Study & Evaluation Scheme
Of
M.S. (Obstetrics & Gynaecology)
[Applicable for the Batch 2015-16 till revised]

TEERTHANKER MAHAVEER UNIVERSITY
Delhi Road, Moradabad, Uttar Pradesh-244001
Website: www.tmu.ac.in
P.G. Curriculum

MS (Obstetrics & Gynaecology)

• Goal
• Objectives
• Syllabus
• Teaching program
• Posting
• Thesis
• Assessment
• Job responsibilities
• Suggested books
• Model Test papers
The composition of the department in terms of units, numbers of beds, faculty strength, other staff & number of PG residents will be as per MCI regulations.

1. **Goals:** The goal of MD course in Obstetrics & Gynecology which also includes Family Welfare Programme is to produce a competent Obstetrician & Gynecologist who
   - Is able to demonstrate comprehensive understanding of Obstetrics & Gynaecology as well as applied disciplines.
   - Has acquired the competence pertaining to basic Methodology and procedures pertaining to Obstetrics & Gynecology that are required to be practiced in community and at all levels of health care system.
   - Has acquired skills effectively in assessing the diagnosis of pregnancy and show expertise in giving effective Antenatal care to the pregnant ladies and diagnose any deviations from normalcy, for giving timely attention and expert obstetrical care for safe deliveries and preventing/treating complications if any.
   - Has acquired knowledge and skills for diagnosing and treating all Gynaecological problems including Gynaecological cancers.
   - Should be able to give adequate family planning advices and measures to the clients.
   - Should be able to demonstrate empathy and have a humane approach towards patients and respect their sensibilities.
   - Is oriented to principle of research methodology.
   - Has acquired skills in educating medical & paramedical professionals (including nursing staff).

2. **Objectives:** At the end of MS course the student should be able to:
   - Develop skills as a self-directed learner, recognize continuing educational needs; use appropriate learning resources and critically analyze relevant published literature in order to practice evidence-based Obstetrics & Gynaecology.
   - Demonstrate competence in basic concepts of research methodology and epidemiology.
   - Practice the specialty of Obstetrics & Gynaecology in keeping with the principles of professional ethics, and all qualities required to become a Consultant in the specialty.
   - Organize and supervise the desired managerial and leadership skills.
   - Function as a productive member of a team engaged in health care, research and education.
• Perform recent investigations and procedures for patients.
• Demonstrate skills in documentation of reports.
• Facilitate learning of medical/nursing students, & paramedics as Teacher-Trainee.
• Play the assigned role in implementation of national health programs, effectively & responsibly (including HIV/AIDS, Family Welfare programme)
• Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education message to patients, families & communities.
SYLLABUS FOR POST GRADUATE COURSE

MS (Obstetrics & Gynaecology)

OBSTETRICS:

1. Basic sciences
   - Applied Anatomy in females of genito urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall and breast.
   - Anatomy of fetus.
   - Endocrinology of pregnancy.
   - Lactation.

   - Maternal pelvis and fetal skull
   - Mechanism of normal labour and management of normal labour
   - 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.


