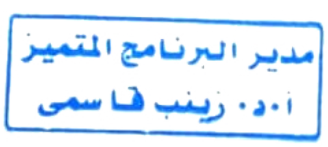
M.B.B.CH. CREDIT HOURS
(5 + 2)
MODULE SPECIFICATION LEVEL II

THE SPECIAL PROGRAM

LEVEL II

لجنة المعايير الاكاديمية و التوصيف بالبرنامج	منسق	مدير وحدة ضمان الجودة	عميد الكلية
د. أحمد حمدان	أ.د زينب عبدالعزيز قاسمي	ا.د/ أميرة فتحى عبد العاطى	أ.د/ محمد فهمي النعمانى



Semester III

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Cardiovascular system

University: Menoufia **Faculty:** Medicine

A-Administrative information

Module Title: Cardiovascular system

Code No: CVS 2101

Department offering the course and teaching hours: Anatomy, histology, biochemistry, physiology, pathology, pharmacology, and microbiology.

Program (s) on which the course is given: Menoufia M.B.B. Ch Credit- hour Program (5+2).

Academic year/level: Second level
Semester: Semester III
Date of specification: 2018.
Date of approval by Departmental Council: 2018
Date of approval by Faculty Council: 2018
Credit hours: 9.5 credit hours

	Teaching hours		
	Lectures	**Practical**	**Activities**
Anatomy	**7.5**	**11.25**	**22.5**
Histology	**2.7**	**4.05**	**8.1**
Biochemistry	**13.2**	**19.8**	**39.6**
Physiology	**19.8**	**29.7**	**59.4**
Pathology	**6.6**	**9.9**	**19.8**
Pharmacology	**5.7**	**8.55**	**17.1**
Microbiology	**1.5**	**2.25**	**4.5**
Total	**57**	**85.5**	**171**

- Professional Information

I- Aim of the module:

To provide the students with a basic knowledge of the normal anatomical and histological structure, pathology of heart &blood vessels, the pharmacological basis of using drugs acting on the heart and blood vessels. The module will help students to Explain and identify inborn error of carbohydrate and lipid metabolism.

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II- Learning Outcomes of the Module:

Competency Area 3: The graduate as a professional.

Key competency		Module LOs
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.2 Demonstrate commitment and integrity while preparing the coursework and assignments

Competency Area 4: The graduate as a scholar and scientist.

Key competency		Module Los
4.1	Describe the normal structure of the body and its major organ systems and explain their functions.	4.1.1. Describe the external and internal features of the heart. 4.1.2. Outline the surface anatomy, blood vessels &nerve supply of the heart and valves and the sites of auscultation 4.1.3. Describe types& innervation of the pericardium &how the cardiac pain impulses reach consciousness. 4.1.4. Describe the anatomy of the great vessels& apply the important related clinical notes. 4.1.5. Clarify the structural characteristics of the cardiac muscle & vascular tissue 4.1.6. Describe the functional capabilities of each tissue type and relate them to the structure. 4.1.7. Discuss the basic histological structure of vascular systems. 4.1.8. Define venous return. Explain the concept of

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		"resistance to venous return" and know what factors determine its value theoretically, what factors are most important in practice, and how various interventions would change the resistance to venous return. 4.1.9. Discuss the interaction of intrinsic (local), neural, and humoral control mechanisms and contrast their relative dominance in the CNS, coronary, cutaneous, and capillary circulations. 4.1.10. Apply the anatomical facts while examining the living subject to reach a proper diagnosis. 4.1.11. Correlate the structure with the function of cardiac muscle and blood vessels 4.1.12. Interpret the light microscopic appearance of normal cells of cardiac muscle and blood vessels 4.1.13. Conclude the normal structure of histological slide. 4.1.14. Construct structures that could be present in a cell from its function 4.1.15. Relate the composition of each tissue type to its specific functions. 4.1.16. Distinguish a physiological from pathological condition. 4.1.17. Integrate physiology of CVS with other basic and clinical sciences.
4.2	Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.	4.2.1. Discuss the site, importance, steps and regulatory mechanisms of glycolysis, citric acid cycle, hexose monophosphate pathway, uronic acid pathway, gluconeogenesis, glycogen metabolism. 4.2.2. Describe the site, importance, steps and regulatory mechanisms of fatty acid synthesis & oxidation &cholesterol & ketone bodies metabolism. 4.2.3. Identify the types, structures and metabolism of various lipoproteins. 4.2.4. Discuss interconversion of major food stuffs, metabolic interrelationship between adipose tissue, the liver and extrahepatic tissues in starve-fed state. 4.2.5. Analyze the related metabolic disorders of galactose and fructose metabolism, fatty acid oxidation &phospholipid metabolism and their clinical application on biochemical and molecular basis. 4.2.6. Interpret symptoms, signs and biochemical laboratory findings of some inborn errors of metabolic disorders, dyslipidemia & myocardial infarction. 4.2.7. Analyze the etiology of metabolic disturbance in a given case study report related to carbohydrates& lipid metabolism.

		4.2.8. Predict the outcome of disturbed function.
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. Identify the causes and pathogenesis, fate, and complications of rheumatic fever, endocarditis, pericarditis, cardiomyopathy, heart failure, 4.5.2. Identify the causes and pathogenesis, fate, and complications of atherosclerosis, hypertension, ischemic coronary diseases, aneurysm and tumors of blood vessels. 4.5.3. Predict the diagnosis of different diseases based on the underlying gross and microscopic pictures. 4.5.4. Apply the microbiological background while examining the patients with cardiovascular system infections to reach a proper diagnosis.
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 characteristic gross and microscopic features of rheumatic fever, endocarditis, pericarditis, cardiomyopathy. 4.6.2. Identify the characteristic gross and microscopic features of atherosclerosis, ischemic coronary diseases, aneurysm and tumors of blood vessels.
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 the drugs used to treat chronic heart failure, hypertension, angina& arrhythmia. 4.7.2. Identify the beneficial effects of beta blockers & spironolactone in reducing mortality in heart failure. 4.7.3. Differentiate between the role of different antihypertensive drugs in different disease states, 4.7.4. Identify the importance of beta blockers as first choice maintenance therapy of classic angina. 4.7.5. Outline the use of different antiarrhythmic drugs in various types of arrhythmias. 4.7.6. Explain the mechanism of action of drugs used in heart failure and hypertension 4.7.7. List the main adverse effects of thiazide, frusemide, potassium sparing diuretics, sympathomimetics used in heart failure and hypotension, 4.7.8. Enumerate the main adverse effects of sympathetic depressants used in treatment of Hypertension, beta blockers and alpha blockers & main antiarrhythmic drugs. 4.7.9. Explain the adverse effects of sympathomimetic, beta and alpha blockers. 4.7.10. Outline different types of beta blockers and select the appropriate drug for different disease states

		4.7.11. Discuss the choices of different antiarrhythmic drugs in various types of arrhythmias. 4.7.12. Explain the role of the increase in intracellular sodium & calcium in the beneficial effects of digoxin on myocardial contractility as well as for its electrophysiological & arrhythmogenic effects, 4.7.13. Outline the main difference between ACEis and ARBs and why they are preferred in diabetics and in patient with nephropathy. 4.7.14. Select the proper antihypertensive during pregnancy
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. Name the parts of a typical bipolar (Lead II) ECG tracing and explain the relationship between each of the waves, intervals, and segments in relation to the electrical state of the heart. 4.8.2. Identify the most important micro-organisms causing infections of cardiovascular system. 4.8.3. Integrate basic anatomical, biochemical, histopathological, and physiological aspects of heart & blood vessels with clinical data. 4.8.4. Predict the outcome of disturbed function. 4.8.5. Solve problems through case study 4.8.6. Interpret the results of practical lab. 4.8.7. Sketch a typical action potential in a ventricular muscle and a pacemaker cell. 4.8.8. Draw, in correct temporal relationship, the pressure, volume, heart sound, and ECG changes in the cardiac cycle 4.8.9. Demonstrate the external and internal anatomical features of the heart chambers, blood vessels of the heart, related vessels to the heart & vessels of upper &lower limbs 4.8.10. Examine the histological glass slides & differentiate between types of cells and tissues in histological slides. 4.8.11. Draw and label the structures they have seen in electron photomicrographs and under light microscope during practical classes. 4.8.12. Estimate serum levels of glucose by colorimetric methods. 4.8.13. Estimate serum levels of cholesterol by colorimetric methods. 4.8.14. Perform a measurement of arterial blood pressure. 4.8.15. Manipulate a stethoscope for hearing heart and respiratory sounds. 4.8.16. Record and interpret an electrocardiogram. 4.8.17. Comment on some clinical parameters such as: ABP, ECG for a normal individual. 4.8.18. Recognize gross and microscopic pictures aiming

	at reaching the correct diagnosis. 4.8.19. Identify an unknown drug by its effect on different types of heart receptors 4.8.20. Identify causative micro-organisms of cardiovascular infections by microscopic examination, culture character, biochemical and serological reactions.

Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency	Module Los
5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1 Demonstrate respect towards colleagues. 5.2.2 Apply teamwork in educational and professional encounters

Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency	Module LOs
6.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1 Formulate a learning plan for the module in focus. 6.2.2 Apply the learning plan respecting emerging priorities and encounters
6.3 Identify opportunities and use various resources for learning.	6.3.1 Use information resources whether written or electronic efficiently for the educational process.
6.6 Effectively manage learning time and resources and set priorities.	6.6.1 Manage time and learning resources effectively. 6.6.2 Apply priority setting in the learning process

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III. Module Contents:

Topic	Teaching	Theoretical Department

	Hours	
Introduction and morphology of the heart	1.5	Anatomy
Blood and nerve supply of the heart & anatomy of the Pericardium	1.5	Anatomy
Great blood vessels (ascending aorta, arch, descending thoracic aorta and azygos venous system	1.5	Anatomy
Abdominopelvic arteries: (abdominal aorta, common iliac, ext. and internal iliac arteries	1.5	Anatomy
Development of cardiovascular system	1.5	Anatomy
Glycolysis	1.5	Biochemistry
Citric acid cycle	1.5	Biochemistry
Lipogenesis	1.5	Biochemistry
fatty acid oxidation and eicosanoids	1.5	Biochemistry
ketone bodies metabolism and cholesterol metabolism	1.5	Biochemistry
Lipoproteins, adipose tissue metabolism	1.5	Biochemistry
Integration of metabolism	1.2	Biochemistry
Hexose monophosphate pathway, uronic acid pathway, gluconeogenesis	1.5	Biochemistry
Glycogen metabolism	1.5	Biochemistry
Cardiac muscle	1.5	Histology
Vascular System	1.2	Histology
Infectious diseases of cardiovascular system	1.5	Microbiology
Rheumatic fever	1.5	Pathology
Endocarditis, myocardial diseases, pericarditis and heart failure	1.5	Pathology
Ischemic Heart diseases	0.6	Pathology
Atherosclerosis and hypertension	1.5	Pathology
Tumors of blood vessels	1.5	Pathology
Ischemic heart disease	1	Pharmacology
Hypertension	1	Pharmacology
Arrythmia	0.7	Pharmacology
Heart failure1	1.5	Pharmacology
Heart failure2	1.5	Pharmacology
Cardiac properties I	1.5	Physiology
Cardiac properties II	1.5	Physiology
Cardiac cycle	1.5	Physiology
ECG	1.8	Physiology
Heart rate	1.5	Physiology
Cardiac output	1.5	Physiology
Cardiac work, reserve & energetics	1.5	Physiology
ABP	1.5	Physiology
Regulation of ABP	1.5	Physiology
Capillary circulation	1.5	Physiology
Pulmonary & venous circulation	1.5	Physiology
Coronary and cerebral circulation	1.5	Physiology
Hemodynamic	1.5	Physiology
Total	**57**	

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Practical		
Topic	**Teaching Hours**	**Department**
External and internal features of the heart	1.5	Anatomy
Blood supply of the heart-pericardium	1.5	Anatomy
Heart and related vessels	1.5	Anatomy
Abdominopelvic vessels	1.5	Anatomy
Carotid and subclavian system	1.5	Anatomy
Blood vessels of extremities	1.5	Anatomy
Radiological anatomy of the blood vessels	2.25	Anatomy
Investigation of a case of diabetes	2	Biochemistry
Glucose colorimetry	1.5	Biochemistry
Glucosuria , fructosuria and a case study on diabetes	1.5	Biochemistry
Lipid profile	1.5	Biochemistry
Dyslipoproteinemia and hypolipidemic drugs	1.5	Biochemistry
Colorimetric determination of serum cholesterol	1.5	Biochemistry
Cardiac markers	2	Biochemistry
Case study	2	Biochemistry
Case study	2	Biochemistry
Glucose tolerance and oral glucose tolerance test	2	Biochemistry
Revision	2.3	Biochemistry
Vascular System	1.5	Histology
Vascular System	1.05	Histology
Cardiac muscle	1.5	Histology
rheumatic fever	2.25	Microbiology
Rheumatic fever	2	Pathology
Atherosclerosis and aneurysm	3	Pathology
Tumors of blood vessels	2	Pathology
Revision	2.9	Pathology
Treatment of Ischemic heart disease	2	Pharmacology
Hypertension	2	Pharmacology
Experimental(effect of unknown drug on isolated rabbit heart	2	Pharmacology
Revision	2.55	Pharmacology
Determination of the pacemaker of frog's heart & Effect of Drug on frog's heart.	3	Physiology
Demonstration of extrasystole & impulse conduction (Heart block) in frog	3	Physiology
Heart sounds	1.5	Physiology
Electrocardiograph and Normal ECG	3	Physiology
Effect of respiration, body posture and exercise on ECG record	1.5	Physiology

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Revision	3	Physiology
Arterial pulse	2.7	Physiology
Arterial blood pressure measurement	4.5	Physiology
Effect of respiration, body posture and exercise on ABP.	1.5	Physiology
Cold pressor effect and Capillary fragility (Hiss test)	1.5	Physiology
Revision	3	Physiology
Cutaneous vascular reaction to mechanical stimuli & reactive hyperemia	1.5	Physiology
Total	**51.9**	

IV– Teaching and learning Methods:

1. **Theoretical Teaching:**
   a) **Interactive lectures: using**
      - Brainstorming
      - Audiovisual aids through animations and diagrams
      - Interaction with the students through questions
      - Student engagement with discussion

   b) **Case Based learning**
2. **Practical Teaching: conducted using:**
   - Practical sessions
3. **Self-directed Learning**

V- Student Assessment:

A. Attendance criteria:

The minimum acceptable attendance is 75%, otherwise students Failing toreach that percentage will be prevented from attending the final examination.

