PHARMACY PRACTICE & CLINICAL PHARMACY DEPARTMENT

Courses of Pharmacy Practice and Clinical Pharmacy Department

No.	Course Title	Course Code
1	Pathology and Pathophysiology	PHP 221
2	Pharmacy Practice I	PHP 322
3	Drug Marketing	PHP 413
4	Pharmacoeconomics	PHP 414
5	Community Pharmacy	PHP 415
6	Pharmacotherapeutics I	PHP 426
7	Pharmacy Practice II	PHP 427
8	Pharmacotherapeutics II	PHP 518
9	Professional Pharmacy Skills and Drug Information	PHP 519
10	Clinical Pharmacy	PHP 520
11	Pharmacoepidimiology, Public Health and Pharmacovigilance	PHP 521

Elective Courses:

No.	Course Title	Course Code
1	Medical Devices	PHP 613
2	Clinical Trials	PHP 614
3	Evidence-based Medicine	PHP 615
4	First Aid	PHP 616

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Pathology and Pathophysiology (PHP 221)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice and Clinical Pharmacy
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Pathology & Pathophysiology **Course Code: PHP 221**

Prerequisites: Physiology (PHL 123)

Students' Level/Semester: Second Level/ Fourth Semester

Credit hours: **4 (3+1)**

Actual teaching hours per week:

Lectures: 3 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 5 hr/week

B. Professional Information

1. Overall Aim of Course

This course is designed to promote the understanding of fundamental disease processes in clinical settings, general concepts of diseases including etiology, pathogenesis, and clinical significance of pathological changes in cells, tissues, organs or systems. The courses provides pharmacy students the pathogenesis and the clinical picture of various diseases affecting the human body regarding the physiological functions of human organs so that the students are enable to understand the relation between the symptoms and the disease which might be helpful in diagnosis. These concepts are applied in a systems – oriented approach to disease processes affecting musculoskeletal, cardiopulmonary, nervous, gastrointestinal, immunological, hematological and endocrinal systems.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. List the causes and pathophysiology of cell injury

a2. Enumerate types and examples of cell injury diseases.

a3. Describe inflammation process and different stages involved in inflammation.

a4. Illustrate the different causes and mechanisms of inflammation.

a5. Describe the different physiological systems involved in control of inflammation.

a6. Describe components of immune systems and stages of immune response.

a7. Explain the general mechanisms of abnormal immune response.

a8. Describe pathogenesis of some autoimmune diseases in different systems of the body.

a9. Illustrate the pathophysiology of hyperthyroidism and hypothyroidism its symptoms and diagnostic tests for hyperthyroidism.
a10. Identify diabetes: causes, types, diagnosis clinical picture.
a11. Describe the pathophysiology of parathyroid gland (hypo- and hyper parathyrodism)
a12. List causes of electrolyte disturbance.
a13. Illustrate the pathophysiology and types of edema (intracellular & extracellular).
a14. Describe the pathophysiology of acute renal failure and its physiological effects.
a15. Define the chronic renal failure (causes, pathophysiology)
a16. Describe the relationship between hypertension and kidney diseases. .
a17. Illustrate the pathophysiology of COPD, Asthma, and tuberculosis.
a18. Mention the disorders and pathophysiology of stomach (Gastritis, peptic ulcer)
a19. Illustrate the pathophysiology liver failure
a20. Illustrate all causes, mechanism and characters of haematological disorders
a21. Identify pathophysiology of CHD and heart failure
a22. Describe cancer biology.

b- Intellectual Skills

b1. Interpret relevant lab and clinical data.
b2. Describe goals of therapy.
b3. Relate pathophysiological changes to clinical picture.
b4. Estimate risk factors related to a disease.
b5. Predict the causative factors of the disease

c- Professional and Practical Skills:

c1. Relate the prognosis to expected long-term complications.
c2. Identify monitoring parameters.
c3. Counsel patients about diseases

d- General and Transferable Skills:

d1. Work separately or in a team to research and prepare a scientific topic.
d2. Apply the essential ethical issues in scientific research.
d3. Interact actively in open scientific discussions.

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	General Introduction Types of cell injury	5	3	
	Case study of cell injury			2
Two	Inflammations	5	3	
	Case study of inflammation			2
Three	Hypersensitivity & immune response	5	3	
	Case study of Hypersensitivity			2
Four	Cancer biology Types of tumors	5	3	
	Case study of tumors			1.5
	+ **First Midterm Exam**			0.5
Five	Pathophysiology of selected CVDs (HTN, HF & IHD)	5	3	
	Case study of CHF + IHD			2
Six	Pathophysiology of Respiratory diseases (Asthma & COPD)	5	3	
	Case study of Asthma & COPD			2
Seven	Pathophysiology of RF, & electrolytes disturbances e.g. acidosis & alkalosis	5	3	
	Case study of ARF			2
Eight	**Second Midterm exam**			
Nine	Pathophysiology of selected neurological disorders (Epilepsy, PD, AD, Psychosis)	5	3	
	Case study of Epilepsy			2
Ten	Pathophysiology of collagen diseases e.g. RA, SLE…	5	3	
	Case study of SLE + RA			2
Eleven	Pathophysiology of Thyroid & Parathyroid.	5	3	
	Case study of Ca disturbances & thyroid dysfunction.			2
Twelve	Pathophysiology of Diabetes Mellitus	5	3	

	Practical Exam			2
Thirteen	Functions of blood components, their Pathophysiology	3	3	
Total No. of hours		58	36	22
Fourteen	University Elective Final Exams			
Fifteen	Final Exams of Faculty			
Sixteen				

4. Teaching and Learning Methods

4.1. Case Scenario presentation.
4.2. Self-learning.
4.3. Role Play.
4.4. Problem solving
4.5. Active and interactive learning.
4.6 Data show and computer in lectures
4.7 Office hours
4.8 Demonstration videos.

5. Student Assessment Methods

5.1. Written exams to assess knowledge and understanding as well as intellectual skills.
5.2. Practical work (including participation)to assess professional and practical skills.
5.3. Oral exam to assess all skills including transferable skills.
5.4. Presentation to assess general and transferrable skills.
5.5. Class Work (Assignments) to assess knowledge and understanding as well as intellectual skills.

Assessment Schedule

Assessment 1 1st Midterm Exam Week 4
Assessment 2 2nd Midterm Exam Week 8

Assessment 3	Practical Exam Week 12
Assessment 4	Final Exam Week 15/16
Assessment 5	Oral exam Week 15/16
Assessment 6	Class Work (Assignments) During the semester

Weighting of Assessments

1st Mid-term exam		5%
2 nd Mid-term exam		15%
Final-Term Exam		30%
Oral Examination		10%
Practical		30%
• Practical Examination	20%	
• Presentation	5%	
• Participation	5%	
Class Work (Assignments)		10%
Total	**100%**	

6. List of References

6.1. Course Notes

Theoretical Course Lectures are uploaded to the moodle
Practical Manual given to each student

6.2. Essential Books (Text Books)

6.2.1 DiPiro j, Talbert L, Posey L.M "Pharmacotherapy: A pathophysiologic approach." 3th Edition, Connecticut: Appleton, 2011.

6.3. Recommended Books

Karin C. Van Meter, PhD and Robert J Hubert, BS Pathophysiology for the Health Professions, 5th Edition, Philadelphia, PA, Saunders Publishers, 2014.

6.4. Periodicals, Websites, ……etc

6.4.1. www.pubmed.com
6.4.2.WWW.pharmacotherapyonline.com
6.4.3. www.Medscape.com

7. Facilities Required for Teaching and Learning

7.1 Lecture halls

7.2 Computer equipped with projector and internet connection available for the usual lectures and Labs.

7.3 Smart board for lectures

7.4 Computers with internet and E-library

7.5 Data Show

7.6 Lanschool

Course Coordinator: -

Head of Department Prof. Dr. Ebtissam Darweesh

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Pharmacy Practice - 1 (PHP 322)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	(Pharmacy Practice and Clinical Pharmacy)
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Pharmacy Practice - 1 Course Code: PHP 322
Prerequisites: Pharmaceutics 1 (PHT 223)
Students' Level/Semester: Third Level/ sixth Semester
Credit hours: **3 (2+1)**
Actual teaching hours per week:
Lectures: 2/week **Practical:** 2/week **Tutorial:** N/A **Total:** 4/week

B. Professional Information

1. Overall Aim of Course

This course was designed to continue the process of developing skills needed for pharmaceutical care, including pharmaceutical calculations, enhancement of written and verbal communication skills, focusing on the role of pharmacist in hospitals and the pharmacy services provided to in and out-patients

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Outline the contemporary role of hospital pharmacist.
a2. Recognize hospital pharmacy activity.
a3. Recognize organization of department of pharmaceutical services in hospitals.
a4. Review patient laboratory data.
a5. Describe IV admixture and TPN preparation.
a6. Identify the basics of enteral nutrition.
a7. Enumerate the specifications and requirements for handling cytotoxic drugs.

b- Intellectual Skills:

b1. Distinguish the different organizations of hospital pharmacy departments, services and procedures.
b2. Select the best method for drug distribution in hospitals
b3. Choose the best methods for IV drug administration.
b4. Identify the best patient drug related needs during TPN therapy.
b5. Interpret laboratory tests for patients.
b6. Indicate the best way to handle cytotoxic drugs.

b7. Outline medication errors problems.

c- Professional and Practical Skills:

c1. Calculate the doses of medicines and radiopharmaceuticals for adults and pediatrics on scientific basis
c2. Reconstitute dry powder medication with required concentration.
c3. Calculate the IV infusion rate for regular IV sets and IV pumps.
c4. Design a TPN supply for patients.
c5. Compound injections in aseptic conditions.

c6. Work comfortably and effectively with IV set components.

d- General and Transferable Skills:

d1. Communicate effectively verbally and nonverbally with other health care providers and patients.
d2. Use medical terminology to deal the medical team
d3. Apply guidelines concerning drug purchase, supplies, storage, etc.
d4. Evaluate proper aseptic technique and laminar airflow workbench operations.

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	Introduction of hospital pharmacy	4	2	
	Introduction			2
Two	The Pharmacy Staff	4	2	
	Drug Orders and Medication Records			2
Three	Medication distribution systems	4	2	
	Use of commercially Prepared Dosage Forms in Compounding			2
Four	Technical Services in hospitals	4	2	

	Use of commercially Prepared Dosage Forms in Compounding + **First Midterm exam**			2
Five	IV Admixtures	4	2	
	Constitution of Dry Powders			2
Six	IV Sets and Rate Flow of IV Fluids	4	2	
	Calculation of IV infusion rate			2
Seven	Dosage calculation based upon creatinine clearance and Radiopharmaceuticals	4	2	
	Dosage calculation based upon creatinine clearance			2
Eight	**2nd Midterm exam**			
Nine	Safe Medication Systems in Hospitals and Handling of cytotoxic drugs	4	2	
	Interpretation of medication label			2
Ten	Parenteral Nutrition	4	2	
	Design of TPN therapy.			2
Eleven	Enteral Nutrition	4	2	
	Review of lab data.			2
Twelve	Investigational Drugs (1)	4	2	
	Practical exam + Quiz			2
Thirteen	Investigational Drugs (2)	2	2	
Total No. of hours		**46**	**24**	**22**
Fourteen	**University Elective Final Exams**			
Fifteen	**Final Exams of Faculty**			
Sixteen				

4. Teaching and Learning Methods

- **4.1.** Lectures
- **4.2.** Class discussions
- **4.3.** Interactive learning and projects
- **4.4.** Assignments
- **4.5.** Power point presentations
- **4.6.** Practical work

5. Student Assessment Methods

- **5.1.** Discussions to assess knowledge and understanding.
- **5.2.** Written to assess knowledge and understanding as well as intellectual skills.
- **5.3.** Practical work to assess professional and practical skills.
- **5.4.** Quiz to assess knowledge and understanding of the practical part, intellectual skills as well as professional and practical skills
- **5.5.** Oral exam to assess all skills including transferable skills.
- **5.6.** Class work to assess all types of skills.

