



MGM INSTITUTE OF HEALTH SCIENCES

(Deemed to be University u/s 3 of UGC Act, 1956)

Grade 'A' Accredited by NAAC

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Curriculum for Fellowship in Reproductive Medicine

(with effect from 2019-20 Batches)

Approved as per BOM - 59/2019, Dated 11/11/2019

Amended History

1. Approved as per BOM - 59/2019, [Resolution No.3.1.4.4], Dated 11/11/2019.



Annexure-17

Fellowship in Reproductive Medicine In collaboration with MGMIHS & Apollo fertility

About MGM Institute of Health Sciences, Navi Mumbai



The **Mahatma Gandhi Mission (MGM) Trust** is the parent body of MGM Institute Health Sciences which was established in 1982 by Hon. Shri.Kamalkishor N. Kadam, M. Tech (IIT Bombay) and Former Minister of Higher & Technical Education, Government of Maharashtra with a futuristic vision to provide quality education and health services by adopting innovative and dynamic pedagogical techniques, promote health, prevent and cure diseases, advancing biomedical and clinical research and educational programs for tomorrow's physicians and scientists. Since inception, the Trust has focused on providing Health Care Services, School Education and Higher Education with dedication and commitment. Members of the Trust are highly committed and well qualified professionals (Doctors and Engineers) who established, developed and nurtured this institution.

A chain of Schools, Medical, Nursing, Management, Engineering, Architecture, Computer Science & IT, Bioinformatics and Biotechnology, Fine Arts and Journalism stand testimony to the endeavors of the Trust. These Institutions under MGM Trust have achieved a mark of excellence in their respective areas over the years.

The MGM Trust had started two medical colleges, MGM Medical College & Hospital at Navi Mumbai in 1989 and MGM Medical College & Hospital at Aurangabad in 1990. During the year 2006, University Grants Commission (UGC) accorded **Deemed to be University** status to both these medical colleges and thus **MGM Institute of Health Sciences (MGMIHS)** came into existence u/s 3 of UGC Act, 1956 with these two constituent medical colleges at Navi Mumbai and Aurangabad, vide Notification No. F. 9-21/2005-U.3 (A) dated 30.08.2006 issued by the Government of India, Ministry of Human Resource Development, Department of Higher Education, and New Delhi.



At present, MGMIHS has 09 constituent institutions (Medical, Biomedical, Physiotherapy, Nursing, Prosthetics & Orthotics) located at 02 campuses, namely Navi Mumbai and Aurangabad. All these institutions strive to achieve excellence in all areas and nurture total commitment to community services, by way of outreach programs. Teaching Hospitals at Navi Mumbai and Aurangabad with a total capacity of around 1740 beds caters to all kinds of speciality including super specialities. The hospitals are **NABH** certified and Laboratories are **NABL** certified. Our medical services are extended to needy patients and those below poverty line.

MGMIHS has been awarded **Grade 'A'** by the **National Assessment and Accreditation Council (NAAC)**. MGMIHS has ranked amongst top 200 universities of India (Under Rank Band: 151 - 200) in **NIRF – 2019 ranking**. It has also received **National 3rd ranking under Swachh Campus by MHRD, Govt. of India** for recognizing the green, self-sustained and environment friendly campus at both locations.

ABOUT APOLLO FERTILITY

Apollo Fertility, the service delivery, is one of India's most advanced fertility centers in located at Navi Mumbai, backed by Asia's largest healthcare group 'Apollo', is a unique facility that houses state-of-the-art Andrology and Embryology labs, modern operation theatres and ultra-modern equipment, to support all fertility treatments like IVF (In vitro fertilization), Laser Assisted Hatching, Cryopreservation, ICSI, IUI, Blastocyst culture and transfer, including donor programs. Its success can be attributed to its unique approach towards healthcare and fertility, spearheaded by Dr. Nikita Lad Patel, a leading obstetrician and infertility specialist.

Fellowship in Reproductive Medicine Program:

MGMIHS and Apollo Fertility offers Fellowship in Reproductive Medicine (FRM) with the objective to train obstetricians and gynecologists in the field of reproductive medicine with evidence-Based guidelines and programs.

With the increase in the prevalence of infertility worldwide, there is a huge demand for professionals trained in the field to provide evidence based and quality treatments to the patients.

The program will be conducted by a multidisciplinary team of obstetricians, Gynecologists, Andrologists Fertility Specialists and Embryologists with a cumulative experience of more than



300+ years. Fellowship in Reproductive Medicine (FRM) is a one year full-time program offering training in.

