



اعتماد توصيف مقررات برنامج الماجستير في جراحة العظام

نقر نحن الموقعون على هذا أدناه أن توصيف وثيقة البرنامج التعليمي لدرجة الماجستير في

جراحة العظام والمقررات الدراسية المكونة له قد تم وضعها بمعرفة الأقسام المعنية

م	اسم المقرر	اسم منسق المقرر	التوقيع	اسم رئيس القسم	التوقيع
١-	الفسولوجيا	د. نوال بدوي على	نوال بدوي	د.د. جلال محمد عبد القادر	د. جلال
٢-	الكيمياء الحيوية	د. عايدة عابدين محمد	عايدة	د. نجوي سيد أحمد	نجوي
٣-	الفارماكولوجيا الأكلينيكية	د. فائق محمد عمران	فايق	د. محمود حمدي	محمود
٤-	التشريح الجراحي	د. نصار ايوب عبد اللطيف	نصار	د. عصام صلاح كامل	عصام
٥-	الهستولوجيا	د. ايمان خليفة احمد	ايمان	د. ايمان السيد ابوضيف	ايمان
٦-	باثولوجيا الجراحة العامة	د. فاطمة الزهراء صلاح الدين	فاطمة	د. ايمان محمد صلاح الدين	ايمان
٧-	الميكروبيولوجيا	د. منى فتوح محمد شلبي	منى	د. احمد حسن عبد العزيز	احمد
٨-	الجراحة العامة	د. نبيل يوسف صلاح الدين	نبيل	د. علاء الدين حسن محمد	علاء
٩-	احصاء طبي وكمبيوتر واساليب بحث علمي	د. احمد فتحي حامد	احمد	د. ايمان عبد الباسط محمد	ايمان
١٠-	جراحة العظام	د. احمد ابراهيم الدسوقي	احمد	د. انيس السيد محمد شبيحة	انيس

عميد الكلية



وكيل الكلية للدراسات العليا



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 Orthopedic Surgery and Traumatology

Sohag University

Faculty of Medicine

A- Basic Information

1. Program title: Master degree in Orthopedic Surgery and Traumatology
2. Program type: Single
3. Faculty: Faculty of Medicine
4. Department: Department of Orthopedic Surgery and Traumatology
5. Coordinator: Dr. Ahmad Addosooki, lecturer of orthopedic surgery, sohag university
6. Assistant Coordinator: Dr.wael adel ahmed, assistant lecturer, Sohag university
7. External evaluator: Prof. Dr. Osama Farouk, professor of orthopedic surgery, Assiut university
8. Last date of program specifications approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013..

B- Professional Information

1. Program aims

The aim of this program is to provide the postgraduate student with medical knowledge and skills essential for the practice of specialty and necessary to gain further training and practice in the field of orthopedic surgery and traumatology through providing:

1. Scientific knowledge essential for advanced level practice of orthopedic surgery and traumatology according to the international standards.
2. Skills necessary for proper diagnosis and management of patients in the field of orthopedic surgery and traumatology including diagnostic , problem solving , decision making and operative skills.
3. Ethical principles related to practice in the highly sensitive specialty.
4. Active participation in community needs assessment and problem solving.
5. Maintenance of learning abilities necessary for continuous medical education.
6. Maintenance research interest and abilities.

2. Attributes of the post graduate:

1. Mastering the basics of scientific research methodologies.
2. The application of the analytical method and used in the field of Orthopedic Surgery.

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 Orthopedic Surgery.
5. Identify problems in the field of Orthopedic Surgery 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.

3. Intended learning outcomes (ILOs)

a) Knowledge and understanding

by the end of the program the student should be able to:

- a1. Mention the normal structure and function of the human musculoskeletal system and its relation to surgical procedures.
- a2. Illustrate the normal growth and development of the human musculoskeletal system and the basic biomechanics of the body.
- a3. List the abnormal structure, function, growth and development of human musculoskeletal system
- a4. Mention the natural history of orthopedic diseases and traumatology problems.
- a5. Mention advances in the causation of orthopedic diseases and their pathogenesis.
- a6. Mention methods of fixation of different fracture pattern.
- a7. List the clinical picture and differential diagnosis of orthopedic diseases.
- a8. Describe advances in the common diagnostic and laboratory techniques necessary to establish diagnosis of orthopedic diseases
- a9. Describe advances in the various therapeutic methods/alternatives used for orthopedic diseases.
- a10. Describe the advances in the knowledge of physiology , biochemistry, microbiology, histology and pathology that is related to orthopedic diseases and fractures.
- a11. Describe the advances in the knowledge of the general surgery.
- a12. Define advanced trauma management.
- a13. Trace scientific developments in the field of orthopedic surgery and traumatology
- a14. List the mutual influence between professional practice and its impacts on the environment.
- a15. Mention Ethical and legal principles of professional practice in the field of orthopedic surgery and traumatology.
- a16. Mention the principles and fundamentals of quality in professional practice in the field of orthopedic surgery and traumatology.

a17. List the basics and ethics of scientific research.

b) Intellectual skills

by the end of the program the student should be able to:

- b1. Interpret data acquired through history taking to reach a provisional diagnosis for orthopedic diseases.
- b2. Apply from different diagnostic alternatives the ones that help reaching a final diagnosis for orthopedic diseases.
- b3. Link between knowledge for professional problems' solving.
- b4. Plan a research study and / or apply a scientific study on a research problem.
- b5. Evaluate risk in professional practices in the field of orthopedic surgery and traumatology
- b6. Plan to improve performance in the field of orthopedic surgery and traumatology
- b7. Evaluate orthopedic and traumatology problems and find solutions.
- b8. Analyze research and issues related to the orthopedic surgery and traumatology.

c) Professional and practical skills

by the end of the program the student should be able to:

- c1. Master the basic and modern professional skills in the area of orthopedic surgery and traumatology
- c2. Evaluate and develop methods and tools existing in the area of Orthopedic surgery and traumatology
- c3. Perform endoscopic evaluation of orthopedic problems.
- c4. Train junior staff through continuous medical education programs.
- c5. Design new methods, tools and ways of professional practice.

d) General and transferable skills

by the end of the program the student should be able to:

- d1. Present orthopedic reports in seminars effectively.
- d2. Use appropriate computer program package for writing reports, presentation and perform statistical analysis.
- d3. Teach undergraduates and residents, and evaluate their performance.
- d4. Assess himself and identify his personal learning needs.
- d5. Use different sources for information and knowledge.
- d6. Work coherently and successfully as a part of a team and team's leadership.
- d7. Manage scientific meetings according to the available time.
- d8. Write and evaluate medical reports.

