



كلية الطب
وحدة ضمان الجودة



Faculty of Medicine
Quality Assurance Unit

***Program Specification for Specialized Professional Certificate
in Fetal Medicine***

(According to currently applied **Credit point by laws**)

***Department of
Obstetrics & Gynecology
Faculty of Medicine
Assiut University
2021-2022/2022-2023***

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Program Specification for Specialized Professional Certificate in **Fetal Medicine**

1. Basic Information

- ✚ Program Title: Specialized Professional Certificate in **Fetal Medicine**
- ✚ Nature of the program: Single.
- ✚ Program code: 124 D
- ✚ Responsible Department: **Obstetrics and Gynecology**
- ✚ Academic Director (Head of the Department):
Professor Ahmad M. Makhoulouf
- ✚ Coordinator (s):
 - Principle coordinator: **Professor Hassan Salah Kamel**
 - Assistant coordinator (s)
Prof. Daaa Alaa-eldin Abdel-hamid Yussif
Prof. Daaa Abdel-al Alnashar
Dr Ahmad Mohamad Abbas
- ✚ Date of Approval by the Faculty of Medicine Council of Assiut University: **14/1/2020**
- ✚ Date of most recent approval of Program by the Faculty of Medicine Council of Assiut University: **27/11/2022**
- ✚ Requirements from the students to achieve the required ILOs are clarified in the joining log book.
- ✚ Admission Requirements (prerequisites):
 - I. General Requirements:
 - **Master degree in the Obstetrics & Gynecology**
 - II. Specific Requirements:
 - **Fluent in English (study language)**

FEES:

As regulated and approved by the Department and Faculty councils.

2. Aims

By the end of the training the candidate will:

1. Independently be able to competently perform basic; advanced ultrasound scans in all trimesters of pregnancy and in gynecologic cases; and to know the principles; details and precautions of interventional ultrasound in this field.

3. Intended learning outcomes (ILOs):

3/1 Knowledge and understanding:

A. Describe the principles of

- Physics of 2D-3D-4D & color Doppler ultrasound.
- Ultrasound machinery; probes & technique of examination
- Principles of Genetics & Inheritance entailed with pregnancy failure & teratogenesis.
- Normal sonographic anatomy of early pregnancy.
- Early assessment of gestational age.
- Characters and measurements of normal and abnormal cervical canal in pregnancy
- Early pregnancy assessment of multiple pregnancy.
- Sonographic features in cases of early pregnancy failure
- Principles of diagnosis of aneuploidy.
- Normal anatomical features of the fetus in mid pregnancy.
- Principles of detailed examination for fetal anomalies and tumours diagnosis.

- Assessment of gestational age and fetal growth abnormalities
 - Appearance of placenta; cord and amniotic fluid assessment including abnormal placentation.
 - Ultrasound monitoring of multiple pregnancy in late pregnancy.
 - Assessment of postpartum complications by ultrasound.
 - Ultrasound features of the normal uterus and cervix: criteria of normality and Uterine anomalies & masses/ tumours.
 - Ultrasound features and variants of the normal ovaries & ovarian abnormalities including functional and neoplastic lesions.
 - Color doppler ultrasound features of normal and abnormal pregnancy
 - Color doppler evaluation of the uterus; adnexa and adnexal masses.
 - 3D/4D applications in obstetrics and gynecology.
 - Know in details the procedures; precautions and limitations of interventional ultrasound.
- B. Describe the basic ethical and medicolegal aspects and principles relevant to different techniques of ultrasound examination & interventions.
- C. Be able to communicate with international Guidelines and Recommendations and plot a plan for research.

3/2 Practical skills (Hand on training):

- A. Perform the following diagnostic procedures including:**
- Detailed ultrasound examination of early pregnancy
 - Early assessment of multiple pregnancy.
 - Assessment of cervical canal in pregnancy.
 - Ultrasound screening for aneuploidy.
 - Ultrasound evaluation in cases of early pregnancy failure.
 - Ultrasound identification of normal fetal anatomical features in mid-pregnancy.

- Ultrasound identification of abnormal fetal anatomy.
 - Detailed ultrasound assessment of the placenta; cord & amniotic fluid.
 - Detailed assessment of normal and abnormal fetal growth
 - Ultrasound examination of the uterus; uterine anomalies and uterine masses.
 - Ultrasound assessment of the ovaries and adnexa; identifying the normal variants and assessment of adnexal masses
 - Color Doppler assessment of early; mid and late pregnancy and of gynecologic cases.
 - Detailed 3D & 4D ultrasound examination of pregnancy and in Gynecologic cases.
- B. **Write competently report of** ultrasound examination in different pregnancy phases and for gynecologic patients.

3. Structure

A. Duration of program: 6 months

B. Structure of the program:

Total number of the credit points: 30 credit points

Didactic 12 credit point (40 %), practical 18 credit points (60%)

total 30

5. Contents and matrix

Module (1) Basic Principles of Ultrasound

Number	Topic	ILOs	Schedule (didactic)	Schedule (practical)	Schedule (Hands on)
1	Ultrasound physics	3/1A	2		
2	Color Doppler Ultrasound physics, safety	3/1A 3/2B	2		
3	Probes, Instruments (Techniques of examination)	3/1A	2	2	2
4	Ergonomics	3/1A	1		
5	Ethical Consideration	3/1B	1		
6	Genetics	3/1A	2		
Total			10	4	

