

# Course Specification

College: **College of Pharmacy**

Institution: **King Saud University**

Department: **Department of Pharmacology**

Degree: **B. Pharm.**

## A Course Identification and General Information

Course code	Course title	Credit Hours			
		Lecture	Lab.	Other	Credit
<b>PHL 462</b>	<b>Clinical toxicology</b>	<b>2</b>	1	-	<b>3</b>
Pre-requisites for this course: <b>(PHL 471)</b>					
Co-requisites for this course (if any):					
Level/year at which this course is offered: <b>10<sup>th</sup> semester</b>					
Name of faculty member responsible for the course: <b>Dr. Mohamed M. Sayed-Ahmed, Dr. saleh A. bakheet, Dr. hesham qurashy, abdulrhman Aqueel</b>					

## B Objectives

### 1. Summary of the main learning outcomes for students enrolled in the course.

- To gain awareness and understanding the evaluation of different types of clinical laboratory tests.
- To gain knowledge regarding the supportive care and clinical procedures for Convulsions, Coma, Hypotension, Hypertension, Hypothermia, Hypothermia, Fluid intolerance, Acid base imbalance.
- To understand the mechanism of toxicity, clinical presentation, diagnosis and medications indicated and contraindicated in the treatment of toxicity of specific drug groups.
- To gain knowledge regarding the special problems with infants, children and geriatric patient.
- To understand the concept of toxic exposure during pregnancy.
- To gain awareness and understanding the bacterial foodborn toxins, Viral and other GIT parasites, food additives, food contaminants and food sensitivity.

### 2. Briefly describe any plans for developing and improving the course that are being implemented. (eg increased use of IT or web based reference material, changes in content as a result of new research in the field)

- **Providing Updated software and Reference to web material.**

<b>C. Course Description</b>		
<p>The course designed to relate the basic pharmacological and toxicological principles to the treatment of the poisoned patient. Several of the compounds commonly encountered in the accidental or intentional poisoning are to be covered. The student will be able to recognize signs and symptoms of poisoning characterize the type and extent of intoxication and develop a specific modern management plan. The practical part is devoted to case studies with emphasis on the treatment protocols adopted and their evaluation.</p>		
<b>1. Topics to be Covered</b>		
<b>Topic</b>	<b>Weeks</b>	<b>Contact hours</b>
<b>Clinical laboratory results and their evaluation</b>	<b>1</b>	<b>2</b>
<b>Supportive care for Convulsions, Coma, Hypotension, Hypertension</b>	<b>2</b>	<b>2</b>
<b>Supportive care for Hypothermia, Hyperthermia, Fluid intolerance, Acid base imbalance.</b>	<b>3</b>	<b>2</b>
<b>Clinical toxicity of Antidepressants (cyclic &amp; new).</b>	<b>4</b>	<b>1</b>
<b>Clinical toxicity of NSAIDS.</b>	<b>4</b>	<b>1</b>
<b>Clinical toxicity of Digitalis group.</b>	<b>5</b>	<b>1</b>
<b>Clinical toxicity of Oral hypoglycaemic drugs</b>	<b>5</b>	<b>1</b>
<b>Clinical toxicity of Anti-infective agents.</b>	<b>6</b>	<b>1</b>
<b>Clinical toxicity of Diuretics.</b>	<b>6</b>	<b>1</b>
<b>Clinical toxicity of Benzodiazepines.</b>	<b>7</b>	<b>1</b>
<b>Clinical toxicity of Oral contraceptives.</b>	<b>7</b>	<b>1</b>
<b>Clinical toxicity of Anticoagulants.</b>	<b>8</b>	<b>1</b>
<b>Toxic exposure during pregnancy.</b>	<b>8-10</b>	<b>4</b>
<b>Special problems with infants, children and geriatric patient</b>	<b>10-11</b>	<b>2</b>
<b>Bacterial foodborn toxins</b>	<b>11-12</b>	<b>3</b>
<b>Viral and other GIT parasites</b>	<b>13</b>	<b>1</b>
<b>Food additives and contaminants</b>	<b>13-15</b>	<b>4</b>
<b>Food sensitivity</b>	<b>15</b>	<b>1</b>

### **Tutorial and drug profile**

Case studies collected from the hospitals, DPIC or literature are to be presented, discussed and evaluated. Comparison between the treatment procedures utilized and other possible modern approaches are to be projected.

Course components (total contact hours per semester):			
Lecture:	Tutorial	Practical	Other
<b>30</b>	<b>45</b>	-	-
Additional private study/learning hours expected for students per week. (This should be an average for the semester not a specific requirement in each week)			
<b>45 hours</b>			

**Development of Learning Outcomes in Domains of Learning**

For each of the domains of learning shown below indicate:

- A brief summary of the knowledge or skill the course is intended to develop;
- A description of the teaching strategies to be used in the course to develop that knowledge or skill;
- The methods of student assessment to be used in the course to evaluate learning outcomes in the domain concerned.