4. Academic Standards:

Sohag Faculty of Medicine adopted the general National Academic 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.6754, in its session NO. 177 Dated 18/5/2009, Based on these NARS; Academic Reference Standards (ARS) were suggested for this program. These ARS were approved by the Faculty Council decree NO.7528 , in its session NO. 191, dated 15/3/2010. The adoption of NARS and the suggested ARS were approved by University council degree No 587, in its session No.60. Dated 26-12-2011

5. Curriculum Structure and Contents

5.a- Program duration: 2 years

5.b- Program structure

Subject	hours /week		
	Lectures	Practical	Clinical
<u>First Part:</u>			
Physiology	1	--	---
Biochemistry	1	--	---
Histology, anatomy	1	2	---
Surgical Pathology	1	2	---
Microbiology and Immunity	1	2	---
Bio statistics, research methodology	1	2	---
Clinical Pharmacology	2	--	---
General surgery	1	1	---
<u>Second Part:</u>			
Orthopedic surgery	3	2	2
Traumatology	2	2.3	2.3

code	Item	No	%	
b.i	Total credit hours	Compulsory	50	100
		Elective	0	0
		Optional	0	0
b.iii	credit hours of basic sciences courses	10	20	
b.iv	credit hours of courses of social sciences and humanities	0	0	
b.v	credit hours of specialized courses:	25	50	
b.vi	credit hours of other course	4	8	
b.vii	Practical/Field Training	5	10	
b.viii	Program Levels (in credit-hours system):			
	Level 1: 1 st part	15	30	
	Level 2: 2 nd Part	24	48	
	Level 3: Thesis	6	12	

6. Program courses 9 compulsory courses

6 1- Level of Program

Semester...1.....

First part

a. Compulsory

Course Title	No. of credit hours	No. of hours/week			Program ILOs covered (By No.)
		Lect.	Lab.	Exer.	
Physiology	1	1			a4
Biochemistry	1	1			a4
Clinical pharmacology	2	2			a4
Surgical Anatomy ,histology	2	1	2		a1,a4,a10
Surgical Pathology	2	1	2		a1
Microbiology	2	1	2		a7
General Surgery	2	1	2	1	a6
Biostatistics,research metholdology	2	1	2		a10

Second Part

A. Compulsory

Course Title	No. of Units	No. of hours/week			Program ILOs covered (By No.)
		Lect.	Lab.	Exer.	
Orthopedics	15	3	2	2	a2,b6,c3,4,5,d1,2,4,5,6
Traumatology	10	2	1.3	1.3	a3,a8,b1, b6,c1,2,3,4,5,d1,2,4,5,6

7. Program Admission Requirements

I- General Requirements.

- Candidate should have either:
 - MBBCh degree from any Egyptian Faculty of Medicine or
 - Equivalent Degree from Medical Schools abroad approved by the ministry of high Education.
- Candidate should pass the house office training year.
- Those who are not university hospital residents should pass a training for at least 12 months in one of the known hospitals.
- 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/cumulative year(s) examination, and grade "Good Rank" in General Surgery Course too.
- Candidate should know how to speak & write English well.
- Candidate should have computer skills.

8. 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):

- Program-related basic & clinical sciences & research Methodology, Ethics & medical reports, Biostatistics and computer.
- At least six months after registration should pass before the student can ask for examination in the 1st part.
- Two sets of exams: 1st in October — 2nd in April.
- At least 50% of the written exam is needed to pass in each course.

- For the student to pass the first part exam, a score of at least 60% (Level D) in each course is needed.
- 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 \geq 6 months=1 semester):

- 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 \geq 18 months= 3 semesters):

Programme related specialized sciences of orthopaedic and traumatology courses

Completion of the first part credit hours and passing the exams are pre requisites for documentation of the second part course

- After passing at least:
 - University hospital residents: 36 months residency in the department of Orthopaedic and traumatology.
 - Residents in other places: Completed 36 months residency; 12 months of them training in the department of orthopaedic & traumatology.
- 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 \geq 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 علمي موسع	6
Training courses	دورات تدريبية	12/ day
Conference attendance	حضور مؤتمرات علمية	12/day
	داخلي خارجة	18/day
Thesis discussion	حضور مناقشات رسائل	6
Workshops	حضور ورش عمل	12/day
Journal club	ندوة الدوريات الحديثة	6
Seminars	لقاء علمي موسع	6
Morbidity and Mortality conference	ندوة تحليل المخاطر المرضية أو الوفاة	6
Self education program	برنامج التعليم الذاتي	6

- Two sets of exams: 1st in October - 2nd in April.
- At least 50% of the written exam is needed to pass in each course.
- For the student to pass the 2nd part exam, a score of at least 60% (Level D) in each course is needed.

9. Methods of student assessments:

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

Assessment schedule:

Part I:

- Physiology: Written Exam (2 hours) + Structured oral Exam
- Biochemistry: Written Exam (2 hours) + Structured oral Exam
- Clinical pharmacology: Written Exam (2 hours) + Structured oral Exam
- Anatomy and Histology: Written Exam (2 hours) + structured oral Exam+ OSPE
- Surgical Pathology: Written Exam (2 hours) + structured oral Exam+ OSPE
- Microbiology: Written Exam (2 hours) + structured oral Exam+ OSPE
- General surgery and its subsidiaries: Written Exam (2 hours) + OSCE + Structured oral Exam
- Biostatistics Methodology: Written Exam (2 hours) + Structured oral Exam+ OSPE

Part II:

- Orthopedics, Traumatology: Written Exam (3 hours) + OSCE + Structured oral Exam+ Operative exam.

10. Evaluation of program

Evaluator	Tool	Sample
1- Senior students	Questionnaire	10
2- Alumni	Questionnaire	5
3- Stakeholders (Employers)	Questionnaire	5
4-External Evaluator(s) (External Examiner(s))	Report	1
5- Other		

Course Specifications of Medical Physiology for Master Orthopedics

Faculty of Medicine

Sohag University

1. Program on which the course is given: Postgraduate - MSc Orthopaedics
2. Major or minor element of program : Minor
3. Department offering the program: Orthopedic Surgery and Traumatology.
4. Department offering the course: Medical Physiology.
5. Academic year / Level: MSc 1st part Orthopedic Surgery and Traumatology
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

A. basic information

Title :physiology , for master degree in Orthopedic Surgery and Traumatology

Code :PHY 0523 200

Total hours :

Lectures	Practical	Tutorial/clinical	Total hours	Credit
15 hours			15 hours	1

B. professional information

1- aim of the course

to prepare an orthopedic physician oriented with the physiology homeostasis especially that concerned with calcium & phosphorus homeostasis , water balance & acid base balance. In addition, graduates should have enough knowledge about body response to trauma including haemostasis, haemorrhage & types of shock.

