
- Birth trauma - prevention, early detection & management
- Detection of congenital malformations in new born and referrals for surgical corrections
- Management of the common problems in neonatal period
- Care of growth restricted babies

GYNAECOLOGY:

- Diagnosis and surgical management of clinical conditions related to congenital malformations of genital tract
- Chromosomal abnormalities and disorders of sexual development (intersex)
- Gynecological disorders of childhood and adolescence
- Polycystic ovary syndrome and secondary amenorrhoea
- Physiology of menstruation, common menstrual disorders and their management; medical & surgical
- Menorrhagia and primary dysmenorrhoea
- Premenstrual syndrome
- Reproductive Endocrinology: Evaluation of primary and secondary amenorrhea, management of hyperprolactinemia, hirsutism, chronic anovulation and polycystic ovary disease (PCOD)
- Endometriosis and adenomyosis - medical and surgical management
- Subfertility evaluation and management
- Use of ovulation induction methods
- Assisted reproduction
- Tubal microsurgery
- Reproductive tract infections
- Sexually transmitted Infections
- HIV/AIDS: prevention, diagnosis and management
- Genital Tuberculosis
- Benign and malignant tumors of genital tract - Early diagnosis and management
- Principles and practice of oncology in gynaecology - chemotherapy, radiotherapy, palliative treatment
- Benign diseases of the vulva, vagina, cervix, uterus and ovary
- Premalignant and malignant disease of the cervix
- Malignant disease of uterus
- Epithelial ovarian cancer
- Malignant disease of the vulva and vagina

- Supports of pelvic organs, genital prolapse, surgical management of genital prolapse.
- Common urological problems in gynaecology, urinary incontinence, voiding difficulties, vesicovaginal fistula.
- Management of menopause, prevention of complications
- Hormone replacement therapy (HRT)
- Cancer screening - genital, breast
- Newer diagnostic aids - USG, and other imaging techniques, endoscopies
- Hysteroscopy, laparoscopy - diagnostic, simple surgical procedures, including laparoscopic tubal occlusion, colposcopy.
- Medico legal aspects, ethics, communications and counseling.
- Operative gynaecology - Selection of case technique and management of complications of minor and major gynaecology procedures.
- Abdominal and vaginal hysterectomy
- Surgical procedures for genital prolapse
- Surgical management of benign and malignant genital neoplasms.
- Diagnosis, preoperative and postoperative care for genital fistula
- Sexual dysfunction
- Ethical issues in Obst. & Gynae.
- Domestic violence and sexual assault

FAMILY PLANNING:

- Demography and population dynamics.
- Contraception - temporary methods, permanent methods
- Legal issues
- Emergency contraception.
- Recent advances in contraceptive technology.

COMMON GYNAECOLOGICAL AND OBSTETRIC SKILLS AND PROCEDURES

GENERAL SURGICAL CARE:

- Administration of antibiotics in the ob/gynae patient
- Female catheterization in ob/gynae patient
- Use of blood and its products
- The role/complications of diathermy
- Pain relief in surgery
- Thrombo-embolic prevention and management
- Wound care and nosocomial infection
- Suture techniques and materials
- Initial assessment and management of obstetric and gynaecological problems

OBSTETRICS

- Obstetric abdominal examination
- Bishops scoring
- Cusco's speculum examination
- Artificial rupture of membranes
- Vaginal examination in labour
- Conduct of spontaneous vertex delivery
- Repair of episiotomy
- Elective caesarean section
- Emergency caesarean section
- Peripartum hysterectomy
- Application of B-lynch and other haemostatic sutures
- Uterine packing and balloon tamponade for PPH
- Manual reduction of uterine inversion
- Manual removal of retained placenta
- Repair torn bladder
- Repair third degree tear

- Repair of 4th degree tear
- Repair lacerated cervix
- Repair of lacerated vagina and perineum
- Application and removal of cervical suture
- Elective breech delivery
- Twin delivery (including principles of internal version)
- Operative vaginal delivery
- Manual rotation
- Mid-cavity non-rotation forceps
- Ventouse rotation
- Obstetric ultrasound for dating, placental localization, viability and multiple pregnancy
- CTG
- Amnio reduction