Assessment Schedule

Assessment 1 Written first midterm exam	Week 4
Assessment 2 Written second mid-term exam	Week 8
Assessment 3 Practical exam	Week 12
Assessment 4 Practical Quiz	Week 12
Assessment 5 Written final exam	Week 15/16
Assessment 6 Oral exam	Week 15/16
Assessment 7 Class Work	(During the semester)

Weighting of Assessments

First Midterm Examination		5 %
Second Mid-Term Examination		15 %
Final-Term Examination		30 %
Oral Examination		10 %
Practical Examination		30 %
• Practical Exam	20%	
• Practical Quiz 1	10 %	
Class Work		10 %
Total		**100%**

6. List of References

6.1. Course Notes

Staff lectures handouts are uploaded to the Moodle.

Lab manual is given to each student.

6.2. Essential Books (Text Books)

Mansoor A. Khan, Indra K. Reddy; Pharmaceutical and clinical calculations, 2nd edition, CRC Press.2000.Florida, USA.
Brown, T.R., "Handbook of Institutional Pharmacy Practice", 3rd ed., 1992, American Society of Hospital Pharmacists, Inc.

6.3. Recommended Books

William E. Hassan, JR. (1986) "Hospital Pharmacy" Fifth Edition, Lea and Febiger, Philadelphia.

6.4. Periodicals, Websites, ……etc

Periodicals: European Journal of Hospital Pharmacy and Hospital Pharmacy Journal.

Websites: www.pubmed.com , www.Rxlist.com , www.Pharmweb.com

7. Facilities Required for Teaching and Learning

a. Personal computer equipped with a data show.
b. White board.
c. Internet searching.
d. Special software (BNF).
e. Books.
f. Meeting rooms for office hours.

Course Coordinator

Head of Department Prof. Dr. Ebtissam Darwish.

Department Approval Date: September 2014

Drug Marketing (PHP 413)

Course Specifications

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice & Clinical Pharmacy
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Drug Marketing **Course Code: PHP 413**

Prerequisites: Pharmacology (1) PHL 315

Students' Level/Semester: **Fourth Level/ Seventh Semester**

Credit hours: **2 (2+0)**

Actual teaching hours per week:

Lectures: 2 hr/week **Practical: N/A** **Tutorial: N/A** **Total: 2 hr/week**

B. Professional Information

1. Overall Aim of Course

The course aims to give students a background of marketing and management principles as they specifically relate to the pharmaceutical industry and practice. It prepares students to a variety of careers in the pharmacy field including pharmaceutical sales, health information management, and pharmacy distribution system development.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Define the basic pharmaceutical marketing principles.
a2. Recognize the major components of the marketing management process including self and time management.
a3. Identify the process of total quality management and audit.
a4. Define TQM, time management, segmentation, targeting & positioning.
a5. Describe the different types of planning, steps, & barriers to effective planning.
a6. Identify negation process & conflict resolution techniques
a7. List the major job attitudes

b- Intellectual Skills

b1. Develop critical thinking and decision-making skills.

b2. Apply theoretical concepts and techniques of marketing analysis, planning, management, promotion & advertisement.

c- Professional and practical Skills

c1. Apply a variety of marketing concepts.

c2. Collect information and data from different segments of the pharmaceutical marketplace.

c3. Practice marketing and communication activities for a specific product.

d- General and Transferable Skills

d1. Communicate effectively with others.

d2. Work professionally within a team

d3. Evaluate situations due to ever-changing external environment to show adaptability and flexibility.

3. Contents

Week	Topic	No. of hours	Lecture
One	The scope of Marketing, Pharmaceutical Marketing, Types of goods, Marketing roles, Needs, wants & demand, Types of needs.	2	2
Two	Maslow's hierarch of needs, Markets & the marketing system, product, brand & value proposition. Value & satisfaction, marketing myopia.	2	2
Three	Different marketing strategies, production, product, selling, marketing & societal marketing concept.	2	2
Four	The marketing mix (4Ps), strategic planning (definition & steps). Designing & analyzing the business portfolio (BCG growth share matrix). + **1st Midterm Exam**	2	2
Five	Strategies for growth & downsizing, Marketing analysis. Buyer's decision process. Designing marketing strategy.	2	2

Six	Segmentation, targeting, differentiation & positioning. Product life cycle, break-even point, pricing & pricing strategies.	2	2
Seven	Fayol's 5 management functions Types of planning Steps & barriers to effective planning	2	2
Eight	**Second Midterm Exam**		
Nine	Conflicts Versus negotiation Conflict resolution techniques The negotiation process.	2	2
Ten	Leadership and team building Self & time management	2	2
Eleven	Major job attitudes Satisfied & dissatisfied employees The big 5 personality model	2	2
Twelve	Selective perception Vs stereotyping. Affects, moods and emotions. Emotional intelligence Vs. emotional stability. Leadership, power & legitimate power.	2	2
Thirteen	Revision	2	2
Total No. of Hours		**24**	**24**
Fourteen	University Elective Final Exams		
Fifteen	Final Exams of Faculty		
Sixteen			

4. Teaching and Learning Methods

4.1. Data show and computer in lectures.
4.2. Group Discussion.
4.3. Data Analysis.
4.4. Problem solving.
4.5. Assignments.
4.6. Power point presentations.
4.7. Demonstration videos.
4.8. Self-learning by discussion of projects prepared by students.
4.9. Office hours
4.10. Case study
4.11. Interactive class discussions

5. Student Assessment Methods

5.1. Written exams to assess knowledge and understanding as well as intellectual and professional skills.
5.2. Class Work (Research and Case Study) to assess all types of skills and mainly general and transferrable skills.

Assessment Schedule

Assessment 2 First Mid-term exam	Week 4
Assessment 3 Second Midterm exam	Week 8
Assessment 4 Final Written Exam	Week 15/16
Assessment 5 Class Work (Research and Case Study)	(During the semester)

Weighting of Assessments

1st Mid-term exam	10%
2 nd Mid-term exam	20%
Final-Term Examination	40%
Class Work (Research and Case Study)	30%
Total	**100%**

6. List of References

6.1. Course Notes:

Staff lectures handouts are uploaded to the Moodle.

6.2. Essential Books (Text Books)

Desselle, Shane, David Zgarrick, and Greg Alston. *Pharmacy management*. McGraw Hill Professional, 2012.

6.3. Recommended Books

Kotler, Philip, and Gary Armstrong. Principles of marketing. Pearson Education, 15th ed. 2014

6.4. Periodicals, Websites, ……etc

www.commercialalert.org
www.fda.gov/Drugs

7. Facilities Required for Teaching and Learning

- **7.1.** Lecture halls.
- **7.2.** Personal Computer (available for each staff member).
- **7.3.** Computer equipped with projector and internet connection available for the usual lectures and Labs.
- **7.4.** Meeting rooms for office hours.
- **7.5.** White board.
- **7.6.** Books.

Course Coordinator: -

Head of Department: Prof. Dr. Ebtissam Darweesh

Department Approval Date: September 2014

Pharmacoeconomics (PHP 414)

Program (s) on which the course is given: Bachelor of Pharmacy
Department offering the program: All Faculty Departments
Department offering the course: Pharmacy Practice and Clinical Pharmacy
Academic year: ----------
Approval Date: September 2014

A. Basic Information

Course Title: Pharmacoeconomics **Course Code: PHP 414**

Prerequisites: Pharmacology-1 (PHL 315)

Students' Level/Semester: Fourth Level/ Seventh Semester

Credit hours: **1 (1+0)**

Actual teaching hours per week:

Lectures: 1 hr/week **Practical: N/A** **Tutorial:** N/A **Total:** 1 hr/week

B. Professional Information

1. Overall Aim of Course

The course aims to give students a background and the ability to estimate and understand the full impact of new therapy to optimize healthcare results and to make the best use of limited resources. The course is complementary to a dedicated cost-effectiveness course with an analytical focus on market studies.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Define the basic economic terms, concepts and issues.
a2. Describe the different Pharmacoeconomics perspectives
a3. Identify the types of Pharmacoeconomics analyses
a4. Identify the types of Pharmacoeconomics methodologies.
a5. List goals, objectives & composition
a6. Enumerate Outcome research
a7. Illustrate measurement methods in health economics
a8. Enumerate major costs for Pharmacoeconomics**.**

b- Intellectual Skills

b1. Develop critical thinking and decision-making skills.
b2. Apply the features of Pharmacoeconomics.
b3. Assess the different perspectives of Pharmacoeconomics studies and different outcome measures.

c- Professional and practical Skills

c1. Apply a variety of Pharmacoeconomics concepts.
c2. Assess how Pharmacoeconomics principles are applied in formulary decision making.
c3. Evaluate the key criteria for the quality of published Pharmacoeconomics data.

d- General and Transferable Skills

d1. . Communicate effectively with others.
d2. Work professionally within a team
d3. Evaluate situations due to ever-changing external environment to show adaptability and flexibility.

3. Contents

Week	Topic	No. of hours	Lecture
One	Basic economic terms	1	1
Two	Basic economic terms	1	1
Three	Pharmacoeconomics principles	1	1
Four	Pharmacoeconomics & outcome research. Goals, objectives & composition. Outcome research 1st Midterm Exam	1	1
Five	Efficacy versus effectiveness Measurement ways in health economics.	1	1

Six	Types of outcomes Euro Qol, quality adjusted life years.	1	1
Seven	Exercises & applications	1	1
Eight	**2nd Midterm Exam**		
Nine	Major costs of Pharmacoeconomics evaluation	1	1
Ten	Major techniques of Pharmacoeconomics evaluation	1	1
Eleven	Exercises & applications	1	1
Twelve	Evaluation of the quality of published Pharmacoeconomics data.	1	1
Thirteen	Revision	1	1
Total Hours		12	12
Fourteen	University Elective Final Exams		
Fifteen	Final Exams of Faculty		
Sixteen			

4. Teaching and Learning Methods

4.1 Data analysis
4.2 Case study
4.3 Problem solving
4.4 Interactive class discussions
4.5 Research & Project presentation
4.6 Office hours
4.7 Power point presentations

5. Student Assessment Methods

5.1. Written exams to assess knowledge and understanding as well as intellectual skills as well as professional skills.

5.2. Class Work (Research and Case Study) to assess all types of skills including general and transferrable skills.

Assessment Schedule

Assessment 1 Class Work (Research and Case Study)	
Assessment 2 First Midterm exam	Week 4
Assessment 3 Second Midterm Exam	Week 8
Assessment 4 Final Written Exam	Week 15/16

Weighting of Assessments

1st Mid-term exam	10%
2 nd Mid-term exam	20%
Final-Term Examination	40%
Class Work (Research and Case Study)	30%
Total	**100%**

6. List of References

6.1. Course Notes:

Handouts given by instructors to students and uploaded to the Moodle.

6.2. Essential Books (Text Books)

i. Haycox, Alan, Tom Walley, and Angela Boland, eds. Pharmacoeconomics. Churchill Livingstone, 2004.

6.3. Periodicals, Websites, ……etc

www.healtheconomics.com

7. Facilities Required for Teaching and Learning

7.1. Data show

7.2. Internet connection

7.3. White board

Course Coordinator: -

Head of Department: **Prof. Dr. Ebtissam Darweesh**

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Community Pharmacy (PHP 415)

Program (s) on which the course is given:	**Bachelor of Pharmacy**
Department offering the program:	**All Faculty Departments**
Department offering the course:	**Pharmacy Practice & Clinical Pharmacy**
Academic year:	**----------**
Approval Date:	**September 2014**

Basic Information

A. Basic Information

Course Title: Community Pharmacy **Course Code: PHP 415**
Prerequisites: Pharmacology-1 (PHL 315)
Students' Level/Semester: 4th Level/ Seventh Semester
Credit hours: **3 (2+1)**
Actual teaching hours per week:
Lectures: 2 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 4 hr/week

B.Professional Information

1. Overall Aim of Course:

The aim of course is to familiarize the student with the roles of community pharmacy and provide knowledge and skills on recommendation of non-prescription medications. The topics aim to develop self reliance and an adult approach to learning in support of continuing professional development. Pharmacy regulations for pharmacy profession, drug registration, and controlling the use of narcotic drugs are other aims.