2- Intended Learning Outcomes of Course (ILOs):

a) Knowledge and Understanding:

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

- a1. Enumerate recent advances of pain transmission
- a2. Identify the effect of spinal cord injury
- a3. Mention hormonal control of Calcium haemostasis
- a4. Enumerate recent advances in development of shock and how to correct
- a5. Identify body response to trauma

b) Intellectual skills:

by the end of the course , the students is should be able to :

- b1. Assess the function of the skeletal system.
- b2. Identify the conditions with acid base disturbance

c) Professional and Practical Skills:

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

- c1. Master basic and modern professional clinical skills in correction of shock and detection of spinal cord injury

d) General and Transferable Skills:

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

- d1. Teach others the physiology of the musculoskeletal system and its relation to orthopedic disease

3- Contents of the course:

Topic	No. Of hours	Lecture	Tutorial/ Practical
hemostasis	2	2	
hypothalamic-pituitary axis	1	1	
haemorrhage & shock	2	2	
tissue fluid formation & oedema	2	2	
body response to trauma	2	2	
water balance	1	1	
calcium & phosphorus hemostasis	1	1	
acid base balance	2	2	
pain & its control by C.N.S	2	2	
Total	15	15	-
Credit	1	1	

4- Teaching & learning methods:

4.1 Lectures

5- Student Assessment:

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

Assessment schedule:

1-Assesment 1: written examination 24 week
2-Assessment 2: Structured Oral Exam 24 week

Weighting of assessments:

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

6- List of references:

6.1-Course notes

Department notes, lectures & handouts.

6.2- Essential books (textbooks)

Guyton textbook of physiology

6.3- Recommended Books

Ganong , medical review of physiology

6.4- Periodicals, Web Sites, ... etc

American journal of physiology

Websites :

<http://www.ncbi.nlm.gov/>

Findarticle.com

Freemedicaljournals.com

7- Facilities Required for Teaching and Learning

- a- -Adequate infrastructure including teaching rooms, comfortable desks, good sources of aeration, bathrooms, illumination, safety and security tools
- b- Teaching tools including screen, slide Projector, computer and data show.

Course Coordinator: Dr. Hoda Mostafa

Head of Department: Prof . Ahmed Mostafa

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

Course Specifications of Medical Biochemistry for Master Orthopedics

Sohag University

Faculty of Medicine

1. Program on which the course is given: Postgraduate - MSc Orthopaedics
2. Major or minor element of program : Minor
3. Department offering the program: Orthopedic Surgery and Traumatology.
4. Department offering the course: Medical Biochemistry.
5. Academic year / Level: MSc 1st part Orthopedic Surgery and Traumatology
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

A. Basic information

Title : Biochemistry for master degree in orthopaedics

Code: BIO 0523 -200

Total hours :

Lectures	Practical	Tutorial/clinical	Total hours	Credit
15 hours			15 hours	1

B. professional information

1- aim of the course

By the end of the course the post graduate students should be able to have the professional knowledge of the biochemistry of the Orthopedic diseases, and able to diagnose any vitamin and calcium regulating hormones deficiency.

2- Intended Learning Outcomes of Course (ILOs):

a) **Knowledge and Understanding:**

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

- a1. To know the biochemical importance of intermediary metabolism (Anabolic and catabolic)
- a2. The importance of clinical biochemistry and its relation to orthopedic diseases.
- a3. Explain the role of vitamin and minerals in Orthopedics
- a4. To know and explain hormonal action

b) **Intellectual Skills**

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

- b1. Integrate basic anatomical , biochemical and physiological facts with clinical data

c) **Professional and Practical Skills**

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

- c1. To identify the biochemical defect that affect musculoskeletal system
- c2. To perform some laboratory tests for early diagnosis of biochemical defects in orthopedic disease.

d) **General and Transferable Skills**

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

- d1. Use appropriate computer program for analysis of biochemical defects in orthopedic disease.

3- Contents of the course:

Topic	No. Of hours	Lecture	Practical
Vitamins (esp. Vitamin D)	1	1	
Minerals (Esp. calcium and phosphorus)	1	1	
Parathyroid hormones in details	2	2	
Anabolic hormones (Insulin , sex hormones)	1	1	
URIC ACID	1	1	
Collagen	1	1	
Fate of ammonia	1	1	
Tissue chemistry	1	1	
Biochemistry of osteoarthritis Hyaluronic acid	1	1	
Biochemistry of osteoporosis	1	1	
Biochemistry of osteomalacia	1	1	
Cellular receptors	1	1	
Chemistry of white fibrous connective tissue and bone	1	1	
Factors affecting the level of blood calcium	1	1	
Total	15	15	-
Credit	1	1	

4- Teaching & learning methods:

4.1 Lectures

5- Student Assessment:

-STUDENT ASSESSMENT METHODS :

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

5.3-Structured Oral Exam	- Knowledge, Intellectual skills, General transferable skills
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Assessment schedule:

1-Assesment 1: written examination	24 week
2-Assessment 2: Structured Oral Exam	24 week

Weighting of assessments:

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

6- List of references:

- 6.1- Course Notes made by the staff of the department
 - 6.2- Essential Books (Text Books)
 - 1. Text book of medical biochemistry with clinical Devlin, JM 1994
 - 2. Harper's biochemistry, Murray, RK 2005
 - 6.3- Recommended Books
 - 1. Lectures notes on clinical biochemistry, Whitby et al 1993
 - 2. Lippincott's illustrated reviews biochemistry, Champe, PC, Harvey, RA, 2005
 - 6.4- Periodicals, Web Sites ... etc
 - 1. <http://www.ncbi.nlm.gov/>
 - 2. <http://www.vlib.org/>
 - 3. www.genome.ad.jp/kegg/regulation.
 - 4. Findarticle.com
 - 5. Freemedicaljournals.com
- Notes of the department and practical notebook
Goodman's and Gilman

7- Facilities Required for Teaching and Learning

- a- -Adequate infrastructure including teaching rooms, comfortable desks, good sources of aeration, bathrooms, illumination, safety and security tools
- b- Teaching tools including screen, slide Projector, computer and data show.