- Reproductive physiology, endocrinology and genetics
- Medical and surgical treatment of infertility
- Assisted Reproductive Technologies in Infertility

Fellowship in Reproductive Medicine

	Overview of the Program
Duration:	1 Year(12 month)
Course Intake:	03
Eligibility:	M.D/MS/ DGO/FCPS in Obstetrics & Gynaecology in MCI approved place or D.N.B. in Obstetrics & Gynaecology in NBE approved place.
Criteria of Selection:	Merit based Interview by the panel of teachers who are nominated for the course.
Course Commencement:	December and August

Course Fees : 5 lacs

List of Documents :

- Birth Certificate as proof of date and birth
 - Copy of Passport/Domicile as proof of Nationality and Address
 - Four passport size photographs
 - Copy of the MCI Registration Certificate
 - Copy of Mark sheets and Degree Certificate of MBBS/MD/MS/ Others
 - Copy of Passport of Parents*
 - Proof of NRI Status of candidate/Parents*
 - Transcripts*
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- Copy of Visa*



**if required for NRI candidates*

Fellowship Certificate :

Participants will get Fellowship certificate from MGM Institute of Health sciences

Program Highlights :

- This is a one-year fellowship program that will be available for qualified gynecologists desiring additional training in reproductive medicine and In-Vitro Fertilization.
- The fellows will be trained in Embryo transfer and OPU by the end of the course
- Lecture taken weekly by the mentors
- Opportunity to conduct at least one original research study during the course duration
- Opportunity to attend and present their research work at state/national/international conferences.
- Training under Fertility experts and Embryologists at Apollo Fertility center, Belapur, Live demonstration of Lab and OT procedures for training purposes, Structured course layout for comprehensive training, Limited students per batch for individual attention

Course Objectives :

- To acquire competence in evaluation and work up of patients with fertility problems
- To achieve competence in formulation of strategies to manage patients with subfertility
- To develop competence in performing IUI
- To gain in-depth knowledge of stimulation protocols
- To learn preventive steps, Diagnosis and Management of ovarian hyper stimulation syndrome.
- To assist in performing ovum pick-ups (OPUs) and fresh/ frozen embryo transfers (ETs)
- To observe laboratory procedures in IVF lab such as semen preparation for IUI, IVF, ICSI
- To achieve competence in managing donor egg /donor sperm programs.
- To understand procedure of sperm and embryo cryopreservation and thawing.

➤ **Admission/Selection Process/Procedure:**

Courses shall be published on the University website. The desirous applicant / candidate shall have to apply online and need to pay the prescribed amount of application fees as decided by the university from time to time. The admission of the students or candidates for the concerned courses shall be on the basis of merit. The merit will be decided by university examination (written test and viva).

- a. Written test only on gynecological surgery - 50 marks
- b. Viva – 50 marks.



➤ **Teaching Scheme (Total periods and periods allotted to each topic).**

It will be more of practically oriented program. All surgeries will be recorded and at a later date mentor will view the recorded video with the students and explain the finer points of surgery. Theory lectures will be minimum and need based. Detailed program/ time table will be tailor made for each course.

➤ **COMPLITE CURRICULUM OF THE COURSE**

a. Academic prerequisites to complete the fellowship:

- I. Paper publishing: 2 Original/Review articles + 2 Case studies/Clinical images
- II. Skill assessment : Examination (Theory and Dry lab)

➤ **Course Syllabus:**

1. Infertility and IVF Procedures

- concepts in infertility
- Aetiology of female infertility
- Evaluation of female factor
- Investigations in the female
- Uterine Receptivity
- Endometriosis – Diagnosis & management
- Polycystic ovarian disease – Evaluation & management
- Recurrent loss – Evaluation & management
- Intrauterine Insemination
- Assisted Conception
- Uterine Receptivity
- Oocyte donation
- Embryo donation

2. Intracytoplasmic sperm injection (ICSI)

- Success rate with different treatment modalities for infertility
- Monitoring & treatment of early pregnancy after ART treatment
- Complications of ART & its management

3. Andrology

- Hands on semen analysis
- semen washing,
- Sperm Donation
- sperm freezing and Thawing

4. Tests for ovarian reserve



- Different stimulation protocol and monitoring of controlled ovarian hyper stimulation
- Prevention of OHSS and its management
- Approaches to ovarian stimulation in PCO patients
- 5. QC, QA and Record keeping in ART –**
 - Setting up of an ART Lab
 - Equipment required for setting an ART Lab
 - Quality Assurance & quality control in ART laboratory
- 6. Ethics and regulation in ART**
 - Ethical aspects of infertility management
- 7. ART in endometriosis**
 - Egg pick up protocol, its trouble shoots, Hands on egg pick up in oocyte pick up room
 - Hands on culture dish preparation
 - Hands on Gamete handling and IVF insemination in embryology lab
 - Hands on catheter loading of embryos and transfer using non gamete cells
- 8. Luteal support**
 - Cryopreservation [Vitrification] and preparation for frozen Thaw
 - Embryo transfer and its protocol
 - Discussion Demonstration about ICSI and IMSI.

