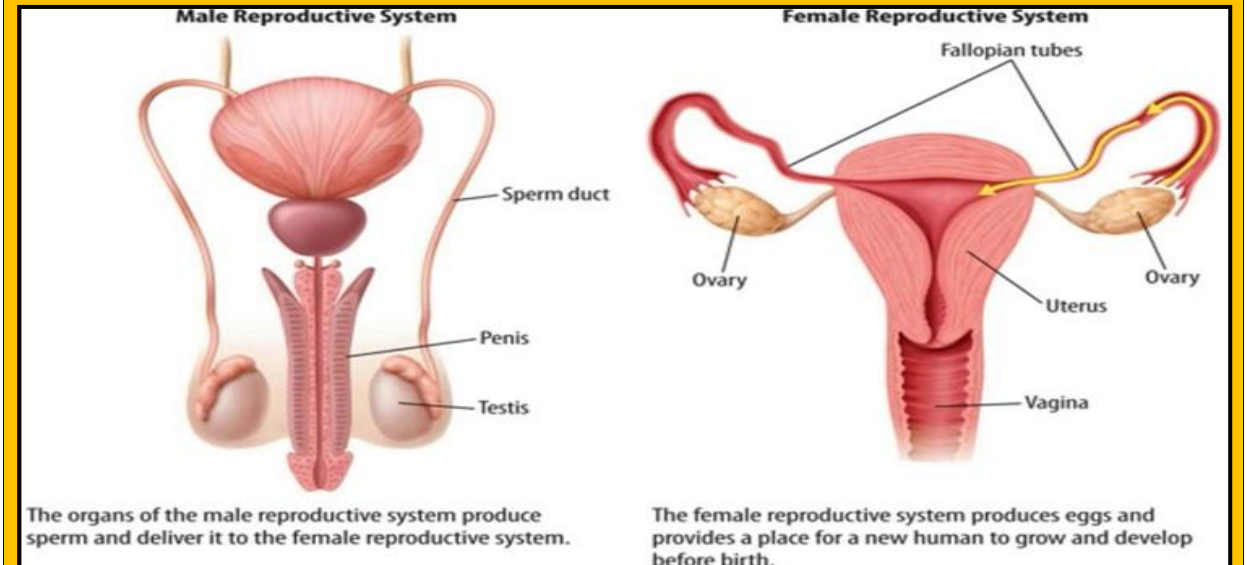
Benha University
Faculty of Medicine

REPRODUCTIVE SYSTEM

Code: REP 242 [2024-2025]



PHASE 1 (LEVEL 2) 4TH SEMESTER

COURSE SPECIFICATIONS

11/3/2025 – 28/4/2025

Module Specifications

A- Basic Information

Program on which the module is given Bachelor of Medicine & Surgery (Integrated program 5+2)

Academic year / Level: Year 2
Semester: 4th semester

Module Title: Reproductive system

- **Code: REP-242**
- **Credit points: 6 CHs**
- **Lecture: 2.4x15= 37 hours**
- **Practical Academic lab: 15x2x1.8 =54 hours)**
- **Student activities (DSL, CBL &TUTORIALS): 15x1.8 x2 =54 hours**
- **Total: 145 h**
- **Module duration: 6 weeks**
- **Academic year: 2024/2025**

Department offering the module: Pathology department.

Module Committee:

- **General supervisor of Modules:** Prof. Dr. Eman Mohamed Arabi
- **Semester Coordinator:** Dr. Samah Abdel-Khaleq
- **Module coordinator:** Dr. Hanan Ahmed
- **Staff sharing in teaching of this module:** all staff members of Anatomy, Physiology, Histology, Biochemistry, Pathology, Microbiology, Pharmacology, Parasitology, and obstetrics & gynecology department

Date of specification approval: Faculty Board No: 2189 Date: 29/8/2023

B- Professional Information

1 – Overall Aims of Module: the student must

- Recognize the anatomical and histological structure, functions, developmental and age changes of different organs of male & female reproductive system
- Explain the structural and functional changes caused by different microbial, parasitic, inflammatory, congenital and traumatic diseases and their treatment
- Describe the processes of human reproduction and the complex interplay of hormones, drugs and other factors at various periods of human life.
- Demonstrate different practical skills necessary for diagnosis of common pathological & infectious diseases of the male & female reproductive tract.