B. Types of Assessment:

- **Formative:** This form of assessment is designed to help the students to identify areas for improvement. It includes multiple-choice questions, problems-solving exercises and independent learning activities in all subjects. These will be given during tutorial and practical sessions. The Answers are presented and discussed immediately with you after the assessment. The results will be made available to the students.
- **Summative** This type of assessment is used for judgment or decisions to be made about the students' performance. It serves as:

1. Verification of achievement for the student satisfying requirement
2. Motivation of the student to maintain or improve performance
3. Certification of performance
4. Grades

C- Summative Assessment Methods and Schedule:

Assessment Method	Percentage	Description	Timing

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Regular Evaluation	30%	10% written at the end of and periodicals including problem-solving, multiple-choice questions, give reason, matching, extended matching, complete and compare.	At the end of the module
		20% Participation in the tutorials, TBL, Research.	During the module
Final practical exam	30%	OSPE Exam	At the end of the module
Final Written	40%	It Includes problem-solving, multiple-choice questions, give reason, matching, extended matching, complete and compare.	At the end of the semester

D- Weighing of Assessment:

Method of Assessment |	Marks	Percentage
Final Written exam.	**95**	**40%**
Final Practical exam.	**71.25**	**30%**
Activities	**71.25**	**30%**
Total	**237.5**	**100%**

E- Grading for by GPA System:

The Percentage	Symbol	Grade
> 85%	A	**Excellent.**
75-<85 %	B	**Very Good**
65 - < 75 %	C	**Good.**
60 - < 65 %	D	**Passed.**
< 60 %	F	**Failed.**
	W	**Withdrawn**

VI. List of references and resources:

- **Lecture Notes of Module Departments**
- **Essential Books:**

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Anatomy:

- Gray's Anatomy for Students. 3rd Edition. By: Richard Drake, A. Wayne Vogl, Adam W. M. Mitchell. Churchill Livingstone; 2014
- Langman's Medical Embryology, 13th Edition. By: T.W. Sadler. Williams and Wilkins; 2016
- Grant's Atlas of Anatomy 14th Edition. By: Anne M. R. Agur, Arthur F. Dalley II. LWW; 2016

Physiology:

- Guyton and Hall Textbook of Medical Physiology (Guyton Physiology) 13th Edition. By: John E. Hall. Saunders, 2015.
- Ganong's Review of Medical Physiology 25th Edition. By: NA. McGraw-Hill Medical, 2015.
- Physiology (Lippincott's Illustrated Reviews Series) 1st Edition. By: Robin R Preston, Thad Wilson, Richard A. Harvey. Lippincott Williams & Wilkins, 2012.

Histology:

- Junqueira's Basic Histology: Text and Atlas, 15th Edition. By: Anthony L. Mescher. McGraw Hill / Medical, 2018.
- Wheater's Functional Histology, 6th Edition. By: Barbara Young, Geraldine O'Dowd, Phillip Woodford. Churchill Livingstone, 2014.
- diFiore's Atlas of Histology with Functional Correlations, 12th Edition. BY: Victor P. Eroschenko. Lippincott Williams & Wilkins, 2012.

Biochemistry:

- Harper's Illustrated Biochemistry 31st Edition. By: Victor W. Rodwell, David Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Weil. McGraw Hill / Medical, 2018.
- Lippincott's Illustrated Reviews Biochemistry, 7TH Edition. By: Denise Ferrier. LWW, 2017.
- Textbook of Biochemistry with Clinical Correlations 7th Edition. By: Thomas M. Devlin. John Wiley & Sons, 2010.

Pathology:

- Robbins Basic Pathology (Robbins Pathology) 10th Edition. By: Vinay Kumar, Abul K. Abbas, Jon C. Aster. Elsevier, 2017.
- Pathology Illustrated, 8th Edition. By: Peter S. Macfarlane, Robin Reid, Robin Callander. Churchill Livingstone, 2018.
- Diagnostic histopathology of tumors, 4th Edition. By: Christopher D. M. Fletcher. Saunders/Elsevier, 2013

Pharmacology:

- Basic and Clinical Pharmacology 14th Edition 14th Edition. By: Bertram Katzung. McGraw Hill / Medical, 2017.
- Lippincott's Illustrated Reviews: Pharmacology, 5th edition. By: Michelle A. Clark, Richard Finkel, Jose A. Rey, Karen Whalen, Richard A. Harvey (Editor). Lippincott Williams & Wilkins, 2011.
- Essentials of Medical Pharmacology 7th Edition. By: Tripathi KD. Jaypee Brothers Medical Pub, 2013.

Microbiology:

- Review of medical microbiology and immunology, 13th Edition. By: Levinson, Warren. The McGraw-Hill Companies, 2016.

- Review of medical microbiology, 27th Edition. By: Jawetz EM, Adelberg IL. Lange, 2016.
- Manual of Practical Microbiology & Immunology, 10th edition. By: El mishad AM. El-Ahram Press, 2014.

VII- Facilities required for teaching and learning:

1. Lecture halls at the faculty
2. Dissecting room including cadavers, bones and plastic models
3. Museum specimens
4. Visual aids
5. Labs equipped with microscopes
6. Microscopic slides of demonstration of samples of tissue

Key Competencies & Module LOs *vs* Teaching and Assessment Methods Matrix

Key Competencies	Module Learning Outcomes	Teaching Methods				Assessment Methods						
						Formative Assessment		Summative Assessment				
		Interactive Lectures	Case Based Learning	Practical sessions	Self-directed study	Theoretical	practical	Written	OSPE	Assignments	quizzes	participation
3.1	3.1.1 to 3.1.2	x	x	x						x		x
4.1	4.1.1 to 4.1.17	x	x		x	x		x		x	x	x
4.2	4.2.1, 4.2.8	x	x		x	x		x		x	x	x
4.5	4.5.1 to 4.5.4	x	x		x	x		x		x	x	x
4.6	4.6.1, 4.6.2	x	x		x	x		x		x	x	x
4.7	4.7.1 to 4.7.14	x	x		x	x		x		x	x	x
4.8	4.8.1 to 4.8.20			x			x		x	x		x
5.2	5.2.1, 5.2.2	x	x	x						x		x
6.2	6.2.1, 6.2.2				x	x	x	x	x	x	x	x
6.3	6.3.1				x	x	x	x	x	x	x	x
6.6	6.6.1, 6.6.2				x	x	x	x	x	x	x	x

Module Coordinator:	**Program Coordinator:**
Name: **Dr.Sherine Sobhy**	**Name: Prof. Dr. Zeinab Kasemy**

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Respiratory System

University: Menoufia **Faculty:** Medicine

A - Administrative Information

Module Title: Respiratory system
Code No: RES 2102
Department offering the Module: Anatomy, Physiology, Histology, Biochemistry, Pathology, Pharmacology, Microbiology and Parasitology departments
Program on which the Module is given : M.B.B.Ch Program
Academic year: 2nd Year
Semester: III
Date of specification: 2018
Date of approval by Departments Council: 2018
Date of approval by Faculty Council: **2018**
Credit hours: 6 credit hours/8 weeks

	Teaching hours		
	Lectures	**Practical**	**Activities**
Anatomy	**6**	**9**	**18**
Histology	**5.1**	**7.65**	**15.3**
Physiology	**9**	**13.5**	**27**
Biochemistry	**4.5**	**6.75**	**13.5**
Pathology	**6**	**9**	**18**
Pharmacology	**3**	**4.5**	**13.5**
Microbiology	**0.9**	**1.35**	**2.7**
Parasitology	**1.5**	**2.25**	**4.5**
Total	**36**	**54**	**108**

B- Professional Information

I- Aim of the Module:

To provide the students with knowledge and skills regarding the normal structure and development of the upper and lower respiratory tracts and their congenital anomalies, normal and abnormal microscopic structure of their tissues, the function of the respiratory system the pharmacological basis of drugs acting on this system, and common parasitic and microbial infections of the respiratory tract.

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II- Learning Outcomes of the Module:

Competency Area 3: The graduate as a professional.

Key competency		Module LOs
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.2 Demonstrate commitment and integrity while preparing the coursework and assignments

Competency Area 4: The graduate as a scholar and scientist.

Key competency		Module LOs
4.1	Describe the normal structure of the body and its major organ systems and explain their functions.	4.1.1. Identify the components and development of respiratory system. 4.1.2. Identify the anatomical structures of the nose, nasopharynx, paranasal sinuses and laryngeal components and their important functions. 4.1.3. Recognize the site, structure, and functions of the trachea and main bronchi. 4.1.4. Describe the anatomy of the pleurae and lung. 4.1.5. Determine the development and congenital anomalies of the respiratory tract. 4.1.6. Distinguish histological structural features of upper and lower respiratory tracts and cell types present in each of them and relate the structure to function. 4.1.7. Compare between structure of different parts of respiratory tract and their function. 4.1.8. Identify microscopic structure of skin and its appendage and cell types present in each of them and relate the structure to function. 4.1.9. Identify the respiratory cycle and discuss how different pressure, airflow, and lung volume change during a normal quiet breathing cycle and factors influencing it. 4.1.10. Explain the curves of the different lung volumes & capacities and list different conditions leading to respiratory distress syndrome. 4.1.11. Identify the regions in the central nervous system in the generation and control of cyclic

			breathing.
4.2	Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.	4.2.1. 4.2.2. 4.2.3.	Describe gas exchange and ventilation-perfusion relationship. Define and point out oxido-reductases enzymes and components of respiratory chain. Define pH, buffers, anion gap and paradoxical alkalosis
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. 4.5.2. 4.5.3. 4.5.4. 4.5.5. 4.5.6.	Recognize different respiratory disorders and different types of hypoxias, dyspnea and cyanosis. Identify normal flora and immunity of respiratory tract Identify the most important micro-organisms causing Upper and lower respiratory tract infections Identify the life cycles and pathogenesis of parasites and arthropods that can affect the respiratory system. Recognize morphology, clinical presentations, complications, diagnosis, treatment and control of parasites and arthropods that can affect the respiratory system. Differentiate between metabolic and respiratory acidosis and alkalosis with their compensatory mechanism.
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. 4.6.2. 4.6.3. 4.6.4. 4.6.5.	Identify the etiopathogenesis of diseases encountered within the respiratory system Describe the characteristic gross and microscopic pictures of different pathologic lesions within respiratory system and the associated functional disturbances. Determine the fate and complications of different disease processes. Describe the mechanism of respiratory distress syndrome and discriminate between different types of hypoxias. Explain the role of respiratory system in PH regulation.

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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. Identify the major groups (Antihistaminic, bronchodilators chemotherapy) involved in management of respiratory diseases. including bronchial asthma, TB and chest infections. 4.7.2. Describe the kinetics, mechanism of actions, therapeutic uses, side effects, contraindications and drug interactions of different drugs used in treatment of respiratory diseases 4.7.3. Design a pharmacological plan for management of pneumonia. 4.7.4. Outline a pharmacological plan for management of bronchial asthma. 4.7.5. Formulate a pharmacological plan for management of COPD.
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. Label dissected structures of the upper and lower respiratory tract according to the present relations. 4.8.2. Differentiate between the consistency of arteries, veins & nerves. 4.8.3. Draw diagrams showing courses and distribution of nerves and main blood vessels in respiratory tract. 4.8.4. Draw diagrams showing surface anatomy of pleura and lung. 4.8.5. Inerpret chest x- rays to recognize the anatomical landmarks. 4.8.6. Draw diagrams showing different components of respiratory system seen under light microscope during practical classes. 4.8.7. Differentiate between trachea, bronchi, bronchioles and alveoli in histological slides. 4.8.8. Differentiate between adult, fetal and injected lung in histological slides. 4.8.9. Draw diagrams showing thick and thin skin. 4.8.10. Differentiate between the thick and thin skin in histological slides. 4.8.11. Sketch and label the pulmonary function curve. 4.8.12. Auscultate breath sounds. 4.8.13. Interpretate data from Arterial Blood Gases (ABG): pH, arterial pressure of oxygen (PaO2), Partial pressure of carbon

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	dioxide (PaCO2), Arterial blood pH, Oxygen saturation (SaO2) and Bicarbonate - (HCO3). 4.8.14. Identify biochemical instruments used to measure pH with the principle and action. 4.8.15. Use the pH meter to estimate pH of Gastric juice, Plasma, Saliva & Urine. 4.8.16. Use different laboratory techniques for handling pathologic samples, appropriate types of fixatives and processing techniques. 4.8.17. Assess gross and microscopic pictures aiming at reaching the correct diagnosis. 4.8.18. Select a laboratory diagnostic approach to reach a proper diagnosis for respiratory tract infections based on microscopic examination, Culture character and Biochemical reaction. 4.8.19. Draw parasites in their different stages specially the diagnostic and infective stages. 4.8.20. Examine microscopic slides of different parasitic stages. 4.8.21. Assess hydatid cyst by naked eye (Jars). 4.8.22. Analyze the given information from spirometer curves so can distinguish between obstructive and restrictive lung disease 4.8.23. Correlate PO2 tension and hemoglobin saturation, and blood oxygen content 4.8.24. Interpret a pathology report. 4.8.25. Judge the dose of different drugs used in respiratory disorders simultaneously administered and to avoid any combination that could result in serious reactions.

Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency	Module LOs
5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1 Demonstrate respect towards colleagues. 5.2.2 Apply teamwork in educational and professional encounters

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Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency		Module ILOs	
6.2	Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1 6.2.2	Formulate a learning plan for the module in focus. Apply the learning plan respecting emerging priorities and encounters
6.3	Identify opportunities and use various resources for learning.	6.3.1	Use information resources whether written or electronic efficiently for the educational process.
6.6	Effectively manage learning time and resources and set priorities.	6.6.1 6.6.2	Manage time and learning resources effectively. Apply priority setting in the learning process

III- Module Contents:

Theoretical		
Topics	**Teaching hours**	**Department**
Anatomy of pleura and Development of respiratory system	3	**Anatomy**
Anatomy of nose, paranasal sinuses, nasopharynx	1.5	**Anatomy**
Trachea, bronchi, lung	1.5	**Anatomy**
Ph, acidosis and alkalosis	3	**Biochemistry**
respiratory chain and lung surfactant	1.5	**Biochemistry**
Conducting portion of the respiratory system	1	**Histology**
Respiratory portion of the Respiratory system	1	**Histology**
Skin (Thick and thin skin)	1.6	**Histology**
Skin appendages (Hair, hair follicles, nails, sweat & sebaceous glands)	1.5	**Histology**
Common bacterial and viral respiratory tract infection	0.9	**Microbiology**
***Paragonimus westermani* and hydatiddisease**	1.5	**Parasitology**
COPD	2	**Pathology**
Inflammatory lesions of lower respiratory system	2	**Pathology**
Tumors of lung and pleura	2	**Pathology**
Chemotherapy used in treatment of chest infections	1.5	**Pharmacology**
Pharmacotherapy of TB	1.5	**Pharmacology**
Mechanics of breathing	1.5	**Physiology**
Pulmonary functions	1.5	**Physiology**

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Transport of gases	1.5	**Physiology**
Regulation of Respiration	1.5	**physiology**
Nervous regulation and types of hypoxia.	3	**Physiology**
Total	**36**	
Practical		
Topic	**Teaching hours**	***Department***
Structure of nose, paranasal sinuses, nasopharynx	1.5	**Anatomy**
Larynx external features	1.5	**Anatomy**
Larynx internal features	1.5	**Anatomy**
Trachea, pleura, lung	1.5	**Anatomy**
Revision	1.5	**Anatomy**
Revision	1.5	**Anatomy**
Instrumentation used to measure pH and Measure pH of body fluids	3	**Biochemistry**
Arterial blood gas (ABG) analysis	2	**Biochemistry**
Interpretation of blood pH and ABG results	1.75	**Biochemistry**
Trachea	1.5	**Histology**
Comparison between trachea, bronchus and bronchiole	1.5	**Histology**
Adult lung, Injected lung, Fetal lung	1.5	**Histology**
Thick skin/ Thin skin	1.5	**Histology**
Revision	1.65	**Histology**
Microbiological diagnosis of common respiratory tract infection	1.35	**Microbiology**
Paragonimus westermani	1	**Parasitology**
hydatid disease	1.25	**Parasitology**
Nasal polyp, Rhinoscleroma, Angiofibroma	3	**Pathology**
Inverted papilloma, Laryngeal carcinoma Emphysema, Bronchectasis	3	**Pathology**
Bronchogenic carcinoma, Mesothelioma	3	**Pathology**
Revision	1.5	**Pathology**
Case of pneumonia	1.5	**Pharmacology**
Case of bronchial asthma	1.5	**Pharmacology**
Case of COPD	1.5	**Pharmacology**
Breathing sounds	3	**Physiology**
Static pulmonary function	3	**Physiology**
Dynamic pulmonary function	3	**Physiology**
Obstructive and restrictive lung diseases	1.5	**Physiology**
Arterial blood gases	1.5	**Physiology**
Case study	1.5	**Physiology**
Total	**54**	

IV– Teaching and learning Methods:

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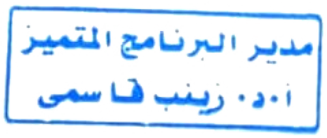
1. **Theoretical Teaching:**
   a) **Interactive lectures: using**
      - Brainstorming
      - Audiovisual aids through animations and diagrams
      - Interaction with the students through questions
      - Student engagement with discussion
   b) **Case Based learning**
2. **Practical Teaching: conducted using:**
      - Practical sessions
      - Skill Lab
3. **Self-directed Learning**



V- Student Assessment:

A. Attendance Criteria:

The minimum acceptable attendance is 75%, otherwise students failing toreach that percentage will be prevented from attending the final examination.