Course Coordinator: dr. Nagwa Sayed Ahmed Hassan

Head of Department: Dr. Nagwa Sayed Ahmed Hassan

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

Course Specifications of Clinical Pharmacology for Master Orthopedics

Sohag University

Faculty of Medicine

1. Program on which the course is given: Postgraduate - MSc Orthopaedics
2. Major or minor element of program : Minor
3. Department offering the program: Orthopedic Surgery and Traumatology.
4. Department offering the course: Clinical Pharmacology.
5. Academic year / Level: MSc 1st part Orthopedic Surgery and Traumatology
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

A. Basic information

Title : pharmacology for master degree in Orthopedic Surgery and Traumatology

code: PHA 0523 200

Total hours :

Lectures	Practical	Tutorial/clinical	Total hours	Credit
30 hours			30 hours	2

B. professional information

1- Aim of the course

By the end of the course the student should be able to have the professional knowledge about the most common drugs used in surgery as;

- a. Analgesics
- b. Antibiotics
- c. Corticosteroids
- d. Antirheumatoid treatment
- e. Antiresorptive bone treatment and drug therapy of osteoporosis
- f. Hyaluronic acid and drugs for osteoarthritis

2- Intended Learning Outcomes of Course (ILOs):

a) Knowledge and understanding

By the end of this course, students should have adequate knowledge about:

- a1. Describe the various therapeutic methods/alternatives used for orthopedic diseases and problems

b) Intellectual skills

By the end of this course, students should have adequate knowledge about:

- b1. Conduct research studies, and/or write a scientific study on a research problem.
- b2. Identify general surgical problems and find solutions..
- b3. Analyze reading of research and issues related to the orthopedic surgery and traumatology.

c) Professional and practical skills:

By the end of this course, students should have adequate knowledge about:

- c1. Apply the basic and modern professional skills in the area of orthopedic surgery and traumatology

d) General and Transferable skills:

By the end of this course, students should have adequate knowledge about:

- d1. Assess himself and identify of personal learning needs.
- d2. learn himself continuously

3- Contents of the course:

Topic	No. of hours	Lecture	practical
Introduction	4	4	
NSAID	4	4	
antibiotics	4	4	
corticosteroids	4	4	
Antirheumatoid drugs	4	4	
Opioid analgesics	4	4	
Drug therapy of osteoporosis	6	6	
Total	30	30	-
Credit	2	2	

4- TEACHING & LEARNING METHODS:

4.1 Lectures

5- Student Assessment:

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

Assessment schedule:

- 1-Assesment 1: written examination 24 week
2-Assessment 2: Structured Oral Exam 24 week

Weighting of assessments:

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

6- List of references:

- 6.1- Course Notes
Notes of the department and practical notebook
6.2- Essential Books (Text Books)
Goodman"s and Gilman
6.3- Recommended Books
Katzumy in pharmacology

7- Facilities Required for Teaching and Learning

- a- -Adequate infrastructure including teaching rooms, comfortable desks, good sources of aeration, bathrooms, illumination, safety and security tools
b- Teaching tools including screen, slide Projector, computer and data show.

Course Coordinator: Dr. Faten M Omeran**Head of Department:** Prof. Mahmoud Hamdi**Date:** 18/12/2011, **Revised:**1/9/2012, **Revised:**1/12/2013

Course Specifications Surgical Anatomy and Histology for Orthopedics Master Degree (first part)

Sohag University

Faculty of Medicine

1. Program(s) on which the course is given: Surgical anatomy and histology for master degree in orthopedics.
2. Minor element of program.
3. Department offering the program: Orthopedics department
4. Department offering the course: Anatomy and Embryology Department and histology department
5. Academic year / Level: post graduate.
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

A. Basic Information

Title: Anatomy and Histology for master degree in orthopedics

Code: ANA, HIS0523-200

Total hours :

Module	Lectures	Practical	Tutorial/clinical	Total hours	Credit
Anatomy	7.5 hours	15 hours		22.5 hours	1
Histology	7.5 hours	15 hours		22.5 hours	1

B. Professional Information

1. Overall Aims of Course

Anatomy module :

By the end of the course the student should be able to have the professional knowledge about the anatomy and embryology upper limb, lower limb and vertebral column.

Histology module :

Our aim is to graduate competent surgeon mastering the:

- Scientific knowledges and skills essential for understanding the orthopaedic surgical problems at microscopical level
- Having the ability to engage in further following researches and training in any branch of applied clinical Histology.

2. Intended Learning Outcomes of Course (ILOs):

Anatomy module :

a) Knowledge and Understanding:

- a1. Mention the normal structure of the human musculoskeletal system
- a2. Enumerate the normal development of the human musculoskeletal system.

b) Intellectual Skills

- b1. Interpret data acquired to understand applied anatomy of orthopedic diseases.

c) Professional and Practical Skills

- c1. Master the basic and modern professional skills in surgical dissection on anatomical basis.

d) General and Transferable Skills

- d1. Use of different sources for information and knowledge to learn more about abnormal anatomy of orthopedic disease.

Histology module :

a) Knowledge and Understanding:

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

- a1. Enumerate sufficient knowledge of the histological structure of the different basic body tissues.
- a2. Mention sufficient knowledge of the detailed histological structure of the different types of bone and ossification .
- a3. Enumerate sufficient knowledge of the histological structure of the spinal cord at different levels.

b) Intellectual Skills:

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

- b1. Use self learning skills in problem solving.
- b2. Interpret some of the medical importance of the histological structure in relation to orthopedic surgical problems.

c) Practical and professional skills:

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

- c1. Identify the histological structure of the body tissues.

d) General and Transferable Skills:

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

- d1. Use the computer to enter histological web sites.
- d2. Collect scientific data from the computer.
- d3. Work in groups, as a leader or as a college.

3. Contents

Anatomy module :

Topic	No. of hours	
	Lecture	Practical
Introduction	1.5	2.
Anatomy and embryology of the upper limb	1	2
Anatomy and embryology of the vertebral column	1	2
Anatomy of the muscles of the back	1	2.
Anatomy and embryology of the lower limb	1	2
Anatomy and embryology of the spinal nerves	1	2
Revision	1	3
Total	7.5	15
Credit	0.5	0.5

Histology module :

Topic	Lecture hours	practical
Cytology: -general structure of the nucleus. -general structure of the cytoplasm. General structure of the body basic tissues: - epithelial tissue. -connective tissue. -muscular tissue. -nervous tissue. -blood and haemopoietic tissue	1.5	4
Bone, Cartilage & joints: -Histological features of cartilage. -cartilage cells. -histological features, stains and sites of hyaline cartilage. -histological features, stains and sites of elastic cartilage. -histological features, stains and sites of fibro cartilage. - growth and nutrition of cartilage. -Histological features of bone. -bone cells. -bone matrix. - bone ossification. - growth and nutrition of bone. -healing of fractures. -histological structure of different types of joints.	2	3

