



Jerash University  
Faculty of Pharmacy

**Year 20xx/20xx  
Course Syllabus**

| <b>Course Information</b> |                            |
|---------------------------|----------------------------|
| Course Title              | Pharmaceutics I lab        |
| Course Code               | 1101322                    |
| Prerequisites             | Pharmaceutics 1            |
| Course Website            |                            |
| Instructor                | <b>Dr. Shadi Gharaibeh</b> |
| Office Location           |                            |
| Office Phone #            |                            |
| Office Hours              | TBA                        |
| E-mail                    |                            |
| Teaching Assistant(s)     | TBA                        |

**Course Description**

This pharmacy practice lab focuses on a number of areas of interest in the fields of pharmacy practice and pharmaceutical care. These areas include: compounding of suspensions, emulsions, semisolids, and suppositories. In addition it builds up focus on patient care in a pharmacy setup in areas of construction of patient charts, drug therapy problems, literature search, patient counseling, and vital signs assessment.

**Textbook:** please refer to the attached list of electronic and hardcopy resources.

| <b>Assessment Policy</b>                      |                          |               |
|---|--------------------------|---------------|
| <b>Assessment Type</b>                        | <b>Expected Due Date</b> | <b>Weight</b> |
| Mid term Exam                                 | TBA                      | 20%           |
| Final Exam                                    | TBA                      | 40%           |
| Quizzes                                       | Every week               | 15%           |
| Assignments and reports                       | Every week               | 5%            |
| Personal Evaluation and attendance            | Every week               | 10%           |
| Counselling techniques and product evaluation | Every week               | 10%           |
| <b>Total</b>                                  |                          | <b>100%</b>   |

| Course Objectives |   | Percentage |
|-------------------|---|------------|
| 1.                | Practice compounding of emulsions, suspensions, and semisolid preparations            | 60%        |
| 2.                | Practice evaluation of drug therapy problems  | 10%        |
| 3.                | Practice patient counseling, evaluation of vital signs, and proper use of glucometers | 15%        |
| 4.                | Practice advanced literature search for pharmacy related information                  | 15%        |

| Teaching & Learning Methods  |
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| <ol style="list-style-type: none"> <li>1. Lab notes on each experiment containing an introduction and self reading materials.</li> <li>2. In-lab experiments (compounding).</li> <li>3. In-lab assignments.</li> <li>4. In-lab determination of vital signs.</li> <li>5. Writing reports.</li> </ol> |

| Learning Outcomes: Upon successful completion of this course, students will be able to |  |              |
|--|--|--------------|
| Related Objective(s)   |  | Reference(s) |
| 1  | Carry out compounding of different semisolid preparations, emulsions, and suspensions.                                   | NA           |
| 2  | Identify drug therapy problems in a prescriptions and propose adequate recommendations for these problems.               | NA           |
| 3  | Carry out successful patient counseling and determination of blood pressure, pulse, body temperature, and blood glucose. | NA           |
| 4  | Carry out literature search to obtain reliable information related to pharmaceutics and pharmaceutical care.             | NA           |

| week | topics   | Details   |
|------|----------|---|
| 1    | Rheology | <p>1-Determination of viscosity using Ostwald viscometer.</p> <p>2-Practice literature search.</p> <p>3- Practice patient counseling.</p> |

|   |   |   |
|---|---|---|
| 2 | Phase equilibrium                                   | 1-Identify the number of phases associated with mixing of partially miscible liquid phases (phenol/water)<br>2- Identify the number of phases associated with mixing of solids (salol/thymol)<br>3-Literature search (using JFDA website to obtain drug information in Jordan). |
| 3 | Drug Therapy Problems (DTP)                         | 1-Practice Identifying types of (DTP) that could occur.<br>2-Practice literature search to find out the solution to an identified DTP.<br>3-Practice writing and presenting a recommendation regarding a DTP.   |
| 4 | - Surface tension                                   | 1- Determination of surface tension of different liquids.<br>3- Literature search (related to hypo- and hyper-glycemia).  |
| 5 | Preparation of suspensions                          | 1- Compounding of a suspension formulation.<br>2-practice reconstitution of a suspension formulation.<br>3- Literature search.<br>4-practice patient counseling.  |
| 6 | Preparation of a liquid emulsion                    | 1-Compounding of a liquid emulsion formulation.<br>2- Literature search.<br>3-practice patient counseling.<br>4-DTP in-lab assignment.  |
| 7 | Preparation of a w/o semi solid formulation (cream) | 1-Compounding of cold cream.<br>2- Literature search.<br>3-practice patient counseling.   |