4. Medical Disorders of Pregnancy:
   - Anemia in Pregnancy
   - Heart disease in Pregnancy
   - Diabetes Mellitus complicating pregnancy
   - Liver disease in Pregnancy
   - Renal disorders in pregnancy, Respiratory and CNS Disorders in pregnancy
   - Skin diseases and Psychiatric disorders in Pregnancy
   - Infections in pregnancy (Malaria, Toxoplasmosis, viral infections (Rubella, CMV, Hepatitis B, Herpes) syphilis, Leptospirosis and other sexually transmitted infections including HIV, Parents to child transmission of HIV infection (PPTCT).
5. Surgical disorders in pregnancy
   - Acute abdomen, Acute Appendicitis, Intestinal obstruction, perforations.
6. Gynaecological disorders in pregnancy
   - Fibroids, Ovarian tumors, Carcinoma cervix, genital prolapse.
7. Hypertensive disorders in pregnancy
   - Gestational hypertension
   - Pre-eclampsia
   - Eclampsia
8. Evaluation of Antenatal & Intra-natal fetal surveillance including maternal health in normal and complicated pregnancies by making use of available diagnostic modalities and plan for safe delivery of the fetus while safeguarding the maternal health.
9. Management of High-risk pregnancy
   - Post caesarean pregnancy
   - Post dated pregnancy
   - Preterm labour
   - Intra-uterine growth restriction
   - Pre mature rupture of membranes (PROM)
   - Blood group incompatibilities including Rh Iso-immunization
   - Recurrent pregnancy wastage
10. Recent advances in medical and surgical management
    - Imaging techniques
    - CTG
    - Prenatal diagnosis of fetal abnormalities and appropriate care. Fetal therapy.
    - PNDT Act and its implications.
11. Management of abnormal labour:
    - Abnormal pelvis and Soft tissue abnormalities in birth passage
    - Malpresentation and malposition of fetus,
    - abnormal uterine action,
    - obstructed labour and its complications – rupture of uterus and other morbidities
    - Cervical Dystocia.
12. Third stage complications –
    - PPH – Atonic, Traumatic, including surgical management,
    - retained placenta,
    - uterine inversion,
    - post partum collapse,
    - amniotic fluid embolism.
13. Normal puerperium –
    - Physiology, management of normal puerperium
    - Breast feeding – technique, management, benefits, BFHI

15. National Health Programs to improve the maternal and child health, social obstetrics and vital statistics.
   - Maternal mortality – causes, prevention
   - Perinatal mortality – causes, prevention


17. Drugs used in obstetric practice – Oxytocics including prostaglandins, Antihypertensive, Tocolytics, FDA Classification.


21. New Born
   - Care of healthy newborn
   - Care of preterm, SGA neonates, infants of diabetic mother.
   - Asphyxia & Neonatal resuscitation (Respiratory distress syndrome and Meconium aspiration syndrome).
   - Neonatal sepsis - prevention, early detection & management.
   - Neonatal hyperbilirubinemia, investigation and management.
   - Birth trauma - prevention, early detection & management.
   - Detection of congenital malformations in newborn and make timely referrals for surgical corrections.
   - Management of the common problems in neonatal period.

22. Preconceptional Counseling where the need arises for planned Pregnancy in special situations.

GYNAECOLOGY:

1. Basic sciences
   - Development of genital tract and associated malformations – clinical significance
   - Applied anatomy of female genital tract, abdominal wall and urinary tract.
   - Physiology of menstruation and ovulation
   - Physiology of spermatogenesis
   - Endocrinology – hypothalamus pituitary, thyroid and adrenal glands
     Neurotransmitters Common menstrual disorders and their management.
• Diagnosis and surgical management of clinical conditions related to congenital malformations of genital tract. Reconstructive surgery in gynaecology.
• Chromosomal abnormalities and intersex. Ambiguous sex at birth.
• Reproductive Endocrinology: Evaluation of primary and secondary amenorrhea, management of hyper Prolactinemia, Hirsutism, chronic anovulation and PCOD.
• Thyroid dysfunction

2. Physiology of puberty and adolescence
• Gynaecological problems of puberty and adolescence including sex education

3. Reproductive Tract Infections
• Pelvic Inflammatory Disease (PID – causes, diagnosis, management)
• Sexually Transmitted Infections, and HIV/AIDS: Prevention, Diagnosis and management
• Genital Tuberculosis – diagnosis & management

4. Supports of pelvic organs
• Genital prolapse – Aetiology, classification, diagnosis and surgical management of genital prolapse.