B. Types of Assessment:

- **Formative:** This form of assessment is designed to help the students to identify areas for improvement. It includes a multiple-choice questions, problems-solving exercises and independent learning activities in all subjects. These will be given during tutorial and practical sessions. The Answers are presented and discussed immediately with you after the assessment. The results will be made available to the students.
- **Summative** This type of assessment is used for judgment or decisions to be made about the Students performance. It serves as:
  1. Verification of achievement for the student satisfying requirement
  2. Motivation of the student to maintain or improve performance
  3. Certification of performance
  4. Grades

C- Summative Assessment methods:

Assessment Method	Percentage	Description	Timing
Regular Evaluation	30%	10% written at the end of and periodicals including problem solving, multiple choice questions, give reason, matching, extended matching, complete and compare.	At the end of the module
		20% Participation in the tutorials, TBL, Research.	During the module
Final practical exam	30%	OSPE Exam	At the end of the module
Final Written	40%	It Includes problem-solving, multiple choice questions, giveæason, matching, extended matching, complete and compare.	At the end of the semester

D- Weighing of Assessment:

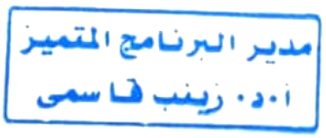
Method of Assessment |	Marks	Percentag

		e
Final Written exam.	**60**	**40%**
Final Practical exam.	**45**	**30%**
Activities	**45**	**30%**
Total	**150**	**100%**

E- Grading for by GPA System:

The Percentage	Symbol	Grade
> 85%	A	**Excellent.**
75-<85 %	B	**Very Good**
65 - < 75 %	C	**Good.**
60 - < 65 %	D	**Passed.**
< 60 %	F	**Failed.**
	W	**Withdrawn**

VI. List of references and resources:



- **Lecture Notes of Module Departments**
- **Essential Books:**

Anatomy:

- Gray's Anatomy for Students. 3rd Edition. By: Richard Drake, A. Wayne Vogl, Adam W. M. Mitchell. Churchill Livingstone; 2014
- Langman's Medical Embryology, 13th Edition. By: T.W. Sadler. Williams and Wilkins; 2016
- Grant's Atlas of Anatomy 14th Edition. By: Anne M. R. Agur, Arthur F. Dalley II. LWW; 2016

Physiology:

- Guyton and Hall Textbook of Medical Physiology (Guyton Physiology) 13th Edition. By: John E. Hall. Saunders, 2015.
- Ganong's Review of Medical Physiology 25th Edition. By: NA. McGraw-Hill Medical, 2015.
- Physiology (Lippincott's Illustrated Reviews Series) 1st Edition. By: Robin R Preston, Thad Wilson, Richard A. Harvey. Lippincott Williams & Wilkins, 2012.

Histology:

- Junqueira's Basic Histology: Text and Atlas, 15th Edition. By: Anthony L. Mescher. McGraw Hill / Medical, 2018.
- Wheater's Functional Histology, 6th Edition. By: Barbara Young, Geraldine O'Dowd, Phillip Woodford. Churchill Livingstone, 2014.
- diFiore's Atlas of Histology with Functional Correlations, 12th Edition. BY: Victor P. Eroschenko. Lippincott Williams & Wilkins, 2012.

Biochemistry:

- Harper's Illustrated Biochemistry 31st Edition. By: Victor W. Rodwell, David Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Weil. McGraw Hill / Medical, 2018.
- Lippincott's Illustrated Reviews Biochemistry, 7TH Edition. By: Denise Ferrier. LWW, 2017.

- Textbook of Biochemistry with Clinical Correlations 7th Edition. By: Thomas M. Devlin. John Wiley & Sons, 2010.

Pathology:

- Robbins Basic Pathology (Robbins Pathology) 10th Edition. By: Vinay Kumar, Abul K. Abbas, Jon C. Aster. Elsevier, 2017.
- Pathology Illustrated, 8th Edition. By: Peter S. Macfarlane, Robin Reid, Robin Callander. Churchill Livingstone, 2018.
- Diagnostic histopathology of tumors, 4th Edition. By: Christopher D. M. Fletcher. Saunders/Elsevier, 2013

Pharmacology:

- Basic and Clinical Pharmacology 14th Edition 14th Edition. By: Bertram Katzung. McGraw Hill / Medical, 2017.
- Lippincott's Illustrated Reviews: Pharmacology, 5th edition. By: Michelle A. Clark, Richard Finkel, Jose A. Rey, Karen Whalen, Richard A. Harvey (Editor). Lippincott Williams & Wilkins, 2011.
- Essentials of Medical Pharmacology 7th Edition. By: Tripathi KD. Jaypee Brothers Medical Pub, 2013.

Microbiology:

- Review of medical microbiology and immunology, 13th Edition. By: Levinson, Warren. The McGraw-Hill Companies, 2016.
- Review of medical microbiology, 27th Edition. By: Jawetz EM, Adelberg IL. Lange, 2016.
- Manual of Practical Microbiology & Immunology, 10th edition. By: El mishad AM. El-Ahram Press, 2014.

Parasitology:

- Foundations of Parasitology. 10th Edition. By: Larry Roberts, John Janovy, Steven Adler. McGraw-Hill Education, 2015.
- Paniker's Textbook of Medical Parasitology, 8th Edition. By: C. K. Jayaram Paniker. JP Medical Ltd, 2017
- Clinical Parasitology, 2nd Edition. By: Elizabeth Zeibig. Saunders, 2012.

VII- Facilities required for teaching and learning:

1- Faculty Lecture halls
2- Equipped labs with microscopes, slides, boxes and jars..
3- Faculty library for textbooks & electronic library for web search.
4- Audiovisual aids as boards, data show and computers
5- Dissecting room including cadavers, bones and plastic models
6- Museum specimens
7- Pharmacology labs with equipment and materials.

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Key Competencies & Module LOs *vs* Teaching and Assessment Methods Matrix

Key Competencies	Module Learning Outcomes	Teaching Methods					Assessment Methods						
							Formative Assessment		Summative Assessment				
		Interactive Lectures	Case Based Learning	Practical sessions	Skill Lab	Self-directed study	Theoretical	practical	Written	OSPE	Assignments	quizzes	participation
3.1	3.1.1 to 3.1.2	x	x	x							x		x
4.1	4.1.1 to 4.1.11	x	x			x	x		x		x	x	x
4.2	4.2.1 to 4.2.3	x	x			x	x		x		x	x	x
4.5	4.5.1 to 4.5.6	x	x			x	x		x		x	x	x
4.6	4.6.1 to 4.6.5	x	x			x	x		x		x	x	x
4.7	4.7.1 to 4.7.5	x	x			x	x		x		x	x	x
4.8	4.8.1 to 4.8.25			x				x		x	x		x
5.2	5.2.1, 5.2.2	x	x	x							x		x
6.2	6.2.1, 6.2.2					x	x	x	x	x	x	x	x
6.3	6.3.1					x	x	x	x	x	x	x	x
6.6	6.6.1, 6.6.2					x	x	x	x	x	x	x	x

Module Coordinator: Dr. Nadia Badawy	Program Coordinator: Prof. Zeinab Kasemy

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Nutrition

University: Menoufia **Faculty:** Medicine

A-Administrative information

Module title: Nutrition
Code No: NUT –2103
Department offering the Module : Biochemistry, Physiology, and Pharmacology
Program (s) on which the Module is given: Menoufia M.B.B. Ch Credit- hour Program (5+2).
Academic year/level: second level
Semester: first semester
Date of specification: 2018.
Date of approval by Departmental Council: 2018
Date of approval by Faculty Council: 2018
Credit hours: 2.5 hours/ 2 weeks

	Teaching hours		
	Lectures	**Practical**	**Activities**
Biochemistry	**12**	**18**	**36**
Physiology	**2.1**	**3.15**	**6.3**
Pharmacology	**0.9**	**1.35**	**2.7**
Total	**15**	**22.5**	**45**

Professional Information

I – Aim of the Module:

To provide the students with basic knowledge and skills regarding protein metabolism and its disorders, importance of vitamins, oxidants and antioxidants, energy balance, metabolic rate, regulation of food intake and associated imbalance, and the pharmacology of drugs used to treat obesity, lipid lowering drugs, and some agents used to treat electrolyte disturbance

II – Learning Outcomes of the Module:

Competency Area 2: The graduate as a health promoter.

Key Competency		Module LOs
2.3	Discuss the role of nutrition and physical activity in health.	1.3.1. Identify metabolic rate and factors affecting it 1.3.2. Describe the mechanism body temperature regulation 1.3.3. 1.3.4. Describe the mechanisms regulating food intake and specific dynamic action of food 1.3.5. Describe the body adaptation to starvation. 1.3.6. Identify the etiology of metabolic disturbance in

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Competency Area 3: The graduate as a professional.		a given case study report 1.3.7. Explain the mechanism of body regulation upon exposure to h weather. 1.3.8. Differentiate metabolic rate from b rate 1.3.9. Distinguish between different fa obesity
Key competency		**Module LOs**
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.2 Demonstrate commitment and integrity while preparing the coursework and assignments

Competency Area 4: The graduate as a scholar and scientist.

Key competency		**Module LOs**
4.2	Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.	4.2.1. Describe sources and fate of ammonia. 4.2.2. Describe synthesis and amino acids (AA) degradation. 4.2.3. Identify specialized products from different amino acids. 4.2.4. Identify the related inborn errors of metabolism and their clinical application on biochemical basis 4.2.5. Interpret symptoms, signs and biochemical laboratory findings of some protein metabolic disorders 4.2.6. Define vitamins and their classification 4.2.7. Point out dietary sources of vitamins 4.2.8. Point out symptoms and signs of vitamin deficiency 4.2.9. Point out manifestations of hypervitaminosis 4.2.10. Interpret symptoms, signs and biochemical laboratory findings of some vitamin deficiency disease. 4.2.11. Point-out the etiology of vitamins deficiency disease in a given case study report. 4.2.12. Define types of free radicals. 4.2.13. Illustrate the endogenous and exogenous sources of free radicals 4.2.14. Describe toxic effect of free radicals. 4.2.15. Describe role of antioxidant in preventing and scavenging these toxic effects.

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. Describe mode of action of drugs used to treat obesity, lipid lowering drugs, and some agents used to treat electrolyte disturbance 4.7.2. Explain the behavior of different drugs in the body with food, and the outcome of their interaction (Drug-Food) interactions. 4.7.3. Describe the different adverse reactions that could result from the use of different drugs and the mechanism of these reactions. 4.7.4. Mention the limitations to the use of drugs such as contraindications and drug interactions. 4.7.5. Prescribe a prescription on a rational base for selected important problems as obesity, electrolyte disturbances and hyperlipoproteinemia considering patient age, weight and health status. 4.7.6. Select the proper drug(s) to treat each particular patient 4.7.7. Identify consideration the appropriate route of administration, bioavailability, pharmacokinetics, age and sex associated diseases. 4.7.8. Judge the possible results if different drugs simultaneously administered with certain types of foods to avoid any combination that could result in serious reactions.
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. Estimate serum level of albumin by colorimetric methods. 4.8.2. Identify the clinical significance of determination of serum level of albumin. 4.8.3. Interpret the normal and abnormal electrophoresis curve for plasma proteins 4.8.4. Analyze metabolic rate curve and factors affecting 4.8.5. Use medical thermometer by different roots to measure body temperature curve 4.8.6. Calculate body mass index and apply it for diagnosis of weight abnormalities.

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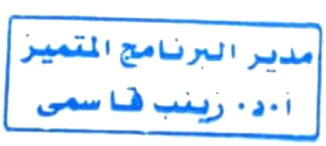
Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency		Module LOs	
5.2	Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1 5.2.2	Demonstrate respect towards colleagues. Apply teamwork in educational and professional encounters



Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency		Module ILOs	
6.2	Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1 6.2.2	Formulate a learning plan for the module in focus. Apply the learning plan respecting emerging priorities and encounters
6.3	Identify opportunities and use various resources for learning.	6.3.1	Use information resources whether written or electronic efficiently for the educational process.
6.6	Effectively manage learning time and resources and set priorities.	6.6.1 6.6.2	Manage time and learning resources effectively. Apply priority setting in the learning process

III- Module Contents:

THEORETICAL		
LECTURES	**TEACHING HOURS**	**DEPARTMENT**
Synthesis and catabolism of protein and amino acids	2	**Biochemistry**
Ammonia synthesis and related diseases	2	**Biochemistry**
Conversion of AA to specialized products	2	**Biochemistry**
Inborn errors of protein metabolism	2	**Biochemistry**
Fat- soluble vitamins	1	**Biochemistry**
Water-soluble vitamins	1	**Biochemistry**
Free radicals and antioxidants	2	**Biochemistry**
Metabolic rate & body temperature regulation	1	**Physiology**
Regulation of food intake and Specific dynamic action of food	1.1	**Physiology**
Lipid lowering drugs	0.9	**Pharmacology**
Total	**15**	
PRACTICAL	**ACTUAL HOURS**	**TEACHER/**

		FACILITATOR
Colorimetric assessment of serum Albumin	3	**Biochemistry**
Electrophoresis of plasma protein normal and abnormal	3	**Biochemistry**
Cases discussion	3	**Biochemistry**
lab results interpretation	3	**Biochemistry**
Revision	3	**Biochemistry**
Revision or exam	3	**Biochemistry**
Measurement and factors affecting metabolic rate	1.15	**physiology**
Measurement of body temperature and Regulation of body temperature upon exposure to hot & cold weather	2	**physiology**
Pharmacotherapy of obesity **Food-Drug interactions**	1.35	**Pharmacology**
Total	**22.5**	

IV– Teaching and learning Methods:

1. **Theoretical Teaching:**
   a) **Interactive lectures: using**
      - Brainstorming
      - Audiovisual aids through animations and diagrams
      - Interaction with the students through questions
      - Student engagement with discussion
   b) **Case Based learning**
2. **Practical Teaching: conducted using:**
   - Practical sessions
3. **Self-directed Learning**

V- Student Assessment:

A. Attendance criteria:

The minimum acceptable attendance is 75%, otherwise students failing toreach that percentage will be prevented from attending the final examination.