2. Intended Learning Outcomes (ILOs)

By the end of this course, student should:

a. Knowledge and Understanding:

a1. Recognize the role of a community pharmacist
a2. Differentiate between simple aliments and major diseases
a3. Identify patient's primary complain and reason for seeking medical care.
a4. Recognize how to adopt structured response to symptoms in the community pharmacy for minor and moderate infantile and children diseases
a5. Point out the responsibility and duty towards Egyptian pharmacy law.
a6. Describe the process of drug registration in Egypt.

i. b. Intellectual Skills:

b1. Assess selected aspects physically, as appropriate to identify the disease
b2. Distinguish minor, moderate and severe illness
b3. Suggest a structured response (ASMETHOD) to symptoms in the Community Pharmacy to verify the degree of illness and hence treatment by non-prescription of prescription medication
b4. Recommend non-pharmacological, pharmacological or both for the management of a disease to ensure optimum drug therapy
b5. Evaluate his responsibilities for establishing a community pharmacy and dealing with medications according to Egyptian pharmacy law to comply with national regulations.

c. Professional and Practical Skills:

c1. Practice clear, accurate and confident communication with patients and health care professionals to establish team working
c2. Choose the most effective, safe and economic non-prescription medication based on best gathering of information to ensure patient's drug related needs
c3. Design a self patient monitoring system to ensure achievement of the desired therapeutic outcomes
c4. Apply the best professional and social skills to perform his job as a community pharmacist.
c5. Illustrate the process of patient monitoring for other minor and moderate diseases

d. General and Transferable Skills:

d1. Communicate with patients, caregivers, other health care professionals, and the public using appropriate listening, verbal, nonverbal, and written communication skills
d2. Explain to patients or caregivers the drug, dosage, indication, and storage requirements for a given drug to optimize drug therapy and minimize drug therapy problems
d3. Counsel patient and/or caregiver while establishing empathy and rapport.
d4. Argue about plans of treatment professionally.

3. Contents

Week	Topic	No. of hours	Lecture	Practical
One	Community pharmacy introduction Pharmacy regulations, Pharmacy law for pharmacy professions , Drug registration in Egypt, drug handling and licensing and narcotics	4	2	
	Orientation to the faculty pharmacy			2

	and structure responding to symptoms			
Two	Cold & Flu Cough	4	2	
	Cold and Flu in Practice			2
Three	Sore Throat Allergic Rhinitis	4	2	
	Cough and Sore throat in Practice			2
Four	Constipation	4	2	
	Constipation in practice			1.5
	+First Midterm Exam			0.5
Five	Mouth Ulcers Heart Burn Indigestion	4	2	
	Heart Burn and indigestion in Practice			2
Six	Nausea & Vomiting Diarrhea	4	2	
	Diarrhea in practice			2
Seven	Communication Skills Patient Counselling	4	2	
	Practicing patient education and counseling			2
Eight	**Second Midterm Exam**			
Nine	Acne Athlete's Foot Warts & Verrucae	4	2	
	Athlete's Foot in Practice			2
Ten	Headache Musculoskeletal problems	4	2	
	Practicing patient education and counseling (Acne)			2
Eleven	Drug use in special populations Common Childhood Rashes (1)	4	2	
	Practicing patient education and counseling (Role-playing) (2)			2
	Revision			
Twelve	Drug use in special populations Common Childhood Rashes	4	2	
	Final Practical Exam			2
Thirteen	Revision	2	2	
Fourteen	University Elective Final Exams			

Total		46	24	22

4. Teaching and Learning Methods

- **4.1.** Lectures
- **4.2.** Researches related to community pharmacy
- **4.3.** Data show and computer in lectures
- **4.4.** Group Discussion
- **4.5.** Problem solving
- **4.6.** Assignments
- **4.7.** Power point presentation
- **4.8.** Demonstration videos
- **4.9.** Office hours
- **4.10.** Case study

5. Student Assessment 0Methods

- **5.1.** Written exams to assess knowledge and understanding as well as intellectual skills.
- **5.2.** Practical work to assess professional and practical skills.
- **5.3.** Oral exam to assess all skills including transferable skills.
- **5.4.** Class Work (Participation and Researches) to assess all types of skills.

Assessment Schedule

Assessment 1: First Midterm exam Week 4
Assessment 2: Second Midterm Exam Week 8
Assessment 3: Practical exam Week 12
Assessment 4: Final Written exam Week 15/16
Assessment 5: Oral exam Week 15/16
Assessment 6: Class Work (Participation and Researches) (During the semester)

Weighting of Assessments

1st Midterm exam	5 %
2nd Mid-Term Exam	15 %
Final-Term Exam	30 %
Oral Exam	10 %
Practical Exam	30 %
Class Work (Participation &Research)	10 %
Total	**100%**

6. List of References

6.1. Course Notes

Theoretical Course Lectures are uploaded to the moodle
Practical Manual given to each student

6.2. Essential Books (Text Books)

- Wasson, John, et al. *The common symptom guide*. McGraw Hill Professional, 2009.

6.3. Recommended books:

- Blenkinsopp, Alison, Paul Paxton, and John Blenkinsopp. *Symptoms in the pharmacy: a guide to the management of common illness*. John Wiley & Sons, 2013.

6.4. Periodicals, Websites, etc.

www.drugs.com
www.pubmed.com

7. Facilities Required for Teaching and Learning

- Computer equipped with data show
- SMART boards
- PowerPoint Slideshows
- Lecture halls.
- Personal Computer (available for each staff member).
- Computer equipped with projector and internet connection available for the usual lectures and Labs.
- Meeting rooms for office hours.
- White board.

- Books

Course Coordinator: -

Head of Department: **Prof. Dr. Ebtisam Abdel Ghafar**

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Pharmacotheraputics I (PHP 426)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice and Clinical Pharmacy
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Pharmacotherapeutics I **Course Code: PHP 426**

Prerequisites: Pharmacology II (PHL 326)

Students' Level/Semester: Fourth Level/ Eighth Semester

Credit hours: **4 (3+1)**

Actual teaching hours per week:

Lectures: 3 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 5hr/week

B. Professional Information

1. Overall Aim of Course

This course acts as an integration of all information about etiology, pathophysiology, pharmacology, pharmacokinetics, clinical pharmacology to analyze and interpret patient's history and laboratory investigation respectively altogether with the clinical picture of the condition under study. The student can develop rational drug therapy and pharmacotheraputic care plans for the pathological conditions under study in order to provide safe and effective management of the diseases concerning cardio-vascular, pulmonary and gastrointestinal disorders. Besides, the role of EBM in making therapeutic decisions is emphasized so that the student can design plans for monitoring the clinical response and toxicity of the pharmacotherapeutics the patient was or is on. In practical sessions, students will develop skills in pharmacy practice and patient counseling.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Define the disease
a2. List the causative and the risk factors of the selected diseases.
a3. Describe the pathophysiology of the selected conditions.
a4. Enumerate the signs and the symptoms of the selected diseases.
a5. State the pharmacological options for treating the selected diseases.
a6. Memorize the pharmacological mechanism of actions of the therapeutic agents.
a7. Identify the evidence based medicine for treating the selected conditions.
a8. Describe the prognosis and long-term complications of the selected diseases.

b- Intellectual Skills:

b1. Interpret relevant lab and clinical data for assessing the severity of the selected diseases.
b2. Describe goals of therapy, including monitoring of response & toxicity.
b3. Outline the role of the pharmacist/clinician in the therapeutic plan.
b4. Mention the non-pharmacological measures and instructions for the selected diseases.
b5. Point out the available alternative / complementary medical options.
b6. Detect drug therapy problems.
b7. Differentiate between disease related and drug related problems.
b8. Manage drug therapy problems effectively.

c- Professional and Practical Skills:

c1. Identify monitoring parameters of patient's response and therapeutic agents.
c2. Explain treatment choices
c3. Select the most appropriate regimen of therapy.
c4. Construct a pharmaceutical care plan to include advice to a clinician.
c5. Select the formulations available, including drug molecule, excipients, etc. for the medicines
c6. Individualize therapy for different patients.
c7. Detect Drug – drug & drug-food interactions.
c8. Counsel patient about his therapy administration, adverse drug reactions, and lifestyle modifications

d- General and Transferable Skills:

d1. Appraise critically treatment options
d2. Communicate effectively with the healthcare team members.
d3. Apply learned ethics to respect patient's confidentiality.
d4. Work effectively in team.

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	General Introduction to Pharmacotherapy	5	3	
	Patient's Medical & Medication History			2
Two	Pharmacotherapy of Liver diseases	5	3	
	Case study of liver diseases			2
Three	Pharmacotherapy of End stage liver disease and complications	5	3	

	Ascites, SBP, edema and varices.			
	Case study of ESLD			2
Four	Pharmacotherapy of Peptic Ulcer Disease PUD	5	3	
	Case study of DU + **First Midterm Exam**		0.5 2.5	2
Five	Pharmacotherapy of Asthma	5	3	
	Case study of Asthma			2
Six	Pharmacotherapy of COPD	5	3	
	Case study of COPD + Patient education of respiratory devices			2
Seven	Pharmacotherapy of renal injury	5	3	
	Case study of End-stage renal disease			2
Eight	**Second Midterm exam**			
Nine	Pharmacotherapy of Hypertension	5	3	
	Case study of HTN			2
Ten	Pharmacotherapy of Angina & IHDs	5	3	
	Case study of chronic stable angina			2
Eleven	Pharmacotherapy of CHF	5	3	
	Case study of CHF			2
Twelve	Pharmacotherapy of Arrhythmias	5	3	
	Practical Exam			2
Thirteen	Pharmacotherapy of DVT and PE	3	3	
Total No. of hours		58	36	22
Fourteen	**University Elective Final Exams**			
Fifteen	**Final Exams of Faculty**			
Sixteen				

4. Teaching and Learning Methods

- **4.1.** Case Scenario presentation.
- **4.2.** Self-learning.
- **4.3.** Role Play.
- **4.4.** Problem solving

4.5. Active and interactive learning.
4.6. Field visits

5. Student Assessment Methods

5.1. Written to assess knowledge and understanding as well as intellectual skills.
5.2. Practical to assess professional and practical skills.
5.3. lab performance to assess knowledge and understanding of the practical part, intellectual skills as well as professional and practical skills
5.4. Oral exam to assess all skills including transferable skills.
5.5. Presentation/Play role to assess general and transferrable skills
5.6. Class Work (Participation) to assess all types of skills.

Assessment Schedule

Assessment 1 1st Midterm Exam Week 4
Assessment 2 2nd Midterm Exam Week 8
Assessment 3 Practical Exam Week 12
Assessment 4 Final Written Exam Week 15 or 16
Assessment 5 Oral Exam Week 15 or 16
Assessment 6 Presentation/Play role (During the semester)
Assessment 7 Class Work (Participation) (During the semester)

Weighting of Assessments

1st Mid-Term Examination		5%
2nd Mid-Term Examination		15%
Final-Term Examination		30%
Oral Examination		10%
Practical		30%
-Practical Examination	20%	
-Presentation	5%	
- Lab Performance	5%	
Class Work		10%
Total		**100%**

6. List of References

6.1. Course Notes

Staff lectures handouts are uploaded to the Moodle.
Lab manual is given to each student.

6.2. Essential Books (Text Books)

Wells, Barbara G., et al. *Pharmacotherapy principles & practice*. New York: McGraw- Hill, 2013.

6.3. Recommended Books

i. Koda-Kimble, Mary Anne. Koda-Kimble and Young's applied therapeutics: the clinical use of drugs. Eds. Brian K. Alldredge, Robin L. Corelli, and Michael E. Ernst. Lippincott Williams & Wilkins, 2012.

ii. William D. Linn, PharmD et al Pharmacotherapy in Primary Care: Graw Hill 2011

iii. Walker, Roger, and Cate Whittlesea. *Clinical pharmacy and therapeutics*. Elsevier Health Sciences, 2011.