5. Endometriosis and Adenomyosis - medical and surgical management.

6. Common urological problems in gynaecology –
• Physiology of Micturition - voiding difficulties
• SUI Urodynamics, diagnosis, investigations and management of SUI
• VVF – surgical repair of genital fistulae
• Ureretic and bladder injuries
• Retention of urine especially in menopausal women – causes, diagnosis and management

7. Infertility evaluation and management.
• Use of ovulation induction methods
• Tubal factors of Infertility – Tubal Patency tests and Tubal microsurgery,
• Assisted reproduction techniques
• management of immunological factors in infertility
• surrogacy
• Adoption law, medico-legal and ethical issues

8. Abnormal uterine bleeding – Aetiology, diagnosis and management including Puberty menorrhagia

9. Benign tumors of the uterus – fibromyoma of uterus

10. Benign and malignant tumors of ovary

11. Screening for genital malignancies - cytology, colposcopy and biochemistry Management of premalignant lesions

12. Benign conditions of cervix, vulva and vagina

13. Malignant tumors of the genital tract
• Carcinoma of cervix
• Carcinoma of Endometrium
• Malignant lesions of vulva and vagina


15. Physiology of menopause, management of menopause, prevention of complications, HRT
• Postmenopausal bleeding – Aetiology, investigations, diagnosis and management
• Postmenopausal Osteoporosis – diagnosis and management

16. Recent advances.

17. Newer diagnostic aids –
• USG, interventional sonography, other imaging techniques.
• Gynaecological endoscopy
  (i) Hysteroscopy – diagnostic and operative,
  (ii) Laparoscopy – diagnostic, simple surgical procedures, including laparoscopic tubal occlusion,
  (iii) endometrial ablative techniques,
  (iv) colposcopy.

18. Medico legal aspects, ethics, communications and counseling (SEXUAL /ASSULTS).

19. Operative gynaecology - Selection of case, technique and management of complications of minor and major gynaecology procedures.
• Abdominal and vaginal hysterectomy
• Surgical procedures for genital prolapsed
• Surgical management of benign and malignant genital neoplasm.
• Repair of genital fistulae, SUI
• Operative endoscopy – Laparoscopic, Hysteroscopic

20. Recent advances in gynaecology - diagnostic and therapeutic.

21. Special groups - Pediatric and adolescent gynaecology, geriatric gynaecology.

22. Evidence based management.

23. Family Planning:
• Demography and population Dynamics.
• Contraception - Temporary methods, Permanent methods (vasectomy and female sterilization) Legal issues.
• MTP Act and procedures of MTP in first & second trimester. (Recent Amendments, Legal/ethical issues)
• Emergency contraception.
• Recent advances, new development, Future research work in contraceptive technology.
Recommended Books:

**Obstetrics:**
- Textbook of Obstetrics by D.C Dutta
- Ian Donald Practical Obstetrics problem.
- Munro-Kerr’s Operative Obstetrics.
- Fernando – Arias, High Risk Pregnancy.
- Williams Obstetrics.
- Medical Disorders in Pregnancy by De Swiet.
- Obstetrics by Ian Donald.
- Post Graduate Obstetrics & Gynaecology by FOGSI, edited by Dr. N. Malhotra & Daftary High Risk pregnancy by James.
- Operative Obstetrics by Douglas.
- Recent Advances in Obst/Gyn.
- All on net.
- FOGSI Books.

**Gynecology:**
- Novak’s textbook of Gynecology.
- Telindes Operative Gynecology.
- D.C.Dutta’s Textbook of gynecology and contraception.
- Bereks gynecological Oncology.
- Gynecology by Saxena
- Jeffcoat’s Principles of Gynaecology.
- Reproductive Endocrinology by Speroff.
- Infertility by Insler.
- Endocrinology by Rajan.
- Gynaecology by Gold
- Bonney’s Text Book of Operative Gynaecology
- Shaw’s Text Book of Gynaecology
- Shaw’s Text Book of Operative Gynaecology
- Post Graduate Obstetrics & Gynecology by Dewhurst.
- Bonney’s Text book of Operative Gynaecology
- All on net.
- FOGSI Books.
- Family Planning
- Reproductive endocrinology by Speroff.
- Population reports.
Journals/Periodicals:
- Clinics in Obst. & gynecology
- North American clinics in Obs & Gynae
- Journal of Obst & Gynaecology of India
- American Journal of Obstetrics & Gynaecology
- British Journal of Obstetrics & Gynaecology
- Fertility & Sterility series
- Year books of Obstetrics & Gynaecology Annuals
- Obstetrical & Gynaeacological Survey