2 – Competencies

Competency Area I of program: The graduate as a health care provider

1.6. Choose the most suitable diagnostic and therapeutic investigative tools in a cost/benefit manner.

- **1.6.1** Select the appropriate laboratory investigations for bacterial, viral and parasitic diseases that affect the genital organs and sexually or congenitally transmitted diseases

(Gonococcus infections, Syphilis, H.ducreyi, Herpes genitalis, Cytomegalovirus, HIV, Papova virus, viruses causing genital warts, Trichomonas vaginalis, Phthirus pubis, Sarcoptes scabeii, urogenital myasis) and interpret their results taking into consideration cost/ effectiveness factors

1.9 Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, to help solve a clinical problem based on evidence (EBM).

- **1.9.1** Create a research project or a presentation based on literature from Medline, library resources and E books to solve certain clinical condition of the reproductive system

Competency Area II of program: The graduate as a health promoter

2.5 Discuss the principles of disease prevention and help to increase the awareness and capacity of his/her community individuals.

- 2.5.1 Identify geographical distribution, ecological factors, the appropriate method prevention and control of Trichomoniasis, Toxoplasmosis, Phthirus pubis and Sarcoptes Scapie

Competency Area III of program: The graduate as a professional

Not applicable

Competency Area III of program: The graduate as a scholar and scientist

4.1. Describe the normal structure and function of the human body and its systems.

- **4.1.1** Illustrate normal anatomical structure of the human pelvis and male and female genital system
- **4.1.2** Outline the relations, blood supply, venous and lymphatic drainage of different pelvic structures and reproductive organs
- **4.1.3** Describe the normal histological structure of the human male and female genital system by electron and light microscopy

4.2. Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis

- **4.2.1** List the functions of the male and female primary and secondary sex organs and blood-testis barrier
- **4.2.2** Illustrate, on biochemical, molecular and cellular basis, the pathways of formation of male and female sex hormones, factors controlling them, their mode of action and their functions
- **4.2.3** List the steps of gametogenesis, factors affecting it and structural functions of sperms and ova

4.3. Recognize and describe main developmental changes in humans and the effect of growth, development and aging on the individual and his family.

- **4.3.1** Explain the endocrine and physiological changes during pregnancy (Human chorionic gonadotropin (HCG), Estrogens, Progesterone, Human chorionic somatomammotropin (HCS) and other placental hormones & the activity of other endocrine glands, maternal weight gain, cardiovascular, respiratory, GIT and renal function changes)

- **4.3.2** Outline the embryological origin, specific stages of the development of the male and female reproductive tract, male and female sex abnormalities as reflected in the duct system and external genitalia
- **4.3.3** Explain the influence of the chromosome complement of the primordial germ cell, sex gland and sex hormones on sex differentiation
- **4.3.4** Illustrate hormonal and physiological changes at puberty in both sexes as somatic growth, development of secondary sexual characteristics & sexual organs in boys & girls.
- **4.3.5** Differentiate between puberty, adolescence, menopause and explain their developmental stages (thelarche, pubarche, menarche and adrenarche) and their local and systemic changes and symptoms

4.5 Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).

- **4.5.1** Outline the etiology and pathogenesis of congenital, traumatic, inflammatory, infectious, benign and malignant diseases of the male and female genital tracts
- **4.5.2** Classify neoplastic lesions of the ovary, cervix, uterus, testis and prostate
- **4.5.3** Identify congenitally and sexually transmitted bacterial, viral and parasitic diseases and explain their pathogenesis

4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions

- **4.6.1** Describe the morphological and functional changes, fate and complications of different congenital, traumatic, inflammatory, neoplastic diseases of male and female sex organs
- **4.6.2** List the manifestations, complications, prognosis and lines of treatment of various congenitally and sexually transmitted microbial or parasitic diseases

4.7 Describe drug actions: therapeutics and pharmacokinetics; side effects and interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.

