



Course Detailed Description – Procedures of the Course Plan Committee /Faculty of Pharmacy

QF02/0408–2.1E

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| Department | Pharmacy |
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| Course Name | Practical Medicinal Chemistry | Course No. | 0201415 |
| Prerequisite | Drug Design | Credit Hours | 1 |
| Number & date of course plan approval | | Brief Description | See form QF02/0409 |

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| Course Objective | This practical course in medicinal chemistry concerned with multistep synthesis of selected medicinal compounds |
| Intended Learning Outcomes | <ol style="list-style-type: none"> Following the attendance of this laboratory the student should be able to operate the different tasks of synthesized drugs analysis. This Lab. represents the first true synthetic experience for the student. |
| Course Topics | <ol style="list-style-type: none"> Synthesis of different known drugs by simple synthetic procedures. Identification and determination of some drugs. Seminars about important topics in medicinal chemistry. |
| Text Books | <ol style="list-style-type: none"> Foye's Principles of Medicinal Chemistry, 6th edition, Thomas L. Lemke and David A. Williams, Lippincott Williams & Wilkins, 2008. The Organic Chemistry of Drug Design and Drug Action, 2nd edition, Richard B. Silverman, Elsevier, 2004. |
| References | <ol style="list-style-type: none"> Wilson and Gisvold's Textbook of Organic Medicinal and Pharmaceutical Chemistry, 12th edition, J. N. Delgado and W. A. Remers, Lippincott-Raven, 2011. Burger's Medicinal Chemistry and Drug Discovery, 7th edition, M. E. Wolff, 2012. The Organic Chemistry of Drug Synthesis, Vol. 1-6, D. Lednicer and L. A. Mitscher, John Wiley and Sons. |
| Practical Course Grade Determination | Reports = 15% Quizes = 25% Evaluation = 10% Final Exam = 50% |



Course Outline

| Week | Hours | Subjects | Chapters in Textbook | Notes |
|------|-------|------------------------------------------------|----------------------|-------|
| 1 | 3 | Introduction, laboratory and safety rules | | |
| 2 | 3 | Synthesis of Paracetamol | | |
| 3 | 3 | Paracetamol Identification | | |
| 4 | 3 | Assay of Paracetamol Tablets | | |
| 5 | 3 | Synthesis of Acetanilide | | |
| 6 | 3 | Synthesis of Sulfanilamide (Part1) | | |
| 7 | 3 | Synthesis of Sulfanilamide (Part 2) | | |
| 8 | 3 | Assay of Chloramphenicol eye drops | | |
| 9 | 3 | Assay of Spironolactone Tablets | | |
| 10 | 3 | Determination of Furosemide content in Tablets | | |
| 11 | 3 | Synthesis of Aspirin | | |
| 12 | 3 | Seminars | | |

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| Approved by Dept. Chair | | Date of Approval | |
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Extra Information: (Updated every semester and filled by course instructor)

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| Course Instructor | Dr. Jamila Isabella ALI |
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| Extension | 242 |
| Email | Jamilaisabella.ali@zuj.edu.jo |
| Office hours | 8:30-9:30 Mon. 12:00-13:00 Sun., Tue., Wed., Thu. |