Scheme of Examination:

Theory (4 papers, 100 marks each. Duration 3 hours.)

<table>
<thead>
<tr>
<th>Paper</th>
<th>Title</th>
<th>Marks</th>
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<tbody>
<tr>
<td>Paper I</td>
<td>Basic sciences in Obstetrics and gynaecology including Family welfare programme.</td>
<td>100</td>
</tr>
<tr>
<td>Paper II</td>
<td>Clinical Obstetrics including newborn</td>
<td>100</td>
</tr>
<tr>
<td>Paper III</td>
<td>Clinical Gynecology</td>
<td>100</td>
</tr>
<tr>
<td>Paper IV</td>
<td>Recent advances in Obs/Gynaecology</td>
<td>100</td>
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<tr>
<td></td>
<td><strong>Total Theory Marks</strong></td>
<td><strong>400</strong></td>
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Practical & Viva-Voce Examination

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<tbody>
<tr>
<td>1</td>
<td>Obstetrics cases - 2 (Long Case 1; Short Case 1)</td>
<td>150</td>
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<tr>
<td>2</td>
<td>Gynaecology cases - 2 (Long Case 1; Short Case 1)</td>
<td>150</td>
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<tr>
<td>3</td>
<td>Viva – 50 each for Obstetrics &amp; Gynaecology</td>
<td>100</td>
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<tr>
<td></td>
<td><strong>Total Practical Marks</strong></td>
<td><strong>400</strong></td>
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1. Teaching & Training Programme

General Principles: Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training is skills oriented.

Learning in postgraduate programme is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

Log Books to be duly maintained and wieghtage to be given in the examination as a part of internal assessment. The assessment is valid objective and reliable. They asses for their clinical and academic activities on day – to – day basis.

Teaching Sessions: In addition to daily routine reporting with consultants in every section, there is one hourly formal teaching sessions of PG per week. This is in addition to UG teaching classes, which they are required to attend to gain basic knowledge of Obstetrics & Gynaecology.
Clinical case discussion
Seminars/Journal Club
Maternal/Perinatal Mortality Conference
Clinical Grand Round (CGR)
Clinico – Pathological Conferences (CPC)
Dissertation Review meetings
Inter departmental meetings
Guest Lectures / Vertical Seminars

Teaching & Training Schedule: The Post-Graduate (PG) Resident must undergo the following rotational training during their 3 years course towards MD/MS degree

<table>
<thead>
<tr>
<th>Teaching Schedule</th>
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<tbody>
<tr>
<td>Obst. Ward : 1 Yr.</td>
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<tr>
<td>Gynae ward : 1 Yr.</td>
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<tr>
<td>Unit Rotation : 3 months in each unit (6 months)</td>
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<td>L.R. : 4 months</td>
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<tr>
<td>Family Planning : 1 months</td>
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<tr>
<td>Neonatology : 2 weeks</td>
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<tr>
<td><strong>Total</strong> : <strong>36 months</strong></td>
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The suggestive departmental teaching schedule is as follows:

