

Student guide

M2 2020-2021

- Contents:

- 1-Guide lines (why P.B.L. “Problem Based Learning”) (what the student will do this year) (modules in this term)
- 2-Schedule for lectures , practicals , cases (small group teaching) , skill lab , & exams
- 3-Rubrics for grading assignments and presentations
- 4-Portfolio items
- 5-Cases

- PBL Philosophy:

In a world where available information is growing exponentially, we believe that the most important thing a student needs to know is how to learn. So the main learning goals of the PBL are a framework for looking at concepts, skills, and abilities and help guide the creation of personalized student curriculum. PBL offers unique environments where students can flourish as individuals within a community of learners.

- PBL Process:

The core of the PBL process is the tutorials that will be held once weekly beside the practical sessions and the interactive lectures. In each tutorial there will be a case scenario that is delivered to the students, where they collaborate together through the seven jumps process to point out the possible problems present in the case and to find out the intended learning objectives need to be known through this case. In the second tutorial, they will discuss the objectives of the case after self study, and a new case will be delivered. In PBL process the role for lectures aim at clarification of complicated areas of information or to integrate different areas of information. Practical sessions and clinical skill lab are included as educational activities in BPL. They act as tools for the students to gain the needed psychomotor skills and to attain the professional attitude and behavior.

- Student role:

The student is the center of the learning process in PBL. **Students will depend on themselves in finding out the learning objectives by brain storming in the case study session. Then they will go home and study and search in the texts for the information of the objectives they got. Then the following session they should try to present the information they gazed and summarized to their students in an easy palatable way.** In BPL the students have to work hard, prepare themselves well for every tutorial group meeting, collaborate with their colleagues and practice team work. They also will have their reflection about the process, their colleagues and the tutor.

- Tutors role:

- The tutor will work as a facilitator more than traditional teacher who delivers all the information to the students. Tutors role is to stimulate and motivate the students to learn and to search for the information and knowledge. During the case they will guide the students and redirect them towards the intended learning objectives. The tutors share in the assessment process. Moreover, the tutor together with the students has the responsibility of setting the roles of the tutorial session.
- **The tutor will receive guide information for the objectives in each case from the departments at least one week before the case is to be discussed, he should read them and**

- then in the discussion of the case he should see if the students had fulfilled all the needed items so as to approve their work or they need to search more for certain items and get them so as to complete their work completely or they got more or un needed items they should discard them. By the end of the cases of the module students will have their hand out covering all items needed in the objectives they searched for
- All staff members should have their official mails done by the beginning of the academic year so as good communication may be applicable and to facilitate uploading of their lectures every Wednesday of each week

 - In each session one of the students will be the reader (the one who reads the case) and another one will be the writer (the one who writes the objectives on the board after brain storming of the students with the tutor and collect them after that)
 - In session (1) (week 1)
 - One case will be read by the students
 - They make brain storming with each other and with the tutor to get the objectives the case is talking about. they will go home to search for them and make presentation about them the coming session
 - Weeks for reading of the cases and discussion of the objectives are written above each case
 - The presentation have certain rubrics the tutor try that the students stick more and more to them each presentation then at the last presentation of the module they will have certain mark among their portfolio total mark about:
 - The presentation they showed along the module and their share in the discussions and preparation of the work needed (see professional behavior sheet included) (the mark is given by the tutor)
 - The assignment they will be given which includes presentation and they should comply completely to the presentation and assignment rubrics (included in the guide) (the mark is given by the tutor and program heads after revising the assignments and discussing the students in them in the date of one of the case sessions scheduled with the students. This is to complete the mark of the portfolio for this module as shown in the assesment schedule included)
 - After they finish the presentation in each session they will read the following case and brain storm to get the objectives that they will go home to prepare them as presentation in the coming case session and so on all the sessions
 - If the case is long its presentation by the students may take two weeks not one week to ensure that the students presented the objectives in the case in a good way

 - All students are to make their Emails in the first week so as to be able to have the on line information uploaded weekly concerning the following:
 - Lectures
 - Videos
 - Presentation done by their colleagues
 - On line exams formative and summative

- Scoring Rubric for Presentations:

Category	Scoring Criteria	Total Points	Score
Organization (15 %)	Were the main ideas presented in a clear manner?	5	
	Information is presented in a logical sequence.	5	
	Presentation appropriately cites requisite number of references.	5	
Content (45 %)	- The Introduction is attention-getting, - It lays out the problem well, - It establishes a framework for the rest of the presentation.	5	
	Technical terms are well-defined in language that is appropriate for the target audience.	5	
	The Presentation contains accurate information.	10	
	The material included is relevant to the overall message/purpose.	10	
	Appropriate amount of material is prepared, and the points made reflect well their relative importance.	10	
	There is an obvious conclusion summarizing the presentation.	5	
Presentation (40 %)	Speaker maintains good eye contact with the audience and is appropriately animated (e.g., gestures, moving around, etc.).	5	
	Speaker uses a clear, audible voice.	5	
	Delivery is poised, controlled, and smooth.	5	
	Good language skills and pronunciation are used.	5	
	Visual aids are well prepared, informative, effective, and not distracting.	5	
	Length of presentation is within the assigned time limits.	5	
	Information was well communicated.	10	
Score %	Total Points	100%	

Professional Behavior of student in the case checklist

Students Name:

Date:

End of module (Summative):

Module title:

Student's Signature :.....

Tutor's Name:.....

Criteria	Scale: 1 and 2 is unsatisfactory, 3, 4 and 5 is satisfactory performance	Comments
<p>Preparation: Is well prepared with relevant information, uses a variety of references and summarizes key points</p>	<p>1 2 3 4 5</p>	
<p>Critical thinking: Identifies problem, analyzes problem, suggests possible reasons for the problem, helps group to formulate learning objectives</p>	<p>1 2 3 4 5</p>	
<p>Participation: Participates actively, talks on turn and listens attentively to others</p>	<p>1 2 3 4 5</p>	
<p>Communication Skill & Group Skills: Respects tutor and colleagues, communicates well uses appropriate language, accepts feedback and responds appropriately. Contributes to group learning, shares information with others, demonstrates sensitivity to views and feeling of others, takes on assigned tasks willingly</p>	<p>1 2 3 4 5</p>	
<p>Presentation skills: Presents the information relevant to the learning objective of the case, explains clearly the reasoning process with regard to solving the problem</p>	<p>1 2 3 4 5</p>	
<p>Overall</p>	<p>SATISFACTORY</p>	<p>UNSATISFACTORY</p>