<b>a. Knowledge</b>
<p>(i) Description of the knowledge to be acquired</p> <ul style="list-style-type: none"> <li>• <b>Knowledge about the evaluation of different types of clinical laboratory tests,</b></li> <li>• <b>Understanding different clinical supportive care procedures for Convulsion, Coma, Hypertension, Hypotension, Hyperthermia, Hypothermia, Fluid intolerance, Acid base imbalance.</b></li> <li>• <b>Understanding the mechanism of toxicity, clinical presentation, diagnosis and medications indicated and contraindicated in the treatment of toxicity of specific drug groups.</b></li> <li>• <b>Gaining knowledge regarding the special problems with infants, children and geriatric patient.</b></li> <li>• <b>Understanding the concept of toxic exposure during pregnancy.</b></li> <li>• <b>Understanding different types bacterial foodborn toxins, Viral and other GIT parasites, food additives, food contaminants and food sensitivity.</b></li> </ul>
<p>(ii) Teaching strategies to be used to develop that knowledge</p> <ul style="list-style-type: none"> <li>• <b>Lectures</b></li> <li>• <b>Case studies</b></li> <li>• <b>Drug profile</b></li> </ul>
<p>(iii) Methods of assessment of knowledge acquired</p> <ul style="list-style-type: none"> <li>• <b>Exams</b></li> <li>• <b>Assignments</b></li> </ul>

- **Case reports**

<b>b. Cognitive Skills</b>
(i) Cognitive skills to be developed
<ul style="list-style-type: none"> <li>• <b>Ability to collect information to help for problem solving.</b></li> </ul>
(ii) Teaching strategies to be used to develop these cognitive skills
<ul style="list-style-type: none"> <li>• <b>Give students a problem and toxicity case that requires collecting information from internet.</b></li> </ul>
(iii) Methods of assessment of students cognitive skills
<ul style="list-style-type: none"> <li>• <b>Exams</b></li> <li>• <b>Reports</b></li> </ul>
<b>c. Interpersonal Skills and Responsibility</b>
(i) Description of the interpersonal skills and capacity to carry responsibility to be developed
<b>Not Applicable</b>
(ii) Teaching strategies to be used to develop these skills and abilities
<b>Not Applicable</b>
(iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility
<b>Not Applicable</b>
<b>d. Communication, Information Technology and Numerical Skills</b>
(i) Description of the skills to be developed in this domain.
<b>Not Applicable</b>
(ii) Teaching strategies to be used to develop these skills
<b>Not Applicable</b>
(iii) Methods of assessment of students numerical and communication skills
<b>Not Applicable</b>
<b>e. Psychomotor Skills (if applicable)</b>
(i) Description of the psychomotor skills to be developed and the level of performance required
<b>Not Applicable</b>
(ii) Teaching strategies to be used to develop these skills
<b>Not Applicable</b>

(iii) Methods of assessment of students psychomotor skills

**Not Applicable**

#### 5. Schedule of Assessment Tasks for Students During the Semester

Assessment	Assessment task (eg. essay, test, group project, examination etc.)	Week due	Proportion of Final Assessment
1	<b>First midterm exam</b>	<b>7</b>	<b>15</b>
2	<b>2<sup>nd</sup> midterm exam</b>	<b>13</b>	<b>15</b>
4	<b>Tutorial and drug profile</b>	<b>1-15</b>	<b>30</b>
4	<b>Final exam</b>	<b>16</b>	<b>40</b>

#### D. Student Support

Arrangements for availability of faculty for individual student consultations and academic advice. (include amount of time faculty are available each week)

- **Faculty web-page with communication tolls.**
- **office hours: 2**

#### E. Learning Resources

##### Required Text(s)

- **Kent R. Olson. Poisoning and drug overdose. (3<sup>rd</sup> edition).**

##### Essential Reference

- **Frank A. Barile. Clinical Toxicology: Principles and Mechanism. CRC Press, N.Y.**

##### Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)

- **Archive Toxicology**
- **Pharmacological Reviews, Black Well, N.Y.**

##### Electronic Materials, Web Sites etc

[www.PubMed.com](http://www.PubMed.com)

#### F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (ie number of seats in classrooms and laboratories, extent of computer access etc.)

##### 1. Accommodation (Lecture rooms, laboratories, etc.)

- **Lecture room (30)**

##### 2. Computing resources

<ul style="list-style-type: none"> <li>• <b>Internet access</b></li> </ul>
<p>3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)</p> <p style="text-align: center;"><b>Not Applicable</b></p>

G Course Evaluation and Improvement Processes
<p>1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching</p> <ul style="list-style-type: none"> <li>• <b>Students evaluation in each semester</b></li> <li>• <b>Meeting with students</b></li> <li>• <b>e- suggestions</b></li> <li>• <b>Open door policy</b></li> </ul>
<p>2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department</p> <ul style="list-style-type: none"> <li>• <b>Self evaluation</b></li> </ul>
<p>3. Processes for Improvement of Teaching</p> <ul style="list-style-type: none"> <li>• <b>Studying reports</b></li> </ul>
<p>4. Processes for Verifying Standards of Student Achievement (eg. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution)</p> <p style="text-align: center;"><b>Not Applicable</b></p>
<p>5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.</p> <ul style="list-style-type: none"> <li>• <b>Collecting all reports and evaluations at the end of the semester for a reviewing purpose.</b></li> </ul>