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>1. Journal Club</td>
<td>Once a week</td>
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<tr>
<td>2. Case discussion</td>
<td>Once a week</td>
</tr>
<tr>
<td>3. Seminars</td>
<td>Once a week</td>
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<tr>
<td>4. Thesis work on daily basis till completion of practical work pertaining to the title of the Thesis till compilation of the Thesis.</td>
<td></td>
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<tr>
<td>5. Inter departmental meeting or Mock examination</td>
<td>Once a week</td>
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<tr>
<td>6. Practical work in attending emergency duties for obstetric management as well as dealing with Gynaecological emergencies / Routine work as and when the need arises, in addition to acquiring theoretical knowledge of each and every problem.</td>
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</tr>
<tr>
<td>7. Central session on CPC, guest lecturers</td>
<td>Once a week</td>
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<tr>
<td>Student seminar, biostatistics, teaching on research methods, medical ethics etc.</td>
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2. Postings
- Attend all UG classes theory & teach as & when assigned & Practical classes.
- Self study on all aspects of Obstetrics & Gynaecology mentioned in syllabus.
• Learning all basics in Obstetrics & Gynaecology like, attending normal and operative deliveries, performing minor procedure like D & C/ D & E, MTPS (under consultant’s supervision), cervical biopsy, taking PAP’s smear, Colposcopy (under guidance) etc.
• Undertake classes for nursing & paramedical staff.
• Posted in allied departments like Transfusion medicines, Pediatrics, ICU.

3. Thesis
Every candidate shall carry out work on an assigned research project under the guidance of a recognized Postgraduate Teacher; the project shall be written and submitted in the form of a Thesis.

The protocol for the thesis has to be submitted within 6 months of the joining of the course which consist of 16 – 18 pages and has to be passed by the thesis committee before the topic is allowed to be selected for the thesis work. The contents of the protocol will be as follows:

(i) Title of the Topic
(ii) Bio-data of the candidate
(iii) Certificate from HOD
(iv) Certificate from Guides and Co-Guides
(v) Introduction of the Topic, specifying the Aims and Objectives of the study
(vi) Review of Literatures
(vii) Material and Methods
(viii) References not more than 10 in Vancouver Style
(ix) Proforma /Master charts

Thesis shall be submitted to the university six months before the commencement of theory examination i.e. for examination May/June session, 30th November of the proceeding year of examination.

The student will identify (i) a relevant problem: (ii) conduct a critical review of literature: (iii) formulate a hypothesis: (iv) determine the most suitable study design: (v) state the objectives of the study: (vi) prepare a study protocol: (vii) undertake a study according to the protocol: (viii) analyze and interpret research data, Discussion after comparing the own data with other established work and draw conclusions: (ix) Write a Thesis

The thesis will be evaluated by three experts (Two Externals and One Internal) in the field. Approval of thesis will be a pre-requisite for appearing in examination.

4. Assessment: All the PG residents are to be assessed daily for their academic activities and also periodically. Evaluation of the residents will be done taking in to consideration the knowledge and acquisition of attitudes, skill and competence.
Summative Assessment

- The final MS examination will be conducted by two external and two internals.
- The examinations shall be organized on the basis of Marking System to evaluate and to certify the candidate’s level of knowledge, skill of competence at the end of the training.
- The pass percentage will be 50%
- Candidate will have to pass theory and practical examinations separately.

A) Theory Examination (Total = 400)

Each paper will have two essay type questions carrying 30 marks each (30×2=60) and two brief notes type theory questions each carrying 20 marks (20×2=40). Total 60 + 40 = 100

<table>
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<tr>
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<td>Clinical Obstetrics including Newborn</td>
<td>100</td>
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<tr>
<td>Paper 3</td>
<td>Clinical Gynaecology</td>
<td>100</td>
</tr>
<tr>
<td>Paper 4</td>
<td>Recent advances in Obstetrics &amp; Gynaecology</td>
<td>100</td>
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B) Practicals & Viva Voce Examination (Total = 400)