GYNAECOLOGY

- Laparotomy
- Gynaecological Endoscopies (laparoscopy, hysteroscopy)
- Evacuation of retained products of conception (ERPC) / MVA
- Suction termination of pregnancy
- Polypectomy
- Staging laparotomy
- Hysterosalpingography (HSG)
- Dilatation and curettage
- Fractional curettage
- Hysterotomy
- Hysterectomy; Abdominal & vaginal
- Salpingo oophorectomy (unilateral and bilateral)
- Oophorectomy / ovarian biopsy
- Myomectomy
- Sling's operation for prolapse
- Anterior and posterior repair

- Cystectomy, cystostomy, salpingostomy, salpingectomy
- Management of ruptured/torsion ovarian cyst
- Ligation of Fallopian tubes
- Treatment of non-CIN cervical lesions
- Pap smear
- Cervical Biopsy
- Endometrial pipelle biopsy
- Marsupialization of Bartholin cyst/abscess
- Management of pruritis vulvae
- Management of benign vulval disease
- Vulval biopsy
- Insertion and retrieval of lost intrauterine IUCD
- Ring Pessary

Optional additional training

- Training in laparoscopy to assist in diagnosis of acute pelvic pain, to offer female sterilization and to perform tubal studies for investigation of infertility
- Basic training in colposcopic techniques might also be offered to trainees caring for women in remote areas without reasonable access to specialist care.

THESIS COMPONENT

RESEARCH/ THESIS WRITING

Project must be completed and thesis be submitted before the end of training.

Research Experience

The active research component program must ensure meaningful, supervised research experience with appropriate protected time for each resident while maintaining the essential clinical experience. Recent productivity by the program faculty and by the residents will be required, including publications in peer-reviewed journals. Residents must learn the

design and interpretation of research studies, responsible use of informed consent, and research methodology and interpretation of data. The program must provide instruction in the critical assessment of new therapies and of the surgical literature. Residents will be advised and supervised by research unit of RMU.

Clinical Research

Each resident will participate in at least one clinical research study to become familiar with:

1. Research design
2. Research involving human subjects including informed consent and operations of the Institutional Review Board and ethics of human experimentation
3. Data collection and data analysis
4. Research ethics and honesty
5. Peer review process

This usually is done during the consultation and outpatient clinic rotations.

Case Studies or Literature Reviews

Each resident will write, and submit for publication in a peer-reviewed journal, a case study or literature review on a topic of his/her choice.

METHODS OF INSTRUCTION/COURSE CONDUCTION

As a policy, active participation of students at all levels will be encouraged. Following teaching modalities will be employed:

1. Lectures
2. Seminar Presentation and Journal Club Presentations
3. Group Discussions

4. Grand Rounds
5. Clinico-pathological Conferences
6. Skill teaching in ICU, Operation theatres, emergency and ward settings
7. Bedside teaching rounds in ward
8. OPD & Follow up clinics
9. Long and short case presentations

In addition to the conventional teaching methodologies interactive strategies like conferences will also be introduced to improve both communication and clinical skills in the upcoming consultants. Conferences must be conducted regularly as scheduled and attended by all available faculty and residents.

1. Clinical Case Presentation

Each resident will be responsible for at least one clinical case presentation every 06 months. The cases discussed may be those seen on either the consultation or clinic service or during rotations in specialty areas. The resident, with the advice of the Attending Surgeon on the Consultation Service, will prepare and present the case(s) and review the relevant literature.

2. Monthly Student Meetings

The university will provide a room for student meetings/discussions such as:

- a. Journal Club Meeting
- b. Core Curriculum Meetings
- c. Skill Development

a. Journal Club Meeting

A resident will be assigned to present, in depth, a research article or topic of his/her choice of actual or potential broad interest and/or application. Two hours per month should be allocated to discussion of any current articles or topics introduced by any participant. Faculty or outside researchers will be invited to present outlines or results of current research activities. The article should be critically evaluated and its applicable results should be highlighted,

which can be incorporated in clinical practice. Record of all such articles should be maintained in the relevant department.

b. Core Curriculum Meetings

All the core topics of Obstetrics and Gynaecology should be thoroughly discussed during these sessions. The duration of each session should be at least two hours once a month. It should be chaired by the chief resident (elected by the residents of the relevant discipline). Each resident should be given an opportunity to brainstorm all topics included in the course and to generate new ideas regarding the improvement of the course structure

c. Skill Development

Two hours once a month should be assigned for learning and practicing clinical skills.