-The students portfolio (October 6 university - faculty of medicine - 2020 - 2021):

- The student binder for the portfolio should contain the followings:

1- Paper that summarizes his learning experience and contain the followings in not more than 3-5 papers:

- Resume of him
- Impact made by the education on him
- His present strengths
- His present weakness
- Future suggestions & goals

- *STUDENTS SHOULD GATHER AND MAKE GROUPS AND GET ENGAGED TO ONE OF THEIR PROFESSORS TO BEGIN TO FORM A PAPER WORK AND PUBLISH IT BEFORE END OF THE YEAR WITH THEIR NAMES ON (EACH STUDENT SHOULD SUBMITT THE PROPOSAL FOR THE WORK INCLUDING (HIS GROUP FOR THIS MANUSCRIPT , HIS COLLEAGUES IN THIS MANUSCRIPT AND HIS SUPERVISING PROFESSOR AND NAME OF THE WORK.....))

2- Any community medical work the student completed under supervision of a staff presenting the followings:

- Name of staff & position
- Date
- Site
- Results
- Obstacles

3- Hand out of his presentations (power point) and upload it

4- Medical pics & posters done by him or his group if present

5- Web page , or brochure constructed by him or his group if present

6- Conferences attended by him if present

7- Visits done to clinical departments to see relevant experiments studied in the (biochemistry , physiology , anatomy , histology departments)

8- Two to three education events attended by him

9- Two to three meetings with educational or clinical supervisors

10- Get started with scopus

- Portfolio scoring (Rubrics for evaluating portfolios):

- Each student should be rated as one of the followings :

- Out standing & he will be given 95% to 100% of the portfolio mark
- Acceptable & he will be given 70% to 75% of the portfolio mark
- Marginal & he will be given 60% to 65% of the portfolio mark
- Unacceptable & he will be given less than 60% of the portfolio mark

Schedule of Assessment Tasks for Students During the module		
Assessment task (, quiz, , mid module , group assignment,, speech, oral presentation)	Week Due	Proportion of Total %
Formative exam (on line)	2 nd week	Formative
Mid module (on line) NER – W4 MEN – W6 ERP – W11 URS – W14	NER – W4 MEN – W6 ERP – W10 URS – W14	23%
Professional behavior (done by tutors) (facilitators)	5 th week	
Assignment presentation (group project) *(Assessed against rubrics) *Uploaded *Each group should send their work to other groups *Each student should submit the proposal of the manuscript	2 nd to 5 th week	7% Percentage of marks of the portfolio
Final module Exam (on line) MCQ ---done on line ----60% Integrated cases ----- 15% SAQs --- done written -- 25%	End of module	40%
OSPE --- slides ----(on line)	End of module	20%
Oral sheet-----True and false (on line)	End of module	10%

Overall distribution of courses of block 3 for the Academic year (2020-2021)

Weeks	Anatomy	Physiology	Histology	Bio & community	Socail	Elective	Skill	Cases
1	28	20	10	30				
2								
3								
4								
5								
6								
7	20	20	18					
8								
9								
10								
11								
12	12	16	6					
13								
14								
15								

Hall lectures in building 3; hall 3008

Cases in building 3; hall 3001

Skill lab in hospital; hall

Practical Anatomy in Anatomy department (hospital; halls 1617 & 1619)

Practical Biochemistry in Biochemistry laboratory (hospital; hall 1606 for odd number groups) and Microbiology laboratory (hospital; hall 2629 for even number groups)

Practical Physiology in Physiology laboratory (building 2; hall 2345 for odd number groups) and Pharmacology 2623 laboratory (hospital; hall for even number groups)

Practical Histology in Histology laboratory (building 2; hall 2344A for odd number groups) and Pathology laboratories (hospital; hall 2617 for even number groups)

Block 3, Module NER, Wk 1 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN (Member of Biochemistry dep)	Scalp (member of Anatomy dep)		Face (member of Anatomy dep)	Social/Elective/Prof	
Monday	Practical Anatomy 5&6	Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12	
	Practical Biochemistry 1&2	Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8	
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10	
Tuesday	Hall lectures 1-6			Hall lectures 7-12		
	General overview of nervous system (member of Histology dep)	General overview of nervous system (member of Histology dep)		General overview of nervous system (member of Histology dep)	General overview of nervous system (member of Histology dep)	
	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
	Hall lectures 7-12			Hall lectures 1-6		
Anatomy of spinal cord (member of Anatomy dep)	Synapse (member of Physiology dep)	Anatomy of spinal cord (member of Anatomy dep)		Synapse (member of Physiology dep)		
Practical Anatomy 1&2	Practical Anatomy 3&4	Practical Physiology 7&8		Practical Physiology 9&10		
Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10		Practical Histology 11&12		
Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8			

Block 3, Module NER, Wk 2 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN (Member of Biochemistry dep)	Triangles of the neck (member of Anatomy dep)		Cranial cavity (member of Anatomy dep)	Social/Elective/Prof	
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12	
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8	
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10	
Tuesday	Hall lectures 1-6			Hall lectures 7-12		
	Neuronal pole & sensory code (member of Physiology dep)	Pain (member of Physiology dep)		Neuronal pole & sensory code (member of Physiology dep)	Pain (member of Physiology dep)	
	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
Wednesday	Hall lectures 7-12			Hall lectures 1-6		
	Pain & sensory lesions (member of Physiology dep)	Spinal reflexes (member of Physiology dep)		Pain & sensory lesions (member of Physiology dep)	Spinal reflexes (member of Physiology dep)	
	Practical Anatomy 1&2	Practical Anatomy 3&4	Practical Physiology 7&8	Practical Physiology 9&10		
	Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10	Practical Histology 11&12		
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8		

Block 3, Module NER, Wk 3 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30
Sunday	Online lectures				
	MEN (Member of Biochemistry dep)	Preauricular region & fossae at the side of the neck (member of Anatomy dep)		Fossae at the side of the neck (member of Anatomy dep)	Social/Elective/Prof
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10
Hall lectures 1-6		Hall lectures 7-12			
Tuesday	Tractology (member of Histology dep)	Tractology (member of Histology dep)		Tractology (member of Histology dep)	Tractology (member of Histology dep)
	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2
Wednesday	Hall lectures 7-12			Hall lectures 1-6	
	Motor cortex (member of Physiology dep)	Tractology (member of Histology dep)		Motor cortex (member of Physiology dep)	Tractology (member of Histology dep)
	Practical Anatomy 1&2	Practical Anatomy 3&4	Practical Physiology 7&8	Practical Physiology 9&10	
	Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10	Practical Histology 11&12	
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8	