- **4.7.1** List drugs (stimulants and relaxants) of the uterus and their therapeutic uses and adverse effects.
- **4.7.2** Classify drugs regarding their fetal toxicity and teratogenic effect and their manipulation and precautions during pregnancy and lactation
- **4.7.3** Illustrate mode of action, pharmacological effects and adverse effects of female sex steroids and explain the benefits and hazards of hormonal contraceptives.

4.8 Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests.

- **4.8.1** Perform functional assessment tests for infertility in male and female and interpret the outcomes for further decision.

- **4.8.2** Demonstrate the laboratory assays of congenitally and sexually transmitted bacterial, viral and parasitic diseases (gonococcus infections, syphilis, H.ducreyi, Herpes genitalis, cytomegalovirus, HIV, Papova virus, viruses causing genital warts, trichomonas vaginalis, Phthirus pubis and Sarcoptes scabeii urogenital miasis)I and interpret them on scientific basis for the diagnosis of congenitally and sexually transmitted diseases
- Interpret the pathologic studies based on scientific basis for the diagnosis of infectious and neoplastic diseases of the reproductive system

Competency Area V of program: The graduate as a member of the health team and system
Not applicable

Competency Area VI of program: The graduate as a lifelong learner and researcher
Not applicable

3- Module structure & Contents:

Code	CHs	Contents				
REP-242	6	Lectures	Practical	Students class activities		
				Tutorial	CBL	DSL
		37	12	8	1	1

Contents of module	Lectures	Practical	Students Activities			Total
			Tutorial	CBL	DSL	
1. Gross anatomy, development and anomalies of male and female reproductive system	8 (21.6%)	5 (41.7%)	2 (25%)	-	-	15 (25.4%)
2. Normal functions and regulation of male and female reproductive system. Physiology & maternal response to pregnancy	7 (19 %)	-	-	-	-	7 (12%)
3. Pathological changes of male and female reproductive system	6 (16%)	3 (25 %)	2 (25%)	-	1	12 (20.3%)
4. Drugs act on female reproductive system and teratogenic drugs	3 (8 %)	-	-	-	-	3 (5%)
5. Male & female sex hormones, disorder	4	-	1	-	-	5 (8.4%)

of gonadal functions & biochemical investigation of infertility	(11%)		(12.5%)			
6. Microbial infections of male and female reproductive system	2 (5.4%)	1 (8.3%)	2 (25%)	-	-	5 (8.4%)
7. Histology of normal male and female reproductive system	4 (11 %)	2 (16.7%)	1 (12.5%)	-	-	7 (12%)
8. Parasitic infections of male and female reproductive system	3 (8 %)	1 (8.3%)	-	-	-	4 (6.8%)
9. Gynecology & Obstetric	-	-	-	1	-	1 (1.7)
Total	37	12 (100%)	8 (100%)	1 (100%)	1 (100%)	59 (100%)

4– Teaching and Learning Methods

- **Modified Lectures:** A modified lecture format, generally presented in a manner of interaction between students and the lecturers, is now commonly presented as video or any aiding materials.
- **Practical sessions.**
- **Tutorials:** Small group Tutorials on special topics will be organized for the purposes of enhancing the students' general knowledge and overall understanding. It allows students to apply newly acquired knowledge and it is suitable for higher order cognitive objectives.
- **Case oriented learning:** Case Presentations will be organized as a series of multidisciplinary sessions of small-group teaching led by staff from the appropriate Academic Departments. These sessions also provide an opportunity for students to conclude the appropriate diagnosis and treatment of different diseases based on the findings discussed in the case presentation
- **Directed Self Learning:** The sessions will promote self-learning and thus, time will be available for further study by the students using all available- learning resources including electronic learning materials.
- **Online lectures (Zoom app.)** Lectures on Benha E- learning platform & synchronous learning منصة ثينكي-مركز التعليم الالكتروني belc.bu.edu.eg موقع منصة التعليم االلكتروني الخاص بجامعة بنها,