List of skills to be learnt during these sessions is as follows:

1. Residents must develop a comprehensive understanding of the indications, contraindications, limitations, complications, techniques, and interpretation of results of all obstetrics and gynaecological procedures.
2. Residents must acquire knowledge of and skill in educating patients about the technique, rationale and ramifications of procedures and in obtaining procedure-specific informed consent. Faculty supervision of residents in their performance is required, and each resident's experience in such procedures must be documented by the program director.
3. Training must include cultural, social, family, behavioral and economic issues, including confidentiality of information, indications for life support systems, and allocation of limited resources.
4. Residents must be taught the social and economic impact of their decisions on patients, the primary care physician and society. This can be achieved by attending the bioethics lectures.
5. Residents should have instruction and experience with patient counseling skills and community education.

6. This training should emphasize effective communication techniques for diverse populations, as well as organizational resources useful for patient and community education.

3. Annual Grand Meeting

Once a year all residents enrolled for MS Obstetrics and Gynaecology should be invited to the annual meeting at RMU Rawalpindi.

One full day will be allocated to this event. All the chief residents from affiliated institutes will present their annual reports. Issues and concerns related to their relevant courses will be discussed. Feedback should be collected and suggestions should be sought in order to involve residents in decision making.

The research work done by residents and their literary work may be displayed.

In the evening an informal gathering and dinner can be arranged. This will help in creating a sense of belonging and ownership among students and the faculty.

ASSESSMENT STRATEGIES

FORMATIVE ASSESSMENT

Self Assessment by the Student (6 monthly)

Each student will be provided with a pre-designed self-assessment form to evaluate his/her level of comfort and competency in dealing with different relevant clinical situations. It will be the responsibility of the

student to correctly identify his/her areas of weakness and to take appropriate measures to address those weaknesses.

Peer Assessment (6 monthly)

The students will also be expected to evaluate their peers. These should be followed by a constructive feedback according to the prescribed guidelines and should be non-judgmental in nature. This will enable students to become good mentors in future.

Informal Internal Assessment by the Faculty (6 monthly)

There will be no formal allocation of marks for the component of Internal Assessment so that students are willing to confront their weaknesses rather than hiding them from their instructors.

It will include:

- a.** Punctuality
- b.** Ward work
- c.** Participation in interactive sessions

Feedback to the faculty by the students: (6 monthly)

After every six months students will be providing a written feedback regarding their course components and teaching methods. This will help to identify strengths and weaknesses of the relevant course, faculty members and to ascertain areas for further improvement.

SUMMATIVE ASSESSMENT (Total 2000 Marks)

MID LEVEL EXAMINATION: (at the end of second year of training)

Written examination (150 MCQs single best answer with one marks for each MCQ) = **150 marks**
TOACS and Short cases = **150 Marks**

Eligibility Criteria

To appear in Mid level Examination, a candidate shall be required

- a) To have submitted certificate of completion of mandatory workshops.
- b) To have submitted certificate of completion of two years of training from the supervisor/ supervisors of rotations.
- c) To have submitted certificate of submission of synopsis
- d) To have submitted evidence of payment of examination fee.
- e) Only those who pass written will appear in TOACS

Schedule and Fee

- a) Mid level Examination at completion of two years of training, will be held once a year in March.
- b) There will be a minimum period of 30 days between submission of applications for the examination and the conduction of examination.
- c) III. Examination fee will be determined periodically by the university.
- d) IV. The examination fee once deposited cannot be refunded / carried over to the next examination under any circumstances.
- e) V. The Controller of Examination will issue Roll Number Slips on receipt of
 - a. prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee.

Declaration of Result

- a) The Candidate will have to score 60% marks to be declared successful
- b) Those who failed in TOACS will appear only in TOACS
- c) Repeat examination for those who failed will be held in June.

FINAL MS EXAMINATION OBSTETRICS AND GYNAECOLOGY

TOTAL MARKS 1000

All candidates admitted in MS Obstetrics and Gynaecology course shall appear in Final examination at the end of structured training programme (end of fourth calendar year) and after clearing Mid level Examination.

Topics included in paper 1

Obstetrics

Topics included in paper 2

Gynaecology

Components of Final Clinical Examination		
Theory		
Paper I Obstetrics	250 Marks	3 Hours
5 SEQs (No Choice)	50 Marks	
100 MCQs	200 Marks	
Paper II Gynaecology	250 Marks	
5 SEQs (No Choice)	50 Marks	3 Hours
100 MCQs	200 Marks	

Only those candidates, who pass in theory papers, will be eligible to appear in the Clinical, TOACS/OSPE

CLINICAL, TOACS/OSPE	
One long case of Obstetrics	150 Marks
One long case of Gynaecology	150 Marks
TOACS/OSPE	200 Marks

Eligibility Criteria:

To appear in the Final Examination the candidate shall be required:

a) To have submitted the result of passing Intermediate Examination.