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|----|---|--|
| 8  | Preparation of a o/w semi solid formulation (cream) | 1- Compounding of Vanishing cream.<br>2- Literature search.<br>3-practice patient counseling (aerosols).<br>4-Review of glucometer use.  |
| 9  | Semisolids incorporation techniques.                | 1- Incorporation of potent and non-potent drugs in a cream base.<br>2- Incorporation of potent and non-potent drugs in an ointment base.<br>3-Incorporation of two semisolid formulations. |
| 10 | Preparation of rectal suppositories.                | 1- Compounding of a rectal suppository formulation.<br>2- Literature search.<br>3-practice patient counseling.<br>4-Review of DTP (in-lab assignment)                                      |

| Additional Notes    |   |
|---------------------|---|
| <b>Lab rules</b>    | <b>Dressing code: Professional dressing is required, with a clean lab coat and tag name.</b>  |
| <b>Exams</b>        | <b>The format for the exams is generally (but NOT always) as follows: Multiple-choice and short essay questions.</b>  |
| <b>Makeup Exams</b> | <ul style="list-style-type: none"> <li><b>Make up exam should not be given unless there is a real valid excuse.</b></li> </ul>  |
| <b>Cheating</b>     | <p>The commitment of the acts of cheating and deceit such as copying during examinations, altering examinations for re-grade, plagiarism of homework assignments, and in any way representing the work of others as your own is dishonest and will not be tolerated. Standard JUST policy will be applied</p> <p>إذا ضُبط الطالب أثناء الامتحان أو الاختبار متلبساً بالغش فتُوقع عليه العقوبات التالية: مجتمعة:</p> <p>أ- اعتباره راسباً في ذلك الامتحان أو الاختبار.</p> <p>ب- الغاء تسجيله في بقية المساقات المسجل لها في ذلك الفصل.</p> <p>ج- فصله من الجامعة لمدة فصل دراسي واحد، وهو الفصل التالي للفصل الذي ضُبط فيه.</p> |
| <b>Attendance</b>   | <ul style="list-style-type: none"> <li><b>Excellent attendance is expected.</b></li> <li><b>policy requires the faculty member to assign ZERO grade (35) if a student misses 10% of the classes that are not excused.</b></li> <li><b>If you miss class, it is your responsibility to find out about any announcements or assignments you may have missed.</b></li> <li><b>Grade bonuses are subjected to attendance.</b></li> </ul>  |
| <b>Workload</b>     | <ul style="list-style-type: none"> <li><b>Average work-load student should expect to spend is ٤ hours/week</b></li> </ul>   |

### Selected References

**Books:**

1. United States Pharmacopoeia – National formulary, 2006
2. British Pharmacopoeia, 2005
3. Merck Index, 1996
4. Trissel's (Handbook of Injectable Drugs), (TBA)
5. Goodman and Gilman's (the pharmacological basis of therapeutics), 1991
6. Jordan Drug Index, 1996
7. USP DI: Drug information for the health care professional, 1998
8. Remington's pharmaceutical sciences, 1985
9. Middle East Medical Index, 1999
10. British National Formulary (BNF), 1994

**Online resources:**

1. Lexi-comp: <http://www.lexi.com/>; requires subscription
2. Clinical pharmacology online: <http://www.clinicalpharmacology.com/> requires subscription
3. RxList the internet drug index: <http://www.rxlist.com/script/main/hp.asp>; free
4. Drugs.com, [www.drugs.com](http://www.drugs.com); free
5. WebMD: <http://www.webmd.com/>; free

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/>; free