6.4. Periodicals, Websites, ……etc

6.4.1. www.pubmed.com
6.4.2. www.drugs.com
6.4.3. WWW.pharmacotherapyonline.com
6.4.4. www.Medscape.com

7. Facilities Required for Teaching and Learning

7.1. Smart board for lectures
7.2. Computers with internet and E-library
7.3. Data Show
7.4. Lanschool

Course Coordinator

Head of Department **Prof. Dr. Ebtissam Darweesh**

Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Pharmacy Practice - II (PHP 427)

Program (s) on which the course is given: Bachelor of Pharmacy
Department offering the program: All Faculty Departments
Department offering the course: Pharmacy Practice and Clinical Pharmacy
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Academic year:
Approval Date: September 2014

A. Basic Information

Course Title: Pharmacy Practice - II Course Code: PHP 427
Prerequisites: Pathology and Pathophysiology (PHP 221),
Biopharmaceutics and Pharmacokinetics (PHT 416)
Students' Level/Semester: Fourth Level/ Eighth Semester
Credit hours: **4 (3+1)**
Actual teaching hours per week:
Lectures: 3/week **Practical:** 2/week **Tutorial:** N/A **Total:** 5/week

B. Professional Information

1. Overall Aim of Course

The course provides the students with basic concepts of clinical pharmacokinetics comprising linear versus non-linear pharmacokinetics, clearance, volume of distribution, half-life, elimination rate constant, bioavailability and bioequivalence. The course makes the students aware of drug dosing in special populations suffering from renal disease, hepatic disease and heart failure. It provides the student with the principals of clinical pharmacokinetics of certain drugs including antibiotics and cardiovascular agents and effect of disease states and conditions on their pharmacokinetic parameters as well as drug interactions.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. List the conceptual and quantitative background in the basic concepts in clinical pharmacokinetics

a2. Define clearance, apparent volume of distribution, half-life and elimination rate constant.

a3. Recall how to maintain steady state concentration in plasma.

a4. Define non-compartmental and non-linear pharmacokinetics.

a5. Identify drug interactions with different antibiotics, cardiovascular agents as well as anticonvulsants.

b- Intellectual Skills:

b1. Differentiate between linear and non-linear pharmacokinetics.
b2. Individualize dosage regimens in response to plasma drug concentrations
b3. Demonstrate competency in devising individualized dosage regimens using pharmacokinetic models and handheld calculators.
b4. Detect potential clinical problems.

c- Professional and Practical Skills:

c1. Estimate pharmacokinetic parameters for liver metabolized drugs.
c2. Modify the dose of drugs in case of presence of drug interaction.
c3. Choose the most appropriate drug for treatment of a certain disease in presence of other drugs intake.
c4. Solve problems related to renal clearance of drugs.
c5. Calculate creatinine clearance.
c6. Adjust doses using nomograms for narrow therapeutic index drugs

d- General and Transferable Skills:

d1. Plan dosage regimens for certain drugs in individual patients.
d2. Solve patients problems

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	Introduction to clinical pharmacokinetics	**5**	**3**	
	Basic pharmacokinetic concepts			**2**
Two	Pharmacokinetics of drugs following one compartment after IV administration IV two compartment Pharmacokinetics of drugs after extravascular administration	**5**	**3**	
	IV one compartment IV two compartment Oral kinetics			**2**
Three	Steady State principle	**5**	**3**	
	IV infusion Multiple drug administration			**2**
Four	Non-compartmental PK Non-linear PK	**5**	**3**	
	Non-compartmental PK Non-linear PK+ **First Midterm Exam**			**1.5** **0.5**
Five	Phenytoin	**5**	**3**	

	Phenytoin pharmacokinetics			**2**
Six	Renal clearance of drugs and Creatinine clearance	**5**	**3**	
	Renal elimination Creatinine clearance			**2**
Seven	Hepatic elimination of drugs	**5**	**3**	
	Hepatic elimination			**2**
Eight	**Second Midterm exam**			
Nine	Aminoglycosides	**5**	**3**	
	Aminoglycosides pharmacokinetics			**2**
Ten	Vancomycin	**5**	**3**	
	Vancomycin pharmacokinetics			**2**
Eleven	Digoxin and cardiovascular drugs	**5**	**3**	
	Digoxin pharmacokinetics			**2**
Twelve	Theophylline	**5**	**3**	
	Practical Exam			**2**
Thirteen	Pharmacogenetics	**3**	**3**	
Total No. of hours		**58**	**36**	**22**
Fourteen	**University Elective Final Exams**			
Fifteen	**Final Exams of Faculty**			
Sixteen				

4. Teaching and Learning Methods

4.1. Data show and computer in lectures.
4.2. Laboratory sessions
4.3. Data analysis.
4.4. Group discussion.
4.5. Problem solving.
4.6. Assignments.
4.7. Power point presentations.
4.8. Demonstration videos.
4.9. Self-learning by discussion of projects prepared by students.
4.10. Office hours.
4.11. Case study.
4.12. Research and presentation.
4.13. Tutorials, Problem-based learning.

5. Student Assessment Methods

5.1. Written exams to assess knowledge and understanding as well as intellectual skills.
5.2. Practical work to assess professional and practical skills.
5.3. Oral exam to assess all skills including transferable skills.
5.4. Research to assess general and transferrable skills.
5.5. Class work (Participation) to assess all types of skills.

Assessment Schedule

Assessment 1	First Midterm	**Week** 4
Assessment 2	Second Midterm exam	**Week** 8
Assessment 3	Practical exam	**Week** 12
Assessment 4	Final Written Exam	**Week** 15/16
Assessment 5	Oral exam	**Week** 15/16
Assessment 6	Class Work	(During the semester)
Assessment 7	Research	(During the semester)

Weighting of Assessments

First Midterm Examination	5%

Second Mid-Term Examination		15%
Final-Term Examination		30%
Oral Examination		10%
Practical		30%
Practical Examination	20%	
Lab Performance	5%	
Quizzes	5 %	
Class Work		10%
Total		**100%**

6. List of References

6.1. Course Notes

Staff lectures handouts are **uploaded to the Moodle.**

Lab manual **is given to each student**.

6.2. Essential Books (Text Books)

Bauer, Larry A., "Applied Clinical Pharmacokinetics", Third edition.

6.3. Recommended Books

Shargel L., Pong, Susanna, WU. & B.C., Andrew, "Biopharmaceutics & Pharmacokinetics".

Joseph T. DiPiro et al., Concepts in Clinical Pharmacokinetics Fourth Edition.

6.4. Periodicals, Websites, ……etc

www.Pubmed.com

www.rxlist.com

www.cspsa.com

7. Facilities Required for Teaching and Learning

7.1. 7.1. Lecture halls.

7.2. Laboratories.

7.3. Personal Computer (available for each staff member).

7.4. Computer equipped with projector and internet connection available for the usual lectures and Labs.

7.5. Meeting rooms for office hours.

7.6. White board.

7.7. Different laboratory equipment (Computers, sphygmomanometer, inhalation devices, …..etc).

7.8. Books.

Course Coordinator

Head of Department Prof. Dr. Ebtissam Darwish.

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Pharmacotherapeutics II (PHP-518)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice and Clinical Pharmacy
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Pharmacotherapeutics II **Course Code: PHP 518**

Prerequisites: Pharmacology III (PHL 417)

Students' Level/Semester: Fifth Level/ Ninth Semester

Credit hours: **4 (3+1)**

Actual teaching hours per week:

Lectures: 3hr /week **Practical:** 2hr /week **Tutorial:** N/A **Total:** 5 hr /week

B. Professional Information

1. Overall Aim of Course

This course shows integration of all information about etiology, pathophysiology, pharmacology, pharmacokinetics, clinical pharmacology to analyze and interpret patient's history and laboratory investigation respectively altogether with the clinical picture of the condition under study. The student can develop rational drug therapy and pharmacotheraputic care plans for the pathological conditions under study in order to provide safe and effective management of the diseases concerning neurological, psychiatric, endocrinological, arthritic, infectious disorders and woman's health problems. Besides, the role of EBM in making therapeutic decisions is emphasized so that the student can design plans for monitoring the clinical response and toxicity of the pharmacotherapeutics the patient was or is on. In practical sessions, students will develop skills in pharmacy practice and patient counseling.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Define the disease
a2. List the causative and the risk factors of the selected diseases.
a3. Describe the pathophysiology of the selected conditions.
a4. Enumerate the signs and the symptoms of the selected diseases.
a5. State the pharmacological options for treating the selected diseases.
a6. Memorize the pharmacological mechanism of actions of the therapeutic agents.

a7. Identify the evidence based medicine for treating the selected conditions.
a8. Describe the prognosis and long-term complications of the selected diseases.

b-Intellectual Skills:

b1. Interpret relevant lab and clinical data for assessing the severity of the selected diseases.
b2. Describe goals of therapy, including monitoring of response & toxicity.
b3. Outline the role of the pharmacist/clinician in the therapeutic plan.
b4. Mention the non-pharmacological measures and instructions for the selected diseases.
b5. Point out the available alternative / complementary medical options.
b6. Recognize drug therapy problems.
b7. Differentiate between disease related and drug related problems.
b8. Manage drug therapy problems effectively.

c-Professional and Practical Skills:

c1. Identify monitoring parameters of patient's response and therapeutic agents.
c2. Identify referral criteria
c3. Explain treatment choices
c4. Select the most appropriate regimen of therapy.
c5. Construct a pharmaceutical care plan to include advice to a clinician.
c6. Select the formulations available, including drug molecule, excipients, etc. for the medicines
c7. Individualize therapy for different patients.
c8. Detect Drug – drug & drug-food interactions.
c9. Counsel patient about his therapy administration, adverse drug reactions, and lifestyle modifications

d- General and Transferable Skills:

d1. Appraise critically treatment options
d2. Communicate effectively with the healthcare team members.
d3. Apply learned ethics to respect patient's confidentiality.
d4. Work effectively in team.

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	General Introduction to Pharmacotherapy + Pharmacotherapy of Sleep disorders & Headache	5	3	
	Case study of Insomnia Case study of Headache			2

Two	Pharmacotherapy of Dementia & Alzheimer's disease - AD. Pharmacotherapy of Schizophrenia	5	3	
	Case study of AD. Case study of SD			2
Three	Pharmacotherapy of Major Depressive disorder & bipolar disease.	5	3	
	Case study of MDD			2
Four	Pharmacotherapy of Epilepsy	5	3	
	Case study of epilepsy + **First**			0.5
	Midterm Exam			1.5
Five	Pharmacotherapy of Diabetes Mellitus	5	3	
	Case study of DM			2
Six	Pharmacotherapy of Thyroid dysfunction	5	3	
	Case study of Hyperthyroidism Case study of Hypothyroidism			2
Seven	Pharmacotherapy of Arthritis	5	3	
	Case study of RA			2
Eight	**Second Midterm exam**			
Nine	Pharmacotherapy of Osteoporosis	5	3	
	Case study of OP			2
Ten	Pregnancy & Contraception	5	3	
	Case study of OCs			2
Eleven	Respiratory Tract Infections	5	3	
	Case study of Pneumonia. Case study of AOM.			2
Twelve	UTIs	5	3	
	Practical Exam			2
Thirteen	PID + Meningitis + viral infections	3	3	
Total No. of hours		58	36	22
Fourteen	University Elective Final Exams			
Fifteen	**Final Exams of Faculty**			
Sixteen				

4. Teaching and Learning Methods

- **4.1.** Case Scenario presentation.
- **4.2.** Self-learning.
- **4.3.** Role Play.
- **4.4.** Problem solving
- **4.5.** Active and interactive learning.
- **4.6.** Field visits

5. Student Assessment Methods

- **5.1.** Written to assess knowledge and understanding as well as intellectual skills.
- **5.2.** Practical to assess professional and practical skills.
- **5.3.** Lab performance to assess knowledge and understanding of the practical part, intellectual skills as well as professional and practical skills
- **5.4.** Oral exam to assess all skills including transferable skills.
- **5.5.** Presentation to assess general and transferrable skills.
- **5.6.** Class Work to assess all types of skills.