Block 3, Module NER, Wk 4 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN	Submandibular region & arteries & veins of the neck (member of Anatomy dep)		Lower 4 cranial nerves & lymph nodes of the neck (member of Anatomy dep)	Spinal cord lesions (member of Physiology dep)	
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12	
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8	
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10	
Mid Module 1-6				Mid Module 7-12		
Tuesday	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
Wednesday	Hall lectures 7-12			Hall lectures 1-6		
	Brain stem (member of Anatomy dep)	RAS (member of Physiology dep)		Brain stem (member of Anatomy dep)	RAS (member of Physiology dep)	
	Practical Anatomy 1&2	Practical Anatomy 3&4		Practical Physiology 7&8	Practical Physiology 9&10	
	Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10	Practical Histology 11&12		
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8		

Block 3, Module NER, Wk 5 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN	Cerebellum (member of Anatomy dep)	Cerebellum (member of Histology dep)		Cerebellum (member of Physiology dep)	Diencephalon & external features of cerebral hemisphere (member of Anatomy dep)
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12		Practical Physiology 5&6	Practical Physiology 11&12	
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8	
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10	
Tuesday	Hall lectures 1-6		Break	Hall lectures 7-12		
	Functional areas (member of Anatomy dep)	Basal ganglia (member of Physiology dep)		Functional areas (member of Anatomy dep)	Basal ganglia (member of Physiology dep)	
	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
Wednesday	Hall lectures 7-12		Hall lectures 1-6			
	Internal capsule & blood supply of cerebral hemisphere (member of Anatomy dep)	Meninges & CSF (member of Anatomy dep)	Internal capsule & blood supply of cerebral hemisphere (member of Anatomy dep)	Meninges & CSF (member of Anatomy dep)		
	Practical Anatomy 1&2	Practical Anatomy 3&4		Practical Physiology 7&8	Practical Physiology 9&10	
	Practical Biochemistry 3&4	Practical Biochemistry 5&6		Practical Histology 9&10	Practical Histology 11&12	
	Skill lab 5&6	Skill lab 1&2		Cases 11&12	Cases 7&8	

Block 3, Module NER, Wk 6 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30
Monday	End Module NER				
Tuesday					
Wednesday	Mid Module MEN				

Block 3, Module ERP, Wk 7 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN	Chemical structure of hormones (member of Physiology dep)		Anatomy of pituitary gland (member of Anatomy dep)	Histology of pituitary gland (member of Histology dep)	Social/Elective/Prof
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12	
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8	
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10	
Tuesday	Hall lectures 1-6			Hall lectures 7-12		
	Hormones pituitary gland (member of Physiology dep)	Growth & prolacyin hormones (member of Physiology dep)		Hormones pituitary gland (member of Physiology dep)	Growth & prolacyin hormones (member of Physiology dep)	
	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
Wednesday	Hall lectures 7-12			Hall lectures 1-6		
	Hormones of posterior pituitary (member of Physiology dep)	Anatomy of thyroid gland (member of Anatomy dep)		Hormones of posterior pituitary (member of Physiology dep)	Anatomy of thyroid gland (member of Anatomy dep)	
	Practical Anatomy 1&2	Practical Anatomy 3&4	Practical Physiology 7&8	Practical Physiology 9&10		
	Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10	Practical Histology 11&12		
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8		

Block 3, Module ERP, Wk 8 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30		
Sunday	Online lectures						
	MEN	Histology of pineal body, thyroid & parathyroid glands (member of Histology dep)		Thyroid hormones (member of Physiology dep)	Social/Elective/Prof		
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12		Practical Physiology 5&6	Practical Physiology 11&12		
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8		
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10		
Tuesday	Hall lectures 1-6			Hall lectures 7-12			
	Parathyroid hormones & calcium (member of Physiology dep)	Anatomy of suprarenal gland (member of Anatomy dep)	Histology of suprarenal gland (member of Histology dep)	Break	Parathyroid hormones & calcium (member of Physiology dep)	Anatomy of suprarenal gland (member of Anatomy dep)	Histology of suprarenal gland (member of Histology dep)
	Practical Anatomy 7&8	Practical Anatomy 9&10			Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12			Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8			Cases 5&6	Cases 1&2	
Hall lectures 7-12			Hall lectures 1-6				
Adrenal cortex (member of Physiology dep)	Endocrine pancreas (member of Physiology dep)	APUD (member of Histology dep)	Adrenal cortex (member of Physiology dep)	Endocrine pancreas (member of Physiology dep)	APUD (member of Histology dep)		
Practical Anatomy 1&2	Practical Anatomy 3&4		Practical Physiology 7&8	Practical Physiology 9&10			
Practical Biochemistry 3&4	Practical Biochemistry 5&6		Practical Histology 9&10	Practical Histology 11&12			
Skill lab 5&6	Skill lab 1&2		Cases 11&12	Cases 7&8			
Wednesday	Hall lectures 7-12			Hall lectures 1-6			
	Adrenal cortex (member of Physiology dep)	Endocrine pancreas (member of Physiology dep)	APUD (member of Histology dep)	Adrenal cortex (member of Physiology dep)	Endocrine pancreas (member of Physiology dep)	APUD (member of Histology dep)	
	Practical Anatomy 1&2	Practical Anatomy 3&4		Practical Physiology 7&8	Practical Physiology 9&10		
	Practical Biochemistry 3&4	Practical Biochemistry 5&6		Practical Histology 9&10	Practical Histology 11&12		
Skill lab 5&6	Skill lab 1&2		Cases 11&12	Cases 7&8			

Block 3, Module ERP, Wk 9 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN	Pelvic walls (member of Anatomy dep)		Arteries & peritoneum of pelvis (member of Anatomy dep)	Social/Elective/Prof	
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12	
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8	
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10	
Tuesday	Hall lectures 1-6			Hall lectures 7-12		
	Scrotum & testis (member of Anatomy dep)	Histology of testis (member of Histology dep)		Scrotum & testis (member of Anatomy dep)	Histology of testis (member of Histology dep)	
	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
Wednesday	Hall lectures 7-12			Hall lectures 1-6		
	Testosterone (member of Physiology dep)	Extratesticular ducts (member of Histology dep)		Testosterone (member of Physiology dep)	Extratesticular ducts (member of Histology dep)	
	Practical Anatomy 1&2	Practical Anatomy 3&4		Practical Physiology 7&8	Practical Physiology 9&10	
	Practical Biochemistry 3&4	Practical Biochemistry 5&6		Practical Histology 9&10	Practical Histology 11&12	
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8		

Block 3, Module ERP, Wk 10 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30		
Sunday	Online lectures						
	MEN	Internal male genital organs (member of Anatomy dep)		Prostate (member of Histology dep)	Internal male genital organs (member of Histology department)		
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break Practical	Practical Physiology 5&6	Practical Physiology 11&12		
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8		
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10		
Mid Module 1-6				Mid Module 7-12			
Tuesday	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4		
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6		
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2		
Wednesday	Hall lectures 7-12				Hall lectures 1-6		
	Ovary (member of Anatomy dep)	Ovary (member of Histology dep)		Estrogen & progesterone (member of Physiology dep)	Ovary (member of Anatomy dep)	Ovary (member of Histology dep)	Estrogen & progesterone (member of Physiology dep)
	Practical Anatomy 1&2	Practical Anatomy 3&4		Practical Physiology 7&8	Practical Physiology 9&10		
	Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10	Practical Histology 11&12			
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8			

Block 3, Module ERP, Wk 11 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN	Fallopian tube (member of Anatomy dep)	Fallopian tube & uterus (member of Histology dep)		Uterus (member of Anatomy dep)	Social/Elective/Prof
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12		Break	Practical Physiology 5&6	Practical Physiology 11&12
	Practical Biochemistry 1&2	Practical Biochemistry 7&8			Practical Histology 1&2	Practical Histology 7&8
	Skill lab 3&4	Skill lab 9&10			Cases 3&4	Cases 9&10
Tuesday	Hall lectures 1-6				Hall lectures 7-12	
	Penis, female external genitalia & perineum (member of Anatomy dep)	Perineum (member of Anatomy dep)			Penis, female external genitalia & perineum (member of Anatomy dep)	Perineum (member of Anatomy dep)
	Practical Anatomy 7&8	Practical Anatomy 9&10			Practical Physiology 1&2	Practical Physiology 3&4
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
Wednesday	Hall lectures 7-12			Hall lectures 1-6		
	Anatomy of mammary gland (member of Anatomy dep)	Histology of mammary gland (member of Histology dep)	Puberty (member of Physiology dep)	Anatomy of mammary gland (member of Anatomy dep)	Histology of mammary gland (member of Histology dep)	Puberty (member of Physiology dep)
	Practical Anatomy 1&2	Practical Anatomy 3&4		Practical Physiology 7&8	Practical Physiology 9&10	
	Practical Biochemistry 3&4	Practical Biochemistry 5&6		Practical Histology 9&10	Practical Histology 11&12	
	Skill lab 5&6	Skill lab 1&2		Cases 11&12	Cases 7&8	

Block 3, Module ERP, Wk 12 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30
Monday					
Tuesday					
Wednesday	End Module ERP				

Block 3, Module URS, Wk 13 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN	Kidney (member of Anatomy dep)		Kidney (member of Histology dep)	Social/Elective/Prof	
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12	
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8	
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10	
Tuesday	Hall lectures 1-6			Hall lectures 7-12		
	Kidney (member of Histology dep)	GFR (member of Physiology dep)		Kidney (member of Histology dep)	GFR (member of Physiology dep)	
	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
Wednesday	Hall lectures 7-12			Hall lectures 1-6		
	GFR (member of Physiology dep)	Function of tubules (member of Physiology dep)	GFR (member of Physiology dep)	Function of tubules (member of Physiology dep)		
	Practical Anatomy 1&2	Practical Anatomy 3&4	Practical Physiology 7&8	Practical Physiology 9&10		
	Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10	Practical Histology 11&12		
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8		

Block 3, Module URS, Wk 14 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30
Sunday	Online lectures				
	MEN	Renal handling of sodium (member of Physiology dep)		Renal handling of sodium (member of Physiology dep)	Renal handling of glucose (member of Physiology dep)
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10
Mid Module 1-6		Mid Module 7-12			
Tuesday	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2
Wednesday	Hall lectures 7-12			Hall lectures 1-6	
	Mechanism of urine concentration (member of Physiology dep)	Mechanism of urine concentration (member of Physiology dep)		Mechanism of urine concentration (member of Physiology dep)	Mechanism of urine concentration (member of Physiology dep)
	Practical Anatomy 1&2	Practical Anatomy 3&4		Practical Physiology 7&8	Practical Physiology 9&10
	Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10	Practical Histology 11&12	
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8	

Block 3, Module URS, Wk 15 (Hybrid system)

Days	9-10.30	10.30-12	12-12.30	12.30-2	2-3.30	
Sunday	Online lectures					
	MEN	Blood supply of kidney (member of Anatomy dep)		Acid base balance (member of Physiology dep)	Social/Elective/Prof	
Monday	Practical Anatomy 5&6	Practical Anatomy 11&12	Break	Practical Physiology 5&6	Practical Physiology 11&12	
	Practical Biochemistry 1&2	Practical Biochemistry 7&8		Practical Histology 1&2	Practical Histology 7&8	
	Skill lab 3&4	Skill lab 9&10		Cases 3&4	Cases 9&10	
Tuesday	Hall lectures 1-6			Hall lectures 7-12		
	Ureter (member of Anatomy dep)	Urinary bladder (member of Anatomy dep)		Ureter (member of Anatomy dep)	Urinary bladder (member of Anatomy dep)	
	Practical Anatomy 7&8	Practical Anatomy 9&10		Practical Physiology 1&2	Practical Physiology 3&4	
	Practical Biochemistry 9&10	Practical Biochemistry 11&12		Practical Histology 3&4	Practical Histology 5&6	
	Skill lab 11&12	Skill lab 7&8		Cases 5&6	Cases 1&2	
Wednesday	Hall lectures 7-12			Hall lectures 1-6		
	Urinary bladder (member of Histology dep)	Urethra (member of Anatomy dep)	Urinary bladder (member of Histology dep)	Urethra (member of Anatomy dep)		
	Practical Anatomy 1&2	Practical Anatomy 3&4	Practical Physiology 7&8	Practical Physiology 9&10		
	Practical Biochemistry 3&4	Practical Biochemistry 5&6	Practical Histology 9&10	Practical Histology 11&12		
	Skill lab 5&6	Skill lab 1&2	Cases 11&12	Cases 7&8		

General Objectives for the module (MEN 201)

MEN 201: (Biochemistry, physiology, community)

A.1-1.1.1. Describe the different methods of energy production , collection , storage and their regulation (bioenergetics) (biochemistry)	
A2-1.1.1, 2, Describe the digestion and absorption process for the carbohydrates and oxidation of glucose by the major and minor pathways (biochemistry)	
A3-1.1.3, Describe the metabolism of the glycogen , galactose , and fructose and their encountered metabolic errors (biochemistry)	
A4-1.1.4, Discuss the blood glucose and its homeostasis and the medical causes of hypo and hyperglycemia and glucosuria (biochemistry) (case)	
A5-1.1.5, Discuss the fatty acids and glycerol metabolism (biochemistry) (case)	
A6-1.1.6, Discuss the Eicosanoid metabolism (biochemistry)	
A7-1.1.7, Discuss the phospholipid , cholesterol , plasma lipoprotein and ketone body metabolism with referral to lipotropic factors and fatty liver and atherosclerosis (biochemistry) (case)	
A8-1.1.8, Describe the different methods of deamination, metabolism of ammonia and metabolism of urea and creatinine. (biochemistry)	
A9-1.1.9, Describe the metabolism of individual amino acids and encountered metabolic errors (biochemistry)	
A10-1.1.10, Describe the chemistry , mode of action , and metabolic roles of insulin (biochemistry)	
A11-1.1.11 Discuss the types of diabetes , its metabolic disturbances , complications and diagnosis (biochemistry) (case)	
A12-1.1.12.describe the heme synthesis mechanism and its catabolism and the different types of jaundice (biochemistry)	
A13-1.1.13, Describe the purine and pyrimidine metabolism and hyper and hypouricemia (biochemistry)	
A14-1.1.14, Discuss the chemistry and mechanism of action and classification of enzymes and factors affecting enzyme action and the diagnostic value for some plasma enzymes.(biochemistry)	
A15-1.1.15, Discuss the caloric requirements , nitrogen balance , and essential nutrients (biochemistry)	
1.1.16, Discuss the chemistry, structure, and properties of fat soluble and water soluble vitamins and requirements and diseases resulting from vitamin deficiencies. (biochemistry)	

-Discuss the BMR and factors affecting it (physiology)	lectures
-Discuss the S.D.A. and food reactions (physiology)	lectures
-Discuss the temperature regulation (physiology)	lectures
-Discuss the theories for obesity and its complication and BMI (physiology)	lectures & (case)

-Discuss the nutrition in health and diseases (community)	lectures
-Discuss the preventive methods for diabetes and jaundice and obesity	lectures and (case) (community)

Professional and practical skills
B1- Performing the basic biochemical blood tests including - determination of the glucose in plasma (practical biochemistry)
B2- -detection of glucose , uric acid , and creatinine in urine (practical biochemistry)
B3-- Performing the basic biochemical blood tests including protein , cholesterol , creatinine , and uric acid in plasma (practical biochemistry)
B4- calculation of creatinine clearance (practical biochemistry)
Clinical skills
C1- Performing male and female urinary catheterization (skill lab)
Intellectual skills
D1-1.1.17, Discuss the metabolic roles of major and trace elements and diseases resulting from their deficiency (biochemistry)
D2-.1.1.18, discuss the role of nutrition in health and diseases (community)

General objectives for the module URS 203

(anatomy , physiology , histology , biochemistry)

A1-1.3.1. Describe the gross anatomy of the kidney , ureters and urinary bladder and suprarenal gland (anatomy)
A2- 1.3.2. Describe the microscopic histologic picture of the urinary bladder , ureters and kidney (histology)
A3- 1.3.3. Describe the physiologic anatomy of the kidney and structure and types of nephrons and mechanism of urine formation (physiology)
A4- 1.3.4. describe the renal blood supply , renal blood flow , plasma flow and filtration fraction (physiology)
A5- 1.3.5. Discuss the glomerular filtration rate (GFR) and forces causing filtration and factors affecting filtration and clinical conditions related (physiology)
A6- 1.3.6. Describe the mechanism of reabsorption of glucose , sodium , potassium and water and discuss different types of diuretics (physiology)
A7- 1.3.7. Discuss the function of the different tubular segments and mechanism of concentration of urine and different kidney function tests (physiology)
A8- 1.3.8. Discuss the acid base balance and role of kidney in this regulation (physiology)
Professional and Practical Skills:
B1- Dissecting different parts and organs related to the urinary system (practical anatomy)
B2- Identifying using the microscope the different tissue structures related to the urinary system (practical histology)
Clearance of substances (physiology)
B3-detection of glucose , uric acid , and creatinine in urine -calculation of creatinine clearance and (kidney function tests) (practical biochemistry)
Clinical skills
C1- Performing male and female urinary catheterization (skill lab)

General objectives for the module ERP 204

(anatomy, histology, physiology, biochemistry)

A1-1.4.1. Describe the gross anatomy of the bony pelvis and muscles attached to it (anatomy)
A2-1.4.2. Describe the gross anatomy of the pelvic vessels , nerves , and pelvic peritoneum (anatomy)
A3-1.4.3. Describe the gross anatomy of the pelvic organs and their relations (anatomy) The male and female genital organs
A4-1.4.4. Describe the gross anatomy of several endocrine glands in the body
A5- 1.4.5. Describe the microscopic histological picture of the male genital system (testes, genital ducts, vas deferens and male accessory glands) as well as the process of spermatogenesis (histology)
A6-1.4.6. Describe the microscopic histological structure of the female genital system (ovary, fallopian tubes, placenta, uterus, external genitalia, vagina, and mammary glands) (histology)
A7-1.4.7. Describe the histological structure of the neuroendocrine system (histology)
A8-1.4.8. Discuss the factors affecting spermatogenesis process , function of sertoli cells, blood testes barrier , testicular function tests and testosterone hormone (release , actions and clinical conditions related) (physiology)
A9-1.4.9. Discuss the ovarian and menstrual cycles and their hormonal control and placental hormones (physiology)
A10-1.4.10 Discuss the hormones secreted by the pituitary gland , thyroid gland , suprarenal gland , pancreas and their actions and their clinical correlated conditions (physiology) - Discuss the hormones of the suprarenal gland (glucocorticoids, mineralocorticoids, and androgen and suprarenal medulla hormones. (physiology)
A11-1.4.11. Discuss the synthesis , structure , and mode of action of hormones including sex hormones (biochemistry)
Professional and practical skills
B1- Dissecting the different parts and organs related to the pelvis (practical anatomy)
B2- Identifying using the microscope the different tissue structures related to the male and female genital systems and mammary glands (practical histology) Semen analysis , pregnancy tests , thyroid function tests , clinical conditions related to GH , cortisol , aldosterone , and insulin (physiology)
Clinical skills
C1- Performing male and female urinary catheterization (skill lab)

General objectives for the module (NER 202)

NER 202: (anatomy, physiology, Biochemistry, Histology)

A1-1.2.1. Describe the gross anatomy of the skull and vertebral column, scalp, face and triangles of the neck (anatomy)
A2-1.2.2. Describe the gross anatomy of the cranial cavity, meninges, cerebral cortex, cerebellum, diencephalon, brain stem, cranial nuclei and basal ganglia (anatomy)
A3-1.2.3. Describe the facial nerve, temporal and infratemporal fossa, and pterygopalatine fossa brain ventricles, fourth ventricle, CSF and brain meninges (anatomy)
A4-1.2.4. Describe the vessels of the head and neck, blood supply of the brain, spinal cord, and nerves of the head and neck (anatomy)
A5-1.2.5. Describe the suprahyoid and infrahyoid muscles brain sections (sagittal and transverse (TS) (anatomy)
A6-1.2.6. Describe the microscopic histological structure of the brain, brain stem, and spinal cord (histology)
A7-1.2.7. Describe the microscopic histological structure of the mid brain, pons, and medulla oblongata, cerebrum and cerebellum (histology)
A8-1.2.8. Describe the microscopic histologic structure of the meninges and brain barriers (histology) -Describe the BBB and cranial nuclei (histology) -Describe the sensory and motor tracts (histology)
A9-1.2.9 Describe the structure of the synapse and mechanism of synaptic transmission and factors affecting synaptic transmission and clinically correlated conditions (physiology)
A10-1.2.10 Discuss the types of receptors and receptor generator potential and characters of receptors and adaptation (physiology)
A11-1.2.11 Discuss the types of somatic sensations and their pathways and effect of lesions in the sensory pathways (physiology) -Discuss the pain mechanism and the pain control and mechanism and types of headache (physiology) -Discuss the sensory and motor areas, pyramidal and extrapyramidal tracts and internal capsule (physiology) -Discuss the basal ganglia and their function and effect of their lesion (physiology) -Discuss the cerebellum and its function and effect of its lesion (physiology) -Discuss the higher function control (limbic system) (physiology)
A12-1.2.12 Describe the reflex arc and the stretch reflex , muscle spindle , mono and polysynaptic reflexes and higher centers controlling stretch reflex and its function (physiology)
A13-1.2.13 Discuss the effect of complete transverse section of spinal cord and effect of other spinal cord lesions and the RAS (physiology)
1.2.15 Discuss the structure of the neurotransmitters (biochemistry)
Professional and practical skills
B1- Dissecting the different parts and organs related to the head and neck (practical anatomy)
B2- Identifying using the microscope the different tissue structures related to the CNS (practical) (histology)



B3- Thermal sensation, Tactile localization, discrimination, stereognosis, texture (practical physiology)
B4- Perform the different tendon jerks and planter reflex (practical physiology), and Examine the cranial nerves and perform Ataxia detecting tests and its Types (sensory and motor) and types of gait (practical physiology)
Clinical skills
C1- Performing male and female urinary catheterization (skill lab)
Intellectual skills
D1--1.2.14 describe the pyramidal and extrapyramidal tracts, internal capsule, the function of the basal ganglia, and cerebellum (physiology)

Cases for the Module (MEN 201) (Block-3) (Second year first term 2020-2021)

Case (1) diabetic obese woman :

Red week (1) of the MEN module & discussed in weeks (2 , & 3) :

A 60-year-old obese woman weighing 88 Kilograms , with a 48-year history of type 1 diabetes was admitted to the hospital for syncope. The patient complained recently from severe autonomic neuropathy with orthostatic hypotension. The syncope was ultimately attributed to the autonomic neuropathy and treated with midodrine.

She had been on NPH insulin 15 units and regular insulin 5 units before breakfast, regular insulin 5 units before dinner, and NPH insulin 6 units at bedtime. Her glucose control on this regimen had been satisfactory for her setting, with only occasional insulin reactions. The glycated hemoglobin (A1C) on admission was 7.8 percent.

On the first full hospital day, the 6:30 AM blood glucose level was 101 mg/dL (5.6 mmol/L).

Case (2) Atherosclerosis :

Rea in week (3) of the MEN module and discussed in weeks (4 , & 5) :

A 52-year-old executive was referred to our clinic for risk factor management after undergoing coronary computed tomography angiography (CTA) as part of an Executive Physical. He has no history of coronary artery disease and exercises regularly without experiencing anginal symptoms.

His family history is notable for a myocardial infarction (MI) in his father at the age of 52 years. He is a lifelong non-smoker. He does not take medications.

His blood pressure was 110/75. His exam was notable for being overweight with a BMI of 27, but was otherwise unremarkable.

His total cholesterol is 206 mg/dL, HDL-C is 46 mg/dL, triglycerides are 178 mg/dL, calculated LDL-C is 124 mg/dL, and non HDL-C is 160 mg/dL. His fasting glucose is 86 mg/dL. His Hgb A1c is 5.6%.

His 10-year risk based on the 2013 ACC/AHA pooled ASCVD risk estimator is 3.7%.

His coronary artery calcium (CAC) score is 120, which places him in the 87th percentile for his age, gender, and ethnicity.

Case 3 renal failure**(Red in week 5) of the MEN module and discussed in weeks 6 , and 7**

A 41 year-old male patient who has a longstanding history of hypertension and diabetes presents with a complaint of pruritis, lethargy, lower extremity edema, nausea and emesis. He denies any other medical illnesses.

On physical exam the patient is well-nourished male in moderate distress. Blood pressure 180/110, pulse 80, respirations 24 and he was afebrile. Body weight 76.5 kg. His fundoscopic findings was of A-V nicking and copper wire changes consistent with hypertensive injury. Cardiac exam had an S1, S2 and S4. The remainder of the exam was remarkable for 2+ lower extremity edema and superficial excoriations of his skin from scratching.

Laboratory Data

Chemistry		Normal Values	Urinalysis
Sodium	133	136-146 mmol/L	pH 6.0 Specific gravity 1.010 Protein 1+ Glucose negative Acetone negative Occult blood negative Bile negative Waxy casts
Potassium	6.2	3.5-5.3 mmol/L	
Chloride	100	98-108 mmol/L	
Total CO ₂	15	23-27 mmol/L	
BUN	170	7-22 mg/dl	
Creatinine	16.0	0.7-1.5 mg/dl	
Glucose	108	70-110 mg/dl	
Calcium	7.2	8.9-10.3 mg/dl	
Phosphorus	10.5	2.6-6.4 mg/dl	
Alkaline Phosphatase	306	30-110 IU/L	
Parathyroid Hormone	895	10-65 pg/ml	
Hemoglobin	8.6	14-17 gm/dl	
Hematocrit	27.4	40-54 %	
Mean cell volume	88	85-95 FL	

24-hour urine protein and creatinine - volume 850 ml, protein 600 mg/dl and creatinine 180 mg/dl. Renal ultrasound- Right kidney 9 × 6.0 cm, Left kidney 9.2 × 5.8 cm Both kidneys illustrate hyperechogenicity and no hydronephrosis.

Case 4 - jaundice

(Red in week 7) of the MEN module and discussed in weeks 8, and 9

A jaundiced, 4 day old, 3.1 kg, baby , appropriate for gestational age (AGA) Asian female infant born at term was born to a 25 year old A+ primiparous woman with gestational diabetes. The pregnancy was otherwise uneventful. Labor was augmented with Pitocin. The baby was discharged home on day of life 2 at which time her weight was down 4% from birth weight and she had mild facial jaundice. In the hospital, she was breast fed every 3 hours and had 2 wet diapers and one meconium stool over a 24 hour period. On day 3, her parents gave her water on two occasions as she appeared hungry despite regular and frequent breast feeding attempts. In addition, they noted an increase in the degree of jaundice, but failed to address it after being reassured by family members that jaundice is common. They also had an appointment to see their pediatrician the following day. In the office, on day 4, mother reports that she is breastfeeding the baby every three hours and that there have been 2 wet diapers per day. The urine is described as dark yellow in color and the stools appear dark green.

Exam: T 37.8, P 162, RR 55, BP 63/45. Weight 2.7 kg (25%ile), length 50 cm, head circumference 34 cm . The infant is jaundiced and irritable. The anterior fontanel is slightly sunken, the oral mucosa is tacky, and there is jaundice to the lower extremities. No cephalohematoma or bruising is present. The sclera of both eyes are icteric. Muscle tone and activity are normal. The remainder of the physical exam is normal.

The total bilirubin is 20 mg% with a direct fraction of 0.7 mg%. She is admitted to the hospital for phototherapy, supplementary formula feedings, and lactation consultation. By the following day, the bilirubin has decreased to 12 mg% and she is discharged home on breast milk feedings. She baby is scheduled for follow-up with both the pediatrician and the lactation consultant.

Case 5 - Gout

(Red in week 9) of the MEN module and discussed in weeks 10 , and 11

A 52-year-old male presented with severe pain in his wrists and right big toe, which was accompanied by inflammation and erythema of the joints. The patient had previously been diagnosed with acute gouty arthritis approximately 7 years ago, but had not experienced another acute attack since his original diagnosis. He had been taking simvastatin 40 mg nightly for hyperlipidemia for 7 years, 20 mg lisinopril daily for hypertension for 10 years, and hydrochlorothiazide 25 mg, also for hypertension, which was recently added two months ago. The patient had been steadily gaining weight over the last few years and was now about 50 lbs overweight. He stated that he drinks about a six pack of beer every day. The PCP suggested that he discontinue taking his hydrochlorothiazide and start taking amlodipine 5 mg daily, and to take naproxen 750 mg initially, followed by 250 mg every 8 hours until the symptoms of his gouty attack subsided. The PCP also suggested that along with exercise, the patient stop drinking or, at the very least, cut down on his alcohol intake and consider beginning a low-purine diet.

Case 6 – vitamin deficiency

(Red in week 11) of the MEN module and discussed in weeks 12 , and 13

A 12-year-old boy with a 2-month history of reduced visual acuity was referred to a corneal specialist by an ophthalmologist. He had a history of high functioning autism and iron deficiency. At age 9, he had developed right optic nerve neuropathy, which had reduced his right eye visual acuity to 6/60 and was attributed to an Epstein-Barr virus infection. There was no significant family history. Dietary history revealed a restricted diet, consisting only of hot chips and nuggets.

On presentation, the patient was short, extremely underweight and pale, with mild proximal muscle weakness. Visual examination showed only light perception in the right eye and 1/60 in the left eye. A relative afferent pupillary defect (RAPD) was noted in the right eye. Supratemporal field loss was noted in the left eye. Slit lamp examination revealed bilateral corneal and conjunctival keratinisation normal anterior and posterior chambers, and clear lenses. He had marked pallor of the right optic nerve disc and temporal pallor of the left disc.

Investigations:

Systemic investigation revealed hypovitaminosis A ($< 0.4 \mu\text{mol/L}$ (reference range $0.9\text{--}2.5 \mu\text{mol/L}$)); anaemia (haemoglobin= 109 g/L); low iron levels despite iron supplementation; and low folate levels. Results for screening for haemolytic anaemia were unremarkable.

CT and MRI of the brain showed narrowing of the left optic canal and internal auditory canal secondary to bony medullary expansion . Electrophysiology confirmed bilateral optic nerve dysfunction. There was mild to moderate bilateral sensorineural hearing loss above 4000 Hz. His bones and skull were found to be generally osteopenic on skeletal survey, with mild thinning of cortices in the long bones. He had normal electrophoresis, rendering thalassaemia unlikely; vitamin C, vitamin D and calcium levels were within normal limits.

Cases for the module (NER 202) :

Meningitis

Red in week (1) of the NER module and discussed in week (2 & 3) :

A previously well 16-year-old African-American young man presented to the Emergency Department (ED) at October 6 university Children's Hospital with persistent vomiting, severe headaches, and decreased energy of 5 weeks duration. Five weeks earlier, the patient had presented to his pediatrician with headache and vomiting. He was treated with oral amoxicillin for presumed streptococcal pharyngitis, but the group A Streptococcus antigen test was negative. Three weeks later, he presented to a local ED with worsening nausea, vomiting, dizziness, poor oral intake, worsening headaches, neck stiffness and fever. Physical examination was significant for a strange affect, belligerent behavior and neck stiffness, but no other abnormalities were found. The evaluation included an examination of cerebrospinal fluid (CSF) which revealed a red blood cell count (RBC) of $3/\text{mm}^3$; white blood cell count (WBC) of $380/\text{mm}^3$ with 25% neutrophils, 66% lymphocytes and 9% monocytes; protein 148 mg/dL; and glucose 15 mg/dL. He was treated with ceftriaxone for possible bacterial meningitis. Further evaluation revealed a normal chest radiograph, no induration in response to a purified protein derivative (PPD) tuberculin skin test, a normal cranial computed tomography (CT) scan and a normal electroencephalogram. The CSF culture had no growth of bacteria and no organisms identified on Gram stain. After 4 days of treatment with ceftriaxone, he was discharged home with a revised diagnosis of presumed viral meningitis.

Case (2) Complete transverse section of spinal cord :

Red in week (3) of the NER module and discussed in week (4 , & 5) :

An 85-year-old woman was brought to the emergency room by her son due to a penetrating stab injury on the anterior neck. A kitchen knife was deeply stuck in the midline of the anterior neck, but there was no active bleeding . The patient was semiconscious, and bradycardia and hypotension were noted. She had been diagnosed to have dementia and depression a long time previously. She thrust herself against a knife positioned at the level of the neck for the purpose of committing suicide, and the knife penetrated her neck. She bowed forward a few more times while the knife was stuck in her neck so that it would get deeper. Initial imaging of the neck using Computed Tomography (CT) with contrast enhancement showed the knife had penetrated the spinal cord completely, and there was a fracture of the T1 vertebral body. The emergency operation was performed immediately under general anesthesia.

The patient was tetraplegic, and her body temperature and Blood Pressure (BP) fluctuated postoperatively. On the 4th day after the surgical procedure, severe hypotension (BP, 50/20 mmHg) and bradycardia (pulse rate, 26) were noted. Cardiopulmonary resuscitation was performed immediately, and the vital signs were restored. Conservative treatment was administered later.

Cases for the module ERP 204

Case (1) Menstrual and ovarian cycles :

Red in week (1) of the ERP module and discussed in week (2 , 3)

Ann, a newlywed college student was asking what they will be taking in the second year medicine (M2) at October 6 university.

Munira told her that the students learn about the follicular and luteal phases of the menstrual cycle, the hormones involved, and the negative feedback that occurs. By the end of the case, students will understand the human female menstrual cycle and be able to predict when ovulation occurs during any given cycle.



Case (2)

Red in week (3) of the ERP module and discussed in week (4 , 5) :

3-year-old boy was born by lower segment caesarean section following a normal antenatal scan at 42 weeks. He was found to have distal hypospadias at neonatal examination. He underwent stage-1 correction surgery of distal hypospadias at the age of 17 months uneventfully. Stage-2 correction surgery of distal hypospadias was planned at 3 years of age. Pre-operatively, his blood pressure was found to be 145/97; as such his surgery was cancelled and he was referred to Paediatric clinic for hypertension investigations.

Cases for the module URS 203

Case 1: A Neighbor's concern about his reports

Red in week (1`) of the URS module and discussed in week (2 , 3)

Akmal is a second-year student at October 6 university. One afternoon, one of his neighbors visited him asking his opinion about his urine analysis report and Ultrasonogram. Actually as the appointment of Mr Akmal with his doctor was 3 days later, he was worried about his reports. Thinking that as Hisham is a medical student, he might help him to assure, that the report findings were not serious. The urine analysis showed presence of protein of 3 plus (increased) and albumin was also detected. The ultrasound showed normal kidneys, ureters and urinary bladder.

Hisham had studied the normal urine analysis in the college and knows that serum proteins as albumin are normally not filtered from the blood to the urine.

Case (2) :

Red in week (2) of the URS module and discussed in weeks (4 , 5)

October 6 university team at a Seminar

6 students of M2 and two professors were selected from faculty of medicine –october 6 university to attend an international seminar on acid base balance. There were many lectures said by reputed speakers from many countries all over the world. In the afternoon session of the 2nd day, the facilitator of the session divided the participants into small working groups and gave them some clinical scenarios. October 6 university group received a case with following history:

“A 72-year-old female was found in her house on the floor with the gas stove switched on with no flame. Her neighbours could not tell the ER doctor for how long she had been there as such. Femoral arterial blood gases were collected about five minutes after her arrival in the hospital, which were as follows:

pH : 7.27 (Normal range: 7.35 to 7.45*)

pCO₂ : 28 mmHg (Normal range: 35-45 mmHg*)

pO₂ : 79 mmHg (Normal range: 80-100 mmHg*)

HCO₃ : 20 mmol/l (Normal range: 23-28 mmol/l*)

Following is the discussion in the group regarding the above case;

- 1st Student: The pH is low, I think it is acidosis.
- 2nd student: But which acidosis, metabolic acidosis or respiratory acidosis?
- Professor: Actually, it is metabolic acidosis because the bicarbonate is low.
- 3rd student: Sorry, I am little bit confused. Why it is not respiratory alkalosis, as the pCO₂ is low too and I remembered from the seminar that low pCO₂ is the feature of respiratory alkalosis?
- Professor: I am glad you remembered this, but please note that pH is low than normal, so it is acidosis not alkalosis and can someone else tell me why the PCO₂ is too low?
- 2nd student: I think there is something going on with her respiration too.
- 3rd student: I guess that since it is metabolic acidosis where the primary acid base change is a decrease in serum HCO₃, there should be a compensatory hyperventilation, expelling CO₂ out of body.
- Professor: Yes, you are right, I am so happy about your progress. Now there is question for all of you. What are the other compensatory mechanisms by which our body corrects different acid base disorders?