Method	Evidence	ILOs
Modified lectures	CDs of lectures including (video films, brainstorming, problem solving, etc…)	***Competency Area I: The graduate as a health care provider*** 1.3.1, 1.3.2, 1.3.3, 1.14.1, 1.14.2, 1.14.3, 1.14.4 ***Competency Area II: The graduate as a health promoter*** 2.6.1, 2.6.2, 2.6.3 ***Competency Area III: The graduate as a professional*** 3.6.1, 3.6.2 ***Competency Area IV: The graduate as a scholar and scientist*** 4.3.1, 4.3.4, 4.3.5, 4.5.1, 5.5.2, 4.5.3, 4.5.4, 4.5.5, 4.8.1, 4.8.2, 4.8.3, 4.8.4 ***Competency Area V: The graduate as a member of the health team and system*** 5.3.1, 5.3.2, 5.4.1 ***Competency Area VI: The graduate as a lifelong learner and researcher*** 6.3
Online lectures Lectures on Benha E-learning center	موقع منصة التعليم الألكترونى بجامعة بنها Http :// www.Elearning.bu.edu.eg منصة ثينكي-مركز التعليم الالكتروني belc.bu.edu.eg	***Competency Area I:The graduate as a health care provider*** 1.3.1, 1.3.2, 1.3.3, 1.14.1, 1.14.2, 1.14.3, 1.14.4 ***Competency Area II: The graduate as a health promoter*** 2.6.1, 2.6.2, 2.6.3 ***Competency Area III: The graduate as a professional*** 3.6.1, 3.6.2 ***Competency Area IV: The graduate as a scholar and scientist*** 4.3.1, 4.3.4, 4.3.5, 4.5.1, 5.5.2, 4.5.3, 4.5.4, 4.5.5, 4.8.1, 4.8.2, 4.8.3, 4.8.4 ***Competency Area V: The graduate as a member of the health team and system*** 5.3.1, 5.3.2, 5.4.1 ***Competency Area VI: The graduate as a lifelong learner and researcher*** 6.3

Practical classes	Reproductive system simulators, log book.	***Competency Area I:The graduate as a health care provider*** 1.5.1, 1.5.2, 1.5.3, 1.5.4, 1.5.5., 1.5.6, 1.5.7, 1.9.1, 1.9.2 ***Competency Area II: The graduate as a health promoter*** 2.5.1, 2.5.2, 2.5.3, 2.5.4, 2.5.5, 2.6.1, 2.6.2, 2.6.3, 2.7.1, 2.7.2, 2.7.3, 2.7.4 ***Competency Area III: The graduate as a professional*** 3.6.1, 3.6.2 ***Competency Area IV: The graduate as a scholar and scientist*** 4.1.2, 4.1.4, 4.1.6, 4.3.6, 4.8.3 ***Competency Area V: The graduate as a member of the health team and system*** 5.4.1 ***Competency Area VI: The graduate as a lifelong learner and researcher*** 6.4.1, 6.4.2, 6.4.3
Case oriented learning	Case scenarios	***Competency Area I:The graduate as a health care provider*** 1.5.4-1.5.5-1.5.6-1.5.7- 1.7.1-1.7.2-1.7.3- 1.9.1-1.9.2-1.9.3 ***Competency Area II: The graduate as a health promoter*** 2.5.1, 2.5.2, 2.5.3, 2.5.4, 2.5.5. ***Competency Area III: The graduate as a professional*** 3.7.1 ***Competency Area IV: The graduate as a scholar and scientist*** 4.5.5 ***Competency Area V: The graduate as a member of the health team and system*** 5.3.1, 5.3.2, 5.4.1 ***Competency Area VI: The graduate as a lifelong learner and researcher*** 6.4.4.
Directed –self Learning	Log book	6.1.1, 6.3