<p>Cardiovascular system :</p> <p>General structure of the heart wall. General structure of the wall of blood vessels. Arteries (large+medium sized) Veins (large+medium sized) Structure of special types of arteries and veins. Arteriovenous connection;capillaries,sinusoids and arteriovenous anastomosis.</p> <p>Lymphatic and immune system: Structure of lymph vessels. Distribution and structure of lymphoid tissue. structure and function of lymphatic nodule lymphocytes and immune cells reaction of B&T lymphocytes to antigens. Common mucosal immune system. Structure and function of lymphatic organs: Lymph nodes. Spleen thymus Tonsils Mononuclear phagocytic system. Antigen presenting cells. Stains to identify member of immune cells.</p>	1	3
<p>Endocrine system :</p> <p>Main components of endocrine system.</p> <p>Pituitary gland: Development and general organization. Anterior lobe and its relation to the hypothalamus. Posterior lobe and its relation to the hypothalamus.</p> <p>Thyroid gland: Development. Microscopic structure;LM.&EM. Characteristic properties. Function and mechanism of secretion. Hypo and hyperfunction and its relation to the structure.</p> <p>Parathyroid gland: Development,site and its relation to the thyroid. Chief and oxyphil cells;structure and function.</p> <p>Suprarenal gland Development (cortex and medulla). Adrenal cortex;zona glomerulosa,zona fasciculata,zona reticularis. Adrenal medulla;chromaffin cells and ganglion cells. Adrenal hormones. Blood supply of the adrenal gland and its significance.</p> <p>Paraganglia: Structure and function. Relation to supra renal medulla.</p>	1	2

Spinal cord: Meninges,CSF.,blood brain barrier. Grey matter. White matter;ascending and descending tracts. Different segments of the spinal cord.	1	3
Total	7.5	15
Credit	0.5	0.5

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

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

Assessment Schedule

Assessment 1 ... Periodic 1...	Week:10-12
Assessment 2 ... Assignment....	Week:15-16
Assessment 3 ...periodic. 2....	Week:18-20
Assessment 2 ...Final OSPE...	Week:24
Assessment 3 Final written exam....	Week:24
Assessment 4.....Final Structured Oral Exam	Week....24

Weighting of Assessments

Periodic Examinations	20	% including:
Assignment:	5%	
Periodic 1:	5%	
periodic. 2:	10%	
Final-term Examination	50%	
Structured Oral Exam.	20%	
OSPE	10 %	

Total 100%

6. List of References

Anatomy module :

- 6.1- Course Notes
Notes of the department and practical notebook
- 6.2- Essential Books (Text Books)
Gray's Anatomy
- 6.3- Recommended Books
A colored Atlas of Human anatomy and Embryology.

Histology module :

6.1- Course Notes

- Lectures notes prepared in the form of a book authorized by the department
- Laboratory manual authorized by the department

6.2- Essential Books (Text Books)

-Junqueira, Carneiro and Kelly (1995): Basic Histology, 7th ed. Librairrie du liban and lang buruit, London ,New York.

-Fawcett(1994):A Text Book of Histology,12th ed.Chapman and Hall,New York, London.

- Drury, R.A.B. and Walington, E.A.(1980): Histological techniques,5th ed.Oxford university press,New York.

-Pears,A.G.E.(1985): Histochemistry theoretical and applied,4th ed. Churchill Livingstone, Melbourne and New York.

6.3- Recommended Books

- Cormack, H.D.(1987): A text book of Histology,9th edition,Lippincott,J.B. Company, Philadelphia.

- Williams, P.L.(1995):Gray's Anatomy,the anatomical bases of Medicine and Surgery,38th ed., Cgurchill, Livingstone, Britain.

6.4- Web Sites:

<http://www.histology-world.com>

<http://histo.life.illinois.edu/histo/atlas/slides.php>

6.5-Periodicals:

- Egyptian J of Histology
- Egyptian J of Anatomy
- Acta Anatomica
- International J of Experimental Research
- Science
- Cell and Tissue Research

7. Facilities Required for Teaching and Learning

Data show device for lectures.

Course Coordinator:

Anatomy module : Dr . Nassar Aiob

Histology module : Dr Eman Khalefa Ahmed

Head of Department:

Anatomy module : Dr. Esam Salah Kamel.

Histology module : Prof/ Eman E AbU-Dief

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

Course Specifications of Pathology for Master Of Orthopedic Surgery & Traumatology

Sohag University

Faculty of Medicine

1. Program on which the course is given: Postgraduate study
2. Major or minor element of program: Minor
3. Department offering the program: Orthopedic Surgery and Traumatology
4. Department offering the course: Pathology Department.
5. Academic year / Orthopedics 1st part of Master degree.
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

Title pathology

Code: PAT 0523 200

A. Basic Information

Total	Lecture	Practical	Credit
45	15	30	2

B. Professional Information

1. Overall Aims of Course

Pathology module:

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:

- a1. Develop understanding of advances of general and systemic pathology.
- a2. Become familiar with etiology, pathogenesis and pathologic manifestation of diseases especially musculoskeletal & soft tissue disorders.
- a3. Mention sufficient information about the fate and complications and prognosis of different diseases especially musculoskeletal & soft tissue disorders.

b) Intellectual Skills:

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

- b1. Correlate gross and histopathology with the clinical basis of diseases especially musculoskeletal & soft tissue disorders.

c) Professional and Practical Skills:

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

- c1. Identify the macroscopic and microscopic criteria of the altered structure (pathology) of the body and its major organs and systems that are seen in various diseases.
- c2. Write a report commenting on a pathological specimen

d) General and Transferable Skills:

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

- d1. Teach undergraduates and residents the surgical pathology of orthopedic disease

d2. Effectively utilize various computer based instruction tools and E-learning of Pathology and utilize a variety of computer-based self assessment tools.

3. Course contents:

Topic	No. of hours	Lecture	Practical
1- General Pathology:	13	3	10
1.1. Inflammation & repair.	2.5	0.5	2
1.2. Cell response to injury and aging.	2.	0.5	1.5
1.3. Disturbances of circulation.	2	0.5	1.5
1.4. Bacterial infection & Pott's disease.	2	0.5	1.5
1.5. Osteoporosis, rickets & osteomalasia.	2	0.5	1.5
1.6. General pathology of tumors.	2.5	0.5	2
2- Musculoskeletal system:	32	12	20
2.1. Osteomyelitis.	3	1	2
2.2. Bone tumors.	4	2	2
2.3. Soft tissue tumors.	4	2	2
2.4. Osteodystrophies.	5	2	3
2.5. Arthritis & synovitis.	4	1	3
2.6. Tumors of joints.	4.5	1.5	3
2.7. Plasma cell dyscrasia & multiple myeloma.	4.5	1.5	3
2.8. Bone lymphoma.	3	1	2
Total	45	15	30
Credit	2	1	1

4. Teaching and Learning Methods

- 4.1. Lectures.
- 4.2. practical lessons

5. Student Assessment Methods

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

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	30%
Attendance of practical lessons	20%
Total	100%

6. List of References

- 6.1- Course Notes: Principles of General and Special Pathology; Gamal Nada.

6.2- Essential Books (Text Books):

- Muir's text book of pathology.
- Robbins pathologic basis of diseases.