Assessment Schedule

Assessment 1 1st Midterm Exam Week 4
Assessment 2 2nd Midterm Exam Week 8
Assessment 3 Practical Exam Week 12
Assessment 4 Final Exam Week 15 or 16
Assessment 5 Oral Exam Week 15 or 16
Assessment 6 Lab performance each lab
Assessment 7 Presentation (During the semester)
Assessment 8 Class Work (During the semester)

Weighting of Assessments

1st Mid-Term Examination		5%
2nd Mid-Term Examination		15%
Final-Term Examination		30%
Oral Examination		10%
Practical		30%
-Practical Examination	20%	
-Presentation	5%	
- Lab Performance	5%	
Class Work		10%
Total		**100%**

6. List of References

6.1. Course Notes

Staff lectures handouts are uploaded to the Moodle

Lab manual is given to each student

6.2. Essential Books (Text Books)

6.2.1. Wells, Barbara G., et al. *Pharmacotherapy principles & practice*. New York: McGraw-Hill, 2013.

6.3. Recommended Books

i. Koda-Kimble, Mary Anne. Koda-Kimble and Young's applied therapeutics: the clinical use of drugs. Eds. Brian K. Alldredge, Robin L. Corelli, and Michael E. Ernst. Lippincott Williams & Wilkins, 2012.

ii. William D. Linn, PharmD et al Pharmacotherapy in Primary Care: Graw Hill 2011

iii. Walker, Roger, and Cate Whittlesea. *Clinical pharmacy and therapeutics*. Elsevier Health Sciences, 2011.

6.4. Periodicals, Websites, ……etc

6.4.1. www.pubmed.com
6.4.2. www.drugs.com
6.4.3. WWW.pharmacotherapyonline.com
6.4.4. www.Medscape.com

7. Facilities Required for Teaching and Learning

7.1. Smart board for lectures
7.2. Computers with internet and E-library
7.3. Data Show
7.4. Lanschool

Course Coordinator

Head of Department Prof. Dr. Ebtissam Darweesh

Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Professional Pharmacy Skills & Drug Information (PHP 519)

Program (s) on which the course is given:	**Bachelor of Pharmacy**
Department offering the program:	**All Faculty Departments**
Department offering the course:	**Pharmacy Practice & Clinical Pharmacy Department**
Academic year:	**----------**
Approval Date:	**September 2014**

Basic Information

A. Basic Information

Course Title: Professional Pharmacy Skills & Drug Information

Course Code: PHP 519 **Prerequisites: Pharmacotherapeutics-I (PHP 426)**
Students' Level/Semester: 5th Level/ Ninth Semester
Credit hours: **3 (2+1)**
Actual teaching hours per week:
Lectures: 2 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 4 hr/week

B. Professional Information

1. Overall Aim of Course:

The topics presented in this course aim to expand the student knowledge of drug interactions – pharmacy's Challenge as well as information resources. The course will get the student familiar with drug information centers, interactions literature, references and drug interaction software. The student will also acquire the basic principles of pharmacoepidemiology, drug interactions, patient and other factors affecting drug actions and interactions. The drug interactions will be focused on assessment and application of drug interaction, information and identification and management of commonly encountered drug interactions by therapeutic category. Moreover, the student will learn about professional communications regarding pharmacy communication skills.

2. Intended Learning Outcomes (ILOs)

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

a. Knowledge and Understanding:

a1. Recognize the role of DIC.

a2. Enumerate drug information resources.

a3. Identify mechanisms of drug interactions.

a4. Identify the clinical significance of the interaction.

a5. Outline the factors affecting drug interactions.

a6. Recognize the importance and methodologies of pharmacovigilance, recall design and pharmacoepidemiology.

b. Intellectual Skills:

b1. Interpret the clinical significance of the interaction.

b2. Recommend appropriate management that is evidence-based and patient-specific.

b3. Evaluate a given DDI

c. Professional and Practical Skills:

c1. Assess patient specific variables.

c2. Interpret primary, secondary and tertiary information resources that lead to improving their ability to make rational, practical, and individualized recommandations.

c3. Analyze case studies to enhance their problem solving skills.

c4. Write the adverse drug report.

d. General and Transferable Skills:

d1. Use drug interaction software.

d2. Work effectively within a teamwork in order to find the required information in the least duration of time.

d3. Interact positively in class.

d4. Communicate effectively with patients and physicians regarding drug actions and interactions.

3. Contents

Teachig Weeks	Topic	No. of hours	Lecture	Practical
One	Drug information center DIC	4	2	
	Introduction to DIC			2
Two	Design of DIC	4	2	
	Case Studies I			2
Three	Role of DIC	4	2	
	Case Studies II			2

Four	**Information Resources & Primary resources**	**4**	**2**	
	Practical Primary Resources + 1st Midterm exam			**1.5**
				0.5
Five	**Secondary and Tertiary resources**	**4**	**2**	
	Practical Secondary & Tertiary Resources			**2**
Six	**Importance ,methodology of pharmacovigilance and pharmacoepidemiology**	**4**	**2**	
	Practical Adverse Drug Report			**2**
Seven	**Introduction to drug interactions**	**4**	**2**	
	How to use yellow card?			**2**
Eight	**Second Midterm**			
Nine	**Drug interactions literature, and references**	**4**	**2**	
	Case Studies III			**2**
Ten	**Drug interaction soft wares**	**4**	**2**	
	Application of DI software			**2**
Eleven	**Basic principles of drug interactions**	**4**	**2**	
	Revision			**2**
Twelve	**Patient and other factors affecting drug actions and interactions**	**4**	**2**	
	Practical Exam			**2**
Thirteen	**Professional communications regarding drug interactions**	**2**	**2**	
Total		**46**	**24**	**22**

Fourteen	**University Elective Final Exams**			
Fifteen	**Final Exams of Faculty**			
Sixteen				

4. Teaching and Learning Methods

4.1. Lectures.
4.2. In-Class Open-Book Quiz.
4.3. Assignments.
4.4. Practical Case Studies.
4.5. Online resources.
4.6. Power point presentations**.**
4.7. Group discussion**.**

5. Student Assessment Methods

5.1. Written to assess knowledge and understanding as well as intellectual skills.
5.2. Practical to assess professional and practical skills.
5.3. Oral exam to assess all skills including transferable skills.
5.4. Class work (Assignments) to assess all types of skills.

Assessment Schedule

Assessment 1: First Midterm Exam	Week 4
Assessment 2: Second Midterm Exam	Week 8
Assessment 3: Class work (Assignments)	During the semester
Assessment 4: Practical exam	Week 12
Assessment 5: Final Written Exam	Week 15/16
Assessment 6: Oral exam	Week 15/16

Weighting of Assessments

1st midterm exam	5 %
2nd Mid-Term Exam	15 %
Final-Term Exam	30 %
Oral Exam	10 %
Practical Exam	30 %
Class Work (Assignments)	10 %
Total	**100%**

6. List of References

6.1. Course Notes

Staff lectures handouts are uploaded to the Moodle.

Lab manual is given to each student.

6.2. Essential Books (Text Books)

6.2.1 Drug information: a guide for pharmacists. McGraw-Hill, Medical Pub. Division, 2014.

6.2.2 Lacy, Charles F., et al. Drug information handbook with international trade names index. Lexi-Comp Inc, 2007.

6.3. Recommended Books

Preston, Claire L., ed. Stockley's drug interactions. London: Pharmaceutical Press, 2010.

6.4. Periodicals, Websites, ……etc

- lexicomp.com
- pubmed.com
- www.drugs.com
- micromedex.com

7. Facilities Required for Teaching and Learning

- Computer equipped with data show
- International published journals
- Subscription in lexicomp.com online resources
- Books
- Meeting rooms for office hours

Course Coordinator

Head of Department Prof. Dr. Ebtisam Abdel Ghafar

Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Clinical Pharmacy (PHP 520)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice and Clinical Pharmacy
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Clinical Pharmacy **Course Code: PHP 520**

Prerequisites: Pharmacotherapeutics-I (PHP 426)

Students' Level/Semester: Fifth Level/ Tenth Semester

Credit hours: **3 (2+1)**

Actual teaching hours per week:

Lectures: 2 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 4 hr/week

B. Professional Information

1. Overall Aim of Course

This course focus on the clinical skills and the role of clinical pharmacist in hospitals giving considerations and skills required for formulating, recommending and applying full pharmaceutical care plan including individualization of therapy and the appropriate drug selection. The course also includes field practice in selected hospitals that possess in-patient care services.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Differentiate between Clinical Pharmacy, Pharmacotherapy and Pharmacy Practice.
a2. Recognize the various manifestations of health and disease through the medium of arts.
a3. Identify clinical pharmacy practices that may maximize patient safety.
a4. Interpret the pharmaceutical and medical abbreviations.
a5. Revise Lab Investigation
a6. Identify subjective and objectives of selected diseases.
a7. Illustrate required monitoring parameters.
a8. Arrange patient medication problems.

b- Intellectual Skills:

b1. Interpret relevant lab and clinical data for assessing the severity of the selected diseases.
b2. Describe goals of therapy, including monitoring of response & toxicity.
b3. Outline the role of the pharmacist/clinician in the therapeutic plan.
b4. Mention the non-pharmacological measures and instructions for the selected diseases.

b5. Describe the manifestations of adverse drug reactions and adverse events.
b6. Manage drug therapy problems effectively.
b7. Analyze the clinical picture of the disease

b- **Professional and Practical Skills:**

c1. Identify monitoring parameters of patient's response and therapeutic agents.
c2**.** Implement practices that maximize patient safety.
c3. Implement practices targeting optimum drug therapy outcomes.
c4. Demonstrate the significance of appropriate patient questioning and active listening skills.
c5. Apply the above information into factors influencing patient's perceptions of illness and health promotion.
c6. Integrate between patient's medicines.

d- General and Transferable Skills:

d1. Appraise critically treatment options
d2. Communicate effectively with the healthcare team members.
d3. Apply learned ethics to respect patient's confidentiality.
d4. Work effectively in team.

3. Contents

Teaching Weeks	Topic	No. of Hours	Lecture	Practical
One	OSCE & OSCPE	**4**	**2**	
	OSCE & OSCPE			**2**
Two	Medication Reconciliation	**4**	**2**	
	Medication Reconciliation techniques of selected patients			**2**
Three	Drug Utilization Review	**4**	**2**	
	DUR on selected drugs			**2**
Four	Cancer Cell Biology	**4**	**2**	
	Carcinogenic agents + **First**			**1.5**
	Midterm Exam			**0.5**
Five	Acute Lymphocytic Leukemia	**4**	**2**	
	Case study of ALL			**2**
Six	Acute Myeloid Leukemia	**4**	**2**	
	Drug Interactions in ALL			**2**
Seven	Solid Tumors	**4**	**2**	
	Case study of small cell lung cancer			**2**

Eight	**Second Midterm exam**			
Nine	Oncology Supportive Care OSC	**4**	**2**	
	Case study of OSC			**2**
Ten	Oncology Emergencies	**4**	**2**	
	Case study of oncology emergencies			**2**
Eleven	Pharmacotherapy of Tuberculosis TB	**4**	**2**	
	Case study of TB			**2**
Twelve	Pharmacotherapy of HIV-AIDS	**4**	**2**	
	Practical Exam			**2**
Thirteen	**Annual Department Workshop:- Free Medical Check up**	**2**	**2**	
Total No. of hours		**46**	**24**	**22**
Fourteen	**University Elective Final Exams**			
Fifteen	**Final Exams of Faculty**			
Sixteen				

4. Teaching and Learning Methods

4.1. Data show and computer in lectures.
4.2. Laboratory sessions
4.3. Group discussion.
4.4. Data analysis.
4.5. Problem solving.
4.6. Power point presentations.
4.7. Demonstration videos.
4.8. Self-learning by discussion of projects prepared by students.
4.9. Office hours.
4.10. Case study.
4.11. Research and presentation.
4.12. Tutorials, Problem-based learning.
4.13. Assignments.
4.14. Hospital visits

5. Student Assessment Methods

5.1. Written exams to assess knowledge and understanding as well as intellectual skills.
5.2. Practical work to assess professional and practical skills.
5.3. Oral exam to assess all skills including transferable skills.
5.4. Class Work (Participation) to assess all types of skills.