B. Types of Assessment:

- **Formative:** This form of assessment is designed to help the students to identify areas for improvement. It includes a multiple-choice questions, problems-solving exercises and independent learning activities in all subjects. These will be given during tutorial and practical sessions. The Answers are presented and discussed immediately with you after the assessment. The results will be made available to the students.
- **Summative** This type of assessment is used for judgment or decisions to be made about the students' performance. It serves as:

1. Verification of achievement for the student satisfying requirement
2. Motivation of the student to maintain or improve performance
3. Certification of performance
4. Grades

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C- Summative Assessment methods:

Assessment Method	Percentage	Description	Timing
Regular Evaluation	30%	10% written at the end of and periodicals including problem-solving, multiple-choice questions, give reason, matching, extended matching, complete and compare.	At the end of the module
		20% Participation in the tutorials, TBL, Research.	During the module
Final practical exam	30%	OSPE Exam	At the end of the module
Final Written	40%	It Includes problem-solving, multiple choice questions, giveæason, matching, extended matching, complete and compare.	At the end of the semester

D- Weighing of Assessment:

Method of Assessment |	Marks	Percentage
Final Written exam.	**25**	**40%**
Final Practical exam.	**18.75**	**30%**
Activities	**18.75**	**30%**
Total	**62.5**	**100%**

E- Grading for by GPA System:

The Percentage	Symbol	Grade
> 85%	A	**Excellent.**
75-<85 %	B	**Very Good**
65 - < 75 %	C	**Good.**
60 - < 65 %	D	**Passed.**
< 60 %	F	**Failed.**
	W	**Withdrawn**

VI. List of references and resources:

Lecture Notes of Module Departments

References:

Physiology:

- Guyton and Hall Textbook of Medical Physiology (Guyton Physiology) 13th Edition. By: John E. Hall. Saunders, 2015.
- Ganong's Review of Medical Physiology 25th Edition. By: NA. McGraw-Hill Medical, 2015.
- Physiology (Lippincott's Illustrated Reviews Series) 1st Edition. By: Robin R Preston, Thad Wilson, Richard A. Harvey. Lippincott Williams & Wilkins, 2012.

- diFiore's Atlas of Histology with Functional Correlations, 12th Edition. BY: Victor P. Eroschenko. Lippincott Williams & Wilkins, 2012.

Biochemistry:

- Harper's Illustrated Biochemistry 31st Edition. By: Victor W. Rodwell, David Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Weil. McGraw Hill / Medical, 2018.
- Lippincott's Illustrated Reviews Biochemistry, 7TH Edition. By: Denise Ferrier. LWW, 2017.
- Textbook of Biochemistry with Clinical Correlations 7th Edition. By: Thomas M. Devlin. John Wiley & Sons, 2010.

Pharmacology:

- Basic and Clinical Pharmacology 14th Edition 14th Edition. By: Bertram Katzung. McGraw Hill / Medical, 2017.
- Lippincott's Illustrated Reviews: Pharmacology, 5th edition. By: Michelle A. Clark, Richard Finkel, Jose A. Rey, Karen Whalen, Richard A. Harvey (Editor). Lippincott Williams & Wilkins, 2011.
- Essentials of Medical Pharmacology 7th Edition. By: Tripathi KD. Jaypee Brothers Medical Pub, 2013

VII- Facilities required for teaching and learning:

1- Faculty Lecture halls
2- Equipped labs with microscopes, slides, boxes and jars.
3- Faculty library for textbooks & electronic library for web search.
4- Audiovisual aids as boards, data show and computers
5- Pharmacology labs with equipment and materials

Key Competencies & Module LOs *vs* Teaching and Assessment Methods Matrix

Key Competencies	Module Learning Outcomes	Teaching Methods				Assessment Methods						
						Formative Assessment		Summative Assessment				
		Interactive Lectures	Case Based Learning	Practical sessions	Self-directed study	Theoretical	practical	Written	OSPE	Assignments	quizzes	participation
2.3	2.3.1 to 2.3.8											
3.1	3.1.1 to 3.1.2	x	x	x						x		x
4.2	4.2.1, 4.2.15	x	x		x	x		x		x	x	x
4.7	4.7.1 to 4.7.8	x	x		x	x		x		x	x	x
4.8	4.8.1 to 4.8.6			x			x		x	x		x
5.2	5.2.1, 5.2.2	x	x	x						x		x
6.2	6.2.1, 6.2.2				x	x	x	x	x	x	x	x
6.3	6.3.1				x	x	x	x	x	x	x	x
6.6	6.6.1, 6.6.2				x	x	x	x	x	x	x	x

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Evidence Based Medicine (Basics of medical Research and Biostatistics)

University: Menoufia **Faculty:** Medicine

A- Administrative Information

Module Title: Evidence Based Medicine (Basics of medical Research and Biostatistics)

Code No: EBM/BMR/B 2104
Department offering the course: Community Medicine and Public Health Department.
Academic year/level: Second level
Semester: Semester III
Date of specification: 2018
Date of approval by departments council: 2018
Date of approval by faculty council: 2018
Credit hours: 2 credit hours/ Longitudinal
Teaching Hours: 30 hours/ Lectures

- Professional Information

I – Aim of the Module:

To prepare a scientific research-oriented physician capable of implementing different designs of studies following evidence based medicine to share in community development and solving community problems connecting between medical statistics and its clinical application in the hospital on

II – Learning Outcomes of the Module:

Competency Area 1: The graduate as a health care provider.

Key competency		Module LOs
1.9	Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM).	1.9.1. Define sources of data collections and different sampling techniques 1.9.2. Identify different types of data and convert it from type to type 1.9.3. Modulate different types of samples and define its proper use 1.9.4. Conclude a proper information and introduce beneficial recommendation for the problem solving. 1.9.5. Retrieve information and able to use the recent information and communications technologies.

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Competency Area 3: The graduate as a professional.

Key competency		Module LOs
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.3 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.4 Demonstrate commitment and integrity while preparing the coursework and assignments

Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency		Module LOs
5.2	Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1 Demonstrate respect towards colleagues. 5.2.2 Apply teamwork in educational and professional encounters

Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency		Module LOs
6.2	Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1 Formulate a learning plan for the module in focus. 6.2.2 Apply the learning plan respecting emerging priorities and encounters
6.3	Identify opportunities and use various resources for learning.	6.3.1Use information resources whether written or electronic efficiently for the educational process.
6.6	Effectively manage learning time and resources and set priorities.	6.6.1 Manage time and learning resources effectively. 6.6.2 Apply priority setting in the learning process
6.8	Critically appraise research studies and scientific papers in terms of integrity, reliability, and applicability.	6.8.1 Define research and list its components 6.8.2 Formulate a research question about a certain problem. 6.8.3 Identify the steps of critical analysis of a research paper.
6.9	Analyze and use numerical data including the use of basic statistical methods.	6.9.1 Define statistics, its functions and describe different types of data 6.9.2 Define morbidity, mortality and fertility indices 6.9.3 Identify test of significance appropriate of each type of data 6.9.4 Demonstrate ethical relationship with faculty and

		staff members. 6.9.5 Choose the best study design for the research objectives. 6.9.6 Differentiate between different types of study designs and their assumptions. 6.9.7 Minimize research bias and follow research ethics.
6.10	Summarize and present to professional and lay audiences the findings of relevant research and scholarly inquiry.	6.10.1 Define different methods of data presentation; also describe different shapes of distribution of data 6.10.2 Apply the skills to present data in its different forms (tabular, graphical and mathematical) 6.10.3 Express freely and adequately themselves by improving descriptive capabilities and communication skills.

III- Module Contents:

Theoretical	
Topic	**Teaching Hours**
Research	4.5
Study design	4.5
Data& sampling	3
Graphical & Mathematical presentation	3
Normal distribution curve& test of significance	3
Hospital statistics	3
Vital statistics	3
Evidence based medicine	3
Revison	3
Total	**30**

IV– Teaching and learning methods

- **Interactive lectures**
- **The lecturers are conducted using:**
  a. Brainstorming
  b. Audiovisual aids through animations and diagrams
  c. Interaction with the students through questions
  d. Student engagement with discussion

V- Student Assessment:

A. Attendance Criteria:

The minimum acceptable attendance is 75%, otherwise students failing to reach that percentage will be prevented from attending the final examination.

B- Assessment methods

- Formative assessment: Through predesigned checklist and assignment with assessment of student participation in the lecture
- Summative Written: MCQ questions

C- Assessment schedule

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Final examination: Final-term assessment at the end of the semester bywritten examination.

D- Weighting of assessments:

Final-term examination: 100 % (25 marks)

E- Grading for by GPA System:

The Percentage	Symbol	Grade
> 85%	A	**Excellent.**
75-<85 %	B	**Very Good**
65 - < 75 %	C	**Good.**
60 - < 65 %	D	**Passed.**
< 60 %	F	**Failed.**
	W	**Withdrawn**

VI. List of references and resources:

- **Course handout**.
- **Essential Books:**

- Research Methodology: A Step-by-Step Guide for Beginners 4th Edition. By: Ranjit Kumar. SAGE Publications Ltd. 2014.
- Research Methodology: A Project Guide for University Students. By:John Kuada. AmazonUs/INDPB, 2012.
- Fundamentals of Biostatistics 8th Edition. By: Bernard Rosner. Cengage Learning, 2015

VII- Facilities required for teaching and learning:-

1-Faculty Lecture halls
2-Faculty library for textbooks & electronic library for web search.
3-Audiovisual aids as boards, data show and computers

Module Coordinator:	**Program Coordinator:**
Name: Dr. Asmaa Sharaf	**Name: Prof. Dr. Zeinab Kasemy**

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Vertical Integration Module (3)

University: Menoufia **Faculty: Medicine**

A - Administrative Information

Module Title: Vertical Integration Module (3).

Department offering the Module: Family medicine

Program on which the Module is given : Menoufia M.B.B. Ch Credit- hour Program (5+2)

Academic year: 2nd Year

Semester: Semester III

Date of specification: 2018

Date of approval by Departments Council: 2018

Date of approval by Faculty Council: 2018

Credit hours: 1/2 / Longitudinal.

Teaching hours: 7.5 hours/ lectures

B- Professional Information

I – Aim of Module:

This module aims to provide the students with an early clinical exposure o to common health problems, applying a holistic approach in clinical management with emphasis ondisease prevention, health promotion and health education.

II – Learning Outcomes of the Module:

Competency Area 1: The graduate as a health care provider.

Key competency		Module LOs
1.8	Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.	1.8.1. Illustrate the approach of studying clinical cases in the form of cough, hypertension and obesity, identifying the significant data and interpret these data. 1.8.2. Identify new medical terms in the context of case study activities. 1.8.3. Illustrate the main ethical principles in dealing with patientsand colleagues.

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1.9	Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM).	1.9.1. Retrieve the use of the recent information and communications technologies. 1.9.2. Design a management plan based on evidence-based medicine.
1.10	Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.	1.10.1 Interpret the clinical and laboratory data in the clinical scenarios to formulate a differential diagnosis.

Competency Area 2: The graduate as a health promoter.

Key Competency		Module LOs
2.9	Adopt suitable measures for infection control.	2.9.1 Apply infection control measures while dealing with patients

Competency Area 3: The graduate as a professional.

Key competency		Module LOs
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.2 Demonstrate commitment and integrity while preparing the coursework and assignments
3.4	Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural or ethnic backgrounds, or their disabilities.	3.4.1 Demonstrate respect to social, culture, and ethnic difference of patients treating them equally.
3.8	Refer patients to the appropriate health facility at the appropriate stage.	3.8.1 Identify the rules of referral for complex and undiagnosed cases

Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency		Module LOs
5.1	Recognize the important role played by other health care professionals in patients' management.	5.1.1 Demonstrate Respect the roles of other colleagues in patient care.

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5.2	Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1.	Work in a team evaluating his own and others work through constructive feedback.
		5.2.2.	Communicate respectively and effectively with other colleagues

Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency		Module LOs	
6.2	Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1	Formulate a learning plan for the module in focus
		6.2.2	Apply the learning plan respecting emerging priorities and encounters
6.3	Identify opportunities and use various resources for learning.	6.3.1	Use information resources either written or electronic efficiently for the educational process.
6.6	Effectively manage learning time and resources and set priorities.	6.6.1	Manage time and learning resources effectively.
		6.6.2	Apply priority setting in the learning process

III- Module Contents:

Topic	Teaching Hours
Approach to problem solving applied to case of cough	0.5
Student presentation for the case (cough) according to physiology, pathology	0.5
Measure the respiratory rate according to pre-described guidelines	0.5
Student activity to assess the respiratory rate and describe it within its context	0.5
Approach to a case of hypertension from physiological and pharmacological view	0.5
Student participation according to physiology and pharmacology	0.5
Measure the blood pressure according to pre-described guidelines	0.5
Student activity to assess the blood pressure and describe it within its context	0.5
Approach to a case of obesity from biochemical and pathological view	0.5
Student participation according to biochemistry and pathology	0.5
Assess the obesity according to pre-described guidelines	0.5
Student activity to assess the obesity and describe it within its context	1
Revision	1
Total	7.5

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IV- Teaching and learning methods

- Lectures for acquisition of knowledge: Two large groups, each group once /week
- Power Point Presentations: at lectures.
- Role Play, case studies, and problem solving.
- Field Trips: individual visits to the students` nearest healthcare facilities

V- Student Assessment:

A. Attendance criteria:

The minimum acceptable attendance is 75%, otherwise students failing toreach that percentage will be prevented from attending the final examination.

B- Assessment methods

- Formative assessment: Through predesigned checklist and assignment with assessment of student participation in the lecture
- Summative Written: MCQ, EMQs, complete, true false and problemsolving

C- Assessment schedule

Final examination: Final-term assessment at the end of the semester bywritten examination.