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<td>150</td>
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<tr>
<td>Gynaecology cases - 2 (Long Case 1- 100 Marks; Short Case 1- 50 Marks)</td>
<td>150</td>
</tr>
<tr>
<td>Obstetrics viva (specimens, Dummy Pelvis for obstetric maneuver, Instruments, CTG, Drugs, USG, etc. including recent advances in the field of obstetrics)</td>
<td>50</td>
</tr>
<tr>
<td>Gynaecology and family planning viva (specimens, Instruments, Operations, X-ray, USG, CT/MRI, etc. including the recent advances in field of Gynaecology and Family Planning, Log Book &amp; Dissertation)</td>
<td>50</td>
</tr>
<tr>
<td>Total practical &amp; viva</td>
<td>400</td>
</tr>
</tbody>
</table>

Model Question Papers

*Paper I: Total marks – 100: Duration 3 hrs*

*All questions to be answered*

*Marks indicated below each question.*

| Q.1. | Discuss Physiology of ovulation and menstruation. | 30 Marks |
| Q.2. | Discuss human implantation | 30 marks |
| Q.3. | Discuss briefly the surgical anatomy of the pelvic part of Ureter. | 20 marks |
| Q.4. | Discuss briefly the MTP act and its evolution to the present time. | 20 marks |
### Paper II: Total marks – 100: Duration 3 hrs

**All questions to be answered**

**Marks indicated below each question.**

| Q.1. | Fetus is a second patient; discuss. | 30 Marks |
| Q.2. | Discuss the aetiological factors in causation of multiple Pregnancy. Discuss the management of twin pregnancy keeping in minds its inherent complications. | 30 marks |
| Q.3. | Classify the hypertensive disorders of pregnancy. Discuss Briefly the management of a case of severe pre – eclampsia and eclampsia. | 20 marks |
| Q.4. | Discuss briefly the nutrition in pregnancy | 20 marks |

### Paper III: Total marks – 100: Duration 3 hrs

**All questions to be answered**

**Marks indicated below each question.**

| Q.1. | Discuss Urodynamics. Discuss the evolution in the Management of stress urinary incontinences. | 30 Marks |
| Q.2. | Discuss the diagnosis and management of ovarian cancer. | 30 marks |
| Q.3. | Briefly discuss the management of Dysfunctional Uterine Bleeding. | 20 marks |
| Q.4. | Mention the causes of peri – menopausal bleeding. Briefly Describe the management of pre – invasive carcinoma of cervix. | 20 marks |

### Paper IV: Total marks – 100: Duration 3 hrs

**All questions to be answered**

**Marks indicated below each question.**

| Q.1. | Discuss population dynamics in the current scenario | 30 Marks |
| Q.2. | Discuss the modern management of uterovaginal prolapse. | 30 marks |
| Q.3. | Discuss briefly the Preconceptional counseling keeping in view the modern era. | 20 marks |
| Q.4. | Briefly discuss the role of various Imaging Techniques in the diagnosis and management of important obstetric Problems. | 20 marks |

### 5. Job Responsibilities

**For Teaching**

- Should be able to take a class using audiovisual aids right from blackboard & chalk to that with laptop & multimedia session for the Undergraduates, Nursing Staff.
- Should be able to make short lectures under senior teacher’s supervision.
- Should have learnt to make Power-Point presentation.
Should have learnt to make multiple-choice questions.
Should attend all undergraduate theory and practical classes. They should play an active role in teaching in all practical classes.

For Research Work
- Should have skill to look up references from journals and present seminars.
- Should have computer skills.
- Will be expected to be familiar with standards methods of preparing a bibliography and for preparing manuscripts and illustrations for publications.

For Clinical Work
- Should have skill to work and would be able to run both Antenatal/Postnatal as well as Gynaecological OPD.
- Will be expected to advice for relevant investigations and interpret all investigative data.
- Should be able to perform Deliveries, take correct decisions for operative interventions in correct time to ensure safety for both the Mother and the unborn baby.
- Should be able to make at least near correct Diagnosis of Gynaecological problems in the OPD and at emergencies, send for relevant investigation to reach a final diagnosis so as to formulate correct management of a particular problem.
- Should be familiar with collection and processing of data.