- b) To have submitted the certificate of completion of training, issued by the Supervisor will be mandatory.
- c) To have achieved a cumulative score of 75% in Continuous Internal assessments of all training years.
- d) To have got the thesis accepted and will then be eligible to appear in Final Examination.
- e) To have submitted no dues certificate from all relevant departments including library, hostel, cashier etc.
- f) To have submitted evidence of submission of examination fee.

Final Examination Schedule and Fee

- a) Final examination will be held once a year in March. Those who failed can appear in supplementary examination in June
- b) The candidates have to satisfy eligibility criteria before permission is granted to take the examination.
- c) Examination fee will be determined and varied at periodic intervals by the University.
- d) The examination fee once deposited cannot be refunded / carried over to the next examination under any circumstances.
- e) The Controller of Examinations will issue an Admittance Card with a photograph of the candidate on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee. This card will also show the Roll Number, date / time and venue of examination.

Declaration of Result

For the declaration of result

- a) The candidate must get his/her Thesis accepted.
- b) The candidate must have passed the final written examination with 50% marks and the clinical examination securing 50% marks. The cumulative passing score from the written and clinical/ oral examination shall be

60%. Cumulative score of 60% marks to be calculated by adding up secured marks of each component of the Examination i.e written and clinical/ oral and then calculating its percentage.

- c) Those who pass written will appear in clinical examination. Those who failed in clinical examination will appear only in clinical examination again.
- d) The MS degree shall be awarded after acceptance of thesis and success in the final examination.
- e) IV. On completion of stipulated training period, irrespective of the result (pass or fail) the training slot of the candidate shall be declared vacant.

CONTINUOUS INTERNAL ASSESSMENT 300 Marks (75/Year)

MS OBSTETRICS AND GYNAECOLOGY THESIS 400 Marks

All candidates admitted in MS Obstetrics and Gynaecology courses shall appear in thesis examination at the end of 4th year of the MS programme and not later than 7th calendar year of enrolment. The examination shall include thesis evaluation with defense.

Submission / Evaluation of Synopsis

1. The candidates shall prepare their synopsis as per guidelines provided by the Advanced Studies & Research Board, available on university website.
2. The research topic in clinical subject should have 30% component related to basic sciences and 70% component related to applied clinical sciences. The research topic must consist of a reasonable sample size and sufficient numbers of variables to give training to the candidate to conduct research, to collect & analyze the data'
3. Synopsis of research project shall be submitted by the end of the 1st year of MS program. The synopsis after review by an Institutional Review Committee shall be submitted to the University for consideration by the Advanced Studies & Research Board, through the Principal / Dean /Head of the institution.

Submission of Thesis

1. Thesis shall be submitted by the candidate duly recommended by the Supervisor.

2. The minimum duration between approval of synopsis and submission of thesis shall be one year, but the thesis can not be submitted later than 8 years of enrolment.
3. The research thesis must be compiled and bound in accordance with the Thesis Format Guidelines approved by the University and available on website.
4. The research thesis will be submitted along with the fee prescribed by the University.

Thesis Examination

- a) The candidate will submit his/her thesis at least 06 months prior to completion of training.
- b) The Thesis along with a certificate of approval from the supervisor will be submitted to the Registrar's office, who would record the date / time etc. and get received from the Controller of Examinations within 05 working days of receiving.
- c) The Controller of Examinations will submit a panel of eight examiners within 07 days for selection of four examiners by the Vice Chancellor. The Vice Chancellor shall return the final panel within 05 working days to the Controller of Examinations for processing and assessment. In case of any delay the Controller of Examinations would bring the case personally to the Vice Chancellor.
- d) The Supervisor shall not act as an examiner of the candidate and will not take part in evaluation of thesis.
- e) The Controller of Examinations will make sure that the Thesis is submitted to examiners in appropriate fashion and a reminder is sent after every ten days.
- f) The thesis will be evaluated by the examiners within a period of 06 weeks.
- g) In case the examiners fail to complete the task within 06 weeks with 02 fortnightly reminders by the Controller of Examinations, the Controller of Examinations will bring it to the notice of Vice Chancellor in person.
- h) In case of difficulty in find an internal examiner for thesis evaluation, the Vice Chancellor would, in consultation with the concerned Deans, appoint any relevant person as examiner in supersession of the relevant Clause of the University Regulations.
- i) There will be two internal and two external examiners. In case of difficulty in finding examiners, the Vice Chancellor would, in consultation with the

concerned Deans, appoint minimum of three, one internal and two external examiners.