D- Weighting of assessments:

Final-term examination: 100 % (12.5 marks)

VI. List of references and resources:

- **Lecture notes**
- **Essential Books:**

- Case Files Family Medicine, Fourth Edition. By: Eugene Toy, Donald Briscoe, Bruce Britton, Joel John Heidelbaugh. McGraw Hill / Medical, 2016.

VII- Facilities required for teaching and learning:

1- Faculty Lecture halls
2- Faculty library for textbooks & electronic library for web search.
3- Audiovisual aids as boards, data show and computers.

Module Coordinator:	**Program Coordinator:**
Prof. Dr. Hala Shahin	**Prof. Zeinab Kasemy**

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Semester IV

Gastrointestinal System

University: Menoufia **Faculty:** Medicine

A - Administrative Information

Module Title : Gastrointestinal System

Code No: GIT 2201

Departments offering the module and teaching hours: Histology, Parasitology, Pathology, Anatomy, Physiology, Biochemistry, Pharmacology, and Microbiology

Program on which the Module is given: Menoufia M.B.B. Ch Credit- hour Program (5+2)

Academic year: 2nd Year

Semester: IV

Date of specification: 2018

Date of approval by Departments Council: 2018

Date of approval by Faculty Council: 2018

Credit hours: 8 credit hours/ 7 weeks

	Teaching hours		
	Lectures	**Practical**	**Activities**
Histology	**9**	**13.5**	**27**
Parasitology	**9**	**13.5**	**27**
Pathology	**7.5**	**11.25**	**22.5**
Anatomy	**7.5**	**11.25**	**22.5**
Physiology	**6**	**9**	**18**
Biochemistry	**3**	**4.5**	**9**
Pharmacology	**3**	**4.5**	**9**
Microbiology	**3**	**4.5**	**9**
Total	**48**	**72**	**144**

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B- Professional Information

I- Aim of the Module:

To provide the students with basic knowledge and skills regarding the gastrointestinal tract and its related organs including development, normal anatomy, congenital anomalies, norma and abnormal microscopic structures, functions, disease pattens and with gross, and microscopic pictures and etiopathogenesis, common parasitic and microbial diseases, related biochemical reactions, and the pharmacological basis of drugs acting on the gastrointestinal tracts

II- Learning Outcomes of the Module:

Competency Area 3: The graduate as a professional.

Key competency		Module LOs
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.2 Demonstrate commitment and integrity while preparing the coursework and assignments

Competency Area 4: The graduate as a scholar and scientist.

Key competency		Module LOs
4.1	Describe the normal structure of the body and its major organ systems and explain their functions.	4.1.1. Describe the anatomy of gastrointestinal tract, liver, and pancreas. 4.1.2. Describe the vasculatures of gastrointestinal tract and previous mentioned related organs. 4.1.3. Identify the course, important relations, distribution and effect of injury of gastrointestinal blood vessels and biliary system. 4.1.4. Recognize the anatomical basis of gastro-oesophageal reflux disease, appendicitis, cholecystitis, pancreatitis, and portal hypertension. 4.1.5. Describe the normal development of gastrointestinal tract and its related organs and their congenital anomalies. 4.1.6. Describe the basic histological structure of different parts of GIT. 4.1.7. Distinguish structural features of organs, regions and

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		cell types present in each part of GIT system. 4.1.8. Identify the normal histological structure of various glands associated with GIT. 4.1.9. Describe the mechanism of formation of the salivary secretion. 4.1.10. Explain the differences in types of salivary secretion and function. 4.1.11. Outline the phases of swallowing. 4.1.12. Describe the process of gastric secretion, function of HCL, and gastric movement 4.1.13. Identify the function, types, and control of secretion of pancreas. 4.1.14. Describe the various composition of biliary secretion and function of gall bladder 4.1.15. Name different types of jaundice and their manifestation **4.1.16.** Recognize the concept of intestinal absorption, intestinal motility and defecation reflex. 4.1.17. Relate the anatomical knowledge with clinical signs seen in cases of portal hypertension. 4.1.18. Correlate the blood supply of some organs and their structure and specialized functions. 4.1.19. Illustrate the functional anatomy, the enteric nervous system and innervation of the GIT. **4.1.20.** Illustrate the course of common bile duct in relation to the surrounding structure. 4.1.21. Relate the ultrastructure and function of different cell types in different parts and glands of GIT. 4.1.22. Relate the histological structure of each organ to its specific functions.
4.2	Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.	4.2.1. List lipotropic factors. 4.2.2. Identify the source and function of GIT enzymes. 4.2.3. Enumerate tumor markers of GIT. 4.2.4. Explain the role of liver in metabolism. 4.2.5. Contrast metabolism of the liver in fed and fasting state. 4.2.6. Relate factors regulating fat content of the liver and causes of fatty liver. 4.2.7. Describe the biochemical tests used to assess the different functions of the liver.
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. Explain different gastrointestinal disease processes, their causes (etiology), and how the disease develops in response to the etiologic agents (pathogenesis). 4.5.2. Determine the fate and complications of different GIT disease processes. 4.5.3. Describe various aspects of parasites of medical importance concerning its geographical distribution, morphology and life cycles.

		4.5.4. Mention the clinical presentations and complications of GIT parasitic diseases. 4.5.5. Determine the methods used for prevention and control of the most common parasites in the community. 4.5.6. Describe the common arthropods of medical interest and explain their medical importance and the methods of combating. 4.5.7. Identify common microbial infections of the gastrointestinal tract, their spread, pathogenesis, fate, and complications.
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 and discuss characteristic gross and microscopic pictures of different pathologic lesions within the GIT specific organ systems and the associated functional disturbances. 4.6.2. Solve problems through case study of certain GIT diseases. 4.6.3. Integrate basic anatomical, biochemical, histopathological, and physiological facts with clinical data.
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. Outline the lines of treatment of peptic ulcer. 4.7.2. Determine the effective therapeutic drugs and its doses in treating each parasitic infection. 4.7.3. Explain mechanism of action of drugs used in treatment of GIT diseases. 4.7.4. Describe pharmacological actions, therapeutic uses, side effects and drug interactions of some drugs used in the treatment of GIT diseases. 4.7.5. Outline the lines of treatment of GERD and drugs used as antiemetics. 4.7.6. Outline the treatment lines for peptic ulcer, diarrhea, gall stones cases and outline treatment.

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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. Examine the different regions of the abdomen. 4.8.2. Interpret x- rays and barium to recognize the anatomical landmarks, common diseases related to the gastrointestinal tract. 4.8.3. Perform the measurement of gastric motility. 4.8.4. Record and interpret a curve of GIT movement. 4.8.5. Comment on some changes such as: amplitude and rate of movement under effect of drug administration. 4.8.6. Practice estimation of the level of AST and ALT. 4.8.7. Interpret the results of normal and abnormal liver function tests. 4.8.8. Examine mounted slides or boxes to identify the most important arthropods of medical interest. 4.8.9. Interpret a pathology report of gastrointestinal diseases. 4.8.10. Identify some parasites or their stages by naked eyes (Jars). 4.8.11. Identify the common micro-organisms of gastrointestinal infections by microscopic examination, culture character, biochemical and serological reactions. 4.8.12. Label dissected structures of the gastrointestinal tract according to the present relations. 4.8.13. Differentiate between the consistency of arteries, veins & nerves. 4.8.14. Draw diagrams showing courses and distribution of main blood vessels related to gastrointestinal tract. 4.8.15. Draw diagrams showing different parts of GIT. 4.8.16. Identify the different parts and associated glands of GIT system under the microscope. 4.8.17. Draw and label the structures they have seen under light microscope during practical classes. 4.8.18. Draw parasites in their different stages specially the diagnostic and infective stages through examination of microscopic slides. 4.8.19. Recognize gross and microscopic pictures of some GIT diseases aiming at reaching the correct diagnosis.

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Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency		Module Los	
5.2	Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1 5.2.2	Demonstrate respect towards colleagues. Apply teamwork in educational and professional encounters

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Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency		Module ILOs	
6.2	Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1 6.2.2	Formulate a learning plan for the module in focus. Apply the learning plan respecting emerging priorities and encounters
6.3	Identify opportunities and use various resources for learning.	6.3.1	Use information resources whether written or electronic efficiently for the educational process.
6.6	Effectively manage learning time and resources and set priorities.	6.6.1 6.6.2	Manage time and learning resources effectively. Apply priority setting in the learning process

III- Module Contents:

Theoretical

Topic	Teaching hours	Department
***Oral cavity (mouth, tongue, salivary glands, palate) and *Pharynx)**	1.5	Anatomy
Oesophagus, *stomach, * and small intestine.	1.5	Anatomy
***Large intestine *Liver and *biliary system**	1.5	Anatomy
***Biliary system *Pancreas, * Blood supply of gastrointestinal tract.**	1.5	Anatomy
Development of gastrointestinal tract.	1.5	Anatomy
Enzymology and tumour markers of GIT	1.5	Biochemistry
Role of liver in metabolism	1.5	Biochemistry
Histology of oral cavity	1.5	Histology
Histology of esophagous & stomach	1.5	Histology
Histology of parotid, submandibular, sublingual	1.5	Histology

salivary glands &pancreas		
Histology of the small intestine	1.5	Histology
Histology of large intestine & rectoanal junction	1.5	Histology
Histology of hepatocytes, hepatic lobules, gall bladder and bile drainage	1.5	Histology
Gastroenteritis and food poisoning	1.5	Microbiology
Diarrheal Diseases	1.5	Microbiology
Hepatic Trematodes (Fasciola) Intestinal Trematodes (Heterophys)	1.5	Parasitology
Taenia - Ascaris Lumbricoides	1.5	Parasitology
Hook Worms - Strongyloides Stercoralis	1.5	Parasitology
Capillaria - Nematodes of Large Intestine	1.5	Parasitology
Amoeba - Balantidium Coli	1.5	Parasitology
Giardia Lamblia * Cryptosporidium	1.5	Parasitology
Oral Cavity and salivary glands	1	Pathology
Esophagus and stomach	1.5	Pathology
Diseases of small and large intestine	1.5	Pathology
Diseases of small and large intestine	1	Pathology
Diseases of the liver	1	Pathology
Diseases of the gall bladder, appendix, pancreas and peritoneum	1.5	Pathology
Peptic Ulcer and GERD	1.5	Pharmacology
Antiemetics	1.5	Pharmacology
Introduction *Control of function of GIT *Salivary secretion *swallowing	1.5	Physiology
Physiology of the stomach *vomiting	1.5	Physiology
Small and large intestine	1.5	Physiology
Pancreatic secretion *The liver and billiary secretion	1.5	Physiology
Total	**48**	
Practical		
Topic	**Teaching hours**	**Department**
Oral cavity (Lip, tongue, papillae folliate) and Pharynx.	1.5	Anatomy
Oesophagus and stomach	1.5	Anatomy
Intestine	1.5	Anatomy
Liver and biliary system	1.5	Anatomy
Pancreas, *peritoneum	1.5	Anatomy
Blood supply of GIT	1	Anatomy
Radiology	1.25	Anatomy
Revision	1.5	Anatomy
Liver functions test	1.5	Biochemistry
Estimation of AST and ALT	1.5	Biochemistry

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Quiz and check list	1.5	Biochemistry
Lip, Tongue and papilla foliate	2	Histology
Esophagus dog, cat and GOJ	2	Histology
Fundus, Pylorus &PDJ	2	Histology
Duodenum, ileum, large intestine & appendix	2	Histology
Parotid gland, mixed salivary gland &pancreas	2	Histology
Human liver and gall bladder	2	Histology
Revision	1.5	Histology
Food-borne infection	2	Microbiology
Gastroenteritis - Diarrheal diseases - and hepatitis	2	Microbiology
Revision	0.5	Microbiology
Hepatic trematodes (Fasciola) Intestinal Trematodes (Heterophys)	2	Parasitology
Tenia Ascaris Lumbricoides	2	Parasitology
Hook Worms - Strongyloides Stercoralis	2	Parasitology
Capillaria nematodes of large Intestine	1.5	Parasitology
Amoeba Balantidium coli	1.5	Parasitology
Giardia Lamblia * Cryptosporidium	1.5	Parasitology
Lab diagnosis of Intestinal Parasites	1.5	Parasitology
D. caninum * H. nana * H. diminuta	1.5	Parasitology
Oral cavity and salivary glands	1.75	Pathology
Stomach, small intestine	2	Pathology
large intestine	2	Pathology
Diseases of liver, gall bladder	2	Pathology
appendix, pancreas and peritoneum	1.5	Pathology
Revision	2	Pathology
Peptic ulcer	1.5	Pharmacology
Diarrhea	1.5	Pharmacology
Treatment of GIT infections	1.5	Pharmacology
Record of Intestinal Motility	2	Physiology
demonstration of autonomic receptors	2	Physiology
Gastric function tests	2	Physiology
liver function tests	2	Physiology
Revision	1	Physiology
Total	72	

IV– Teaching and learning Methods

1. **Theoretical Teaching:**
   a) **Interactive lectures: using**
      - Brainstorming
      - Audiovisual aids through animations and diagrams
      - Interaction with the students through questions
      - Student engagement with discussion
   b) **Case Based learning**

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2. **Practical Teaching: conducted using:**
   - Practical sessions
   - Skill Lab
3. **Self-directed Learning**

V- Student Assessment:

A. Attendance criteria:

The minimum acceptable attendance is 75%, otherwise students failing toreach that percentage will be prevented from attending the final examination.

B. Types of Assessment:

- **Formative:** This form of assessment is designed to help the students to identify areas for improvement. It includes a multiple-choice questions, problems-solving exercises and independent learning activities in all subjects. These will be given during tutorial and practical sessions. The Answers are presented and discussed immediately with you after the assessment. The results will be made available to the students.
- **Summative** This type of assessment is used for judgment or decisions to be made about the students' performance. It serves as:
  1. Verification of achievement for the student satisfying requirement
  2. Motivation of the student to maintain or improve performance
  3. Certification of performance
  4. Grades

C- Summative Assessment Methods and Scheule:

Assessment Method	Percentage	Description	Timing
Regular Evaluation	30%	10% written at the end of and periodicals including problem solving, multiple choice questions, give reason, matching, extended matching, complete and compare.	At the end of the module
		20% Participation in the tutorials, TBL, Research.	During the module
Final practical exam	30%	OSPE Exam	At the end of the module
Final Written	40%	It Includes problem-solving, multiple choice questions, give a eason, matching, extended matching, complete and compare.	At the end of the semester

D- Weighing of Assessment:

Method of Assessment |	Marks	Percentage
Final Written exam.	**80**	**40%**
Final Practical exam.	**60**	**30%**
Activities	**60**	**30%**
Total	**200**	**100%**

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E- Grading for by GPA System:

The Percentage	Symbol	Grade
> 85%	A	**Excellent.**
75-<85 %	B	**Very Good**
65 - < 75 %	C	**Good.**
60 - < 65 %	D	**Passed.**
< 60 %	F	**Failed.**
	W	**Withdrawn**

VI. List of references and resources:

- **Lecture Notes of Module Departments**
- **Essential Books:**

Anatomy:

- Gray's Anatomy for Students. 3rd Edition. By: Richard Drake, A. Wayne Vogl, Adam W. M. Mitchell. Churchill Livingstone; 2014
- Langman's Medical Embryology, 13th Edition. By: T.W. Sadler. Williams and Wilkins; 2016
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Pathology:

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- Robbins Basic Pathology (Robbins Pathology) 10th Edition. By: Vinay Kumar, Abul K. Abbas, Jon C. Aster. Elsevier, 2017.
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- Manual of Practical Microbiology & Immunology, 10th edition. By: El mishad AM. El-Ahram Press, 2014.