Module (2) First Trimester Ultrasound

Number	Topic	ILOs	Schedule (didactic)	Schedule (practical)	Schedule (Hands on)
1	Normal Anatomy by Ultrasound	3/1A 3/2A 3/2B	1	1	2
2	Early Pregnancy Failure	3/1A 3/2A 3/2B	1	1	2
3	Ectopic Pregnancy & Vesicular mole	3/1A 3/2A 3/2B	1	2	2
4	Aneuploidy Screening & Ultrasound Softmarkers	3/1A 3/2A 3/2B	2	2	2
5	Multiple Pregnancy	3/1A 3/2A 3/2B	1	1	2
6	Cervical canal assessment	3/1A 3/2A 3/2B	1	1	1
Total			7	19	

**Module (3) Second Trimester Ultrasound
A: Normal Fetal Anatomy**

Number	Topic	ILOs	Schedule (didactic)	Schedule (practical)	Schedule (Hands on)
1	Normal Anatomy of CNS	3/1A 3/2A 3/2B	1	2	2
2	Normal Anatomy of Chest	3/1A 3/2A 3/2B	1	1	1
3	Normal Anatomy of Heart	3/1A 3/2A 3/2B	2	2	2
4	Normal Anatomy of Abdomen	3/1A 3/2A 3/2B	1	2	2
5	Normal Anatomy of Skeletal System	3/1A 3/2A 3/2B	1	1	2
6	Normal Anatomy of The Face	3/1A 3/2A 3/2B	1	1	2
Total			7	20	

**Module (3) Second Trimester Ultrasound
B: Abnormal Fetal Anatomy**

Number	Topic	ILOs	Schedule (didactic)	Schedule (practical)	Schedule (Hands on)
1	Abnormal Anatomy of CNS	3/1A 3/2A 3/2B	2	2	4
2	Abnormal Anatomy of Chest	3/1A 3/2A 3/2B	1	2	2
3	Abnormal Anatomy of Heart	3/1A 3/2A 3/2B	4	4	6
4	Abnormal Anatomy of Abdomen	3/1A 3/2A 3/2B	2	2	4
5	Abnormal Anatomy of Skeletal System	3/1A 3/2A 3/2B	2	2	4
6	Abnormal Anatomy of Face	3/1A 3/2A 3/2B	2	2	4
Total			13	38	

Module (4) Late Pregnancy Ultrasound

Number	Topic	ILOs	Schedule (didactic)	Schedule (practical)	Schedule (Hands on)
1	Biometry	3/1A 3/2A 3/2B	2	4	4
2	Amniotic Fluid & Placenta	3/1A 3/2A 3/2B	2	2	2
3	Fetal Growth Assessment	3/1A 3/2A 3/2B	3	3	4
4	Multiple Pregnancy	3/1A 3/2A 3/2B	1	2	2
5	Antepartum Hemorrhage	3/1A 3/2A 3/2B	2	1	2
Total			10	26	

Module (5) Gynecology module

Number	Topic	ILOs	Schedule (didactic)	Schedule (practical)	Schedule (Hands on)
1	Normal Sonographic Pelvic Anatomy	3/1A 3/2A 3/2B	1	1	2
2	Ultrasound of Congenital Uterine Anomalies	3/1A 3/2A 3/2B	1	1	2
3	Ultrasound of Myometrial Pathology	3/1A 3/2A 3/2B	1	1	2
4	Ultrasound of Adnexal Masses	3/1A 3/2A 3/2B	2	1	2
5	Ultrasound of Endometrial Pathology	3/1A 3/2A 3/2B	1	1	1
6	Pelvic floor Ultrasound	3/1A 3/2A 3/2B	2	2	2
7	Ultrasound in Ovulation Monitoring & Infertility	3/1A 3/2A 3/2B	2	2	4
8	Ultrasound Evaluation of Uterine Cavity & Tubal Patency (SIS)	3/1A 3/2A 3/2B	1	1	1
9	Ultrasound Guided Procedures in IVF	3/1A 3/2A 3/2B	1	2	
Total			12	28	

Module (6) Advanced Ultrasound

Number	Topic	ILOs	Schedule (didactic)	Schedule (practical)	Schedule (Hands on)
1	3D&4D-US In obstetrics and Gynecology	3/1A 3/2A 3/2B	2	4	6
2	Fetal Echocardiography	3/1A 3/2A 3/2B	4	6	6
3	Interventional Ultrasound:				
	Chorionic Villus Sampling	3/1A 3/2A 3/2B	1	2	2
	Amniocentesis & Amnioreduction	3/1A 3/2A 3/2B	1	2	4
	Cordocentesis & Intrauterine Transfusion	3/1A 3/2A 3/2B	1	2	2
4	Ultrasound During Labour	3/1A 3/2A 3/2B	2	2	2
5	Recent Advanced In Ultrasound	3/1C	2		
Total			13	36	

6. Methods of teaching/learning:

1. Didactic (lectures, tutorial): 72 hours
2. Hand on training: 171 hours
3. Others (Assignment , test preparation Self-directed learning)

7. Assessment methods:

i. Assessment tools:

- Attendance (60%)
- Formative assessment (MCQs) (20 %)
- OSPE (Objective structural practical examination) (20%)

ii. Time schedule: At the end of the training.

8. List of references

i. Lectures notes

- Staff members print out of lectures and/or CD copies

ii. Essential books

- Ultrasound of Fetal Anomalies: DIFFERENTIAL DIAGNOSIS AND PROGNOSTIC INDICATORS. Paladini & Volpe; 2014
- Ultrasound in Obstetrics and Gynecology; Wladimiroff; Elsevier

iii. Recommended books

- Donald School textbook of Power-point Presentation on Advanced Ultrasound in Obstetrics and Gynecology.

iv. Periodicals, Web sites

ISUOG international guidelines of Obstetric & Gynecologic ultrasound examination

v. Others

International and National conferences; symposia and Workshops in the field of study.

9. Signatures

Program Coordinator:	Head of the Department:
Date:	Date: