Peer Revision

Reviewers	University	Date of Revision
- Prof. Dawlat Salem	Cairo	10/12/2011
- Prof. Ahmad K. Mansur	Mansura	28/11/2011

Program Specification of Master Degree in Internal Medicine

Sohag University **Faculty of Medicine**

A. Basic Information:

1. Program title: Master degree in internal medicine.
2. Program type: Single.
3. Faculty: Faculty of Medicine
4. Department: Internal medicine.
5. Coordinator: Lec./ Mohamed Mustafa Ahmed Malak.
6. External evaluator: Prof. Yosrea Abd-Elrahman (Prof of internal medicine, Assiut University).
7. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

B. Professional Information:

1. Aims of the Program:

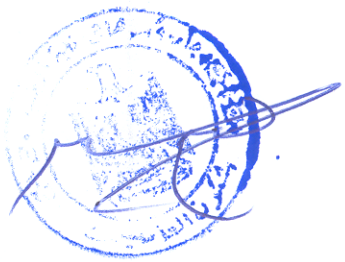
The aim of this program is to provide the postgraduate with the medical knowledge and skills essential for the practice of specialty and necessary to gain further training and practice in the field of internal medicine.

1 Scientific knowledge essential for the practice of internal medicine according to the international standards.
2 Skills necessary for proper diagnosis and management of patients in the field of internal medicine including diagnostic, problem solving and decision making.
3 Ethical principles related to the practice in this specialty.
4 Active participation in community needs assessment and problems identification.
5 Maintenance of learning abilities necessary for continuous medical education.
6 Maintenance of research interest and abilities.

2. Attributes of the student:

3.

1 Mastering the basics of scientific research methodologies.
2 The application of the analytical method and used in the field of internal medicine
3 The application of specialized knowledge and integrate it with the relevant knowledge in practice.
4 Be aware of the problems and has modern visions in the field of internal medicine
5 Identify problems in the field of internal medicine and find solutions to them.
6 Mastery of professional skills in this specialty and use of the appropriate recent technologies supporting these skills.



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3 The application of specialized knowledge and integrate it with the relevant knowledge in practice.
4 Be aware of the problems and has modern visions in the field of internal medicine
5 Identify problems in the field of internal medicine and find solutions to them.
6 Mastery of professional skills in this specialty and use of the appropriate recent technologies supporting these skills.

7 Communicate effectively and the ability to lead work teams.
8 Decision-making in his professional contexts.
9 To employ and preserve the available resources to achieve the highest benefit.
10 Awareness of his role in the community development and preservation of the environment at the lights of both international and regional variables.
11 Reflects the commitment to act with integrity and credibility, responsibility and commitment to rules of the profession.
12 Academic and professional self development and be capable of continuous learning

4. Intended Learning Outcomes (ILOs):

A. Knowledge and Understanding

By the end of the study of master program in Internal Medicine the graduate should be able to:

a1. Describe the various functions and anatomy of body systems.
a2. List indications, pharmaco-kinetics and side effects of commonly used drugs in the field of internal medicine.
a3. Describe the basic pathology of common internal medicine diseases.
a4. Explain the common diagnostic and laboratory techniques necessary to establish diagnosis of common illness.
a5. Describe the mutual influence between professional practice and its impacts on the environment.
a6. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of internal medicine.
a7. Enumerate the principles and fundamentals of quality of professional practice in the field of internal medicine.
a8. Trace the spectrum of clinical symptomatology related to different body systems.
a9. Appreciate the clinical spectrum of common medical conditions with multisystem affection.
a10. Describe the concept of emergency management of acute medical disorders (acute abdomen, acute cardiac illness, coma,……..).
a11. List the basics and ethics of scientific research.

B. Intellectual Skills:

By the end of the study of master program in internal medicine the Graduate should be able to:

1. Formulate appropriate management plans for individual patients presenting with the most common medical disorders (cardiac, hepatic, GIT, hematological, neurological, …..).
2. Make decisions regarding common clinical situations using appropriate problem solving skills.
3. Select from different diagnostic alternatives to reach a final diagnosis.

4. Interpret X-ray and CT films, blood gas, blood picture, bone marrow, liver and renal function reports covering the most important medical conditions.
5. Demonstrate appropriate professional attitudes and behaviors in different practice situations in cardiology hepatic diabetic ,…..).
6. Link between knowledge for professional problems' solving.
7. Conduct research studies and / or write a scientific study on a research.
8. Assess risk in professional practices in the field of internal medicine.
9. Plan to improve performance in the field of internal medicine.
10. Identify medical problems and find solutions.
11. Analyze reading of research and issues related to the internal medicine.

C. Professional and Practical Skills:

By the end of the study of master program in internal medicine the Graduate should be able to:

1. Describe the basic and modern professional skills in the area of internal medicine.
2. Take a good medical history.
3. Conduct a proper general examination.
4. Identify normal and abnormal physical signs.
5. Conduct proper regional examination of the thorax and abdomen by inspection, palpation, percussion and auscultation to identify: surface anatomy of internal organs, normal physical signs and abnormal physical signs.
6. Writ and evaluate medical reports.
7. Identify a clear priority plan in the patient's management.
8. Recognize the indications for consulting higher levels or reference to other disciplines.
9. Develop the clinical skills of eliciting abnormal physical signs in various systems examination.
10. Interpret the significance and relevance of abnormal physical signs.
11. Identify the appropriate supportive investigations relevant to a particular patient and adequately interpret the results.
12. Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis in various body systems affection.
13. Identify adequate logistics for further patient assessment and management.
14. Become acquainted with special approach to the diagnosis of common medical conditions related to the specialty.

D. General and Transferable Skills:

By the end of the study of master program in internal medicine the Graduate should be able to:

1. Describe capabilities and skills of communications with fellows.
2. Communicate effectively with patients and their families.
3. Deal perfectly with the computer.
4. Assess himself and identify personal learning needs.

5. Use different sources for information and knowledge.
6. Describe information through the internet.
7. Develop rules and indicators for assessing the performance of others.
8. Work in a team work.
9. Manage scientific meetings according to the available time.
10. Learn himself continuously.

5. Academic Standards:

Sohag faculty of medicine adopted the general National Academic Reference Standards (NARS) provided by the national authority for quality assurance and accreditation of education (naqaae) for postgraduate programs. This was approved by the Faculty Council decree No.6854, in its cession No. 177 Dated: 18/5/2009. Based on these NARS; Academic Reference Standards (ARS) were suggested for this program. These ARS were revised by external evaluator, and approved by the Faculty Council decree No. 7528, in its cession No. 191 dated: 15/3/2010. The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its cession No.60. dated 26-12-2011.

6. Curriculum Structure and Contents:

5a- Program duration: 6 semesters (3 years).

5b- Program structure (total 48 credit hours)

4b.i- Number of hours/week:

	hours /week		
Subject	**Lectures**	**Practical**	**Clinical**
First Part:			
Anatomy	**2**	**---**	**---**
Pathology	**1**	**2**	**---**
Microbiology	**1**	**2**	**---**
Physiology	**2**	**---**	**---**
Clinical Pharmacology	**1**	**2**	**---**
Clinical Pathology	**1**	**2**	
Biostatistics & computer and research methodology	**1**	**2**	**----**
Second Part:			
Internal medicine	**5**	**---**	**6.6**

%	No	Item		code
100	50	Compulsory		
0	0	Elective		
0	0	Optional		

20	10	credit hours of basic sciences courses	b.iii
0	0	credit hours of courses of social sciences and humanities	b.iv
50	25	credit hours of specialized courses:	b.v
8	4	credit hours of other course	b.vi
10	5	Practical/Field Training	b.vii
30 48 12	15 24 6	Program Levels (in credit-hours system): Level 1: 1st part Level 2: 2nd Part Level 3: Thesis	b.viii

7. Program Courses: 8 courses are compulsory

6،1- Level of Program:

Semester…1…..

First part

a. Compulsory

		Number of hours / week			
		Lect.	Lab.	clinical	
First part:					
Physiology	2	2	---	---	a1, b4, c4, d5
Pharmacology	3	1	2	---	a2, b1, c7, d5
Pathology	3	1	2	---	a3, b4, b6, c6, d1, d5
Clinical Pathology	3	1	2	---	a4, b4, c6, d5
Microbiology	3	1	2	---	a4, b4, c11, d5, d6
Anatomy	2	2	---	---	a1, b3, c5, d5, d6
Biostatistics & computer and research methodology	3	1	2	---	d3,d5
Second part:					
Internal Medicine	11.6	5	---	6.6	a4, a5, a6, a7, a8, a9, a10, a11, b1, b2, b3, b4, b5, b6, b7, b8, b9, b10, b11, c1, c2, c3, c4, c5, c6, c7, c8, c9, c10, c11, c12, c13, c14, d1, d2, d4, d5, d6, d7, d8, d9, d10

8. Program Admission Requirements

I- General Requirements.

1. Candidate should have either:

i. MBBch degree from any Egyptian Faculty of Medicine or
ii. Equivalent Degree from Medical Schools abroad approved by the ministry of high Education.

2. Candidate should pass the house office training year.
3. Those who are not university hospital residents should pass a training for at least 12 months in one of the known hospitals.
4. Follow postgraduate bylaw Regulatory rules of Sohag Faculty of Medicine approved by the ministerial decree No. (44), dated 6/1/2010.

II. Specific Requirements:

- Candidates graduated from Egyptian Universities should have at least "Good Rank" in their final year examination/ cumulative years, and grade "Good Rank" in internal medicine course too.
- Candidate should know how to speak & write English well.
- Candidate should have computer skills.

9. Regulations for Progression and Program Completion

Duration of program is 50 credit hours (≥4 semesters ≥3 years), starting from registration till 2nd part exam; divided to:

First Part: (15 Credit hours ≥6 months ≥1 semester):

1 Program-related basic & clinical sciences & research Methodology, Ethics & medical reports, Biostatistics and computer.

2 At least six months after registration should pass before the student can ask for examination in the 1st part.

3 Two sets of exams: 1st in October — 2nd in April.

4 At least 50% of the written exam is needed to pass in each course.

5 For the student to pass the first part exam, a score of at least 60% (Level D) in each course is needed.

6 Those who fail in one course need to re-exam it only for the next time only, and if re-fail, should register for the course from the start.

Thesis/Essay(6 Credit hours ≥6 months=1 semester):

1 Completion of the 1st part credit hours and passing the exams are pre requisites for documentation of the **Thesis/Essay** subject.

- Should be completed, defended and accepted after passing the 1st part examination, and at least one month before allowing to enter 2nd part final examination.
- Accepting the thesis is enough to pass this part.

Second Part: (24 Credit hours ≥18 months= 3 semesters):

1 Program related specialized sciences of internal medicine courses.

2 Completion of the 1st part credit hours and passing the exams are pre requisites for documentation of the 2nd part courses.

3 After passing at least:

- University hospital residents: 36 months residency in the department of Internal Medicine.

- Residents in other places: Completed 36 months residency; 12 months of them training in the department of Internal Medicine.

4 The students should pass the 1st part before asking for examination in the 2nd part.

- Fulfillment of the requirements in each course as described in the template and registered in the log book (5 Credit hours; with obtaining ≥75% of its mark) is a prerequisite for candidates to be assessed and undertake part 1 and part 2 examinations; the credit hours of the logbook are calculated as following:
  - Each Cr. Hr.= 60 working Hrs.
  - Logbook= 5 Cr. Hr. X 60 working Hrs = 300 Working Hrs.
  - Collection of working Hrs. is as following:

Activity		**Hrs**
Grand rounds	**اجتماع علمى موسع**	**6**
Training courses	**دورات تدريبية**	**12/ day**
Conference attendance	**حضور مؤتمرات علمية** **داخلى** **خارجة**	 **12/day** **18/day**
Thesis discussion	**حضور مناقشات رسائل**	**6**
Workshops	**حضور ورش عمل**	**12/day**
Journal club	**ندوة الدوريات الحديثة**	**6**
Seminars	**لقاء علمى موسع**	**6**
Morbidity and Mortality conference	**ندوة تحليل المخاطر المرضية أوالوفاة**	**6**
Self education program	**برنامج التعليم الذاتى**	**6**

2 Two sets of exams: 1st in October - 2nd in April.

3 At least 50% of the written exam is needed to pass in each course.

4 For the student to pass the 2nd part exam, a score of at least 60% (Level D) in each course is needed.

10. Methods of student assessments:

The assessed ILOs	weight	Method of assessment
- General transferable skills, intellectual skills		1-Activities
- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills	50 % 	2-Written Exams: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%
-Practical skills, intellectual skills, general transferable skills		3-OSCE/ OSPE
- Knowledge, Intellectual skills, General transferable skills		4-Structured Oral Exams

Assessment schedule:

Part I:

- Clinical Pharmacology: Written Exam (2 hours) + Structured oral Exam+ OSPE
- Human Anatomy & Embryology: Written Exam (2 hours) + Structured oral Exam
- Clinical and Chemical Pathology: Written Exam (2 hours) + Structured oral Exam+ OSPE
- Medical Physiology: Written Exam (2hours) + structured oral Exam
- Medical Microbiology and Immunology: Written Exam (2 hours) + Structured oral Exam +OSPE
- Pathology: Written Exam (2 hours) + Structured oral Exam +OSPE
- Biostatistics & Computer and Research Methodology: Written Exam (2 hours) + Structured oral Exam+ OSPE

Part II:

- Internal Medicine and its subsidiaries: Two Written Exams (3 hours for each) + OSCE + Structured oral Exam.

11. Evaluation of Program:

Evaluator	Tool	Sample
1- Senior students	Questionnaire	39
2- Alumni	Questionnaire	35
3- Stakeholders (Employers)	Questionnaire	38
4-External Evaluator(s) (External Examiner(s))	Report	1
5- Other	---	---

Course Specification of Clinical Pharmacology in Master Degree of Internal Medicine

University: Sohag. **Faculty of Medicine.**

1. Program on which this course is given: Master degree in internal medicine.
2. Major or minor element of program: Minor.
3. Department offering the program: Internal medicine department.
4. Department offering the course: Clinical Pharmacology department.
5. Academic year/level: 1st part.
6. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

A. Basic Information

Title: Clinical Pharmacology
Code: PHA 0513-200

Total hours:

Lectures	Practical	Tutorial	Total hours
15	30	-	45

B. Professional Information

1 – Overall Aims of Course

By the end of the course the postgraduate student should be efficiently able to have basic knowledge of the microorganisms affecting human beings all over the world and particularly in Egypt , and learn to use the knowledge gained from applied microbiology to better understand the pathology, clinical symptoms, complications and the laboratory tests needed for diagnosis of each disease, in particular how to use microbiological testing in determining antibiotic prescription. The student is also expected to acquire advanced knowledge about the structure and function of the immune system and the role of the immune system in health and disease.

2 – Intended Learning Outcomes of Course (ILOs):

a Knowledge and Understanding:

By the end of the course the student is expected to:

a.1 List indications, pharmaco-kinetics and side effects of commonly used drugs in the field of internal medicine.

b **Intellectual Skills:**

By the end of the course the student is expected to:

b.1 Formulate appropriate drug therapy for medical disorders (cardiac, hepatic, GIT, hematological, neurological, …..).

c Professional and Practical Skills:

By the end of the course the student should have the ability to

c.1 Identify a clear priority plan in the patient's management by knowledge of indications, contraindications and side effects of various drugs.

d General and Transferable Skills:

By the end of the course the student should have the ability to:

d.1 Use different sources for information and knowledge to know more about new drugs.

3- Contents:

Topic	No. of hours	Lecture	Tutorial/ Practical
Medical pharmacology.	4.5	1.5	3
Pharmacodynamics	4.5	1.5	3
Pharmacokinetics	4.5	1.5	3
Autacoids	4.5	1.5	3
Drugs of autonomic nervous system.	4.5	1.5	3
Drugs of the CNS.	4.5	1.5	3
Drugs of the CVS.	4.5	1.5	3
Drugs of the GIT.	4.5	1.5	3
Drugs of the respiratory system.	4.5	1.5	3
Chemotherapy and hormones.	4.5	1.5	3
Total	45	15	30
Credit	2	1	1

4– Teaching and Learning Methods:

4.1- Lectures.
4.2- Department practical class and notes.
4.3- Practical lessons.

5- Student Assessment Methods:

The assessed ILOs	Method of assessment
- General transferable skills, intellectual skills	5.1- Observation of attendance and absenteeism.
- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,	5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%
- Knowledge, Intellectual skills, General transferable skills	5.3-Structured Oral Exam

Assessment Schedule:

Assessment 1…Written exam Week 24.
Assessment 2… Structured Oral Exam Week 24.

Weighting of Assessments:

Written Examination	50%
Structured Oral Exam.	50%
Total	100 %

6- List of References:

6.1- Essential Books (Text Books)

Goodman and Gilman (2016) Manual of Clinical Pharmacology and therapeutics. Mc Graw Hill, Katzung (2018),

6.2- Recommended Books

Clinical Pharmacology book, Assiut university.

6.3- Periodicals, Web Sites, etc

1-American Journal of Pharmacology
2- British journals of pharmacology.
3- WWW.Google. COM
4- WWW.yahoo.com.
5- www.sciencedirect.com.

7- Facilities Required for Teaching and Learning

1. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
2. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.
3. COMPUTER PROGRAM: for designing and evaluating MCQs

Course Coordinator: Dr. Hala Ibraheem Madkoor .

Head of Department: Dr/ Sanaa Abd El-Aal

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised: 1/12/2018

Course Specification of Human Anatomy & Embryology in Master Degree of Internal Medicine

University: Sohag. **Faculty of Medicine**

1. Program on which this course is given: Master degree in internal medicine.
2. Major or minor element of program: Minor.
3. Department offering the program: Internal medicine department.
4. Department offering the course: Human Anatomy & Embryology department.
5. Academic year/level: 1st part.
6. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

A. Basic information:

Title: Human Anatomy & Embryology.
Code: ANA 0513-200

Total hours:

Module	Lectures	Practical	Tutorial	Total hours
Human Anatomy & Embryology	30	-	-	30

A. Professional information:

1. Overall Aims of Course

By the end of the course the student should be able to have the have the professional knowledge about the anatomy and embryology of the abdomen, heart and chest

2. Intended Learning Outcomes of Course (ILOs):

a) Knowledge and Understanding:

By the end of the course the student is expected to:

a.1 Describe the anatomy of thorax, abdomen, head and neck.

b) **Intellectual Skills:**

By the end of the course the student is expected to:

b.1 Make decisions regarding common clinical situations using appropriate problem solving skills by knowledge of surgical anatomy.

c) Professional and Practical Skills:

By the end of the course the student should have the ability to

c.1 Conduct proper regional examination of the thorax and abdomen by inspection, palpation, percussion and auscultation to identify: surface anatomy of internal organs, normal physical signs and abnormal physical signs.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d.1 Use different sources for information and knowledge to gain more about human body.

d.2 Gain information through the internet to know the new about human anatomy.

3. Conents:

Topic	No. of hours
Anatomy of the heart Anatomy of the chest. Anatomy of the abdomen	10 10 10
	30

4- Teaching and Learning Methods

4.1- lectures.
4.2- practical lessons.
4.3- Assignments for the students to empower and assess the general and transferable skills.

5- Student Assessment Methods:

The assessed ILOs	Method of assessment
- General transferable skills, intellectual skills	5.1- Observation of attendance and absenteeism.
- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,	5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%
- Knowledge, Intellectual skills, General transferable skills	5.3-Structured Oral Exam

Assessment Schedule:

Assessment 1 Final written exam Week 24
Assessment 2 Final Structured Oral Exam Week 24

Weighting of Assessments:

Final-term written examination 50%
Structured Oral Exam 50%
Total 100 %

6- List of References:

6.1- Essential Books (Text Books)
- Fitzgerald M.J.T. (2016): The anatomical basis of medicine and surgery. By Standing s., ELIS H., Healy J. C., Johnson D. and Williams A. Gray's Anatomy. Elsevier; London, New York. Sydney. Toronto.
6.2- Recommended Books
- Stevens A. and Lowe J. S. (2015): Human histology; 5th edition; edited by

Elsevier Mosby
- Colored Atlas of anatomy.
- Martini F. H., Timmons M. J. and McKinley M.P. (2015): Human anatomy; 10 edition.
- Tortora G. J. and Nielson M.T. (2016): Principles of human anatomy 14 edition; Edited by John Wiley and Sons ; United states.
- McMinn R.M.H. (2017): Lasts anatomy regional and applied chapter 7; 14 edition, edited by Longman group UK.

(3) Periodicals,Web sites:

1 American journal of physiology.

2 Journal of applied physiology.

3 Journal of clinical endocrinology and metabolism.

4 Physiological Review.

7- Facilities Required for Teaching and Learning:

1. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
2. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

Course Coordinator: Dr . Mohamed Al- Badry

Head of Department: Dr. Mohamed Al- Badry.

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised: 1/12/2018

Course Specification of Medical Physiology in Master Degree of Internal Medicine

Sohag University **Faculty of Medicine**

1. Program on which this course is given: Master degree in internal medicine.
2. Major or minor element of program: Minor.
3. Department offering the program: Internal medicine department.
4. Department offering the course: Medical Physiology department.
5. Academic year/level: 1st part.
6. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

A. Basic Information

Title: Medical Physiology
Code: PHY 0513-200

Total hours:

Module	Lectures	Practical	Tutorial	Total hours
Medical Physiology	30	-	-	30

B. Professional Information

1. Overall Aims of Course

to prepare a internal medicine physician oriented with the physiology of the cardiovascular system including that of haemorrhage & types of shock and proper management also that concerned with the regulation of body temperature and respiratory physiology. in addition , graduates should have enough knowledge about some endocrine glands . And it is very important to know the secretory and motility functions of G.I.T.

2. Intended Learning Outcomes of Course (ILOs):

a) **Knowledge**:
By the end of this course, students should have adequate knowledge to:
a.1 Describe the various functions of body systems.

b) Intellectual Skills:
By the end of the course, the students is expected to be able to :
b.1 Interpret laboratory abnormalities based on previous knowledge of normal values.

c) Professional and Practical Skills:
By the end of the course, the students is expected to be able to :
c.1 Identify normal physical signs to detect abnormalities.

d) General and Transferable Skills:
By the end of the course, the students is expected to be able to :

d.1 Use different sources for information and knowledge to know the new in human body functions.

3. Conents:

Lectures (30 hrs)

Topic	hrs
body fluids, electrolytes, edema.	2
water & electrolyte balance	1
cardio-vascular physiology	2
hemostasis & its defects.	2
blood groups & transfusion	1
hemorrhage & shock.	1
respiratory physiology	4
renal physiology	2
body temperature regulation.	1
R.B.Cs, hemoglobin & anaemia.	1
G.I.T physiology	2
endocrine physiology	3
physiology of C.N.S.	5

4. Teaching and Learning Methods

4.1- lectures.

4.2- practical lessons.

4.3- Assignments for the students to empower and assess the general and transferable skills.

5. Student Assessment Methods:

The assessed ILOs	Method of assessment
- General transferable skills, intellectual skills	5.1- Observation of attendance and absenteeism.
- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,	5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%
- Knowledge, Intellectual skills, General transferable skills	5.3-Structured Oral Exam

Assessment Schedule:

Assessment 1 Final written exam Week 24

Assessment 2 Final Structured Oral Exam Week 24

Weighting of Assessments:

Final-term written examination 50%

Structured Oral Exam 50%

Total 100 %

6. List of References:

(1) Essential Books (Text Books): Gyton textbook of physiology.2010

Guyton and Hall Textbook of Medical Physiology, John E. Hall,13th edition, Elsevier Health Sciences, 2015.

6.2- Recommended Books

Ganong's Review of Medical Physiology, 25th Edition, McGraw Hill Professional, 2015.

(3) Periodicals, Web sites:

5 American journal of physiology.
6 Journal of applied physiology.
7 Journal of clinical endocrinology and metabolism.
8 Physiological Review.

7. Facilities Required for Teaching and Learning:

8. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
9. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

Course Coordinator: Dr. Ahmed Mostafa

Head of Department: Dr. Hoda Mostafa

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised: 1/12/2018

Course Specification of Pathology in Master Degree of Internal Medicine

University: Sohag **Faculty of Medicine**

1. Program on which this course is given: Master degree in internal medicine.
2. Major or minor element of program: Minor.
3. Department offering the program: Internal medicine department.
4. Department offering the courses: Pathology department.
5. Academic year/level: 1st part.
6. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

A. Basic Information:

Title: Pathology
Code: PAT 0513-200
Total hours:

Module	Lectures	Practical	Tutorial	Total hours
Pathology	15	30	-	45

B. Professional Information:

1. Overall Aims of Course

By the end of the course the post graduate students should be able to have the professional knowledge of the pathology of medical diseases.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student should be able to:

a.1 Describe the basic pathology of common internal medicine diseases.

b) Intellectual Skills:

By the end of the course the student should have the ability to:

b.1 Interpret pathological reports covering the most important medical conditions.

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c.1 Evaluate pathological reports.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d.1 Use different sources for information and knowledge about pathogenesis of various diseases.

3. Course Contents:

Topic	No. of hours	Lecture	Practical
1- General Pathology:	6	2	4
1.1. Cell response to injury and aging.			
1.2. Disturbances of circulation.			
1.3. Immunopathology and infectious diseases.			
2- Heart:	8	3	5
2.1. Rheumatic fever and endocarditis.			
2.2. Valvular lesions of the heart.			
2.3. Ischemic heart diseases and cardiomyopathy.			
2.4. Heart failure.			
3- Blood vessels:	6	2	4
3.1. Atherosclerosis & hypertension.			
3.2. Vasculitis			
5- Kidney:	7	2	5
4.1. Glomerulonepheritis.			
4.2. Nephrotic syndrome.			
4.3. Pyelonepheritis and tubular necrosis.			
4.4. Interstitial diseases of the kidney.			
4.5. Acute and chronic renal failure.			
5-Endocrine system:	6	2	4
5.1. Diseases of pituitary gland.			
5.2. Diseases of thyroid & parathyroid glands.			
5.3. Diseases of adrenal gland.			
6- The musculoskeletal system:	6	2	4
6.1. Rheumatoid arthritis.			
6.2. Osteoporosis, osteomalacia.			
7-Diseases of blood, lymph nodes, and spleen:	6	2	4
7.1. Leukemia and myeloproliferative disorders			
7.2. Lymphomas			
7.3. Plasma cell dyscrasias			
Total	45	15	30
Credit	2	1	1

4. Teaching and Learning Methods

4.1. Lectures.

4.2. Practical learning (e.g. Museum specimens & slides).

5. Student Assessment Methods

The assessed ILOs	Method of assessment
- General transferable skills, intellectual skills	5.1- Observation of attendance and absenteeism.

- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,	5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%
- Knowledge, Intellectual skills, General transferable skills	5.3-Structured Oral Exam

Assessment Schedule:

Assessment 1 Written examination
Assessment 2 Structured Oral Exam
Assessment 3 Attendance and absenteeism

Weighting of Assessments:

Final-term Examination	50%
Structured Oral Exam	50%
Total	100%

6. List of References:

6.1- Essential Books (Text Books):

- Muir's text book of pathology, 15th egition,2014
- Robbins pathologic basis of diseases, 10th edition, 2017

6.2- Recommended Books:

- Rosi &Ackerman text book of pathology, 11th edition, 2017
- Sternberg text book of pathology, 6th edition,2015

6.3- Periodicals, websites:

American journal of pathology
Pathology journal
Human pathology jounal
Web Sites: http://www.ncbi.nlm.nih.gov/pubmed/

7. Facilities Required for Teaching and Learning:

8. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
9. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

Course Coordinator: Dr. Fatma Al Zahraa

Head of Department: Dr. Afaf Al-Nashar**.**

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised: 1/12/2018

Course Specification of Medical Microbiology and Immunology in Master Degree of Internal Medicine

University: Sohag. **Faculty of Medicine**

1. Program on which this course is given: Master degree in internal medicine.
2. Major or minor element of program: Minor.
3. Department offering the program: Internal medicine department.
4. Department offering the courses: Medical Microbiology and Immunology department.
5. Academic year/level: 1st part.
6. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

A. Basic Information:

Title: Microbiology.
Code: MIC 0513-200
Total hours:

Module	Lectures	Practical	Tutorial	Total hours
Medical Microbiology and Immunology	15	30	-	45

B. Professional Information:

1. Overall Aims of Course

By the end of the course the postgraduate student should be efficiently able to have basic knowledge of the microorganisms affecting human beings all over the world and particularly in Egypt , and learn to use the knowledge gained from applied microbiology to better understand the pathology, clinical symptoms, complications and the laboratory tests needed for diagnosis of each disease, in particular how to use microbiological testing in determining antibiotic prescription. The student is also expected to acquire advanced knowledge about the structure and function of the immune system and the role of the immune system in health and disease.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student is expected to:

a.1 Explain the common diagnostic and laboratory techniques necessary to

establish diagnosis of common illness.

b) **Intellectual Skills:**

By the end of the course the student is expected to:

b.1 Interpret cultures and other laboratory reports covering the most important medical conditions.

c) Professional and Practical Skills:

By the end of the course the student should have the ability to:

c.1 Identify the appropriate supportive investigations relevant to a particular patient and adequately interpret the results.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d.1 Use different sources for information and knowledge.

d.2 Gain information through the internet.

3. Course Contents:

Topic	No. of hours	Lecture	Tutorial/ Practical
Lectures ***General Bacteriology*** Bacterial anatomy, Genetics & Physiology	1	1	
Recombinant DNA technology	1	1	
Antibiotics	1	1	
Sterilization & Disinfection	2	1	1
Systematic Bacteriology Gram +ve cocci, Gram –ve cocci	1	1	
Gram +ve bacilli, Gram –ve bacilli	1	1	
General virology	1	1	
Systematic Virology RNA viruses, DNA viruses	1	1	
Mycology Fungal classifications, Opportunistic mycosis& Antifungal drugs	1	1	
Immunology Congenital & Acquired Immunity	1	1	
Immunological Cells, Hypersensitivity	1	1	

Transplantation, Tumor Immunology	1	1	
Immunodeficiency	1	1	
Applied Microbiology	1	1	
Nosocomiology	1	1	
Practical Bacterial Cultures	2		2
Bacterial Isolation & Identification	1		1
Diagnostic Molecular Biology Methods	1		1
Antibiotic Sensitivity Tests	1		1
Immunology(Antigen Antibody Reactions) 1	1		1
Immunology(Antigen Antibody Reactions) 2	1		1
Staphylococci	2		2
Streptococci & Pneumococci	2		2
Neisseria	2		2
Corynebacterium	2		2
Mycobacterium	2		2
Enterobacteria	2		2
Pseudomonas & Yersinia	2		2
Bacillus	2		2
Clostridium	2		2
Vibrios & Brucella	2		2
Spirochaetes & Mycology	2		2
Total	**45**	**15**	**30**
Credit	**2**	**1**	**1**

4. Teaching and Learning Methods

4.1. Lectures.

4.2. Practical learning (e.g. Museum specimens & slides).

5. Student Assessment Methods

The assessed ILOs	Method of assessment
- General transferable skills, intellectual skills	5.1- Observation of attendance and absenteeism.
- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,	5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%
- Knowledge, Intellectual skills, General transferable skills	5.3-Structured Oral Exam

Assessment Schedule:

Assessment 1. Written examination
Assessment 2. Structured Oral Exam
Assessment 3. Attendance and absenteeism

Weighting of Assessments:

Final-term Examination	50%
Structured Oral Exam	50%
Total	100%

6. List of References:

(1) Essential Books (Text Books)

Jawetz Medical Microbiology2016.

Roitt Essential Immunology.

Abbas Clinical Immunology

Alberts Molecular Biology

(2) Recommended Books

A colored Atlas of Microbiology.

Topley and Wilson, Microbiology

(3) Periodicals, Web Sites, … etc

Microbiology

Immunology

http://mic.sgmjournals.org/

7. Facilities Required for Teaching and Learning:

8. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety &

security tools.

9. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

Course Coordinator: Dr. Ekram Abd-Al Rahman

Head of Departments: Dr. Abeer M. Shenief

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised: 1/12/2018

Course Specification of Clinical and Chemical Pathology in Master Degree of Internal Medicine

Sohag University **Faculty of Medicine**

1. Program on which this course is given: Master degree in internal medicine.
2. Major or minor element of program: Minor.
3. Department offering the program: Internal medicine department.
4. Department offering the courses: Clinical and Chemical Pathology department.
5. Academic year/level: 1st part.
6. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

A. Basic Information:

Title: Clinical and Chemical Pathology
Code: CL.P 0513-200
Total hours:

Module	Lectures	Practical	Tutorial	Total hours
Clinical and Chemical Pathology	15	30	-	45

B. Professional Information:

1. Overall Aims of Course

By the end of the course the postgraduate student should be efficiently able to have basic knowledge of the microorganisms affecting human beings all over the world and particularly in Egypt , and learn to use the knowledge gained from applied microbiology to better understand the pathology, clinical symptoms, complications and the laboratory tests needed for diagnosis of each disease, in particular how to use microbiological testing in determining antibiotic prescription. The student is also expected to acquire advanced knowledge about the structure and function of the immune system and the role of the immune system in health and disease.

2. Intended Learning Outcomes of Course (ILOs):

According to the intended goals of the faculty

a) Knowledge and Understanding:

By the end of the course the student is expected to:

a.1 Explain the common diagnostic and laboratory techniques necessary to establish diagnosis of common illness.

b) **Intellectual Skills:**

By the end of the course the student is expected to:

b.1 Interpret blood gas, blood picture, bone marrow, liver and renal function reports covering the most important medical conditions.

c) Professional and Practical Skills:

By the end of the course the student should have the ability to

c.1 Interperate various laboratory reports.

d) General and Transferable Skills:

By the end of the course the student should have the ability to:

d.1 Use different sources for information and knowledge.

3. Course Contents:

	Lectures	**practical**
Total hours : (15 hrs)		
Clinical hematology	11	8
1. Normal Hb. and its variants	1	7.5
2. Anemia	1	1
3. Normal homeostasis	1	7.5
4. Commonest cause of bleeding	1	1
5. Platelet disorders	1	1
6. Coagulation disorders	1	7.5
7. Anticoagulant therapy monitoring	1	7.5
8. How to investigate a case of bleeding?	1	1
9. Pre-transfusion compatibility procedure	1	7.5
10. Blood component therapy	1	10.5
11. Hazards of blood transfusion	1	1
Clinical Chemistry	2	2
1. Kidney function	1	1
2. Urine examination	1	1
Clinical Microbiology	2	2
1) Anti-microbial and sensitivity test	1	1
2) Medically important cases : a. sore throat	1	1
Clinical Immunology	3	3
1) Types of antigen and antibody	1	1

reactions		
2) Diagnosis of infectious diseases.	1	1
Total	15	30
Credit	1	1

4. Teaching and Learning Methods

4.1. Lectures.
4.2. Practical learning (e.g. Museum specimens & slides).

5. Student Assessment Methods

The assessed ILOs	Method of assessment
- General transferable skills, intellectual skills	5.1- Observation of attendance and absenteeism.
- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,	5.2-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%
- Knowledge, Intellectual skills, General transferable skills	5.3-Structured Oral Exam

Assessment Schedule:

Assessment 1. Written examination
Assessment 2. Structured Oral Exam
Assessment 3. Attendance and absenteeism

Weighting of Assessments:

Final-term Examination	50%
Structured Oral Exam	50%
Total	100%

6. List of References:

(1) Essential Books (Text Books):

Essential Haematology of A. H.Hoffbrand.

(2) Recommended Books:

Color Atlas of Haematology of Harald Theml.
Atlas of Clinical Haematology of Douglas C. Tkachuk..

(3) Periodicals, Web Sites, etc

7. Facilities Required for Teaching and Learning:

8. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.

9. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, colour and laser printers.

Course Coordinator: Dr. Lila M. Yousef

Head of Department: Dr .Hsnaa A. Aboelwafa

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised: 1/12/2018.

Course Specifications of Applied biostatistics (with computer use) and Research Methodology in Master degree of Internal Medicine

Sohag University **Faculty of Medicine**

1. Program title : Master degree in Internal Medicine
2. Major/minor element of the program : Minor
3. Department offering the course: Community Medicine and public Health Dep.
4. Department offering the program: Internal Medicine
5. Academic year /level : 1st part
6. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

A. Basic Information

Title: Master degree in Internal Medicine Biostatistics and Computer use for health services **and Research Methodology**

Code: COM: 0513-200

Total Hours:

Title	Lectures	Practical/ surgical	Total	credit
Applied biostatistics and computers & Research methodology	15	30	45	2

B. Professional Information

Applied Biostatistics Module:

1. Overall Aims of Course

a. To influence the students to adopt an analytical thinking for evidence based medicine.
b. To use precisely the research methodology in researches and computer programs SPSS, Epi Info and Excel in data analysis.

Research Methodology Module:

1. Overall Aims of Course

The aim of this course is to provide the postgraduate student with the advanced medical knowledge and skills essential for the mastery of practice of specialty and necessary to provide further training and practice in the field of Public health and Community Medicine through providing:

1. Recent scientific knowledge essential for the mastery of practice of Public

Health and Community Medicine according to the international standards.

2. Skills necessary for preparing for proper diagnosis and management of community problems, skills for conducting and supervising researches on basic scientific methodology.
3. Ethical principles related to the practice in this specialty.
4. Active participation in community needs assessment and problems identification.
5. Maintenance of learning abilities necessary for continuous medical education.
6. Upgrading research interest and abilities.

2. Intended Learning Outcomes of Courses (ILOs)

Applied Biostatistics Module:

a) Knowledge and understanding:

By the end of the course, the student is expected to be able to:

a1. Mention different programs of analysis of data and statistical packages
a2. Define the recent advances of sources of data and methods of collection.
a3. Summarize data, construct tables and graphs
a4. Calculate measures of central tendency and measures of dispersion
a5. Describe the normal curves and its uses
a6. Illustrate selected tests of significance and the inferences obtained from such tests
a7. Illustrate selected tests of significance for parametric and non parametric inferences
a8. Identify factor analysis and discrimination analysis.

b) Intellectual Skills

By the end of the course, the student is expected to be allowed to:

1. Mention how to collect and verify data from different sources
2. Interpret data to diagnose prevalent problems clinical pathology

c) Professional and Practical Skills:

By the end of the course, the student is expected to practice the following:

1. Perform recent advanced technological methods in collection, analysis and interpretation of data and in management of prevalent problems in clinical pathology

d) General and Transferable Skills:

By the end of the course, the student is expected to be able to:

1. Use appropriate computer program packages.
2. Use of different sources for information and knowledge about biostatistics.

Research Methodology Module:

2. Intended Learning Outcomes of Courses (ILOs)

a) Knowledge and understanding:

By the end of the course, the student is expected to be able to:

a1. Define the recent advances of screening tests pertinent to selected diseases and the at-risk approach in the application of screening tests.

a2. Explain the usefulness of screening tests, and calculate sensitivity, specificity, and predictive values.

a3. Describe the study design, uses, and limitations.

a4. Mention the recent advances of principles, methodologies, tools and ethics of scientific research.

a5. Explain the strategies and design of researches.

a6. Describe bias and confounding.

a7. Describe sampling techniques and list advantages of sampling

a8. Identify principles of evidence based medicine.

b) Intellectual Skills

By the end of the course, the student is expected to be able to:

1. Conduct research studies that adds to knowledge.
2. Formulate scientific papers in the area of public health and community medicine
3. Innovate and create researches to find solutions to prevalent community health problems
4. Criticize researches related to public health and community medicine

c) Professional and Practical Skills:

By the end of the course, the student is expected to be able to:

1. Enumerate the basic and modern professional skills in conducting researches in the area of public health and community medicine.
2. Design new methods, tools and ways of conducting researches. .

d) General and Transferable Skills:

By the end of the course, the student is expected to be able to:

1. Use of different sources for information and knowledge to serve research.
2. Work coherently and successfully as a part of a team and team's leadership in conducting researches and field studies.

3. Contents

Topic	No. of hours	Lecture	Tutorial/ Practical
Applied Biostatistics Module:			
Recent advances in collection, analysis and interpretation of data	3	1	2
-Details of Tests of significance: Proportion test	3	1	2
-Chi-square test	1.5	.5	1
-Student T test	1.5	.5	1
-Paired T test	1.5	.5	1
-Correlation	1.5	.5	1
-Regression	2	1	1
-ANOVA test	3	1	2

-Discrimination analysis	3	1	2
-Factor analysis	3	1	2
-Parametric and non parametric tests	4.5	.5	4
Research Methodology Module:			
Details of epidemiological studies (case control, cohort and cross sectional)	3	1	2
Clinical trials, Quasi experimental study	3	1	2
Bias and errors	2	1	1
Setting a hypothesis	1.5	.5	1
Recent advances in screening	1.5	.5	1
-0 Evidence – based Medicine: Concept and examples Applicability Scientific writing: A protocol A curriculum	3	1	2
Setting an objective - Critical thinking	2	1	1
Formulation of papers	1.5	.5	1
Total hours	**45**	**15**	**30**
Total Credit hours	**2**	**1**	**1**

4. **Teaching and Learning Methods**

4.1- Lectures
4.2- Practical sessions
4.3- Computer search assignments
4.4- Computer application

5. **Student Assessment Methods**

The assessed ILOs	Method of assessment
- General transferable skills, intellectual skills	5.1- Observation of attendance and absenteeism.
- Knowledge	5.2-Written Exams:
- Knowledge	-Short essay: 40%
- Knowledge, intellectual skills	-structured questions: 25%
- Intellectual skills, General transferable skills,	-MCQs: 20%
- Practical skills, intellectual skills	-Commentary, Problem solving: 15%
- Knowledge	5.3-Structured Oral Exams
- general transferable skills, intellectual skills	5.4Computer search assignment

Assessment Schedule

Assessment 1….Final written exam Week: 24
Assessment 2…..Final oral exam Week: 24
Assessment 3 Attendance and absenteeism throughout the course
Assessment 4 Computer search assignment performance throughout the course

Weighting of Assessments

50%	Final-term written examination
50%	Final oral Examination
100%	Total

Formative only assessments: attendance and absenteeism and Computer search assignments performance.

6. List of References

Applied Biostatistics Module:

6.1- Essential Books (Text Books)

1-Maxy-Rosenau Public health and preventive medicine, 2008.,Robert Wallace, publisher McGraw-Hill Medical; 15 edition.

6.2- Recommended Books

1- Dimensions of Community Based projects in Health Care, 2018. Arxer, Steven L., Murphy, John W.; 1st edition.

2- Parks Text Book of Preventive & Social Medicine. 2017., K. Park. BanarsidasBhanot Publishers; 23 edition.

3- Clinical Epidemiology: The Essentials, 2013, Robert F., Suzanne W. Fletcher, Grant S., publisher Lippincott Williams & Wilkins; 5 edition.

6.3- Periodicals, Web Sites, …etc

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

Research Methodology Module:

6.1- Essential Books (Text Books)

1-Maxy-Rosenau Public health and preventive medicine, 2008.,Robert Wallace, publisher McGraw-Hill Medical; 15 edition.

6.2- Recommended Books

1- Dimensions of Community Based projects in Health Care, 2018. Arxer, Steven L., Murphy, John W.; 1st edition.

2- Parks Text Book of Preventive & Social Medicine. 2017., K. Park. BanarsidasBhanot Publishers; 23 edition.

3- Clinical Epidemiology: The Essentials, 2013, Robert F., Suzanne W. Fletcher, Grant S., publisher Lippincott Williams & Wilkins; 5 edition.

6.3- Periodicals, Web Sites, …etc

1-American Journal of Epidemiology

2-British Journal of Epidemiology and Community Health

3- WWW. CDC and WHO sites

7. Facilities Required for Teaching and Learning:

Applied Biostatistics Module:

1. Adequate conditioned space for staff and assistants.
2. Adequate conditioned teaching facilities.
3. Audiovisual Aids: Data show, overhead and slide projectors and their requirements.

Research Methodology Module:

1. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
2. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.

Course Coordinator: Dr/Rasha Abd-El-Hameed Aly

Head of Department: Prof / Ahmed Fathy Hamed

Date: 18/12/2011, Revised:1/9/2012, Revised:1/12/2013, Revised: 1/12/2018

Course Specification of Internal Medicine in Master Degree of Internal Medicine

University: Sohag. **Faculty of Medicine.**

1. Program on which this course is given: Master degree in internal medicine.
2. Major or minor element of program: Major.
3. Department offering the program: Internal medicine department.
4. Department offering the course: Internal medicine department.
5. Academic year/level: 2nd part.
6. Last date of program specifications approval: Faculty council No. "317", decree No. "1533" dated 17/12/2018.

A. Basic Information

Title: Internal Medicine for postgraduate students
Code: MED 0513-200

Lectures	Practical	clinical	Total hours	Credit
225	-	300	525	25

B. Professional Information

1. Overall Aims of Course

By the end of the course of Internal Medicine, the student should be qualified as a specialist, who is able to:

1 Manage common medical conditions accurately and independently on the basis of adequate history taking, physical examination and interpretation of relevant supportive investigations.
2 Deal with acute medical emergencies safely and effectively without aid.
3 Perceive and integrate accurately the progress in medical knowledge and technology.
4 Maintain and improve his standards of knowledge and training by clinical self-education.

2. Intended Learning Outcomes of Course (ILOs)

a) Knowledge and Understanding:

By the end of the course, the students is expected to be able to :

1. Explain the common diagnostic and laboratory techniques necessary to establish diagnosis of common illness.
2. Mention the mutual influence between professional practice and its impacts on the environment.
3. Mention the principles and fundamentals of ethics and legal aspects of professional practice in the field of internal medicine.

4. List the principles and fundamentals of quality of professional practice in the field of internal medicine.
5. Trace the spectrum of clinical symptomatology related to different body systems.
6. Appreciate the clinical spectrum of common medical conditions with multisystem affection.
7. Describe the concept of emergency management of acute medical disorders (acute abdomen, acute cardiac illness, coma,……..).

b) Intellectual Skills:

By the end of the course, the students is expected to be able to :

1. Formulate appropriate management plans for individual patients presenting with the most common medical disorders (cardiac, hepatic, GIT, hematological, neurological, …..).
2. Select from different diagnostic alternatives to reach a final diagnosis.
3. Make decisions regarding common clinical situations using appropriate problem solving skills.
4. Interpret X-ray and CT films, blood gas, blood picture, bone marrow, liver and renal function reports covering the most important medical conditions.
5. Demonstrate appropriate professional attitudes and behaviors in different practice situations in cardiology hepatic diabetic,…..).
6. Link between knowledge for professional problems' solving.
7. Conduct research studies, that add to knowledge.
8. Assess risk in professional practices in the field of internal medicine.
9. Plan to improve performance in the field of internal medicine.
10. Identify medical problems and find solutions.

c) Professional and Practical Skills:

By the end of the course, the students is expected to be able to :

1. Mention the basic and modern professional skills in the area of internal medicine.
2. Take a good medical history.
3. Conduct a proper general examination.
4. Identify normal and abnormal physical signs.
5. Conduct proper regional examination of the thorax and abdomen by inspection, palpation, percussion and auscultation to identify: surface anatomy of internal organs, normal physical signs and abnormal physical signs.
6. Writ and evaluate medical reports.
7. Identify a clear priority plan in the patient's management.
8. Recognize the indications for consulting higher levels or reference to other disciplines.
9. Develop the clinical skills of eliciting abnormal physical signs in various systems examination.
10. Interpret the significance and relevance of abnormal physical signs.
11. Identify the appropriate supportive investigations relevant to a particular patient and adequately interpret the results.

12. Integrate patient's symptomatology, historic data, abnormal physical signs and investigations into a comprehensive differential diagnosis in various body systems affection.
13. Identify adequate logistics for further patient assessment and management.
14. Become acquainted with special approach to the diagnosis of common medical conditions related to the specialty.

d) General and Transferable Skills:

By the end of the course, the students is expected to be able to :

1. Communicate effectively with patients and their families.
2. Use different sources for information and knowledge.
3. Mention information through the internet.
4. Develop rules and indicators for assessing the performance of others.
5. Work in a team work.
6. Manage scientific meetings according to the available time.
7. Learn himself continuously.

8. 3- Contents

I- Lectures:

Topic	**No of hours**	**Lectures Hours**	**Practical hours**
Cardiology	80	40	40
Hematology	60	30	30
Hepatology	57	27	30
Endocrinology and diabetes	40	20	20
Nephrology	39	9	30
Gastroenterology	45	15	30
Rheumatology	30	10	20
General medicine	28	8	20
Neurology	42	22	20
Respiratory disease	52	22	30
Tropical medicine	52	22	30
Total	**525**	**225**	**300**
Credit	**25**	**15**	**10**

DETAILED CONTENTS

1 -Cardiology Teaching

The cardiology curriculum is designed so that at the end of the course the student will be able to:

1 Know the principles of cardiovascular anatomy and physiology which are relevant to cardiovascular diseases.

2 Know the basic patho-physiological and structural alteration that occur in cardiovascular diseases.

3 Know the important causes, presenting features (symptoms, signs and alteration in specific investigations) that may occur in various cardiovascular diseases.

4-Skills: The graduate should be able to:

1 Elicit normal and abnormal cardiovascular signs such as general features, attitude, facies, BP arterial and venous pulse,……
2 Elicit normal and abnormal physical signs in chest and abdominal examination that may cause or accompany or result from cardiac disease such as hepatomegaly, splenomegaly, ascites,……
3 Can perform successfully basic and advanced life support and cardiac resuscitation (cardiac message, mouth to mouth breath) either alone or with a team.
4 He should be able to interpret normal and abnormal cardiac shadows in chest Xray.

He should recognize the normal ECG and diagnose any abnormalities in ECG

Cardiology Teaching (Methodology):

A combination of strategies are used to reach the above mentioned objects, this include lectures, clinical word rounds, practical classes and self teaching.

1 **Lectures:** 40 lectures each is one hour are given to accompany the clinical and the practical teaching. They are designed to cover the sailent features, difficult aspects, recent advances and specific personal practices of the following subjects:

A Lectures (40 hours)

Topics	No of hours
Rheumatic fever	2
Infective endocarditis	2
Valvular diseases	2
Coronary artery diseases -Acute coronary syndromes -Chronic ischemia	5
Systemic Hypertension	4
Adult Congenital Heart Diseases	2
Cardiomyopathy: -dilated cardiomyopathy -Hypertrophic cardiomyopathy -Restrictive cardiomyopathy	2
Arrhythmias:. -Tachyarrhythmias -Bradyarrhythmias	3
Heart failure -Systolic Heart Failure -Diastolic Heart Failure -High cardiac output heart failure	4
Pericardial diseases -Pericarditis -Pericardial effusion and tamponade	2
Myocarditis	2

Cardiovascular manifestations of systemic diseases	2
Pulmonary embolism	2
Cor pulmonale	2
Investigations in cardiology:. X-Ray, ECG Stress ECG, echocardiography, Coronary angiography	4

B- Practical Teaching (Cardiology) (40 hours)

Practical Topics:

1-Cardiovascular history taking

2-Cardiac examination (including pulse BP, and Jugular venous pressure comment)

3-Cardiac valve lesions

4-Rheumatic heart disease

5-Infective endocarditis

6-Heart failure

7-Cardiomyopathy

8-Adult congenital heart diseases

9-Pericardial effusion

10-Atrial fibrillation

11-Interpretation of ECG abnormalities

3- Self Learning: This includes:

- Personal or group ward responsibilities including follow up of inpatients in the department.
- Cardiology outpatient sessions in which the student examine the patients with the lecturer

2- Endocrinology Teaching

Terminal Objectives are:

1-To know the principles of the physiology of endocrinal system
2-To know the basic pathophysiological and structural alteration changes that occur in various endocrinal diseases.
3-To know presenting features of endocrinal diseases
4-To be able to elicit skeletal disproportions and to identify body mass index
5-To diagnose various endocrinal emergencies

6-To know the various investigations of endocrinal diseases
7-To interpret endocrinal imagings such as X-ray , CT and MRI of different endocrinal organs.

Endocrinology Teaching (Methodology)

A combination of stratiegies are used to reach the above mentioned objectives. This include:

A- Lectures (20 hours)

Topics	No of hours
Disorders of the anterior pituitary and the hypothalamus	3
Growth axis, Short stature	1
Disorders of the neurohypophysis 'Diabetes Insipidus"	1
Disorders of the thyroid gland Hypothyroidism Hyperthyroidism Thyroid malignancy	3
Disorders of the adrenal cortex: -Cushing syndrome -Aldosteronism -Adrenogenital syndrome -Hypoadrenalism -Clinical uses of corticosteroids	3
Pheochromocytoma	1
Disorders of calcium metabolism' Parathyroid gland"	1
Endocrinology of blood pressure control	1
Diabetes mellitus	3
Hypoglycemia	1
Multiple endocrine system affection	2

B- Practical teaching in Endocrinology (20 hours)

Practical Topics:.

1 History taking of various endocrinal disorders
2 Anthropometric measurements, Body mass index
3 Obesity, morbid obesity
4 Short stature
5 Thyrotoxicosis

6 Myxedema
7 Cushing syndrome
8 Acromegally
9 Pheochromocytoma

Diabetic coma

3-Hematology Teaching

Terminal objectives in Teaching Hematology are:

1 To review their informations about the physiology of blood cells (RBCs, WBCs and platelets) and homeostasis.
2 To review their informations about the anatomy of the lymphatic and hematopiotic organs.
3 To know the important causes, presentation and management of various types of anemias.
4 To examine lymph nodes, liver and spleen and to know causes and management of lymphadenopathy, hepatomegaly, and splenomegaly.
5 To know causes, manifestation and management of bleeding and coagulation disorders.
6 To know causes presentation and management of various hematological malignancies (Leukemia, lymphomas, plasma cell tumors).
7 To interpret lab investigations as blood picture, bone marrow examination, results of lymph node, spleen biopsy, and tests for coagulation disorders.
8 To know recent advances in treatment of various hematological disorders as bone marrow transplantation, immunological treatment,……..

Hematology Teaching (Methodology):

A combination of stratiegies is used to reach the above mentioned objectives. This includes:

A- Lectures (30 hours):.

Topics	No of lectures
Anemia; -Iron deficiency anemia -Megaloplastic anemia -Hemolytic anemia -Aplastic anemia	4
Polycythemia vera, and secondary polycythemia	1
Other meloproliferative diseases: -Myelofibrosis -Essential thrombocytosis -Chronic myeloid leukemia	4
Acute leukemia	4
Lymphomas	4
Plasma cell disorders	2
Myelodysplasia	2

Disorders of platelets and vessel wall "Thrombocytopenia" -Purpura	4
Disorders of coagulation and thrombosis:. -Hemophilias -Thrombophilias	4
Anticoagulants	1

B- Practical Hematology (30 hours):

Topics

1 History taking in hematological disorders
2 Pallor
3 Lymphadenopathy and Hepatospleenomegaly
4 leukemias and lymphomas
5 Purpura and bleeding tendency

4- Rheumatology teaching

Terminal objectives are:

1 To know the basic pathophysiological and structural alteration in common musculoskletal and connective tissue diseases
2 To do systemic examination (face, skin, eye cardiac, chest abdominal nervous system examination and understanding their relation to common connective tissue diseases
3 To know the important causes, presenting features (symptoms, signs and alteration in specific investigations) that may occur in each of the following conditions:
4 Rheumatoid arthritis, Systemic lupus erythematosis
5 Seronegative arthropathies -Gout
6 Osteoporosis-Systemic sclerosis -Systemic vasculitis

Rheumatology Teaching (Methodology)

A- Lectures (10 hours)

Topics	No of lectures
Classification and DD of arthropathies	1
Rheumatoid arthritis	1
Seronegative arthropathies	1
Systemic lupus erythematosus	2
Systemic sclerosis	1
Gout and other crystal deposition arthropathy	1
Systemic Vasculitis	2
Osteoporosis	1

B- Practical Rheumatology (20 hours)
Topics:.
1- History taking in collagen diseases
2- Joint examination
3- Rheumatoid arthritis
4 Systemic lupus erythematosus
5- Scleroderma
6 - Gout
7- Polyarteritis nodosa
8- Reach interpretation of X ray, laboratory markers that occur with autoimmune diseases

5- Nephrology Teaching
A-Lectures (9 hours):

Topics	No of lectures
Major clinical syndromes in nephrology: Nephrotic syndrome Acute nephritic syndrome	1
Glomerulonephritis	1
Disturbed renal function: Acute renal failure Chronic renal failure Renal dialysis and Renal transplantation	3
Tubulointerstial disease Interstial nephritis Inherited tubular disorders Drug induced renal disorders	1
Urinary tract infections: Acute and chronic pyelonephritis	1
Water, electrolyte and acid-base balance	1

B- Practical nephrology (30 hours)
Topics:.
1-History taking in renal disorders
2- Nephrotic syndrome and nephritis
3-Chronic renal failure
4-Acute renal failure
5-Renal dialysis:. Indications, technique, mange complications

6- Gastroenterology and Hepatology Teaching
Terminal Objectives in Teaching Gastroenterology are:
1-To know the basic physiology of the digestive system (esophagus, stomach, small, large intestine and the pancreas)
2-To know the anatomy and the basic patho-physiological and

structural changes that occur in the gastrointestinal tract in various GIT diseases.

3 To know the gastrointestinal symptoms such as vomiting , diarrhea, constipation,…… and how to elicit important findings through abdominal examination, examination of the buccal cavity and PR examination.

4-To know the important causes, presentation and management of the following disorders affecting the gastrointestinal tract:

3 Salivary gland disorders
4 esophageal diseases (GERD, esophagitis, cancer)
5 Peptic ulcer, gastritis, gastric malignancies.
6 Acute and chronic GIT bleeding
7 Malabsorption syndromes, vascular occlusion of the intestinal vessels and malignancies affecting the intestine
8 Inflammatory bowel diseases
9 Functional GIT disorders
10 Causes and management of medical causes of acute abdomen
11 To acquire the basic knowledge for the following investigations done for GIT diseases as:
- Abdominal sonography - Barium studies
- Endoscopies - Abdominal CT
- Motility studies - ERCP

The Hepatology curriculum is designed so that at the end of the course the student is able to:

1-Know the principles of hepatobiliary system anatomy and physiology which are relevant to hepatobiliary diseases.

2-Know the basic pathophysiological and structural alteration that occur in hepatobiliary diseases.

3-Know the important causes, presenting features (symptoms, signs and alteration in specific investigations) that may occur in each of the following conditions:

3 Jaundice (classification, causes and management)
4 Portal hypertension, esophageal varices.
5 Ascites including causes rather than portal hypertension
6 Liver cirrhosis (causes, presentation and complications).
7 Liver cell failure (acute and chronic)
8 Hepatomegaly (causes and management)
9 Splenomegaly (including causes and management of huge splenomegaly)
10 Hepatitis (acute and chronic)
11 Liver tummours
12 liver diseases in relation to drugs and other medical situations.
13 Different investigations which are performed for liver diseases as biochemical tests, abdominal imaging (sonography, CT,……..) endoscopies.
14 Liver transplantation

A-Lectures (42hours)

Topics	No of lectures
Esophagus	1
Gastroesophageal junction disorders	1
Peptic ulcer and gastritis	3
Diarrhea and dysentery	2
Malabsorption syndrome	2
Inflammatory bowel disease	3
Irritable bowel syndrome	1
Gastrointestinal malignancy	2
Approach to the patient with hepatic disease	1
Evaluation of liver function	1
Hyperbilrubinemia	1
Jaundice	3
Acute hepatitis	1
Chronic hepatitis	2
Cirrhosis	2
Portal hypertension	2
Upper GI bleeding	2
Hepatocellular failure	3
Hepatocellular carcinoma	2
Ascites and peritoneal diseases	2
Gall bladder disease	2
Focal hepatic lesions	1
Pancreatitis	2

Practical GIT and Hepatology (30 hours)

Topics:.

1 History taking of gastroenterology and hepatobilliary disorders
2 Abdominal masses including malignancies
3 Hepatomegally
4 Spleenomegally
5 Vitamine deficiencies manifestations
6 Ascites
7 Weight loss causes and detection
8 Hepatocellular failure
9 Gastrointestinal bleeding evaluation
10 Acute and chronic hepatitis
11 Gastroenteritis
12 Jaundice
13 Pancreatitis

Self Teaching: This includes:

- Personal or group word responsibilities including follow up of inpatients in the

department.

- Hepatology outpatient sessions in which the student examine the patients with the assistant lecturer to recognize the presenting manifestations of the diseased and non diseased person

7- General Teaching: 8 hours lectures

Topics	**No of lectures**
Nutrition requirement, Malnutrition	2
Obesity	1
Vitamin deficiency	2
Dyslipidemia Smoking	1 1
Basic life support and cardiopulmonary resuscitation	1

8- Respiratory Disease Teaching

A Lectures (22 hours)

Topics	No of lectures
Asthma	2
COPD	3
Upper respiratory infections	1
Pneumonias	2
Suppurative syndrome	2
Tuberculosis	2
Interstitial disease	2
Respiratory failure	2
Malignancy:.-bronchial adenoma bronchiogenic carcinoma Malignant pleural effusion and mesothelioma	3
Lung in systemic disease	1
Mediastinal syndrome	1
Arterial blood gases	1

B- Practical Respiratory Disease (30 hours)

Topics:

1-History taking of chest diseases
2-Chest examination
3-Cyanosis tremors
4-Bronchial asthma,

5-Chronic obstructive airway diseases
6-Pleural effusion
7-Tuberclosis
8-Cancer lung
9-Mediastinal syndrome
10 Chest infections
11-Chronic suppurative lung diseases
12-Interstial lung fibrosis
13-Interpretation of X-ray chest

9- Neurology Teaching

A- Lectures (22 hours)

Topics	No of lectures
Cerebral atherosclerosis	1
Stroke	2
Hemiplegia	2
Cervical myelopathy	1
Cauda equina	1
Extrapyramidal syndromes	2
Peripheral neuropathy /radiculopathy	2
Myopathy	2
Paraplegia	2
Facial palsy	1
Epilepsy	2
Metabolic encephalopathies	1
Abnormal movements and cerebellar lesions	2
Speech abnormalities	1

B- Practical Neurology (20 hours)

Topics:.

1-History taking in neurology
2-Neurological examination
3-Cerebrovascular stroke
4-Hemiplegia
5-Paraplegia
6-Ataxia
7- Parkinsonism
8- Chorea
9- Cranial nerve palsy
10- Myopathy

11- Prepheral neuropathy

9- Teaching of Tropical Medicine: Lectures: 22 hs

Title	Sessions	Hours
Fever: definition, pattern, pathogenesis and PUO…..	1	1
Bacterial infections: Streptococcal and staphylococcal infections, Diphteria and Anthrax	2	2
Clostridial diseases (gas gangrene, tetanus, botulism, pseudo-membranouscolitis	1	1
Typhoid fever and other salmonella infections	1	1
Brucellosis	1	1
Rickettssial diseases and viral infections of the upper respiratory tract	1	1
Acute and chronic viral hepatitis and their squeales	3	3
HIV and associated infections	1	1
Rabies	1	1
Shistosomiasis, Fascioliasis, Heterophyes	2	2
Hydatid disease and other cestodes	1	1
Intestinal nematodes	1	1
Tissue nematodes	1	1
Amaebiasis, giardiasis	1	1
Malaria, Toxoplasmosis	1	1
Infectious diarrhea and food poisoning	1	1
Antimicrobial chemotherapy and vaccines	2	2

Clinical Teaching (30 hours):

History taking
Symtomatology of the GIT
General examination
Abdominal examination
Pallor and its differential diagnosis
Jaundice and its differential diagnosis
Ascites and its differential diagnosis
Hepatocellular failure and hepatic encephalopathy
Portal hypertension and its causes and management
Hepatomegaly and splenomegaly and their differential diagnosis
Emergencies: GIT bleeding, hepatic encephalopathy, fulminant hepatic failure

4. Teaching and Learning Methods

4.1- Illustrated lectures and case studies
4.2- Clinical rounds on patients.
4.3- Clinical rounds with guided clinical case-taking
4.4- Interactive presentations (lectures with discussion)
4.5- Clinical simulations and emergency drills by manikains and models simulating m

5. Student Assessment Methods

The assessed ILOs	Method of assessment
- General transferable skills, intellectual skills	5.1- Observation of attendance and absenteeism.
- General transferable skills	5.2- Log book
- Knowledge - Knowledge - Knowledge, intellectual skills - Intellectual skills, General transferable skills,	5.3-Written Exam: -Short essay: 40% -structured questions: 25% -MCQs: 20% -Commentary, Problem solving: 15%
- Knowledge, Intellectual skills, General transferable skills	5.4-Structured Oral Exam
-Practical skills, intellectual skills General transferable skills	5.5-OSCE

Assessment Schedule:

1	Assessment 1 : written exams	Week 24
2	Assessment 2 : OSCE	Week 24
3	Assessment 3 : Structured Oral Exams	Week 24

Weighting of Assessments:

Final-term written examination	50%
OSCE and Structured oral examination	50%
Total	100 %

6. List of References

(1) Essential Books (Text Books)

6.1- Essential Books (Text Books)
- Kumar and Clarke Textbook of Medicine; Parveen Kumar and Richard Clark; Blackwell Science; 9th edition, 2018
-Hutchison's Clinical Methods; Robert Hutchison; Harry Rainy; 24st edition;2018

6.2- Recommended Books
- Goldman-Cecil Textbook of Medicine; 25th edition, 2018.
- Harrisson's principales of internal medicine , 20th edition, 2018.

6.3 Periodicals, Web Sites:

- WWW.American Heart Association. Com.
- WWW. American gastroenterology Association.com.
- WWW. Circulation.com.
- WWW. American Rheumatology Association.com.

7. Facilities Required for Teaching and Learning:

8. ADEQUATE INFRASTRUCTURE: including teaching places (teaching class, teaching halls, teaching laboratory), comfortable desks, good source of aeration, bathrooms, good illumination, and safety & security tools.
9. TEACHING TOOLS: including screens, computers including cd (rw), data shows, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.

Course Coordinator: Dr. Mohamed Mustafa Ahmed Malak**.**

Head of Department: Prof. Usama Ahmed Arafa.

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