➤ **Recommended books and Journals:**

1. Journals

- i) Fertility and sterility**
- ii) Human reproduction**
- iii) Human reproduction update**
- iv) Reprod Biomed outline**

2. ART

- a) David Garden**
- b) Vergese**
- c) Pankaj Talwar**
- d) Altus**
- e) Frozen Life**

3. Infertility Management

- a) Kamini Rao**

4. Ultrasound

5. Endoscopy

6. ICMR guidelines

➤ **Scheme of Examination (in detail):**



(Pattern of exam/passing criteria/ Award of fellowship)

- i) Credit based system (pre requisite to appear in exam). Log book to be maintained of work done. Minimal number of cases to qualify competency may be set by the fellowship director.
- ii) Annual examination- theory 100 marks, practical 100 marks.

➤ **Faculty required (with qualification) for conducting the course:**

(a) Program Director – (to be managed from existing teaching staff)

**Dr SUSHIL KUMAR
HOD
Department of OBGYN,
MGM Medical College and hospital,
Kalamboli, Navi Mumbai.**

The duties and responsibilities of Director shall include overall monitoring of the Course. To provide with the required academic and infrastructural facilities required for Training Centre.

Eligibility criteria: Maximum age limit shall be 70 years. Age of superannuation shall be, as decided by the University, from time to time.

Qualification:

- I. **Person from teaching faculty:** He shall possess the qualifications and experience prescribed by the University for Professor in concerned Health Sciences specialty. The dean/principal of affiliated Health science college can also officiate as director of the training center run at their institute/college.
- II. **Person from the non teaching background:** He shall possess the professional experience of 15 years after acquiring the PG degree in Health Sciences including the teaching experience in an affiliated health sciences college/institute, if any;

(b) Center Course Coordinator- To be managed from existing teaching staff.-

**Dr SUNIL SHARMA
ASSOCIATE PROFESSOR
Department of OBGYN,**



**MGM Medical College and hospital,
Kalamboli, Navi Mumbai.**

There shall be one Center Course Coordinator designated for each Fellowship/Certificate Course Conducted by the training center. The duties and responsibilities of Center Course Coordinator shall include:

- I. Organization of academic activities of the courses as per university guidelines.
- II. Preparation and implementation of teaching learning programs, academic calendar, schedules (timetable) as per the syllabus.
- III. Administrative work.

Qualifications: The center course coordinator for the fellowship or certificate courses should be an academician/administrator with postgraduate qualification and minimum of 10 years of academic/administrative experience in teaching institute or hospitals not below the rank of administrative officer/associate professor/medical superintendent/senior consultant.

(c) Mentors- Two part time gynaecologist with qualification/experience in Reproductive medicine. **(to be appointed)**

Mentor is the educator designated by concerned Training Centre for imparting teaching or training to the candidates admitted to the concerned Fellowship and/or Certificate Courses; The Mentor should be a fulltime/part time, teaching/Professional faculty. The duties and responsibilities of Mentors shall include. To guide and train the students admitted for the fellowship/certificate course.

Eligibility criteria of Mentor: Maximum age limit shall be 65 years. Age of superannuation shall be as decided by the University, from time to time.

Qualification:

Postgraduate Degree in the concerned or related specialty from recognized institution or University, with additional qualification and/or requisite experience of the concerned specialty of Fellowship and/or Certificate course, if applicable.

EVALUATION: The evaluation of learning outcome of trainees consists of:

Assessment for certification:

- There will be continuous monitoring and regular assessment of all academic activities of the candidate.



- Formal evaluation is done by the staff of the department based on participation of students in various teaching / learning activities.
- The evaluation is structured on the basis of checklists that evaluate these various parameters.

CHECK LIST FOR EVALUATION OF CLINICAL WORK

Parameters evaluated	Poor 0	Below average 1	Average 2	Good 3	Very good 4
Regularity of attendance					
Punctuality					
Interaction with colleagues					
Maintenance of case records					
Case Presentation during rounds					
Investigations work up					
Bed side manners					
Rapport with patients					
Counselling patients relative					
Overall quality of ward work					

Internal assessment:

It will be based on the evaluation of the log book. Log book maintained a proper record of events of teaching and experiences. The record will include academic activities as well as the presentations and procedures carried out by the candidate.

The written assessment:

There shall be a written assessment at the end .Theory paper shall carry 100 marks.

MCQ	1 X 10=10	10
Theory (9 out of 11)	9 X 10=90	90

Practical Exam:

Skill assessment in performing IVF techniques. There shall be one external examiner, appointed by MGMIHS and maximum 100 marks.



Certification:

- The candidate should secure a minimum of 50% marks each in written and practical examination.
- Based on evaluation, successful candidate would be awarded the Certificate.

Note: In case of unsatisfactory completion, the trainee would be given another chance to appear before the examiners (6 months) later



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