Assessment Schedule

Assessment 1 1st Midterm Exam	Week 4
Assessment 2 2nd Midterm Exam	Week 8
Assessment 3 Practical Exam	Week 12
Assessment 4 Final Exam	Week 15/16
Assessment 5 Oral Exam	Week 15/16
Assessment 6 Hospital visits	(During the semester)
Assessment 7 Class Work (Participation)	(During the semester)

Weighting of Assessments

1st Mid-term exam		5%
2 nd Mid-term exam		15%
Final-Term Examination		30%
Oral Examination		10%
Practical		30%
-Practical Examination	20%	
-Hospital - field visits	10%	
Class Work		10%
Total		**100%**

6. References

6.1. Course notes

Staff lectures handouts are **uploaded to the Moodle**.
Lab manual **is given to each student**

6.2. Essential Books (Text Books)

6.2.1. Wells, Barbara G., et al. *Pharmacotherapy principles & practice*. New York: McGraw- Hill, 2013.

6.2.2. Hard copy BNF 67 (the British National Formulary 67ed. September.2014)
6.2.3. Electronic BNF 56 (the British National Formulary 56 ed. September.2008)

6.3. Recommended Books

i. Koda-Kimble, Mary Anne. Koda-Kimble and Young's applied therapeutics: the clinical use of drugs. Eds. Brian K. Alldredge, Robin L. Corelli, and Michael E. Ernst. Lippincott Williams & Wilkins, 2012.

ii. William D. Linn, PharmD et al Pharmacotherapy in Primary Care: Graw Hill 2011

iii. Walker, Roger, and Cate Whittlesea. *Clinical pharmacy and therapeutics*. Elsevier Health Sciences, 2011.

6.4. Periodicals, Websites, ……etc

6.4.1. www.pubmed.com
6.4.2. www.drugs.com
6.4.3. WWW.pharmacotherapyonline.com
6.4.4. www.Medscape.com

7. Facilities Required for Teaching and Learning

7.1. Lecture halls.
7.2. Laboratories.
7.3. Personal Computer (available for each staff member).
7.4. Computer equipped with projector and internet connection available for the usual lectures and Labs.
7.5. Meeting rooms for office hours.
7.6. White board.
7.7. Different laboratory equipment (Computers, sphygmomanometer, inhalation devices …..etc).
7.8. Books.

Course Coordinator:

Head of Department: Prof. Dr. Ebtissam Darweesh

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Pharmacoepidemiology, Pharmacovigilance and Health Promotion (PHP 521)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice and Clinical Pharmacy Microbiology and Immunology Department
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Pharmacoepidemiology, Pharmacovigilance and Health Promotion
Course Code: PHP 521
Prerequisites: Pharmacotherapeutics-1 (PHP 426)
Students' Level/Semester: Fifth Level/ Tenth Semester
Credit hours: **4(3+1)**
Actual teaching hours per week:
Lectures: 3 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 5 hr/week

B. Professional Information

1. Overall Aim of Course

This course is designed to deliver knowledge to the students on Pharmacovigilance and risk benefit balance of marketed products based on their knowledge of the pharmacological and toxicological background of the drugs. Also students are trained to suggest strategies for the best therapeutic outcomes with minimum risks. Applying the aforementioned knowledge, the students should know the updated advancements in this new science to be skilled enough to cope with the new era of Medicines` control. To ensure that the pharmacy graduates have the necessary knowledge & skills that enable them to develop professional competence in the recognition, analysis and discussion of different aspects of drug safety monitoring and Pharmacovigilance. The course also provides pharmacy students with basic knowledge on public health, epidemiology of infectious diseases to develop the attitude of the student as to health promotion, prevention of diseases and the impact of environment on health. Students should understand the relationship between health and environmental quality such as water, sewage disposal, air, industrial and toxic wastes and occupational hazards.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Define scope of Pharmacoepidemiology & Pharmacovigilance.
a2. Mention the whole picture of Benefit/Risk balance of Human pharmaceuticals.
a3. Outline the clinical picture of various types of Adverse Drug Reactions (ADRs).
a4. Recognize the optimum therapeutic uses of medicines.
a5. Outline the Control options and alternatives involved in the management of ADRs.
a6. Delineate the basis of making good use of medication in the context of published known risk.
a7. Identify patient follow up parameters to evaluate the efficacy and safety of the drug treatment.
a8. Recognize the desired control measures for marketed human pharmaceutical products.
a9. Define epidemiology.
a10. Summarize the major goals of epidemiological studies.
a11. List the different types of controls in epidemiological studies.
a12. List the different types of bias in epidemiological studies.
a13. Describe the endogenous microflora of human.
a14. Differentiate among infectious, communicable, contagious diseases.
a15. Distinguish among sporadic, endemic, non-endemic, epidemic and pandemic.
a16. Identify living and non-living reservoirs.
a17. Characterize the patterns of transmission of infectious diseases.
a18. Outline the steps involved in water treatment.
a19. Mention the main steps of sewage treatment.
a20. Outline water-born infectious diseases.
a21. Define nosocomial infection.
a22. Explain the primary methods of tracking infections and diseases in a population.
a23. Outline the most common types of healthcare- associated infections.
a24. Discuss food-borne infectious diseases.
a25. Cite examples for the most common food-borne infectious diseases.
a26. List types of patients who are especially vulnerable to healthcare –associated infections.
a27. Discuss the main investigative strategies of outbreaks.
a28. List different types of outbreaks.
a29. Identify potential health hazards of industrial wastes, contamination by toxin wastes, pesticides and fertilizers.
a30. Mention the relation between health and environment.
a31. Recognize the effect of unwise behavior on health as over nutrition.
a32. Outline important child, prenatal and natal care.

b- Intellectual Skills:

b1. Differentiate between clinical pharmacology and pharmacoepidemiology.
b2. Correlate the knowledge about the therapeutic agents with its application in providing maximum patient care with minimum Risks.
b3. Conclude the appropriate ways of prevention of human health Hazards.

b4. Demonstrate understanding of the ways of medications` control.
b5. Analyze patient data to assess medical risks to be able to suggest a suitable risk management plan.
b6. Relate between diseases and their causative factors.
b7. Evaluate the most important and effective way to reduce infectious diseases.
b8. Illustrate proper order the component of the chain of infection.
b9. Detect infectious, communicable, contagious diseases.
b10. Discuss the phases in the course of an infectious disease.
b11. Conclude the importance of coliform count.
b12. Rate the main sources of water supplies.
b. Differentiate between chemical and biological pollution of water.
b14. Explain what is happening during each stage of infection.
b15. Differentiate among healthcare- associated, community acquired infections.
b16. Outline different methods of food preservation.
b17. State the major contributing factors in healthcare –associated infections.
b18. Discuss the most important and effective ways to reduce the healthcare –associated infections.
b19. Differentiate between a case and a carrier.
b20. Distinguish between the types of vectors.
b21. Illustrate preventive measures to control infectious diseases, nosocomial infection, and outbreaks.

c- Professional and Practical Skills:

c1. Use available clinical data both retrieved from RCTs and in clinical settings.
c2. Provide the optimal Risk Management Plans (RMPs) for medicines.
c3. Counsel patients about the risks of medication and how to minimize them.
c4. Formulate monitoring plan in case of the need for that.
c5. Apply community preventive measures to control the spread of infectious diseases.
c6. Apply epidemiological studying methods of communicable and non communicable diseases.

d- General and Transferable Skills:

d1. Develop the ability to collect and evaluate data in accordance with standard scientific guidelines in PV.
d2. Work as a part of the Health Care Team in an effective and interactive way.
d3. Defend ideas professionally in small group discussions.
d4. Solve problems of stated risks.
d5. Use of different resources in the literature to solve problems
d6. Plan polices for treatment.
d7. Manage a public health crisis.
d8. Provide general education concerning public health.

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	Introduction to Pharmacovigilance (PV). Communicable diseases: Epidemiology of communicable diseases.	**5**	**3**	
	Communicable diseases			**2**
Two	Understanding PV Jargon & PV Basic Knowledge. Chain of infectious disease	**5**	**3**	
	Introduction to Pharmacovigilance			**2**
Three	Spontaneous Case Reporting (ICSRs). Measures of prevention and control of infectious diseases	**5**	**3**	
	Case Reporting (ICSRs)			**2**
Four	Periodic Safety Update Report (PSUR). Hospital acquired diseases	**5**	**3**	
	Hospital acquired diseases +			**1.5**
	First Midterm Exam			**0.5**
Five	Vigi-search Versus Vigi-mine. Outbreaks.	**5**	**3**	
	Outbreaks.			**2**
Six	Risk management systems and plans. Environmental Health: Housing and Air pollution	**5**	**3**	
	Risk management systems and plans			**2**
Seven	Risk communications. Cont. Environmental Health: Food pollution.	**5**	**3**	
	Risk communications.			**2**
Eight	**Second Midterm Exams**			
Nine	Tools used in PV. Cont. Environmental Health: Water and water supplies	**5**	**3**	
	Tools used in PV.			**2**
Ten	Post authorization Safety Studies (PASS). Cont. Environmental Health: Treatment of community wastes	**5**	**3**	
	PASS			**2**

Eleven	Role of Pharmacists in PV. Sewage treatment	**5**	**3**	
	Role of Pharmacists in PV.			**2**
Twelve	Role of Pharma companies in PV. Human nutrition	**5**	**3**	
	Practical Exam			**2**
Thirteen	Egyptian PV as an integral part of the Global PV system. Family health	**3**	**3**	
Total No. of hours		**58**	**36**	**22**
Fourteen	University Elective Final Exams			
Fifteen	**Final Exams of Faculty**			
Sixteen				

4. Teaching and Learning Methods

- **4.1.** Lectures
- **4.2.** Interactive discussions
- **4.3.** Research Projects.
- **4.4.** Practical work.
- **4.5.** Group Discussion.
- **4.6.** Data Analysis.
- **4.7.** Problem solving.
- **4.8.** Assignments.
- **4.9.** Power point presentations.
- **4.10.** Demonstration videos.
- **4.11.** Case study.

5. Student Assessment Methods

- **5.1.** Written to assess knowledge and understanding as well as intellectual skills.
- **5.2.** Practical to assess professional and practical skills.
- **5.3.** Quiz to assess knowledge and understanding of the practical part, intellectual skills as well as professional and practical skills
- **5.4.** Oral exam to assess all skills including transferable skills.
- **5.5.** Assignment (Research Project) to assess general and transferrable skills.
- **5.6.** Class Work (Participation) to assess all types of skills.

Assessment Schedule

Assessment 1: First Midterm Exam	Week 4.
Assessment 2: Second Midterm Exam	Week 8.
Assessment 3: Assignment (Research Project)	Week 11.
Assessment 4: Practical Exam + Practical Quiz	Week 12
Assessment 5: Final written Exam	Week 15 or 16.
Assessment 6: Oral Exam	Week 15 or 16.
Assessment 7: class Work (Participation)	During the semester

Weighting of Assessments

First Midterm Examination	5%
Second Midterm Examination	15%
Class Work (Participation + Assig.)	10%
Final-Term Examination	30%
Practical Examination • Practical Exam (20%) • Practical Quiz (10)	30%
Oral Examination	10%
Total	**100%**

6. List of References

6.1. Course Notes

Staff lectures handouts are uploaded to the Moodle.
Lab manual is given to each student.

6.2. Essential Books (Text Books)

- Waller, Patrick. "Getting to grips with the new European Union pharmacovigilan legislation." Pharmacoepidemiology and drug safety 20.5 (2011): 544-549.
- Talaro and Chess. Foundation in Microbiology, Mcgrawhill International edition. Warren Levinson.
- L.J. Donaldson and R.J. Donaldson. Essential public health (2nd edition)

6.3. Recommended Books

- R.A. Robison, D.N. Wright and M.M. Jensen. Microbiology for health sciences 7thed,

6.4. Periodicals, Websites, ……etc

www.pubmed.com

7. Facilities Required for Teaching and Learning

7.1. Smart board for lectures
7.2. Computers with internet and E-library
7.3. Data Show
7.4. Laboratories.
7.5. Personal Computer (available for each staff member).
7.6. Computer equipped with projector and internet connection available for the usual lectures and Labs.
7.7. White board.
7.8. Books.