Parasitology:

- Foundations of Parasitology. 10th Edition. By: Larry Roberts, John Janovy, Steven Adler. McGraw-Hill Education, 2015.
- Paniker's Textbook of Medical Parasitology, 8th Edition. By: C. K. Jayaram Paniker. JP Medical Ltd, 2017
- Clinical Parasitology, 2nd Edition. By: Elizabeth Zeibig. Saunders, 2012.

VII- Facilities required for teaching and learning:

1- Faculty Lecture halls
2- Equipped labs with microscopes, slides, boxes and jars.
3- Faculty library for textbooks & electronic library for web search.
4- Audiovisual aids as boards, data show and computers
5- Dissecting room including cadavers, bones and plastic models
6- Museum specimens
7- Pharmacology labs with equipment and materials

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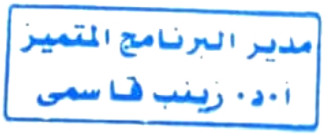
Key Competencies & Module LOs *vs* Teaching and Assessment Methods Matrix

Key Competencies	Module Learning Outcomes	Teaching Methods					Assessment Methods						
							Formative Assessment		Summative Assessment				
		Interactive Lectures	Case Based Learning	Practical sessions	Skill Lab	Self-directed study	Theoretical	practical	Written	OSPE	Assignments	quizzes	participation
3.1	3.1.1 to 3.1.2	x	x	x							x		x
4.1	4.1.1 to 4.1.23	x	x			x	x		x		x	x	x
4.2	4.2.1, 4.2.7	x	x			x	x		x		x	x	x
4.5	4.5.1 to 4.5.7	x	x			x	x		x		x	x	x
4.6	4.6.1 to 4.6.3	x	x			x	x		x		x	x	x
4.7	4.7.1 to 4.7.6	x	x			x	x		x		x	x	x
4.8	4.8.1 to 4.8.19			x	x			x		x	x		x
5.2	5.2.1, 5.2.2	x	x	x							x		x
6.2	6.2.1, 6.2.2					x	x	x	x	x	x	x	x
6.3	6.3.1					x	x	x	x	x	x	x	x
6.6	6.6.1, 6.6.2					x	x	x	x	x	x	x	x

Module Coordinator:	**Program Coordinator:**
Name: **Dr Ahmed Gaifar**	**Name: Prof. Dr. Zeinab Kasemy**



Renal &Urinary system

University: Menoufia **Faculty:** Medicine

A-Administrative information

Module Title: Renal &Urinary system

Code No: URIN 2202
Department offering the Module : Anatomy, Histology, Biochemistry, Physiology, Pathology, Pharmacology, and Microbiology
Program (s) on which the Module is given: Menoufia M.B.B. ChCredit- hour Program **(5+2)**
Academic year/level: Second level
Semester: Semester IV
Date of specification: 2018.
Date of approval by Departmental Council: 2108
Date of approval by Faculty Council: 2108
Credit hours: 5 credit hours/ 4 weeks

	Teaching hours		
	Lectures	**Practical**	**Activities**
Anatomy	**5.1**	**7.65**	**15.3**
Histology	**3**	**4.5**	**9**
Biochemistry	**3.9**	**5.85**	**11.7**
Physiology	**9**	**13.5**	**27**
Pathology	**6.6**	**9.9**	**19.8**
Pharmacology	**1.5**	**2.25**	**4.5**
Microbiology	**0.9**	**1.35**	**2.7**
Total	**30**	**45**	**90**

- Professional Information

I – Aim of the Module:

To provide the students with basic knowledge and skills regarding the renal and urinary system including development, normal anatomy, congenital anomalies, normal and abnormal microscopic structure, disease patterns with their gross and microscopic pictures etiopathogenesis and fate, the pharmacological basis of drugs action on the kidney and urinary tract, purine metabolism and its errors, and common microbiological infectious causing renal and urinary tract diseases.

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II – Learning Outcomes of the Module:

Competency Area 3: The graduate as a professional.

Key competency		Module LOs
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.2 Demonstrate commitment and integrity while preparing the coursework and assignments

Competency Area 4: The graduate as a scholar and scientist.

Key competency		Module Los
4.1	Describe the normal structure of the body and its major organ systems and explain their functions.	4.1.1. Outline the general organization of the urinary system. 4.1.2. Illustrate the site, shape, surfaces, peritoneal coverings, and relations of the kidney. 4.1.3. Illustrate the site, shape, surfaces, and relations of the ureter. **4.1.4.** Identify the site, shape, surfaces, peritoneal coverings, and relations of the ureter, urinary bladder and urethra. 4.1.5. Identify anatomy of the kidneys regarding their shape, surfaces, hilum and borders 4.1.6. Outline coverings and relations of the kidney. 4.1.7. Identify blood supply, lymphatic drainage and nerve supply of the kidney. 4.1.8. Identify the surface anatomy of the kidney. 4.1.9. Differentiate between the relations, blood supply and lymphatic drainage of both kidneys.

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		4.1.10. Recognize length, course & relations of ureter. 4.1.11. Recognize the normal development of the kidney and ureter. 4.1.12. Identify blood supply, nerve supply & lymphatic drainage of ureter. 4.1.13. Enumerate and describe sites of ureteric stricture 4.1.14. Outline relations, blood supply, nerve supply & lymphatic drainage of urinary bladder and urethra 4.1.15. Differentiate between male and female urethra **4.1.16.** Differentiate between internal and external urethral sphincter. 4.1.17. Outline the structural characteristics of the Kidney. 4.1.18. Determine the relationship between the Kidney structure with the function. 4.1.19. Describe histological structure of blood renal barrier with reference to their function. 4.1.20. Identify structures that could be present in renin producing cells from its function 4.1.21. Name the cells lining Collecting tubules. 4.1.22. Describe the specific renal blood flow and mechanisms of its regulation. 4.1.23. Explain the mechanism of concentration and dilution of urine and the countercurrent exchanger and multiplier behind. 4.1.24. Discuss movement of important ions in renal tubules. 4.1.25. Explain the reflex of micturition. 4.1.26. Identify higher centres control of the brain for micturition 4.1.27. Match clinical data and its relation to anatomical knowledge. 4.1.28. Construct the site and relations of the kidney, ureter, the urinary bladder and urethra.
4.2	Explain the molecular, biochemical, and cellular mechanisms that are important in maintaining the body's homeostasis.	4.2.1. Define Non protein nitrogenous compounds. 4.2.2. Describe different urinary crystals. 4.2.3. Summarize the steps and regulatory mechanisms of synthesis, catabolism of purine. 4.2.4. Identify the biochemical bases of the related metabolic disorders and their clinical application. 4.2.5. Describe pyrimidine nucleotides synthesis and catabolism and related disorders. 4.2.6. List the factors affecting the movement of the ions. 4.2.7. Point out the clinical significance of determination of plasma levels of uric acid.
4.5	Identify various causes (genetic, developmental,	4.5.1. List the congenital anomalies of the kidney and ureter. 4.5.2. Explain on embryological basis these congenital

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	metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).	anomalies. 4.5.3. Determine the development of the urethra and its congenital anomalies. 4.5.4. Explain on embryological basis these congenital anomalies. 4.5.5. Describe causes, pathogenesis, clinical, pathological pictures and complications of different types of acute glomerulonephritis. 4.5.6. List the most important microorganism involved in urinary tract infections.
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. Outline different types of acute glomerulonephritis. 4.6.2. Describe the causes, pathogenesis, clinical, pathological pictures, fate and complications of chronic glomerulonephritis. 4.6.3. Identify the causes, pathogenesis, gross, microscopic pictures, fate and complications of tubulointerstitial diseases. 4.6.4. Identify causes, pathogenesis, gross, microscopic pictures, fate and complications of different types of pyelonephritis 4.6.5. Outline the causes, pathogenesis and types of urinary stones. 4.6.6. Identify pathogenesis, gross, microscopic pictures, and spread of different types of bladder tumors. 4.6.7. Predict the diagnosis of different urinary system diseases based on the underlying gross and microscopic pictures. 4.6.8. Formulate a systematic approach for laboratory diagnosis of UTIs.

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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. Enumerate adverse effects, contraindications of different antimicrobials used for UTI treatment. 4.7.2. Explain the mechanism of action, actions, clinical uses, adverse effects, and contraindications of osmotic diuretics, carbonic anhydrase inhibitors, loop diuretics, thiazides and potassium-sparing diuretics. 4.7.3. Identify the indications of different drugs in UTI. 4.7.4. Identify possible changes of plasma electrolytes and pH of the blood and urine caused by diuretics. 4.7.5. Recognize the diseases of the kidney that must be taken into account when prescribing drugs that are eliminated by the kidney. 4.7.6. describe different classes of diuretics: their sites and mode of actions, classification, adverse effects and uses in cardiac, hepatic, renal and other conditions.
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. Differentiate normal and abnormal urine characters. 4.8.2. Identify the physical and chemical characters of normal urine under different physiological condition. 4.8.3. Identify the most important methods of specimen handling and principles of infection control. 4.8.4. Interpret the radiologic aspects of congenital anomalies of the urinary tract. 4.8.5. Interpret an ABG report. 4.8.6. Interpret a pathology report about urinary system diseases. 4.8.7. Interpret reports of urine analysis. 4.8.8. Identify the site and relations of the kidney, ureter, the urinary bladder and urethra. 4.8.9. Label dissected structures of the urinary system according to the present relations. 4.8.10. Differentiate between the right and left kidney- internal and external urethral sphincter. 4.8.11. Interpret CT and IVP to recognize the anatomical landmarks, common diseases related to the urinary system. 4.8.12. Use the light microscope efficiently to obtain information from histological slides. 4.8.13. Draw and label the structures they have seen under light microscope during practical classes. 4.8.14. Differentiate the kidney vasculature by injected stain (Gelatin Carmine) 4.8.15. Comment on urine specific gravity and differentiate its diluted and concentrated conditions.

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	4.8.16. Measure pH of urine 4.8.17. Use different laboratory techniques for handling pathologic samples, appropriate types of fixatives and processing techniques. 4.8.18. Recognize gross and microscopic pictures aiming at reaching the correct diagnosis. 4.8.19. Identify causative micro-organisms of urinary tract infections by microscopic examination, Culture character and Biochemical reaction.

Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency	Module LOs
5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared re-sponsibilities and engaging in shared decision-making for effective patient management.	5.2.1 Demonstrate respect towards colleagues. 5.2.2 Apply teamwork in educational and professional encounters

Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency	Module ILOs
6.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1 Formulate a learning plan for the module in focus. 6.2.2 Apply the learning plan respecting emerging priorities and encounters
6.3 Identify opportunities and use various resources for learning.	6.3.1 Use information resources whether written or electronic efficiently for the educational process.
6.6 Effectively manage learning time and resources and set priorities.	6.6.1 Manage time and learning resources effectively. 6.6.2 Apply priority setting in the learning process

III- Module Contents:

Theoretical		
Topic	**Teaching Hours**	**Department**
Anatomy of the kidney	1.5	**Anatomy**
Anatomy of ureter & urinary bladder	1.5	**Anatomy**

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Anatomy of ureter, urinary bladder2 &urethra	1	Anatomy
Development of the urinary system	1.1	Anatomy
Normal & abnormal Constituents ofurine	1.5	Biochemistry
Chemistry and metabolism of purine	1	Biochemistry
Chemistry and metabolism ofpyrimidines	1.4	Biochemistry
Histological Structure of the kidney	1.5	Histology
Histological Structure of excretory passage ofurinary system	1.5	Histology
Urinary tract infection	0.9	Microbiology
Congenital anomalies of the kidney +acute glomerulonephritis	2	Pathology
Chronic glomerulonephritis+ disease of tubules and interstitium	1.5	Pathology
Obstructive uropathies + kidney tumors	1.5	Pathology
Cystitis & bladder tumors	1.6	Pathology
Pharmacology of Diuretics	1.5	Pharmacology
Overview of renal functions	1.5	physiology
Formation of urine	1.5	Physiology
Tubular processing	1.5	Physiology
Renal handling of water & Na	1.5	physiology
Renal handling of K, glucose and Ca	1.5	Physiology
Acid base balance	1.5	physiology
Total	30	

Practical

Topic	Teaching Hours	Department
Kidney, posterior abdominal wall	1.5	Anatomy
Ureter, urinary bladder & urethra	1.5	Anatomy
Revision	1.5	Anatomy
Revision	1.5	Anatomy
Kidney and ureter anatomy	1.65	Anatomy
Chemical composition of urine & urinestrips	1.5	Biochemistry
Kidney function tests except creatinineclearence	1.5	biochemistry
Creatinine clearance & urine report	1.5	biochemistry
Uric acid colorimetry & cases	1.35	Biochemistry
1-kidney (H&E) 2-Injected kidney	1.5	Histology
Histological Structure of the kidney	1.5	Histology
1- Urinary bladder 2- Ureter (Practical)	1.5	histology
Urinary tract infection causes	1.35	Microbiology

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Kidney jars	1.9	**pathology**
Kidney, bladder jars & data show	1.5	**Pathology**
Kidney, bladder jars & data show	1.5	**Pathology**
Kidney, bladder slides	1.5	**Pathology**
Revision	1.5	**Pathology**
Kidney, bladder	2	**Pathology**
Pharmacological aspects of Antimicrobials used for urinary infections.	1.25	**Pharmacology**
Alteration of urinary PH (online)	1	**Pharmacology**
Simple urine examination (urineanalysis)	1.5	**Physiology**
Urine examination	1.5	**Physiology**
Specific gravity	1.5	**Physiology**
Abnormal constituent of urine	1.5	**physiology**
Abnormal constituent of urine (	1.5	**Physiology**
Clearance	1.5	**Physiology**
Clearance	1.5	**Physiology**
Acid base balance	1.5	**physiology**
Acid base balance	1.5	**physiology**
Total	**45**	

IV– Teaching and learning Methods:

1. **Theoretical Teaching:**
   a) **Interactive lectures: using**
      - Brainstorming
      - Audiovisual aids through animations and diagrams
      - Interaction with the students through questions
      - Student engagement with discussion
   b) **Case Based learning**
2. **Practical Teaching: conducted using:** Practical sessions
3. **Self-directed Learning**

V- Student Assessment:

A. Attendance criteria:

The minimum acceptable attendance is 75%, otherwise students failing toreach that percentage will be prevented from attending the final examination.