5- Student Assessment Methods:

a. Formative (continuous assessment): This form of assessment is designed to give you feedback to help you to identify areas for improvement. It includes a mixture of MCQs, short answer questions (SAQs), problem-solving exercises and independent learning activities in all subjects. These will be given during tutorial sessions and practical **or online**. The answers will be presented and discussed immediately with you after the assessment.

b. Summative (written examination): This type of assessment is used for judgment or decisions to be made about student's performance. It serves as:

- Verification of achievement for the student satisfying requirement
- Motivation of the student to maintain or improve performance
- Certification of performance

In this Module your performance will be assessed according to the following:

Continuous Assessment	**30% (45 marks)**
Practical (OSPE & Data Show)	**30 % (45 marks)**
Final Exam	**40 % (60 marks)**
	Total = 100 % (150 marks)

Written Exams: will include multiple choice questions (MCQs). These will cover material presented during the lectures, tutorials, case-oriented learning presentations, and directed self-learning. Final examination will be held 12-1.5 PM at the end of the semester at the main examination Hall.

Assessment Schedule

- Mid assessment exam: on the beginning of the third week of the module
- Final assessment exam: at the end of semester
- Practical & problem-solving exam (OSPE) : at the end of the module

Weighting of Assessments

Periodic exam (30%)	
• Student Activities	6 %
• Mid assessment exam	24 %
Final exam (70 %)	
• Practical	30 %
• Final exam (MCQs & essay Qs)	40 %

Tool	Evidence	Purpose (ILOs)
Written examination: • MCQs • Case study.	Attached module of examination.	**<u>To assess: (know & know how levels of Miller's pyramid "knowledge, understanding & intellectual skills".</u>** ***Competency Area I:The graduate as a health care provider*** 1.3.1, 1.3.2, 1.3.3, 1.14.1, 1.14.2, 1.14.3, 1.14.4 ***Competency Area II: The graduate as a health promoter*** 2.6.1, 2.6.2, 2.6.3 ***Competency Area III: The graduate as a professional*** 3.6.1, 3.6.2 ***Competency Area IV: The graduate as a scholar and scientist*** 4.3.1, 4.3.4, 4.3.5, 4.5.1, 5.5.2, 4.5.3, 4.5.4, 4.5.5, 4.8.1, 4.8.2, 4.8.3, 4.8.4 ***Competency Area V: The graduate as a member of the health team and system*** 5.3.1, 5.3.2, 5.4.1 ***Competency Area VI: The graduate as a lifelong learner and researcher*** 6.3
Practical	Samples of test exams: OSPE/ OSCE stations.	**<u>To assess: (show & does levels of Miller's pyramid "Practical, clinical, professional skills & attitude").</u>** ***Competency Area I:The graduate as a health care provider*** 1.5.1, 1.5.2, 1.5.3, 1.5.4, 1.5.5., 1.5.6, 1.5.7, 1.9.1, 1.9.2 ***Competency Area II: The graduate as a health promoter*** 2.5.1, 2.5.2, 2.5.3, 2.5.4, 2.5.5, 2.6.1, 2.6.2, 2.6.3, 2.7.1, 2.7.2, 2.7.3, 2.7.4 ***Competency Area III: The graduate as a professional*** 3.6.1, 3.6.2 ***Competency Area IV: The graduate as a scholar and scientist*** 4.1.2, 4.1.4, 4.1.6, 4.3.6, 4.8.3 ***Competency Area V: The graduate as a member of the health team and system*** 5.4.1