Course Coordinator:

Head of Department: Prof. Dr. Ebtissam Darweesh

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Medical Devices (PHP 613)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice and Clinical Pharmacy
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Medical Devices **Course Code: PHP 613**

Prerequisites: Pharmacotherapeutics-1 (PHP 426)

Students' Level/Semester: Elective

Credit hours: **2 (1+1)**

Actual teaching hours per week:

Lectures: 1 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 3 hr/week

B. Professional Information

1. Overall Aim of Course

This course points out the role of medical devices in healthcare as the diversity and innovativeness of this sector contribute significantly to enhance the quality and efficacy of healthcare services. The medical devices sector plays a crucial role in the diagnosis, prevention, monitoring and treatment of diseases besides improving patient's quality of life suffering from disabilities.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Define the medical device.
a2. List some examples of medical devices.
a3. Classify the medical devices according to FDA.
a4. Illustrate safety procedure while operating MD.
a5. Describe the types of devices based on intended use.
a6. List steps of operating Class I, II devices.
a7. List steps of operating some Class III, IV devices

b- Intellectual Skills:

b1. Interpret special considerations for Clinical Studies of Devices.
b2. Differentiate between therapeutic, aesthetic devices and diagnostic devices.

c- Professional and Practical Skills:

C1. Counsel patients about some devices requiring considerable training and skill to use in a safe and effective manner.

c2. Use medical devices properly.

d- General and Transferable Skills:

d1. Communicate effectively with the healthcare team members.

d2. Apply learned ethics to respect patient's confidentiality.

d3. Work effectively in team.

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	Introduction – Medical Device Development: Academia vs. Industry	3	1	
	Medical Device Development			2
Two	Introduction – Medical Device Development: Academia vs. Industry	3	1	
	Medical Device Development			2
Three	Pre-clinical Device Development – Research projects	3	1	
	Pre-clinical Device Development			2
Four	Regulatory considerations for medical device development	3	1	
	First Midterm Exam +			0.5
	Pre-clinical Device Development			1.5
Five	Regulatory considerations for medical device development (cont.)	3	1	
	Regulatory considerations for medical device development			2
Six	Manufacturing, Quality Control, and Quality Assurance	3	1	
	Manufacturing, Quality Control, and Quality Assurance			2
Seven	Manufacturing, Quality Control,	3	1	

	and Quality Assurance (cont.)			
	Manufacturing, Quality Control, and Quality Assurance			2
Eight	**Second Midterm exam**			
Nine	Marketing medical devices, and the basics of sales forces	3	1	
	Marketing medical devices, and the basics of sales forces			2
Ten	Marketing medical devices, and the basics of sales forces (cont.)	3	1	
	Marketing medical devices, and the basics of sales forces (cont.)			2
Eleven	Field Visit in a medical devices company	3	1	
				2
Twelve	Marketing medical devices, and the basics of sales forces (cont.)	3	1	
	Marketing medical devices, and the basics of sales forces (cont.)			2
Thirteen	Marketing medical devices, and the basics of sales forces (cont.)	3	1	
	Practical exam			2
Total No. of hours		36	12	24
Fourteen	University Elective Final Exams			
Fifteen	Final Exams of Faculty			
Sixteen				

4. Teaching and Learning Methods

- **4.1.** Case Scenario presentation.
- **4.2.** Role Play.
- **4.3.** Practical work.
- **4.4.** Group Discussion.
- **4.5.** Problem solving.
- **4.6.** Assignments.
- **4.7.** Power point presentations.
- **4.8.** Demonstration videos.
- **4.9.** Case study.

5. Student Assessment Methods

5.1. Written exams to assess knowledge, understanding, and intellectual abilities.

5.2. Practical exam to assess professional and practical skills.

5.3. Class work (Participation) to assess all types of skills incuding general and transferrable skills.

Assessment Schedule

Assessment 1 1st Midterm Exam Week 4
Assessment 2 2nd Midterm Exam Week 8
Assessment 3 Practical Exam Week 13
Assessment 4 Final Exam Week 15 or 16
Assessment 5 Class Work (During the semester)

Weighting of Assessments

1st Mid-term exam	5%
2nd Mid-term exam	15%
Final-Term Examination	40%
Practical Examination	30%
Class Work (Participation)	10%
Total	100%

6. List of References

6.1. Course Notes

Staff lectures handouts are uploaded to the Moodle.
Lab manual is given to each student.

6.2. Essential Books (Text Books)

Webster, John. *Medical instrumentation: application and design*. John Wiley & Sons, 2009.

6.3. Recommended books

The Medical Device R&D Handbook

6.4. Periodicals, websites,…….etc.

www.fda.gov/medicaldevices

7. Facilities Required for Teaching and Learning

7.1. Smart board for lectures

7.2. Computers with internet and E-library
7.3. Lecture halls
7.4. Personal Computer (available for each staff member).
7.5. Computer equipped with projector and internet connection available for the usual lectures and Labs.
7.6. Meeting rooms for office hours.

Course Coordinator: -
Head of Department Prof. Dr. Ebtissam Darweesh

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Clinical Trials (PHP 614)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice & Clinical Pharmacy
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: Clinical Trials **Course Code: PHP 614**

Prerequisites: Pharmacotheraputics I (PHP 426)

Students' Level/Semester: Elective

Credit hours: **2 (1+1)**

Actual teaching hours per week:

Lectures: 1 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 3 hr/week

B. Professional Information

1. Overall Aim of Course

The overall aim of the course is to provide students with a solid understanding of the main issues in the design and interpretation of clinical trials. The course will outline the fundamental principles of comparative clinical trials in investigating effectiveness, efficacy and safety of treatments; and compare the benefits of clinical trials in comparison to alternative study designs. The main features of clinical trials, including methodological and organizational considerations, and the principles of trial conduct and reporting will be described. Key decisions surrounding design (including sample size), delivery and assessment of clinical trials will be explored.

It will also introduce the basic statistical methods used in clinical trials. Students will learn how to select and apply appropriate statistical methods to analyze data from clinical trials, and how to present, interpret and discuss the analyses clearly and concisely**.**

2.Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Explain fundamental principles of comparative clinical trials in investigating effectiveness, efficacy and safety of interventions.

a2. Compare the benefits of randomized controlled clinical trials in comparison with alternative study design.

a3. Describe the main features of clinical trials, including methodological and organizational considerations.

a4. Explain the principles of trial conduct and reporting.
a5. Describe the basic statistical methods used in clinical trials.
a6. Interpret the following terms: reliability; validity; sensitivity; specificity; positive and negative predictive value
a7. Define information bias, selection bias, and confounding and give examples of each.

b- Intellectual Skills:

b1. Test hypotheses
b2. Assess key decisions surrounding the design and analysis of clinical trials.
b3. Apply the logistics of study design and data collection
b4. Interpret data.
b5. Evaluate information from a wide variety of sources.
b6. Plan a programme of original research.
b7. Apply an understanding of basic statistics in other study modules of the clinical trials course.

c- Professional and Practical Skills:

c1. Plan a clinical study;
c2. Screen subjects for a study.
c3. Monitor clinical safety.
c4. Interpret clinical and laboratory data.
c5. Analyze experimental results to determine their strength and validity.
c6. Prepare technical reports/
c7. Use the scientific literature effectively.
c8. Use computational tools and packages and Proficiently use at least one computer data analysis program

d- General and Transferable Skills:

d1. Demonstrate ideas and results.
d2. Communicate effectively through oral presentations, computer processing and presentations, written reports and scientific publications.
d3. Apply statistical and modelling skills.
d4. Develop management skills: decision processes, objective criteria, problem definition, project design and evaluation, risk management, teamwork and coordination, extension needs.
d5. Integrate information from a variety of sources.
d6. Use Information and Communications Technology.
d7. Manage resources and time.
d8. Apply independent learning with open-mindedness and critical enquiry.

d9. Develop professional skills continually.

3.Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	Principles of clinical trials	**3**	**1**	
	Introduction to clinical trials			**2**
Two	Introduction to study design	**3**	**1**	
	Application of research study design			**2**
Three	Randomization, Types of Bias	**3**	**1**	
	Population and sampling			**2**
Four	The use of blinding and placebos	**3**	**1**	
	Data Collection + **First Midterm Exam**			**0.5**
				1.5
Five	Descriptive studies - Cohort studies	**3**	**1**	
	Case Study 1			**2**
Six	Case-control studies	**3**	**1**	
	Case Study 2			**2**
Seven	Randomized clinical trials	**3**	**1**	
	Case study on RCTs			**2**
Eight				
	Second Midterm exam			
Nine	Basic statistical methods in clinical trials	**3**	**1**	
	Application of statistical problems			**2**
Ten	Using computer based statistical software	**3**	**1**	
	Application of computer Software			**2**
Eleven	Monitoring and reporting clinical trials	**3**	**1**	
	Clinical Trial Reports			**2**
Twelve	Interpreting results of statistical data	**3**	**1**	
	Practical Exam + Quiz			**2**
Thirteen	Revision	**1**	**1**	
Total No.		**34**	**12**	**22**

of hours				
Fourteen	**University Elective Final Exams**			
Fifteen	**Final exams of faculty**			
Sixteen				

4. Teaching and Learning Methods

4.1 Group discussion
4.2 Data analysis
4.3 Tutorials, Problem-based learning
4.4 Interactive & Active learning in lectures
4.5 Case Study
4.6 Problem solving based learning
4.7 Analysis & Literature evaluation

5. Student Assessment Methods

5.1 Written exams to assess knowledge and understanding as well as intellectual skills.
5.2 Practical work to assess professional and practical skills.
5.3 Quiz to assess knowledge and understanding of the practical part, intellectual skills as well as professional and practical skills

5.4 Active participation to assess general and transferrable skills.
5.5 Class work (Lab Performance & Assignments) to assess all types of skills.
5.6 Assignments to assess all types of skills.

Assessment Schedule

Assessment 1 First Midterm Week 4
Assessment 2 Second Midterm Week 8
Assessment 3 Final Written Week 15/16
Assessment 4 Practical Exam Week 12
Assessment 5 Practical Quiz Week 12
Assessment 6 Active Participation (During the semester)
Assessment 8 Class work (Lab performance) each lab
. Assessment 7 Assignments (During the semester)

Weighting of Assessments

1st Mid-Term Examination	5%
2nd Mid-Term Examination	15%
Final-Term Examination	40%
Practical	30%
Practical Examination	20%
Practical Quiz	5%
Active Participation	5 %
Class Work (Lab performance & Assignments)	10%
Total	100%

6. List of References

6.1 Course Notes

Staff lectures handouts are **uploaded to the Moodle**.

Lab manual **is given to each student**.

6.2 Essential Books (Text Books)

Friedman, Lawrence M., Curt Furberg, and David L. DeMets. *Fundamentals of clinical trials*. Vol. 4. New York: Springer, 2010.

6.3 Recommended Books

Hulley, Stephen B., et al. *Designing clinical research*. Lippincott Williams & Wilkins, 2013.

6.4 Periodicals, Websites,…. etc

www.pubmed.com

www.sciencedirect.com

www.mathportal.org/calculators/statistics-calculator

7. Facilities Required for Teaching and Learning

Computer equipped with data show

Statistical Software

Internet access

Computer equipped with projector and internet connection available for the usual lectures and Labs.