B. Types of Assessment:

- **Formative:** This form of assessment is designed to help the students to identify areas for improvement. It includes multiple-choice questions, problems-solving exercises and independent learning activities in all subjects. These will be given during tutorial and practical sessions. The Answers are presented and discussed immediately with you after the assessment. The results will be made available to the students.
- **Summative** This type of assessment is used for judgment or decisions to be made about the students' performance. It serves as:
  1. Verification of achievement for the student satisfying requirement
  2. Motivation of the student to maintain or improve performance
  3. Certification of performance
  4. Grades

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C- Summative Assessment Methods and Schedule:

Assessment Method	Percentage	Description	Timing
Regular Evaluation	30%	10% written at the end of the module including problem-solving, multiple-choice questions, give reason, matching, extended matching, complete and compare.	At the end of the module
		20% Participation in the tutorials, CBL, Research.	During the module
Final practical exam	30%	Data show Exam	At the end of the module
Final Written	40%	It Includes problem-solving, multiple-choice questions, give reason, matching, extended matching, complete and compare.	At the end of the semester

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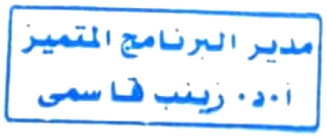
D- Weighing of Assessment:

Method of Assessment |	Marks	Percentage
Final Written exam.	50	**40%**
Final Practical exam.	37.5	**30%**
Activities	37.5	**30%**
Total	**125**	**100%**

E- Grading for by GPA System:

The Percentage	Symbol	Grade
> 85%	A	**Excellent.**
75-<85 %	B	**Very Good**
65 - < 75 %	C	**Good.**
60 - < 65 %	D	**Passed.**
< 60 %	F	**Failed.**
	W	**Withdrawn**

VI. List of references and resources:



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4- Audiovisual aids as boards, data show and computers
5- Dissecting room including cadavers, bones and plastic models
6- Museum specimens
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Key Competencies & Module LOs *vs* Teaching and Assessment Methods Matrix

Key Competencies	Module Learning Outcomes	Teaching Methods				Assessment Methods						
						Formative Assessment		Summative Assessment				
		Interactive Lectures	Case Based Learning	Practical sessions	Self-directed study	Theoretical	practical	Written	OSPE	Assignments	quizzes	participation
3.1	3.1.1 to 3.1.2	x	x	x						x		x
4.1	4.1.1 to 4.1.28	x	x		x	x		x		x	x	x
4.2	4.2.1, 4.2.6	x	x		x	x		x		x	x	x
4.6	4.6.1 to 4.6.8	x	x		x	x		x		x	x	x
4.7	4.7.1 to 4.7.6	x	x		x	x		x		x	x	x
4.8	4.8.1 to 4.8.19			x			x		x	x		x
5.2	5.2.1, 5.2.2	x	x	x						x		x
6.2	6.2.1, 6.2.2				x	x	x	x	x	x	x	x
6.3	6.3.1				x	x	x	x	x	x	x	x
6.6	6.6.1, 6.6.2				x	x	x	x	x	x	x	x

Module Coordinator:	**Program Coordinator:**
Name: Dr. Asmaa Ali Ahmed	**Name:** Prof. Dr. **Zeinab Kasemy**

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Reproductive system & Breast

University: Menoufia **Faculty:** Medicine

A-Administrative information

Module Title: Reproductive System & Breast Module
Code No: REP/BR 2203
Departments offering the module: Physiology, Histology, Parasitology, Microbiology, Anatomy, Pathology and Pharmacology departments
Program on which the course is given: M.B.B. Ch Program-(5+2) credit hours
Academic year: 2nd Year
Semester: IV
Date of specification: 2018
Date of approval by Departments Council: 2018
Date of approval by Faculty Council: 2018
Credit hours: 6 credit hours/ 5 weeks

	Teaching hours		
	Lectures	Practical	Activities
Anatomy	**10.2**	**15.3**	**30.6**
Histology	**8.7**	**13.05**	**26.1**
Physiology	**5.7**	**8.55**	**17.1**
Pharmacology	**1.5**	**2.25**	**4.5**
Pathology	**5.7**	**8.55**	**17.1**
Microbiology	**1.2**	**1.8**	**3.6**
Parasitology	**3**	**4.5**	**9**
Total	**36**	**54**	**108**

B- professional Information

I- Aim of the Module:

This multidisciplinary module aims to integrate knowledge from various departments to enable students to comprehend the anatomical basics, histological characteristics, physiological processes, microbiological aspects, pathological conditions, and pharmacological interventions relevant to the reproductive system and breast health. Through a collaborative and comprehensive approach, this module aims to equip students with the theoretical foundation and practical skills essential for assessing, diagnosing, and managing reproductive and breast-related disorders effectively.

I- Learning Outcomes of the Module:

Competency Area 3: The graduate as a professional.

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Key competency		Module LOs
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.2 Demonstrate commitment and integrity while preparing the coursework and assignments

Competency Area 4: The graduate as a scholar and scientist.

Key competency		Module LOs
4.1	Describe the normal structure of the body and its major organ systems and explain their functions.	4.1.1. Describe the shape, position, and of the female breast. 4.1.2. List the blood supply and lymphatic drainage of the female breast. 4.1.3. Explain the presence of skin dimpling, retracted nipple, fixed breast, and peau d´orange in cancer breast. 4.1.4. Describe the development of the breast and its congenital anomalies. 4.1.5. List the muscles forming the pelvic diaphragm and describe the origin, insertion, action and nerve supply of each. 4.1.6. Describe the position, relations and vascular supply of the ovaries. 4.1.7. Explain the cause of the pain, which is felt on the medial side of the thigh during ovulation 4.1.8. Describe the anatomy of the uterine tube regarding

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parts, function & vascular supply

4.1.9. Describe the pelvic peritoneum in females.
4.1.10. Describe the anatomy of the uterus regarding subdivisions, cavities, relations, ligaments, main support, and vascular supply.
4.1.11. Describe the anatomy of the vagina: position, fornices &vascular supply.
4.1.12. Describe perineum: boundaries & divisions
4.1.13. Name pouches of the urogenital triangle and contents of the pudendal canal.
4.1.14. Describe internal pudendal artery and pudendal nerve regarding origin, course & branches.
4.1.15. Enumerate structures piercing the perineal membrane
4.1.16. List boundaries and contents of deep and superficial perineal pouches
4.1.17. Describe stages of gonad genesis and their congenital anomalies
4.1.18. Differentiate between testes and ovaries development
4.1.19. Differentiate between the fate of mesonephric and paramesonephric ducts in males and females and describe their congenital anomalies
4.1.20. Describe the development of the external genitalia and their congenital anomalies
4.1.21. Describe the anatomy of the testis: coverings, structure, thermoregulatory mechanisms & vascular supply
4.1.22. Describe the anatomy of the spermatic cord: coverings & contents
4.1.23. Relate layers of the scrotum to layers of the anterior abdominal wall.
4.1.24. Describe anatomy of the prostate, epididymis, vas, seminal vesicles & ejaculatory ducts and explain the spread of cancer prostate to the vertebral column
4.1.25. Describe the anatomy of the penis: structure, nerve, and vascular supply.
4.1.26. Demonstrate the basic components of the male reproductive system and describe the basic histological structure of each component related to its functions.
4.1.27. List the types of cells present in the spermatogenic epithelium and their functions
4.1.28. List the types of tunicae present in the testis & Be able to identify the seminiferous tubules and cells present between it.
4.1.29. Compare between extra testicular and intratesticular ducts
4.1.30. Compare between vas deferens and ureter.
4.1.31. Describe the histological structure of the glands associated with the male reproductive system (seminal vesicles, prostate, bulbourethral glands and

gland of littre) and its participation in semen formation.

4.1.32. Name the cellular and structural elements that form the blood-testis barrier.
4.1.33. Identify principal structure of the penis, its corpora, its blood supply and mechanism of erection.
4.1.34. List the normal parameters of semen.
4.1.35. Identify the different components of female reproductive systems
4.1.36. Identify the histological structure of the ovary
4.1.37. Identify the different types of ovarian follicles
4.1.38. Compare between different types of ovarian corpora
4.1.39. Describe the histological structure of fallopian tubes and its parts
4.1.40. Describe the histological changes of menstrual cycle and its relationship with ovarian cycle
4.1.41. Identify the histological structure of vagina and effect of female hormones on it.
4.1.42. Describe parts of female external genitalia.
4.1.43. Identify histological structure of bartholin's glands.
4.1.44. Identify the histological structure of placenta, its formation and changes throughout pregnancy.
4.1.45. Identify histological structure of mammary glands before puberty, after puberty, lactating and non-lactating.
4.1.46. Describe the female sexual cycles and hormonal changes.
4.1.47. Identify placental functions and its hormones.
4.1.48. Describe the mechanisms of labor and factors regulating it.
4.1.49. Describe the control of spermatogenesis.
4.1.50. Integrate basic anatomical, histopathological and physiological aspects of the female, male reproductive system and breast.
4.1.51. Apply the anatomical facts while examining the living subject to reach a proper diagnosis.
4.1.52. Correlate between the different components of male reproductive system under the microscope, and functional and clinical criteria whenever possible.
4.1.53. Relate the histological structure of each part of male reproductive system to its specific functions.
4.1.54. Correlate between the different components of female reproductive system under the microscope, and the functional and clinical criteria whenever possible.
4.1.55. Relate the histological structure of the breast to its functions.
4.1.56. Relate the histological structure of each part of female reproductive system to its specific functions.
4.1.57. Interpret changes at both Puberty and Menopause.
4.1.58. Analyze the difference between ovulatory cycles

		from non-ovulatory cycles. 4.1.59. Apply the physiological actions of hormones to reach a proper diagnosis in case of physiological abnormalities 4.1.60. Analyze the difference between different actions of male and female sex hormones. 4.1.61. Integrate basic interaction of normal flora and immunity of genital tract
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 M(pathogenesis).	4.5.1. Explain different disease processes encountered in the reproductive system, their causes (etiology), and how the disease develops in response to the etiologic agents (pathogenesis). 4.5.2. Recognize the most important microorganisms and involved in reproductive system infections. 4.5.3. Describe the most important methods of specimen handling and principles of infection control. 4.5.4. Describe various aspects of parasites of medical importance concerning its geographical distribution, morphology and life cycles. 4.5.5. Discuss the pathogenesis of parasitic infections and the relation of the stage of the life cycle to pathogenesis and the clinical signs and symptoms. 4.5.6. Describe the common arthropods of medical interest and explain their medical importance and the methods of combating. 4.5.7. Analyze theoretical information to select the most appropriate diagnosis from differential diagnosis for a given case.
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 characteristic gross and microscopic pictures of different pathologic lesions within specific organ systems and the associated functional disturbances. 4.6.2. Determine the fate and complications of different disease processes. 4.6.3. Mention clinical presentations and the complications of parasitic diseases. 4.6.4. Describe the conventional and up to date diagnostic laboratory methods to reach the accurate diagnosis of most common parasitic diseases. 4.6.5. Interpret a pathology report of Reproductive system & Breast diseases. 4.6.6. Predict the diagnosis of different Reproductive system & Breast diseases based on the underlying gross and microscopic pictures.

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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. Enumerate the therapeutic indications of Estrogen receptor modulators, antiestrogens and antiprogesterone. 4.7.2. Mention the methods of treatment of sexually transmitted diseases. 4.7.3. List drugs acting on the uterus. 4.7.4. Determine the effective therapeutic drugs and its doses in treating each parasitic infection. 4.7.5. Determine the methods used for prevention and control of the most common parasites in the community. 4.7.6. Apply the basic pharmacological data while management the living subject in order to reach a proper treatment of reproductive system diseases. 4.7.7. Recognize different classes of contraceptive pills: mode of actions, classification, adverse effects and any other uses than contraception. 4.7.8. Identify possible changes of uterine contractions by tocolytics and ecbolics. 4.7.9. Formulate a treatment plan for the sexually transmitted diseases and how to avoid serious complications.
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. Identify dissected specimens for the organs of the reproductive system and breast. 4.8.2. Interpret X-rays and Label diagrams showing different male and female reproductive systems. 4.8.3. Examine breast and different lymph node groups. 4.8.4. Differentiate between types of tissues and organs in histological slides. 4.8.5. Draw and label the structures they have seen under light microscope during practical classes. 4.8.6. Perform pregnancy test and interpret its results. 4.8.7. Use different laboratory techniques for handling pathologic samples, appropriate types of fixatives and processing techniques. 4.8.8. Recognize gross and microscopic pictures aiming at reaching the correct diagnosis. 4.8.9. Identify causative micro-organisms of sexually transmitted infections by microscopic examination, culture character and Biochemical reaction. 4.8.10. Draw parasites in their different stages specially the diagnostic and infective stages through examination of microscopic slides. 4.8.11. Identify some parasites or their stages 4.8.12. Examine mounted slides or boxes to identify the most important arthropods of medical interest.

Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency		Module LOs
5.2	Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1 Demonstrate respect towards colleagues. 5.2.2 Apply teamwork in educational and professional encounters

Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency		Module ILOs
6.2	Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1 Formulate a learning plan for the module in focus. 6.2.2 Apply the learning plan respecting emerging priorities and encounters
6.3	Identify opportunities and use various resources for learning.	6.3.1 Use information resources whether written or electronic efficiently for the educational process.
6.6	Effectively manage learning time and resources and set priorities.	6.6.1 Manage time and learning resources effectively. 6.6.2 Apply priority setting in the learning process

III- Module Contents:

THEORETICAL		
TOPIC	**TEACHING HOURS**	**DEPARTMENT**
Anatomy of Breast, blood supply, lymphatic drainage. Pelvic diaphragm	1.5	Anatomy
Ovary (anatomy, blood supply, peritoneal covering) and uterus 1	1.5	Anatomy
Uterus 2& vagina (anatomy, blood supply) & perineal pouches	1.5	Anatomy
Embryology of female reproductive system	1.5	Anatomy
Scrotum &Testis (anatomy, blood supply and lymphatics, clinical notes).	1.5	Anatomy
Vas, epididymis, seminal vesicle, ejaculatory ducts, prostate, penis (anatomy, blood supply, clinical notes)	1.5	Anatomy
Embryology of male reproductive system	1.2	Anatomy
Female genital system (Ovary)	1.5	Histology
Female genital system (Fallopian tube – Uterus – vagina)	1.5	Histology
Mammary gland (Resting – Lactating) - Placenta	1.5	Histology

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Resting and lactating mammary gland Placenta Male genital system (Testis and epididymis)	1	Histology
Male genital system (Testis and epididymis)	1	histology
Male genital system (Accessory gland; ext. genitalia) - Prostate, penis and penile urethra	2.2	Histology
Bacterial vaginosis Pelvic inflammatory disease (PID) Diseases transmitted from mother to foetus by breast feeding and by genital tract.	1.2	Microbiology
Toxoplasma and phyrus pubis	1.5	Parasitology
Trichomonus vaginalis, Scabis and Mite transmitted parasite.	1.5	Parasitology
Female genital tract infection and abnormal uterine bleeding	1.5	Pathology
Pathology of female genital tract tumors	1.2	Pathology
Pathogenesis of breast inflammatory and neoplastic lesions.	1.5	Pathology
- Causes (etiology), and pathogenesis of Prostatic and testicular lesions. - Fate and complications of the of Prostatic lesions.	1.5	Pathology
Pharmacology of female sex hormones and contraception	1.5	Pharmacology
Oogenesis, female sexual cycles (ovarian & endometrial)	1	Physiology
Female sexual cycles (ovarian & endometrial)	1.2	Physiology
- Endocrinal functions of the ovary - Fertilization, implantation & functions of placenta	1.2	Physiology
-Parturition, lactation, menopause -Testicular functions &regulation of spermatogenesis	1.2	Physiology
Endocrinal functions of the testis, semen and puberty (male & female).	1.1	Physiology
Total Hours	**36**	
PRACTICAL		
TOPIC	**TEACHING HOURS**	**DEPARTMENT**
Pelvic diaphragm	2.75	Anatomy
Breast and Ovary	2.55	Anatomy
Uterus, uterine tube & vagina	2	Anatomy
Male reproductive organs	2	Anatomy
Radiology	2	Anatomy
Revision	2	Anatomy
Revision	2	Anatomy
Female genital system (Ovary Fallopian tube – Uterus – vagina)	1.5	Histology
-Placenta-Mammary gland	3	Histology
-Male genital system (Testes)	3	Histology
Epididymis, vas deferens, spermatic cord and the penis	2.55	Histology
Revision	3	Histology
Cases and assignments on Bacterial and Viral causes of sexually transmitted diseases	1.8	Microbiology

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Toxoplasma and phyrus pubis	2	Parasitology
Trichomonus vaginalis, Scabis and Mite transmitted parasite.	2.5	Parasitology
Endometrial changes (secretory and proliferative), Endometrial hyperplasia, squamous cell carcinoma cervix	2	Pathology
Dermoid cyst, Mucinous cystadenoma, Brenner tumour.	2.55	Pathology
FCD of breast, Fibroadenoma, invasive duct carcinoma	2	Pathology
Nodular prostatic hyperplasia, Seminoma	2	Pathology
Uterine Stimulants & relaxants	1	Pharmacology
Sexually transmitted diseases	1.25	Pharmacology
Pregnancy tests	2.55	Physiology
Birth control methods	3	Physiology
Semen analysis report	3	Physiology
Total	**54**	

IV– Teaching and learning Methods:

1. **Theoretical Teaching:**
   a) **Interactive lectures: using**
      - Brainstorming
      - Audiovisual aids through animations and diagrams
      - Interaction with the students through questions
      - Student engagement with discussion
   b) **Case Based learning**
2. **Practical Teaching: conducted using:**
      - Practical sessions
      - Skill Lab
3. **Self-directed Learning**

VI- Student Assessment:

A. Attendance criteria:

The minimum acceptable attendance is 75%, otherwise students failing to reach that percentage will be prevented from attending the final examination.

B. Types of Assessment:

- **Formative:** This form of assessment is designed to help the students to identify areas for improvement. It includes a multiple-choice questions, problems-solving exercises and independent learning activities in all subjects. These will be given during tutorial and practical sessions. The Answers are presented and discussed immediately with you after the assessment. The results will be made available to the students.
- **Summative** This type of assessment is used for judgment or decisions to be made about the students performance. It serves as:
  1. Verification of achievement for the student satisfying requirement
  2. Motivation of the student to maintain or improve performance
  3. Certification of performance
  4. Grades

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C- Summative Assessment methods and schedule:

Assessment Method	Percentage	Description	Timing
Regular Evaluation	30%	10% written at the end of and periodicals including problem solving, multiple choice questions, give reason, matching, extended matching, complete and compare.	At the end of the module
		20% Participation in the tutorials, TBL, Research.	During the module
Final practical exam	30%	OSPE Exam	At the end of the module
Final Written	40%	It Includes problem-solving, multiple choice questions, give a eason, matching, extended matching, complete and compare.	At the end of the semester

D- Weighing of Assessment:

Method of Assessment |	Marks	Percentage
Final Written exam.	**55**	**40%**
Final Practical exam.	**41.25**	**30%**
Activities	**41.25**	**30%**
Total	**137.5**	**100%**

E- Grading by GPA System:

The Percentage	Symbol	Grade
> 85%	A	**Excellent.**
75-<85 %	B	**Very Good**
65 - < 75 %	C	**Good.**
60 - < 65 %	D	**Passed.**
< 60 %	F	**Failed.**
	W	**Withdrawn**

VI. List of references and resources:

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- **Lecture Notes of Module Departments**
- **Essential books:**

Anatomy:

- Gray's Anatomy for Students. 3rd Edition. By: Richard Drake, A. Wayne Vogl, Adam W. M. Mitchell. Churchill Livingstone; 2014
- Langman's Medical Embryology, 13th Edition. By: T.W. Sadler. Williams and Wilkins; 2016
- Grant's Atlas of Anatomy 14th Edition. By: Anne M. R. Agur, Arthur F. Dalley II. LWW; 2016

Physiology:

- Guyton and Hall Textbook of Medical Physiology (Guyton Physiology) 13th Edition. By: John E. Hall. Saunders, 2015.
- Ganong's Review of Medical Physiology 25th Edition. By: NA. McGraw-Hill Medical, 2015.
- Physiology (Lippincott's Illustrated Reviews Series) 1st Edition. By: Robin R Preston, Thad Wilson, Richard A. Harvey. Lippincott Williams & Wilkins, 2012.

Histology:

- Junqueira's Basic Histology: Text and Atlas, 15th Edition. By: Anthony L. Mescher. McGraw Hill / Medical, 2018.
- Wheater's Functional Histology, 6th Edition. By: Barbara Young, Geraldine O'Dowd, Phillip Woodford. Churchill Livingstone, 2014.
- diFiore's Atlas of Histology with Functional Correlations, 12th Edition. BY: Victor P. Eroschenko. Lippincott Williams & Wilkins, 2012.

Pathology:

- Robbins Basic Pathology (Robbins Pathology) 10th Edition. By: Vinay Kumar, Abul K. Abbas, Jon C. Aster. Elsevier, 2017.
- Pathology Illustrated, 8th Edition. By: Peter S. Macfarlane, Robin Reid, Robin Callander. Churchill Livingstone, 2018.
- Diagnostic histopathology of tumors, 4th Edition. By: Christopher D. M. Fletcher. Saunders/Elsevier, 2013

Pharmacology:

- Basic and Clinical Pharmacology 14th Edition 14th Edition. By: Bertram Katzung. McGraw Hill / Medical, 2017.
- Lippincott's Illustrated Reviews: Pharmacology, 5th edition. By: Michelle A. Clark, Richard Finkel, Jose A. Rey, Karen Whalen, Richard A. Harvey (Editor). Lippincott Williams & Wilkins, 2011.
- Essentials of Medical Pharmacology 7th Edition. By: Tripathi KD. Jaypee Brothers Medical Pub, 2013.

Microbiology:

- Review of medical microbiology and immunology, 13th Edition. By: Levinson, Warren. The McGraw-Hill Companies, 2016.
- Review of medical microbiology, 27th Edition. By: Jawetz EM, Adelberg IL. Lange, 2016.
- Manual of Practical Microbiology & Immunology, 10th edition. By: El mishad AM. El-Ahram Press, 2014.

Parasitology:

- Foundations of Parasitology. 10th Edition. By: Larry Roberts, John Janovy, Steven Adler. McGraw-Hill Education, 2015.
- Paniker's Textbook of Medical Parasitology, 8th Edition. By: C. K. Jayaram Paniker. JP Medical Ltd, 2017
- Clinical Parasitology, 2nd Edition. By: Elizabeth Zeibig. Saunders, 2012.

VII Facilities required for teaching and learning:

1. Lecture halls at the faculty
2. Dissecting room, including bones and plastic models
3. Museum specimens
4. Visual aids
5. Labs equipped with microscopes

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6. Microscopic slides of demonstration of samples of tissue

Key Competencies & Module LOs *vs* Teaching and Assessment Methods Matrix

Key Competencies	Module Learning Outcomes	Teaching Methods					Assessment Methods						
							Formative Assessment		Summative Assessment				
		Interactive Lectures	Case Based Learning	Practical sessions	Skill Lab	Self-directed study	Theoretical	practical	Written	OSPE	Assignments	quizzes	participation
3.1	3.1.1 to 3.1.2	x	x	x							x		x
4.1	4.1.1 to 4.1.61	x	x			x	x		x		x	x	x
4.5	4.5.1 to 4.5.7	x	x			x	x		x		x	x	x
4.6	4.6.1 to 4.6.6	x	x			x	x		x		x	x	x
4.7	4.7.1 to 4.7.9	x	x			x	x		x		x	x	x
4.8	4.8.1 to 4.8.12			x	x			x		x	x		x
5.2	5.2.1, 5.2.2	x	x	x							x		x
6.2	6.2.1, 6.2.2					x	x	x	x	x	x	x	x
6.3	6.3.1					x	x	x	x	x	x	x	x
6.6	6.6.1, 6.6.2					x	x	x	x	x	x	x	x

Module Coordinator:	**Program Coordinator:**
Name: **Dr. Eman Aboelyazed**	**Name: Prof. Dr. Zeinab Kasemy**

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Vertical Integration Module (4)

University: Menoufia **Faculty: Medicine**

A - Administrative Information

Module Title : Vertical Integration Module (4)

Department offering the Module: Family medicine department

Program on which the Module is given: Menoufia M.B.B.Ch Credit- hour Program **(5+2)**

Academic year : 2nd Year

Semester: IV

Date of specification: 2018

Date of approval by Departments Council: 2018

Date of approval by Faculty Council: **3/2018**

Credit hours 1/2 credit hours (Longitudinal).

Teaching Hours: 7.5 hours/ Lectures

B- Professional Information

1 – Aim of Module:

This module aims to provide the students with an early clinical exposure o to common health problems, applying a holistic approach in clinical management with emphasis ondisease prevention, health promotion and health education.

II – Learning Outcomes of the Module (LOs):

Competency Area 1: The graduate as a health care provider.

Key competency	Module LOs
1.8 Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.	1.8.1. Illustrate the approach of studying clinical cases in the form of irritable bowel syndrome, delayed puberty, urinary tract infection, identifying the significant data and interpret these data. 1.8.2. Identify new medical terms in the context of case study activities. 1.8.3. Illustrate the main ethical principles in dealing with patientsand colleagues.

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1.9	Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM).	1.9.1. Retrieve the use of the recent information and communications technologies. 1.9.2. Design a management plan based on evidence-based medicine.
1.10	Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.	1.10. 1 Interpret the clinical and laboratory data in the clinicalscenarios to formulate a differential diagnosis.

Competency Area 2: The graduate as a health promoter.

Key Competency		Module LOs
2.9	Adopt suitable measures for infection control.	2.9.1 Apply infection control measures while dealing with patients

Competency Area 3: The graduate as a professional.

Key competency		Module LOs
3.1	Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	3.1.1 Demonstrate a professional. respectful attitude while dealing with colleagues, and staff members 3.1.2 Demonstrate commitment and integrity while preparing the coursework and assignments
3.4	Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural or ethnic backgrounds, or their disabilities.	3.4.1 Demonstrate respect to social, culture, and ethnic difference of patients treating them equally.
3.8	Refer patients to the appropriate health facility at the appropriate stage.	3.8.1 Identify the rules of referral for complex and undiagnosed cases

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Competency Area 5: The graduate as a member of the health team and part of the health care system.

Key competency		Module LOs
5.1	Recognize the important role played by other health care professionals in patients' management.	5.1.1 Demonstrate Respect the roles of other colleagues in patient care.
5.2	Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	5.2.1. Work in a team evaluating his own and others workthrough constructive feedback. 5.2.2. Communicate respectively and effectively with other colleagues

Competency Area 6: The graduate as a lifelong learner and researcher.

Key competency		Module LOs
6.2	Develop, implement, monitor, and revise a personal learning plan to enhance professional practice.	6.2.1 Formulate a learning plan for the module in focus 6.2.2 Apply the learning plan respecting emerging priorities and encounters
6.3	Identify opportunities and use various resources for learning.	6.3.1 Use information resources either written or electronic efficiently for the educational process.
6.6	Effectively manage learning time and resources and set priorities.	6.6.1 Manage time and learning resources effectively. 6.6.2 Apply priority setting in the learning process

III- Module Contents:

Topic	Teaching Hours
Case presentation (role play) for irritable bowel syndrome	0.5
An approach to a case of irritable bowel syndrome from anatomical view	0.5
An approach to a case of irritable bowel syndrome from pathological view	0.5
An approach to a case of irritable bowel syndrome from pharmacological view	0.5
Case study for delayed puberty	0.5
An approach to a case of delayed puberty from physiological view	0.5

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An approach to a case of delayed puberty from pathological view	0.5
An approach to a case of delayed puberty from pharmacological view	0.5
Case presentation (role play with urinalysis report) for urinary tract infection	0.5
An approach to a case of urinary tract infection from pathological view	0.5
An approach to a case of urinary tract infection from pharmacological view	0.5
Designing and discussing case from the student surrounding community	0.75
Designing and discussing case from the student surrounding community	0.75
Revision	1
Total	7.5

IV- Teaching and learning methods

- Lectures for acquisition of knowledge: Two large groups, each group once /week
- Power Point Presentations: at lectures.
- Role Play, case studies, and problem solving.
- Field Trips: individual visits to the students` nearest healthcare facilities

V- Student Assessment:

A. Attendance criteria:

The minimum acceptable attendance is 75%, otherwise students failing toreach that percentage will be prevented from attending the final examination.

B- Assessment methods

- Formative assessment: Through predesigned checklist and assignment with assessment of student participation in the lecture
- Summative Written: MCQ, EMQs, complete, true false and problemsolving

C- Assessment schedule

Final examination: Final-term assessment at the end of the semester bywritten examination.

D- Weighting of assessments:

- Final-term examination: 100 % (12.5 marks)

VI. List of references and resources:

- **Lecture notes**
- **Essential Books:**

- Case Files Family Medicine, Fourth Edition. By: Eugene Toy, Donald Briscoe, Bruce Britton, Joel John Heidelbaugh. McGraw Hill / Medical, 2016.

VII- Facilities required for teaching and learning:

4- Faculty Lecture halls
5- Faculty library for textbooks & electronic library for web search.
6- Audiovisual aids as boards, data show and computers.

Module Coordinator:	Program Coordinator:
Name: **Prof. Dr. Hala Shahin**	**Name: Prof. Zeinab Kasemy**

مدير البرنامج المتميز
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توصيف موديولات بكالريووس الطب و الجراحة العام

(البرنامج المتميز 5+2

ساعات معتمدة)

لجنة المعايير الاكاديمية و التوصيف بالبرنامج	منسق	مدير وحدة ضمان الجودة	عميد الكلية
د. أحمد حمدان	أ.د زينب عبدالعزيز قاسمي	ا.د/ أميرة فتحى عبد العاطى	أ.د/ محمد فهمي النعمانى

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وحدة
ضمان
الجودة

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