- j) The total marks of thesis evaluation will be 400 and 60% marks will be required to pass the evaluation.
- i) The thesis will be considered / accepted, if the cumulative score of all the examiners is 60%.
- ii) The clinical training will end at completion of stipulated training period but the candidate will become eligible to appear in the Final
- iii) Examination at completion of clinical training and after acceptance of thesis. In case clinical training ends earlier, the slot will fall vacant after stipulated training period.

AWARD OF MS OBSTETRICS AND GYNAECOLOGY DEGREE

After successful completion of the structured courses of MS Obstetrics and Gynaecology and qualifying Abridged & Final Examinations and acceptance of thesis the degree with title MS Obstetrics and Gynaecology shall be awarded.

RECOMMENDED BOOKS

CORE TEXTBOOK

1. Obstetrics by **Ten teachers**
2. Gynaecology by **Ten teachers**
3. Edmonds ***Dewhurst's Post Graduate Obstetrics & Gynecology***
4. D James, P Steer, C Weiner, B Gonik. ***High Risk Pregnancy – Management Options.***
5. De Swiet, **Medical disorder in obstetrics**
6. **Shaws text book of gynaecology**
7. **Evidence based text for MRCOG** by Lusley
8. **Munrokur Obstetrics**

GYNECOLOGICAL SURGERY (for reference only)

1. **Shaws text book of operative gynaecology**

SUPPLEMENTARY BOOKS

1. Snell. ***Clinical Anatomy.***
2. Langman J. ***Embryology.***
3. DTY Liu. ***Labor Ward Manual.***
4. Studd. ***Progress in O & G.***
5. Bonnar. ***Recent Advances in O & G.***
6. ***RCOG Clinical Greentop Guidelines***
7. ***NICE guidelines***

APPENDIX "A"

Preview Form

RESIDENT EVALUATION BY NURSE / STAFF

Please take a few minutes to complete this evaluation form. All Information is confidential and will be used constructively. You need not answer all the questions.

Name of Resident*

Location of care or interaction: (OPD/Ward/Emergency Department)

Your position (Nurse, Head Nurse)

S#	PROFESSIONALISM	Poor	Fair	Good	V. Good	Excellent	Insufficient Contact
1.	Resident is Honest and Trustworthy	○	○	○	○	○	○
2.	Resident treats patients and families with courtesy, compassion and respect	○	○	○	○	○	○
3.	Resident treats me and other member of the team with courtesy and respect	○	○	○	○	○	○
4.	Resident shows regard for my opinions	○	○	○	○	○	○
5.	Resident maintains a professional manner and appearance	○	○	○	○	○	○
INTERPERSONAL AND COMMUNICATIONS SKILLS							
6.	Resident communicates well with patients families, and members of the healthcare team	○	○	○	○	○	○
7.	Resident provides legible and timely documentation	○	○	○	○	○	○
8.	Resident respect differences in religion, culture age, gender sexual orientation and disability	○	○	○	○	○	○
SYSTEMS BASED PRACTICE							
9.	Resident works effectively with nurses and other professionals to improve patient care	○	○	○	○	○	○
PATIENT CARE							
10.	Resident respects patient preferences	○	○	○	○	○	○
11.	Resident is reasonable accessible to patients	○	○	○	○	○	○
12.	Resident take care of patient comfort and dignity during procedures	○	○	○	○	○	○
PRACTICE BASED LEARNING AND IMPROVEMENT							
13	Resident facilitates the learning of students and other professionals	○	○	○	○	○	○
COMMENTS							
14	Please describe any praises or concerns of information about specific incidents	○	○	○	○	○	○
THANK YOU for your time and thoughtful input. You play a vital role in the education and training of the internal medicine resident.							