Course Coordinator: -

Head of Department: Prof. Dr. Ebtissam Darwish

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

Evidenced Based Medicine (PHP 615)

Program (s) on which the course is given: Bachelor of Pharmacy
Department offering the program: All Faculty Departments
Department offering the course: Pharmacy Practice and Clinical Pharmacy
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Academic year:
Approval Date: September 2014

A. Basic Information

Course Title: Evidence Based Medicine **Course Code: PHP 615**
Prerequisites: Pharmacotherapeutics-I PHP 426
Students' Level/Semester: Elective
Credit hours: **2 (1+1)**
Actual teaching hours per week:
Lectures: 1 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 3 hr/week

B. Professional Information

1. Overall Aim of Course

This course is intended for students to acquire and develop both the knowledge and the skills for evidence-based medicine (EBM). During this course students will use concepts obtained in previous epidemiology courses as they are applied to help solving clinical problems. Health professionals make numerous decisions when they provide care to patients. These decisions should be informed by the best evidence available from sound clinical research and patients' values and preferences. Therefore, health professionals need to acquire knowledge and develop skills to determine the validity, the meaning, and the applicability into practice of clinical research evidence findings.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Define Evidence Based Medicine
a2. Describe the steps of the practice of EBM.
a3. Illustrate the major concepts of the evidence based practice.
a4. Enumerate the different purposes for searching the scientific biomedical literature.
a5. List the future trends that may influence use of evidence to improve the quality of practice.
a6. Determine the contribution of research to evidence based practice.
a7. Identify methods of literature evaluation.

a8. Classify level of evidence.

b- Intellectual Skills:

b.1 Demonstrate an in depth understanding of the process of data management.
b.2 Evaluate critically data quality, integrity and bias.
b.3 Distinguish between quantitative & qualitative research approach.
b.4 Examine organizational strategies that facilitate evidence based practice.
b.5 Analyze barriers for application of evidence to practice.

c- Professional and Practical Skills:

c.1 Conduct efficient searches of clinical evidence using the most appropriate terms and other tools (filters, operators, and clinical queries) in databases available through the Internet, in accordance with the type of evidence of interest (PubMed, Cochrane Library, Guidelines).
c.2 Appraise critically the most common types of clinical research papers (interventions, harm, diagnostic tests, and systematic reviews.)
c.3 Translate evidence to practice
c.4 Apply the evidence to individual patients.

General and Transferable Skills:

d.1 Identify evidence via searching skills
d.2 Present critical appraisal of research publications
d.3 Communicate effectively with clarity in both the academic and professional setting to a range of audiences and using a variety of approaches.
d.4 Plan learning
d.5 Present complex information using a comprehensive range of learning resources.

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	Introduction to Evidence-based Medicine	**3**	**1**	
	Introduction to Evidence-based Medicine			**2**
Two	Practice Steps of EBM	**3**	**1**	
	Application of EBM			**2**
Three	How to search the clinical evidence	**3**	**1**	
	Research Databases			**2**
Four	More on PubMed and other resources + **First Midterm Exam**	**3**	**1**	

	Research Applications			**2**
Five	How to appraise evidence about interventions	**3**	**1**	
	Case Study 1			**2**
Six	Critically Appraising Knowledge for Clinical Decision Making	**3**	**1**	
	Application of critical appraisal			**2**
Seven	Organizational Structures that facilitate EBM	**3**	**1**	
	Case Study 2			**2**
Eight	**Second Midterm exam**			
Nine	Patient Concerns, Choices, and Clinical Judgment in EBP	**3**	**1**	
	Case Study 3			**2**
Ten	Advancing Optimal Care With Clinical Practice Guidelines	**3**	**1**	
	EBM application in Clinical setting			**2**
Eleven	Implementing Evidence in Clinical Settings	**3**	**1**	
	Practical Revision			**2**
Twelve	The Role of Outcomes in Evaluating Practice Change	**3**	**1**	
	Practical Exam			**2**
Thirteen	**Revision**	**1**	**1**	
Total No. of hours		**34**	**12**	**22**
Fourteen	**University Elective Final Exams**			
Fifteen	**Final Exams of Faculty**			
Sixteen				

4. Teaching and Learning Methods

- **4.1.** Illustrated lectures.
- **4.2.** Group discussion.
- **4.3.** Case studies.
- **4.4.** Directed reading and researching.
- **4.5.** Problem solving.
- **4.6.** Assignments.
- **4.7.** Power point presentations.
- **4.8.** Practical work.

Student Assessment Methods

- **5.1.** Written exams to assess knowledge and understanding as well as intellectual skills.
- **5.2.** Practical work to assess professional and practical skills.
- **5.3.** Lab performance to assess knowledge and understanding of the practical part, intellectual skills as well as professional and practical skills
- **5.4.** Presentation to assess all skills including transferable skills.
- **5.5.** Class Work (Participation & Assignments) to assess all types of skills.

Assessment Schedule

Assessment 1 First Midterm	Week 4
Assessment 2 Second Midterm	Week 8
Assessment 3 Final Written	Week 15/16
Assessment 4 Practical Exam	Week 12
Assessment 5 Lab performance	each lab
Assessment 6 Presentation	(During the semester)
Assessment 7 Class Work (Participation & Assignments)	(During the semester)

Weighting of Assessments

1st Mid-Term Examination		5%
2nd Mid-Term Examination		15%
Final-Term Examination		30%
Practical		30%
	Practical Examination	20%
	Lab Performance	5%
	Presentation	5%
Class work (Par. & Ass.)		10%

Total	**100%**

5. List of References

6.1. Course Notes

Staff lectures handouts are uploaded to the Moodle.
Lab manual is given to each student.

6.2. Essential Books (Text Books)

Guyatt G, Rennie D, Meade MO, Cook DJ, eds. Users' Guides to the Medical Literature: A Manual for Evidence-Bases Clinical Practice.2nd edition, New York, NY: McGraw-Hill; 2008

6.3. Recommended Books

Straus SE, Glasziou P, Richardson WS, Haynes RB. Evidence-Based Medicine. How to practice and teach EBM. Edinburg: Elsevier Churchill Livingstone, Fourth Edition, 2011.

6.4. Periodicals, Websites, ……etc

www.pubmed.com

7. Facilities Required for Teaching and Learning

Data show
Internet research and database library
Laboratories
Meeting rooms for office hours
White board
Books

Course Coordinator: -

Head of Department: Prof. Dr. Ebtissam Drawish

Department Approval Date: September 2014

FUTURE UNIVERSITY IN EGYPT
FACULTY OF PHARMACEUTICAL SCIENCES AND PHARMACEUTICAL INDUSTRIES

Course Specifications

First Aid (PHP 616)

Program (s) on which the course is given:	Bachelor of Pharmacy
Department offering the program:	All Faculty Departments
Department offering the course:	Pharmacy Practice & Clinical Pharmacy
Academic year:	----------
Approval Date:	September 2014

A. Basic Information

Course Title: First Aid **Course Code:** PHP 616

Prerequisites: Pathology and Pathophysiology (PHP 221)

Students' Level/Semester: Elective

Credit hours: **2(1+1)**

Actual teaching hours per week:

Lectures: 1 hr/week **Practical:** 2 hr/week **Tutorial:** N/A **Total:** 3 hr/week

B. Professional Information

1. Overall Aim of Course

The topics presented in this course aim to expand the student knowledge and understanding of the most current theory and practical guidelines for rendering first aid and Emergency Medicine, triage and referral skills for all ages and all systems of the body. The course offers the students the knowledge and skills to maintaining good practice in the safe, prompt and effective treatment of injuries and ill health.

2. Intended Learning Outcomes (ILOs)

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

a- Knowledge and Understanding:

a1. Identify the basic principles of first aid.
a2. Recognize the steps of cardiopulmonary resuscitation (CPR).
a3. Describe the first aid of chocking.
a4. List the steps for the first aid of coma.
a5. Outline the first aid of convulsions.
a6. Distinguish types of wounds
a7. Outline methods of extraction of foreign objects

b- Intellectual Skills:

b1. Demonstrate how to apply the rules of first aid to wounds.
b2. Determine the appropriate first aid of hemorrhage.
b3. Illustrate the first aid of shock.
b4. Evaluate the degree of burn.
b5. Explain the basic principles of first aid on intoxicated persons.

c- Professional and Practical Skills:

c1. Apply the basic principles of first aid on selected dummies.
c2. Prioritize managing life threatening conditions
c3. Practice appropriate methods of first aid to save life, prevent further injury, and limit infection.

d- General and Transferable Skills:

d1. Manage time.
d2. Apply learned ethics to respect the patient.
d3. Communicate advice to patient

3. Contents

Teaching Weeks	Topic	No. of hours	Lecture	Practical
One	Basic principles of First Aid.	3	1	
	Introduction to First Aid			2
Two	First Aid of Convulsions & Coma	3	1	
	Administering first aid to unconscious casualty			2
Three	Cardiopulmonary Resuscitation (CPR).	3	1	
	CPR demonstration			2
Four	First Aid of Chocking & Drowning	3	1	
	Application of first aid to choking & drowning+ **First Midterm Exam**			1.5 0.5
Five	First Aid of Wounds &Injuries Of Special Organs	3	1	
	Handling of wounds and minor injuries			2
Six	First Aid of injuries of the Head & Spines	3	1	
	Administering first aid to casualty in shock			2
Seven	First Aid of Bone & Muscle Injuries	3	1	
	Case studies			2
Eight	**2nd Mid-Term Exam**			
Nine	First Aid of Foreign Bodies in The Eye, Ear	3	1	

	and Nose			
	Case Studies			2
Ten	First Aid of Hemorrhage & Shock	3	1	
	Case Studies			2
Eleven	First Aid of Snake, Scorpion & Spider bites	3	1	
	Revision			2
Twelve	First Aid of intoxicated persons	3	1	
	Practical Exam			2
Thirteen	First Aid of Thermal Injuries	1	1	
Total no. Hours		34	12	22
Fourteen	University Elective Final Exams			
Fifteen	Final Exams of Faculty			
Sixteen				

4. Teaching and Learning Methods

4.1. Data show and computer in lectures.
4.2. Laboratory sessions
4.3. Data analysis.
4.4. Group discussion.
4.5. Problem solving.
4.6. Assignments.
4.7. Power point presentations.
4.8. Demonstration videos.
4.9. Self-learning by discussion of projects prepared by students.
4.10. Office hours.
4.11. Case study.
4.12. Research and presentation.
4.13. Tutorials, Problem-based learning.

5. Student Assessment Methods

- **5.1.** Written exams to assess knowledge and understanding as well as intellectual skills.
- **5.2.** Practical work to assess professional and practical skills.
- **5.3.** Lab performance to assess knowledge and understanding of the practical part, intellectual skills as well as professional and practical skills
- **5.4.** Role play to assess all skills including transferable skills.
- **5.5.** Class Work (Participation & Assignments) to assess all types of skills.

Assessment Schedule

Assessment 1: First Midterm Exam.	Week 4
Assessment 2: 2nd mid-exam.	Week 8
Assessment 3: Practical exam.	Week 12
Assessment 4: Written final exam.	Week 15/16
Assessment 4: Role plays	(During the semester)
Assessment 5: Lab performance	(each lab)
Assessment 7: Class Work (Participation & Assignment)	(During the semester)

Weighting of Assessments

1st Mid-term Exam		5%
2nd Mid-Term Examination		15 %
Final-Term Examination		40 %
Practical		30%
-Practical Exam	20%	
-Role Play	5%	
-Lab Performance	5%	
Class Work (Par. & Ass.)		10 %
Total		**100 %**

6. List of References

6.1. Course Notes

Staff lectures handouts are **uploaded to the Moodle.**
Lab manual **is given to each student**.

6.2. Essential Books (Text Books):

P. Blakiston's son. American National Red Cross Text-Book on First Aid and Relief Columns; a Manual of Instruction; How to Prevent Accidents and What to Do for Injuries and Emergencies Publisher: Philadelphia, 2010.

First Aid Manual: Written and authorized

6.3. Recommended Books:

- Tao and Kendall Krause. First Aid for the Basic Sciences: Organ Systems. McGraw Hill Professional, 2011.

- Manual of First Aid: The Authorized Manual of St. John Ambulance, St. Andrew's Ambulance Association, and the British Red Cross. Year
- First Aid for the Basic Sciences: General Principles, Second Edition [Nook Book] by Tao Le, Kendall Krause. Year

6.4. Periodicals, Websites, ……etc

www.pubmed.com
http://firstaid.about.com/
http://www.focusonfirstaid.co.uk/

7. Facilities Required for Teaching and Learning:

7.1. Lecture halls.
7.2. Laboratories.
7.3. Personal Computer (available for each staff member).
7.4. Computer equipped with projector and internet connection available for the usual lectures and Labs.
7.5. Meeting rooms for office hours.
7.6. White board.
7.7. Books.

Course Coordinator: -
Head of the department: Prof. Dr. Ebtissam Darweesh
Department Approval Date: September 2014