		Competency Area VI: The graduate as a lifelong learner and researcher 6.4.1, 6.4.2, 6.4.3
Class activities	Student's portfolio	**<u>To assess: (show & does levels of Miller's pyramid "Practical, clinical, professional skills & attitude").</u>** ***Competency Area I:The graduate as a health care provider*** 1.5.1, 1.5.2, 1.5.3, 1.5.4, 1.5.5., 1.5.6, 1.5.7, 1.9.1, 1.9.2 ***Competency Area II: The graduate as a health promoter*** 2.5.1, 2.5.2, 2.5.3, 2.5.4, 2.5.5, 2.6.1, 2.6.2, 2.6.3, 2.7.1, 2.7.2, 2.7.3, 2.7.4 ***Competency Area III: The graduate as a professional*** 3.6.1, 3.6.2 ***Competency Area IV: The graduate as a scholar and scientist*** 4.1.2, 4.1.4, 4.1.6, 4.3.6, 4.8.3 ***Competency Area V: The graduate as a member of the health team and system*** 5.4.1 ***Competency Area VI: The graduate as a lifelong learner and researcher*** 6.4.1, 6.4.2, 6.4.3

6- List of References

Textbooks:

1. **Clinical Anatomy by Regions;** 9th ed.; Snell R.S., Lippincott Williams & Wilkins, 2012.
2. **Langman's Medical Embryology;** 14th ed.; SadlerT.W.andLangman J., Wolters Kluwer, **2019**.
3. **Cell biology & Histology (2017);** Gartner L.P. & Hiatt J.L. 7th ed. Wolters Kluwer, Philadelphia, New York, London.
4. **Junqueira' s Basic Histology; Text & Atlas (2018);** Mescher A. L. 15th ed. McGraw-Hill Education. New York, London, Toronto.
5. **Ganong's review of Medical Physiology;** 26th ed.; Barrett K.E.Barman S.M., Yuan J.X-J and Brooks H., McGraw-Hill Companies, 2019.
6. **Human Physiology;** from Cell to System; 4th ed.; Sherwood L. and WardC., Nelson Pub. Co., 2019.
7. **Textbook of Medical Physiology;** 13th ed.; Guyton A.C. and Hall J.E., Saunders/Elsevier Co., 2016.

8. **Medical Biochemistry;** 5th ed.; Baynes J.W. and Dominiczak M.H., Elsevier Inc., 2019.
9. **Harper's illustrated biochemistry;** 31st ed.; Rodwell V.W. et al., McGraw-Hill Medical Co., 2018
10. **Clinical chemistry;** 8th ed.; Marshall W.J., Day A.P. and Lapsley M, Elsevier Co., 2017.
11. **Robbins Basic Pathology;** 10th ed.; Kumar V.; Abbas A.K. and AsterJ.C., W.B. Elsevier Inc., 2017.
12. **Basic and Clinical Pharmacology;** 14th ed.; Katzung B.G., McGraw Hill Medical Co., 2018.
13. **ABC of Learning and Teaching in Medicine;** 3rded.;Cantillon P., Wood D. and Yardley S., Newark John Wiley & Sons Pub. Co., 2017.
14. **Markell and Voge's Medical Parasitology-E-Book;** 9th ed.,; John D.T., Markell E.K., Petri W.A. and Voge M., Elsevier Health Sciences; 2013.
15. **Lippincott's illustrated reviews: Microbiology;** 3rd ed.; Cornelissen C.N., Fisher B.D. and Harvey R.A., Lippincott Williams & Wilkins, 2014.

7- Facilities Required for Teaching and Learning

Method	Facilities
Lectures	Lectures halls, Computers, Data show, films
New distance learning	Benha E- learning platform
Practical classes	Clinical cases, Instruments, Skill lab.
Tutorials	Small Halls, Clinical cases.
Case Oriented Learning	Small Halls, Clinical cases.
Directed self-learning (DSL)	EKB

General supervisor of Modules: Prof. Dr. Eman Mohamed Arabi

Semester Coordinator: Dr. Samah Abdel-Khaleq

Module coordinator: Dr. Hanan Ahmed (01027903919, Hanan.ahmed@fmed.edu.bu.eg)