TOTAL SCORE _____/56

APPENDIX "B"

Patient Medical Record / Chart Evaluation Proforma

Name of Resident

Location of Care or Interaction

(OPD/Ward/Emergency/Endoscopy Department)

S#		Poor	Fair	Good	V. Good	Excellent	Insufficient Contact
1.	Basic Data on Front Page Recorded	0	0	0	0	0	0
2.	Presenting Complaints written in Chronological Order	0	0	0	0	0	0
3.	Presenting Complaints Evaluation Done	0	0	0	0	0	0
4.	Systemic review Documented	0	0	0	0	0	0
5.	All Components of History Documented	0	0	0	0	0	0
6.	Complete General Physical Examination done	0	0	0	0	0	0
7.	Examination of all systems documents	0	0	0	0	0	0
8.	Differential Diagnosis framed	0	0	0	0	0	0
9.	Relevant and required investigations documented	0	0	0	0	0	0
10.	Management plan framed	0	0	0	0	0	0
11.	Notes are properly written and eligible	0	0	0	0	0	0
12.	Progress notes written in organized manner	0	0	0	0	0	0
13.	Daily progress is written	0	0	0	0	0	0
14.	Chart is organized no loose paper	0	0	0	0	0	0
15.	Investigations properly pasted	0	0	0	0	0	0
16.	Abnormal findings in investigations encircled	0	0	0	0	0	0
17.	Procedures done on patient documented properly	0	0	0	0	0	0
18.	Medicine written in capital letter	0	0	0	0	0	0
19.	I/v fluids orders are proper with rate of infusion mentioned	0	0	0	0	0	0
20.	All columns of chart complete	0	0	0	0	0	0

Poor:0, Fair:1, Good:2, V.Good:3, Excellent:4,

TOTAL SCORE _____/80

APPENDIX "C"

Patient Evaluation of Physician

Physician's Name: _____

Date of Evaluation: _____

Please circle the appropriate number for each item using this scale.
Please provide any relevant comments on the back of this form.

1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

The Physician:	Scale				
Introduces him/herself and greets me in a way that makes me feel comfortable ڈاکٹر نے اپنا تعارف کروایا اور خوش اخلاقی سے معائنہ کیا۔	1	2	3	4	5
Is truthful, upfront, and does not keep things from me that I believe I should know مجھے بیماری کے بارے میں تفصیل سے آگاہ کیا۔					
Talks to me in a way that I can understand, while also being respectful میرے ساتھ آسان زبان میں بات کی۔					
Understands how my health affects me, based on his/her understanding of the details of my life میرے انفرادی حالات کے مطابق میری بیماری کا علاج کیا۔					
Takes time to explain my treatment options, including benefits and risks مجھے میری بیماری کے علاج کے مختلف طریقوں اور ان کے فوائد اور نقصانات سے آگاہ کیا					

TOTAL SCORE _____/30

APPENDIX "D"

MENTOR / SUPERVISOR EVALUATION OF TRAINEE

Resident's Name: _____
 Evaluator's Name(s): _____
 Hospital Name: _____
 Date of Evaluation: _____

1	Unsatisfactory
2	Below Average
3	Average
4	Good
5	Superior

Traditional Track (10% Clinic)

Primary Care Track (20% Clinic)

Please circle the appropriate number for each item using the scale above.

Patient Care	Scale				
1. Demonstrates sound clinical judgment	1	2	3	4	5
2. Presents patient information case concisely without significant omissions or digressions	1	2	3	4	5
3. Able to integrate the history and physical findings with the clinical data any identify all of the patient's major problems using a logical thought process	1	2	3	4	5
4. Develops a logical sequence in planning for diagnostic tests and procedures and formulates an appropriate treatment plan to deal with the patient's major problems	1	2	3	4	5
5. Able to perform commonly used office procedures	1	2	3	4	5
6. Follows age appropriate preventative medicine guidelines in patient care	1	2	3	4	5
Medical Knowledge	Scale				
1. Uses current terminology	1	2	3	4	5
2. Understands the meaning of the patient's abnormal findings	1	2	3	4	5
3. Utilizes the appropriate techniques of physical examination	1	2	3	4	5
4. Develops a pertinent and appropriate differential diagnosis for each patient	1	2	3	4	5
5. Demonstrates a solid base of knowledge of ambulatory medicine	1	2	3	4	5
6. Can Discuss and apply the applicable basic and clinically supportive sciences	1	2	3	4	5
Professionalism	Scale				
1. Demonstrates consideration for the patient's comfort and modesty	1	2	3	4	5
2. Arrives to clinic on time and follows clinic policies and procedures	1	2	3	4	5
3. Works effectively with clinic staff and other health professionals	1	2	3	4	5
4. Ale to gain the patient's cooperation and respect	1	2	3	4	5
5. Demonstrates compassion and empathy for the patient	1	2	3	4	5
6. Demonstrates sensitivity to patient's culture, age, gender, and disabilities	1	2	3	4	5
Interpersonal and Communication Skills	Scale				
1. Demonstrates appropriate patient/physician relationship	1	2	3	4	5
2. Uses appropriate and understandable layman's terminology in	1	2	3	4	5

discussions with patients					
3. Patient care documentation is complete, legible, and submitted in timely manner	1	2	3	4	5
4. Recognizes need for behavioral health services and understands resources available	1	2	3	4	5
Systems-based Practice		Scale			
1. Spends appropriate time with patient for the complexity of the problem	1	2	3	4	5
2. Able to discuss the costs, risks and benefits of clinical data and therapy	1	2	3	4	5
3. Recognizes the personal, financial, and health system resources required to carry out the prescribed	1	2	3	4	5
4. Demonstrates effective coordination of care with other health professionals	1	2	3	4	5
5. Recognizes the patient's barriers to compliance with treatment plan such as age, gender, ethnicity, socioeconomic status, intelligence, dementia, etc	1	2	3	4	5
6. Demonstrates knowledge of risk management issues associated with patient's case	1	2	3	4	5
7. Works effectively with other residents in clinic as a member of a group practice	1	2	3	4	5
Osteopathic Concepts		Scale			
1. Demonstrates ability to utilize and document structural examination findings	1	2	3	4	5
2. Integrates findings of osteopathic examination in the diagnosis and treatment plan	1	2	3	4	5
3. Successfully uses osteopathic manipulation for treatment where appropriate	1	2	3	4	5
4. Practices patient Centered Care with a "whole person" approach to medicine	1	2	3	4	5
Practice-Based Learning and Improvement		Scale			
1. Locates, appraises, and assimilates evidence from scientific studies	1	2	3	4	5
2. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies to assess diagnostic and therapeutic effectiveness of treatment plan	1	2	3	4	5
3. Uses information technology to access information to support diagnosis and treatment	1	2	3	4	5
Comments					
TOTAL SCORE _____/180					

Resident's Signature

Date

Evaluator's Signature

Date

APPENDIX "E"

Mandatory Workshops (during first three years)

1. Each candidate of MD/MS/MDS program would attend the 07 mandatory workshops and any other workshop as required by the university.

2. The seven mandatory workshops will include the following
 - a. Research Methodology and Biostatistics
 - b. Synopsis Writing
 - c. Introduction to computer / Information Technology and Software Programs
 - d. Communication Skills
 - e. Workshop on basic surgical skills
 - f. Clinical audit workshop
 - g. Critical appraisal of articles

3. An appropriate fee for each workshop will be charged

4. Each workshop will be of 02-05 days duration

5. Each workshop will be arranged by DME.

APPENDIX "F"

CONTINUOUS INTERNAL ASSESSMENTS

Workplace Based Assessments

Workplace based assessments will consist of Generic as well as Specialty Specific Competency Assessments and Multisource Feedback Evaluation.

1. GENERIC COMPETENCY TRAINING & ASSESSMENTS

The candidates of all MD/MS/MDS programs will be trained and assessed in the following five generic competencies.

- i) Patient Care.
 - a. Patient care competency will include skills of history taking, examination, diagnosis, plan of investigation, clinical judgment, plan of treatment, consent, counseling, plan of follow up, communication with patient / relatives and staff.
 - b. The candidate shall learn patient care through ward teaching, departmental conferences, morbidity and mortality meeting and training in procedures and operations.
 - c. The candidate will be assessed by the supervisor during presentation of cases on clinical ward rounds, scenario based discussions on patient management, multisource feedback evaluation. Direct Observation of Procedures (DOPS) and operating room assessments.
 - d. These methods of assessments will have equal weightage.
- ii) Medical Knowledge and Research
 - a. The candidate will learn basic factual knowledge of illnesses relevant to the specialty through discussions on topics selected from the syllabus, small group tutorials and bed side rounds and self study
 - b. The medical knowledge/skill will be assessed by the teacher during clinical ward rounds, SGD, mid level to end of course assessment.
 - c. The candidate will be trained in designing research project, data collections, data analysis and presentation of results by the research department.
 - d. The acquisition of research skill will be assessed as per regulations governing thesis evaluation and its acceptance.
- iii) Practice and System Based Learning
 - a. This competency will be learnt from journal clubs, review of literature, policies and guidelines, audit projects, medical error investigations, and awareness of healthcare facilities.