6.3- Recommended Books:

- Rosi & Ackerman text book of pathology.
- Sternberg text book of pathology.

6.4- Periodicals, American journal of pathology

Pathology

Human pathology

Web Sites: <http://www.ncbi.nlm.nih.gov/pubmed/>

7- Facilities Required for Teaching and Learning:

- a. Library & textbooks.
- b. Computer & data show.
- c. Internet connection.

Course Coordinator: Dr. Fatma El Zahraa

Head of Department: Dr. Eman Mohammed Salah El Deen

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

Course Specifications of Medical Microbiology and Immunology for Master Of Orthopedic Surgery & Traumatology

Sohag University

Faculty of Medicine

1. Program on which the course is given: Postgraduate study
2. Major or minor element of program: Minor
3. Department offering the program: Orthopedic Surgery and Traumatology
4. Department offering the course: Medical Microbiology and Immunology department
5. Academic year / Orthopedics 1st part of Master degree.
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

A. Basic Information

Title: Microbiology for Master Of Orthopedic Surgery & Traumatology

Code: MIC 0523 200

Total	Lecture	Practical	Credit
45	15	30	2

B. Professional Information

3. 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 expected to fully understand the concept of nosocomial infections, particularly on how to avoid and manage SSI; and to fully co-operate with the infection control team. 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

4. Intended Learning Outcomes of Course (ILOs):

a) **Knowledge and Understanding:**

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

- a1. List the microorganisms affecting human beings all over the world and particularly in Egypt.
- a2. Describe the metabolism and genetics of organisms.
- a3. Describe the pathology, clinical symptoms and complications of diseases affecting musculoskeletal system.
- a4. Summarize the laboratory tests needed for diagnosis of each case.
- a5. Name the drugs and instructions used for treatment of each case.
- a6. Describe infection control methods
- a7. Describe the structure and function of immune system

b) Intellectual Skills:

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

- b1. Differentiate between the different microorganisms (Bacteria, viruses and fungi)
- b2. Differentiate between the different types of disease causing microbes

- b3. Determine the antibiotic regimen based on previous microbiological experience and laboratory tests.
- b4. Determine the involvement of the immune system in the current disease process.

c) Professional and Practical Skills:

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

- c1. Recognize micro-organisms on morphological bases.
- c2. Identify the methods of staining, culturing and biochemical reactions
- c3. Recognize serological tests used in diagnosis & handling of samples.
- c4. Learn infection control measures

d) General and Transferable Skills:

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

- d1. Use the computer and internet to gather scientific information.
- d2. Learn how to co-operate with other departments especially infection control units

3. Course contents:

Topics	No. of Hours	Lecturers	Practical
<u>General Bacteriology</u> Bacterial anatomy, Genetics & Physiology	1	1	
Recombinant DNA technology	1	1	
Antibiotics	1	1	
Sterilization & Disinfection	5	1	4
<u>Systematic Bacteriology</u> Gram +ve cocci, Gram -ve cocci	1	1	
Gram +ve bacilli, Gram -ve bacilli	1	1	
<u>General virology</u>	1	1	
<u>Systematic Virology</u> RNA viruses, DNA viruses	1	1	
<u>Mycology</u> Fungal classifications, Opportunistic mycosis & Antifungal drugs	1	1	
<u>Immunology</u> Congenital & Acquired Immunity	1	1	
Immunological Cells, Hypersensitivity	1	1	
Transplantation, Tumor Immunology	1	1	
Immunodeficiency	1	1	
<u>Applied Microbiology</u>	1	1	
Nosocomiology	1	1	
Bacterial Cultures	2		2
Bacterial Isolation & Identification	2		2
Diagnostic Molecular Biology Methods	2		2
Antibiotic Sensitivity Tests	2		2
Immunology(Antigen Antibody Reactions) 1	2		2
Immunology(Antigen Antibody Reactions) 2	2		2
Staphylococci	2		2
Streptococci & Pneumococci	2		2
Neisseria	1		1
Corynebacterium	1		1
Mycobacterium	1		1
Enterobacteria	1		1
Pseudomonas & Yersinia	1		1
Bacillus	1		1
Clostridium	1		1
Vibrios & Brucella	1		1
Spirochaetes & Mycology	2		2
Total	45	15	30
Credit	2	1	1

4. Teaching and Learning Methods

- 4.1. Lectures.
- 4.2. practical lessons

5. Student Assessment Methods

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

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	% 30%
Attendance of practical lessons	% 20%
Total	100%

6. List of References

6.1- Course Notes

Notes of the department and practical notebook
Prof. Abla Elmeshad

6.2- Essential Books (Text Books)

Jawetz Medical Microbiology.
Roitt Essential Immunology.
Abbas Clinical Immunology
Alberts Molecular Biology

6.3- Recommended Books

A coloured Atlas of Microbiology.
Topley and Wilson, Microbiology

6.4- Periodicals, Web Sites, ... etc

Microbiology
Immunology
<http://mic.sgmjournals.org/>

7- Facilities Required for Teaching and Learning:

- a. Library & textbooks.
- b. Computer & data show.
- c. Internet connection.

Course Coordinator: Dr. Mona Fatoh

Head of Department: Dr . Abeer Shenief

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

Course Specifications of General Surgery for Master Orthopedics

Sohag University

Faculty of Medicine

1. Program on which the course is given: Postgraduate - MSc Orthopaedics
2. Major or minor element of program : Minor
3. Department offering the program: Orthopedic Surgery and Traumatology .
4. Department offering the course: General Surgery.
5. Academic year / Level: MSc 1st part Orthopaedics
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

A. Basic Information

Title: General surgery

Code: SUR 0523- 200

Lectures	Practical/Surgical	Tutorials/Clinical	Total hour	Credit
30	15		45	3

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 general surgical conditions

2. Intended Learning Outcomes of Course (ILOs):

a) **Knowledge and Understanding:**

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

- a1. Mention the normal structure and function of different boy system and its relation to surgical approaches

b) **Intellectual Skills:**

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

- b1. Interpret data to differentiate between surgical and non-surgical conditions

c) **Professional and Practical Skills:**

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

- c1. Master the basic and modern professional general surgical skills

d) **General and Transferable Skills:**

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

- d1. Use of different sources for information and knowledge in the field of general surgery

3. Contents

Lectures	Total No. of hours	lectures	clinical
<u>General Surgery</u>			
Breast	7	5	2
Thyroid	7	5	2
Hernia	7	5	2
Differential diagnosis of abdominal mass	7	5	2
Types of wounds and management	7	5	2
Hemorrhage	4.5	2.5	2
Shock	5.5	2.5	3
Total	45	30	15
Credit	3	2	1

4. Teaching and Learning Methods

4.1- Lectures.

5. Student Assessment Methods

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

Assessment Schedule

Assessment 1... Written exam	week24
Assessment 2... Structured Oral Exam	week24
Assessment 3... OSCE	week24

Weighting of Assessments

Written Examination	50	%
Structured Oral Exam.	30	%
OSCE	20%	
Total	100	%

6. List of References

6.1- Course Notes

Notes of the department and practical notebook

6.2- Essential Books (Text Books)

6.3- Recommended Books

6.4- Periodicals, Web Sites, ... etc

Microbiology

Immunology

<http://mic.sgmjournals.org/>

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 and security tools.

2-Teaching tools: including screens, computers including CD, data show, projectors, flip charts, white boards, video player, digital video camera, scanner, copier, color and laser printers.

Course Coordinator: Dr/ Nabil Abo El Dahb

Head of Department: Prof. Dr/Alaa El Suty

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

Course Specifications of Applied biostatistics (with computer use) and Research Methodology in Master degree of Orthopedic Surgery & Traumatology

Sohag University

Faculty of Medicine

1. Program title : Master degree in Orthopedic Surgery &Traumatology
2. Major/minor element of the program : Minor
3. Department offering the course: Community Medicine and public Health Dep.
4. Department offering the program: Orthopedics
5. Academic year /level : 1st part
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

A. Basic Information

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

Code: COM: 0523-200

Total Hours:

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

B. Professional Information

1. Overall Aims of Course

Applied Biostatistics Module:

- 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:

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:

- b1. Mention how to collect and verify data from different sources
- b2. 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:

- c1. 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:

- d1. Use appropriate computer program packages.
- d2. Use of different sources for information and knowledge about biostatistics.

Research Methodology Module:

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:

- b1. Conduct research studies that adds to knowledge.
- b2. Formulate scientific papers in the area of public health and community medicine
- b3. Innovate and create researches to find solutions to prevalent community health problems
- b4. 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:

- c1. Enumerate the basic and modern professional skills in conducting researches in the area of public health and community medicine.
- c2. 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:

- d1. Use of different sources for information and knowledge to serve research.
- d2. 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
- 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

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

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

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

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, Prentice – Hall International Inc

6.2- Recommended Books

- 1- Dimensions of Community Health, Boston Burr Ridge Dubuque.
- 2- Short Textbook of preventive & social Medicine Prentice-Hall International Inc.
- 3-Epidemiology in medical practice, 5thed Churchill Livingstone New York, London and Tokyo

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, Prentice – Hall International Inc

6.2- Recommended Books

1- Dimensions of Community Health, Boston Burr Ridge Dubuque.

2- Short Textbook of preventive & social Medicine Prentice-Hall International Inc.

3- Epidemiology in medical practice, 5th edition. Churchill Livingstone. New York, London and Tokyo

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:

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

Research Methodology Module:

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

Head of Department: Prof/Eman Abd El-Baset Mohammed

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

Course Specification of Orthopaedic Surgery and Traumatology in Master degree in Orthopaedic Surgery and traumatology

Faculty of Medicine

Sohag University

1. Program on which the course is given: Master degree in Orthopaedic Surgery and Traumatology
2. Major element of program.
3. Department offering the course: Orthopaedic Surgery and Traumatology department
4. Department offering the program: Orthopedic Surgery and Traumatology Department
5. Academic year / Level: 1st part.
6. Date of specification approval: Faculty council No. "250", decree No. "1378" dated 28/12/2013.

A. Basic Information

Title: Orthopedics Surgery and Traumatology

Code: ORT0523 -200

Total hours

Lectures	Practical	Clinical	Total hour	Credit
225		300	525	25

B. Professional Information

1. Overall Aims of Course

By the end of the program the student should be able to manage orthopedic disease patients and trauma cases, and perform all of the general surgical procedures and most of special surgical procedures. Also he should master the basics of scientific research and apply the analytic methods for knowledge in the orthopedic surgery field.

2. Intended Learning Outcomes of Course (ILOs):

a) **Knowledge and understanding:**

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

- a1. Mention the normal structure and function of the human musculoskeletal system and its relation to surgical procedures
- a2. Understand the normal growth of the human musculoskeletal system.
- a3. List the abnormal structure, function, growth and development of human musculoskeletal system.
- a4. Enumerate the natural history of orthopedic diseases and traumatology problems.
- a5. Enumerate the causation of orthopedic diseases and traumatology problems and their pathogenesis.
- a6. Enumerate methods of fixation of different fracture pattern.
- a7. List the clinical picture and differential diagnosis of orthopedic diseases.
- a8. Enumerate advances in the common diagnostic and laboratory techniques necessary to establish diagnosis of orthopedic diseases.

- a9. Describe advances in the various therapeutic methods/alternatives used for orthopedic diseases.
- a10. Enumerate advances in the knowledge of the general surgery.
- a11. Define advances in the trauma management.
- a12. Enumerate scientific developments in the field of orthopedic surgery and traumatology
- a13. Enumerate the mutual influence between professional practice and its impacts on the environment.
- a14. Mention Ethical and legal principles of professional practice in the field of orthopedic surgery and traumatology.
- a15. Mention the principles and fundamentals of quality in professional practice in the field of orthopedic surgery and traumatology.
- a16. Enumerate the basics and ethics of scientific research.

b) Intellectual Skills

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

- b1. Interpret data acquired through history taking to reach a provisional diagnosis for orthopedic diseases.
- b2. Select from different diagnostic alternatives the ones that help reaching a final diagnosis for orthopedic diseases.
- b3. Link between knowledge for professional problems' solving.
- b4. Conduct a research study and / or write a scientific study on a research problem.
- b5. Assess risk in professional practices in the field of orthopedic surgery and traumatology.
- b6. Plan to improve performance in the field of orthopedic surgery and traumatology.
- b7. Identify orthopedic and traumatology problems and find solutions.
- b8. Analyze research and issues related to the orthopedic surgery and traumatology.

c) Professional and Practical Skills:

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

- c1. Master the basic and modern professional clinical and surgical skills in the area of orthopedic surgery and traumatology.
- c2. Write and evaluate medical reports.
- c3. Evaluate and develop methods and tools existing in the area of orthopedic surgery and traumatology.
- c4. Perform endoscopic and imaging evaluation of orthopedic problems.
- c5. Train junior staff through continuous medical education programs.
- c6. Design new methods, tools and ways of professional practice

d) General and Transferable Skills:

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

- d1. Present reports in seminars effectively.
- d2. Teach others orthopedic surgery and traumatology and evaluate their performance.
- d3. Assess himself and identify his personal learning needs.
- d4. Use of different sources for information and knowledge of orthopedic diseases and traumatology.
- d5. Manage scientific meetings according to the available time.

