

In the Name of God

**Islamic Republic of Iran
Ministry of Health and Medical Education
Deputy for Education**

**Maternal Fetal Medicine
Degree: Fellowship**

Introduction:

Despite many advances in the field of midwifery in Iran in the past several decades, management of pregnant women with underlying diseases or fetuses with anomalies and growth retardation has not yet reached its favorable position. It seems that strengthening maternal-fetal medicine for qualitative improvement of education and treatment provides the opportunity for taking practical steps towards reducing maternal, fetal, and infant mortality by training specialists in this field. To this end, the first step is to develop a comprehensive curriculum based on the needs.

The committee for developing the curriculum of maternal-fetal medicine was established in 2008 and the curriculum was ratified after legal proceedings in 2010 and issued to the universities.

Definition and Duration of the Training Program:

Maternal-fetal medicine includes the science of prevention, diagnosis, management of high-risk pregnancies, and the graduates are involved in providing specialized care to the mother and fetus, performing medical interventions and maternal and fetal surgical procedures, and participating in the neonatal follow-up team by acquiring sufficient knowledge about maternal and fetal physiology, teratology, genetic diseases, intrauterine infections, pathological tests before and after birth and applying invasive and non-invasive diagnostic and therapeutic techniques.

The course duration is 18 months with the aim of training knowledgeable, competent, and liable specialists to provide the society with diagnostic, managerial, preventive, educational, and research services related to maternal and fetal medicine.

Admission Requirements

- Holding an MD degree
- Having specialty in OB/Gyn
- Having passed the Entrance Exam

Expected Competencies at the End of the Program

General Competencies*

Specific Competencies and Skills

- At the end of the program learners will be competent in the following skills:

Educational Strategies, Methods and Techniques*

Procedural skills (Diagnostic and Therapeutic Measures):

- ✓ First trimester ultrasound
- ✓ Second trimester ultrasound
- ✓ Third trimester ultrasound
- ✓ Fetal echocardiography
- ✓ Doppler ultrasound in pregnancy
- ✓ Pelvic ultrasound (transvaginal and abdominal)
- ✓ Fetal Biophysical profile score (BPS)
- ✓ Fetal Non-Stress test (NST) and Contraction Stress Test
- ✓ Amniocentesis
- ✓ Chorionic villus sampling (CVS)
- ✓ Cordocentesis
- ✓ Intrauterine transfusion (IUT)
- ✓ Amnioreduction and amnioinfusion

Student Assessment (Methods and Types)

Assessment Methods:

- DOPS (Direct Observed Procedural Skills)
- Written and oral examinations
- Assessment of portfolio, including log book, written articles, assessments made during the course, project progress report in which the student is involved, thesis, report of educational activities, and rewards and punishments

Periods of Assessment:

- Continuously through log books
- Academic final exams

Ethical Considerations*

*Note: The related document(s) can be found at <http://hcmep.behdasht.gov.ir/>.

The overall structure of the course:

Educational ward,unit,setting	Contents- Measures
Training workshops	Research methodology and academic writing workshops- statistics and epidemiology of resuscitation and breastfeeding workshops, medical ethics and rules
High-risk pregnancy unit and clinic	Outpatient visit- management of high-risk pregnancies- providing advice to high-risk pregnant women hospitalized in other units- gaining enough knowledge of normal and abnormal physiology of mother, fetus, and infant, familiarity with internal diseases and surgery during pregnancy- diagnosis and treatment of internal diseases during pregnancy through counselling the relevant wards
Operating room	Gaining enough knowledge and experience in surgical procedures related to the field- participating in on-call shifts of the ward and being present at the operating room for the relevant surgeries
Delivery room	Identifying and determining policies for controlling high-risk pregnancies- participating in educational programs and on-call shifts of the ward- visiting emergency high-risk pregnancies- delivery
Ultrasound room	Performing ultrasound for pregnant women, both outpatients or inpatients- performing CVS- cordocentesis, amniocentesis, and therapeutic measures such as IUT
Pediatric cardiology ward	Evaluating the cases referred to the ward for fetal echocardiography (case study)
Pathology department	Familiarity with the pathological changes in the placenta and aborted and dead fetuses based on the relevant programs
Anesthesiology ward	Familiarity with the effects of analgesics and anesthetics- learning the side effects of local and general anesthesia- learning how to anaesthetize high-risk pregnancy patients- treatment of water-electrolyte imbalances and transfusion
Genetics unit	Familiarity with human genetics- genetic diagnostic techniques, genetic consultation on the relevant diseases- familiarity with fetal genetic disorders, fetal anomalies, and hereditary and congenital diseases
NICU	Gaining knowledge and ability of the urgent care in the delivery room (newborn resuscitation)- familiarity with newborn complications in high and low-risk pregnancies- familiarity with the problems of infants hospitalized in NICU
ICU	Familiarity with the principles of critical care

Seyed-Hassan Emami-Razavi MD
Secretariat of the Council for
Graduate Medical Education

Seyed Mansour Razavi MD
Secretary of the Supreme Council for
Medical Sciences Planning

Bagher Larijani MD
Deputy for Education
Ministry of Health and Medical Education