- b. The assessment methods will include case studies, presentation in morbidity and mortality review meetings and presentation of audit projects if any.
- c. These methods of assessment shall have equal weight-age

iv) Communication Skills

- a. These will be learnt from role models, supervisor and workshops.
- b. They will be assessed by direct observation of the candidate whilst interacting with the patients, relatives, colleagues and with multisource feedback evaluation.

v) Professionalism as per Hippocratic Oath

- a. This competency is learnt from supervisor acting as a role model, ethical case conferences and lectures on ethical issues such as confidentiality, informed consent, end of life decisions, conflict of interest, harassment and use of human subjects in research.
- b. The assessment of residents will be through multisource feedback evaluation according to proformas of evaluation and its' scoring method.

2. Specialty Specific Competencies

- i) The candidates will be trained in operative and procedural skills
- ii) The level of procedural competency will be according to a competency table
- iii) The following key will be used for assessing operative and procedural competencies:

a. Level 1 Observer status

The candidate physically present and observing the supervisor and senior colleagues

b. Level 2 Assistant status

The candidate assisting procedures and operations

c. Level 3 Performed under supervision

The candidate operating or performing a procedure under direct supervision

d. Level 4 Performed independently

The candidate operating or performing a procedure without any supervision

i) Procedure Based Assessments (PBA)

- a. Procedural competency will assess the skill of consent taking , preoperative preparation and planning, intraoperative general and specific tasks and postoperative management
- b. Procedure Based assessments will be carried out during teaching and training of each procedure.
- c. The assessors may be supervisors, consultant colleagues and senior residents.
- d. Standardized forms will be filled in by the assessor after direct observation
- e. The resident's evaluation will be graded as satisfactory /deficient / requiring further training and not assessed at all.

f. A satisfactory score will be required to be eligible for taking final examination.

3. Multisource Feedback Evaluation

- i) The supervisor would ensure a multisource feedback to collect assessments in medical knowledge, clinical skills, communication skills, professionalism, integrity, and responsibility by feedback from nurses , patients.
- ii) Satisfactory annual reports will be required to become eligible for the final examination

4. Log Book (Portfolio)

5. Supervisor's Annual Review Report.

This report will consist of the following components:-

- i) Verification and validation of Log Book of operations & procedures according to the expected number of operations and procedures performed (as per levels of competence) .
- ii) A 75% attendance in academic activities will include: Lectures, Workshops other than mandatory Workshops, Journal Clubs, Morbidity & Review Meetings and other presentations.
- iii) Assessment report of presentation and lectures
- iv) Compliance Report to meet timeline for completion of research project.
- v) Compliance Report on personal development plan.
- vi) Multisource feedback report, on relationship with colleagues, patients,
- vii) Supervisor will produce an annual report based on assessments as per profoma in appendix-G and submit it to the Examination department.
- viii) 75% score will be required to pass the continuous internal assessment on annual review.

APPENDIX "G"

Yearly Supervisor's Assessment PROFORMA FOR CONTINUOUS INTERNAL ASSESSMENTS

1.	Generic Competencies		
	(please score from 1-100% 75% shall be the pass marks)		Component Score
			Score achieved
	i) Patient care		20
	ii) Medical Knowledge and Research		20
	iii) Practice and system based learning		
	<ul style="list-style-type: none"> • Journal clubs • Audit projects • Medical Error investigation and root cause analysis • Morbidity / Mortality / Review meetings • Awareness of Health Care Facilities 		04 04 04 04 04
	iv) Communication skills		
<ul style="list-style-type: none"> • Informed consent • End of life decisions 		10 10	
v) Professionalism			
<ul style="list-style-type: none"> • Punctuality and time keeping • Patient doctor relationship • Relationship with colleagues • Honesty and integrity 		04 04 04 04	
2.	Specialty specific competencies		
	Please score from 1-100%.75% shall be the pass marks		Score achieved
	Operative Skills / Procedural skills		
3.	Multisource Feedback Evaluation (Please score from 1-100.75% shall be the pass marks)		
4.	Candidates training Portfolio (Please score 1-100.75% shall be the pass marks)		
	Please score from 1-100.75% shall be the pass marks		Component Score
			Score achieved
	i) Log book		25
	ii) Record of participation and presentation in academic activities		20
	iii) Record of publications		10
iv) Record of results of assessments and examinations		45	