3. Contents

Topic	No. of hours	Lecture	clinical
GENERAL PRINCIPLES <u>* Surgical Techniques and Approaches</u>	45	15	20
ARTHRODESIS <u>* Arthrodesis of Ankle, Knee, and Hip</u> <u>* Arthrodesis of Shoulder, Elbow, and Wrist</u>	45	15	20
ARTHROPLASTY <u>*Introduction and Overview</u> <u>* Arthroplasty of Ankle and Knee</u> <u>* Arthroplasty of Hip</u> <u>*Arthroplasty of Shoulder</u>	75	25	20
AMPUTATIONS <u>General Principles of Amputations</u> <u>Amputations About Foot</u> <u>Amputations of Lower Extremity</u> <u>Amputations of Hip and Pelvis</u> <u>Amputations of Upper Extremity</u> <u>Amputations of Hand</u>	45	15	20
INFECTIONS <u>General Principles of Infection</u> <u>Osteomyelitis</u> <u>Infectious Arthritis</u> <u>Tuberculosis and Other Unusual Infections</u>	30	10	20
TUMORS <u>*General Principles of Tumors</u> <u>*Benign Tumors of Bone</u> <u>*Benign (Occasionally Aggressive) Tumors of Bone</u> <u>*Malignant Tumors of Bone</u> <u>* Soft Tissue Tumors and Nonneoplastic Conditions Simulating Bone Tumors</u>	30	10	20
NONTRAUMATIC SOFT TISSUE DISORDERS <u>* Nontraumatic Soft Tissue Disorders</u> <u>* Miscellaneous Nontraumatic Disorders</u>	30	10	20
CONGENITAL ANOMALIES <u>* Congenital Anomalies of Lower Extremity</u>	30	10	10

* <u>Congenital and Developmental Anomalies of Hip and Pelvis</u>			
* <u>Congenital Anomalies of Trunk and Upper Extremity</u>	30	10	10
OSTEOCHONDROSIS			
<u>Osteochondrosis or Epiphysitis and Other Miscellaneous Affections</u>			10
NERVOUS SYSTEM DISORDERS IN CHILDREN	30	10	
<u>Cerebral Palsy</u>			
<u>Paralytic Disorders</u>			
<u>Neuromuscular Disorders</u>			10
FRACTURES AND DISLOCATIONS IN CHILDREN	30	10	
THE SPINE	30	10	20
* <u>Spinal Anatomy and Surgical Approaches</u>			
* <u>Fractures, Dislocations, and Fracture-Dislocations of Spine</u>			
* <u>Arthrodesis of Spine</u>			
* <u>Pediatric Cervical Spine</u>			
* <u>Scoliosis and Kyphosis</u>			
* <u>Lower Back Pain and Disorders of Intervertebral Discs</u>			
* <u>Infections of Spine</u>			
* <u>Other Disorders of Spine</u>			10
SPORTS MEDICINE	45	15	
<u>Ankle Injuries</u>			
<u>Knee Injuries</u>			
<u>Shoulder and Elbow Injuries</u>			
<u>Recurrent Dislocations</u>			
<u>Traumatic Disorders</u>			10
ARTHROSCOPY	30	10	
<u>General Principles of Arthroscopy</u>			
<u>Arthroscopy of Lower Extremity</u>			
<u>Arthroscopy of Upper Extremity</u>			20
FRACTURES AND DISLOCATIONS	60	20	

<u>General Principles of Fracture Treatment</u>			
<u>Fractures of Lower Extremity</u>			
<u>Fractures of Hip</u>			
<u>Fractures of Acetabulum and Pelvis</u>			
<u>Fractures of Shoulder, Arm, and Forearm</u>			
<u>Malunited Fractures</u>			
<u>Delayed Union and Nonunion of Fractures</u>			
<u>Acute Dislocations</u>			
<u>Old Unreduced Dislocations</u>			20
PERIPHERAL NERVE INJURIES	30	10	20
MICROSURGERY	30	10	
THE HAND			20
<u>Basic Surgical Technique and Aftercare</u>	45	15	
<u>Acute Hand Injuries</u>			
<u>Flexor and Extensor Tendon Injuries</u>			
<u>Fractures, Dislocations, and Ligamentous Injuries</u>			
<u>Nerve Injuries</u>			
<u>Wrist Disorders</u>			
<u>Special Hand Disorders</u>			
<u>Paralytic Hand</u>			
<u>Cerebral Palsy of the Hand</u>			
<u>Arthritic Hand</u>			
<u>Compartment Syndromes and Volkmann Contracture</u>			
<u>Dupuytren Contracture</u>			
<u>Carpal Tunnel, Ulnar Tunnel, and Stenosing Tenosynovitis</u>			
<u>Tumors and Tumorous Conditions of Hand</u>			
<u>Hand Infections</u>			
<u>Congenital Anomalies of Hand</u>			
THE FOOT AND ANKLE			
<u>Surgical Techniques</u>			
<u>Disorders of Hallux</u>			
<u>Pes Planus</u>			
<u>Lesser Toe Abnormalities</u>			
<u>Rheumatoid Foot</u>			
<u>Diabetic Foot</u>			
<u>Neurogenic Disorders</u>			
<u>Disorders of Nails and Skin</u>			
<u>Disorders of Tendons and Fascia</u>			
<u>Fractures and Dislocations of Foot</u>			
Total	675	225	300
Credit	25	15	10

4. **Teaching and Learning Methods**

- 4.1 Lectures.
- 4.2 Practical / surgical /clinical lessons
- 4.3 Discussion sessions.
- 4.4 Information collection from different sources.
- 4.5 Attending and participating in scientific meeting and workshops

5. **Student Assessment Methods**

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

Assessment Schedule

Assessment 1 ... Assignment.....	Week: 30-31
Assessment 2 ... Written exam...	Week: 96
Assessment 3.... OSCE ...	Week: 96
Assessment 4..... Structured Oral Exam	Week: 96

Weighting of Assessments

Final Written	50	%
Structured Oral Exam	30	%
OSCE	20	%
<hr/>		
Total	100%	

Formative only assessment: single research assignment, log book, attendance and absenteeism

6. **List of References**

- 6.1- Essential Books (Text Books)
Campell's Operative Orthopedic
- 6.2- Recommended Books:
 - Manual of internal fixation
 - Stanley's Surgical approaches
- 6.3-Periodicals and Web Sites:
 - Spine Journal
 - British bone and joint Journal
 - American bone and joint Journal
 - Journal of hand and microsurgery
 - Clinical Orthopedic Journal

7. Facilities Required for Teaching and Learning

- Adequate infrastructure including teaching rooms, comfortable desks.
- Teaching tools including screen, slide Projector, computer and data show.

Course Coordinator: Dr .Ahmad Addosooki

Head of Department: Prof. Dr.El Shazly S. Mousa

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