Basic information:	
Program on which the Block is offered	PharmD
Qualification Awarded	BPharmD
Block title - Code - Year	General Dispensing – 3102– Foundational Year I
Block Type	Foundational
Total contact Hours / week [28 hrs.]	(Lectures: 4, Lab: 2, Tutorials: 4, Seminars: 2, PBL: 9, Self-study: 6, Exams: 1)
ECTS Hours	16
Pre-requisites for this Block	Fundamentals of Biology, Pharmaceutics, Chemistry, Physics, Arabic, and English Language.
Week period	8

Block Description:

This block introduces students to basic knowledge of organic aromatic molecules and theories related to stability of atoms and molecules ending with dosage forms. This block also deals with pharmaceutical calculations, compounding, interpretation of prescriptions, dispensing, patient counselling and different patterns in behaviour & communication within an ethical context. Students will also learn about imaging diagnostic devices and radiation exposure. Problem-based learning strategies are used for this block delivery.

Block Objectives:

By the end of this Block the student should be able to:

- Relate the relationship of nutrition to the body's energy.
- Explain the basic principles of genetics.
- Demonstrate a basic knowledge of the properties of organic aromatic molecules regarding their nomenclature, properties, preparation and chemical reaction mechanisms.
- Perform basic pharmaceutical calculations related to general drug dispensing.
- Explain the different aspects of electricity and magnetisms and their connection to imaging diagnostic devices.
- Distinguish a number of physical principles that are involved in the design of different dosage forms.
- Discuss the molecular geometry and atomic orbitals hypridization.
- Explain the chemical kinetic and equilliubruim concept.
- Possess the knowledge and skills required to communicate effectively with patients as well as healthy individuals.
- Distinguish between the concepts of equality and diversity in the work place.
- Develop skills of observation and critical reading.
- Analyze, interpret, and evaluate data from various sources.

Learning and Teaching Methods, & Assessment Methods

Learning and Teaching Methods:

- Problem-Based Learning (PBL)
- Lectures
- Tutorials
- Practice in lab
- Independent study assignments
- Presentations
- Seminars

Assessment methods:

- **Continuous assessment:**
  - Problem Based Learning sessions (Brain-storming/Debriefing)
  - Reports
  - Report Discussion
  - Individual reassurance test (IRAT): MCQs
  - Group reassurance test (GRAT): MCQs
  - Presentations (oral/ poster)
  - Practice in lab
  - Open-book/open-web exam
- **End-Block exam:**
  - Written
- **Final-Block exam:**
  - Written
  - Objective structured practical examination (OSPE)

Weighting of Assessment:	
Continuous assessment:	**60%**
• PBL sessions	• 30%
• Practical sessions	• 10%
• Other Activities (Tutorial/Seminar/Assignments/Moodle Activities)	• 10%
• Mid-block Exam	• 5%
• End-block exam	• 5%
Final Exam:	**40%**
• Written	• 30%
• OSPE	• 10%
Total:	**100%**
Assessment Schedule:	
Continuous assessment:	**During the block**

• PBL sessions	Weeks 1-8
• Practical sessions	Weeks 1-8
• Other Activities (Tutorial/Seminar/Assignments/Moodle Activities)	Weeks 1-8
• Mid-block exam	Week 4
• End-block exam	At the end of the block
Final exam:	**At the end of the year**
• Written	At the end of the year
• OSPE	At the end of the block

Examination Regulations:

- If the student absenteeism is more than 25 % he/she cannot attempt the final exam.
- The total required percentage to pass this course is at least 60 %

List of textbooks and references:

- **Course Notes:**
  - PowerPoint presentations, videos and other materials related to lectures, tutorials and practical sessions are uploaded to the Moodle by experts on weekly basis according to teaching schedule.
- **Essential Books (Text Books):**

  - Aulton, M. (2008) *Pharmaceutics the science and practice of pharmacy.* 2nd ed. Churchill Livingstone.
  - Chang, R. (2010) *Chemistry*. 10th ed. New York: McGraw-Hill.
  - Cutnell, J. and Johnson, K. *Physics.*USA: John Wiley and Son, Ltd.
  - Ebbing, Darrell, and Steven D Gammon. (2016) General chemistry (Cengage Learning).
  - Harvey, R.A. and Ferrier, D.R.(2010) Biochemistry (Lippincott Illustrated Reviews Series). Biochemistry (Lippincott Illustrated Reviews Series). 5th Edition.
  - Felton L. (2013). *Remington, Essential of pharmaceutics.* 1st edition. Pharmaceutical Press.
  - Florence, A. T. and Attwood, D. (2008) *Fast Track: Physical Pharmacy*, Pharmaceutical Press London. Chicago.
  - McMurry, J.E. (2015) Organic chemistry. Cengage Learning.
  - Reddy, I.K. and Khan, M.A. (2003) *Essential math and calculations for pharmacy technicians*. CRC Press.
  - Satyajit D. Sarker, Lutfun Nahar. (2007) Chemistry for Pharmacy Students General, Organic and Natural Product Chemistry, UK: John Wiley & Son, Ltd.
  - Rees, J.A., Smith, I. and Watson, J. (2015) *Introduction to pharmaceutical calculations*. Pharmaceutical Press.
  - Roth, J.A. (1989) *Organic Chemistry*, (Solomons, TW Graham).

- Fowler, S., Roush, R., Wise, J. and Stronck, D. (2013) *Concepts of Biology*. Openstax College, Rice University.

- **Periodicals and websites:**
  - Guyton and Hall. Year. *Textbook of Medical Physiology*, 12th ed.[online] Available from (www.medstudents.ir).
  - Joint FIP/WHO Guidelines on GPP: Standards for quality of pharmacy services. Available form: https://www.fip.org/www/uploads/database_file.php?id=331&table_id=
  - BC open textbook, Concepts of biology, 1st Canadian edition. https://opentextbc.ca/biology/chapter/3-3-eukaryotic-cells/
  - Adjei, M., 2012. Clinical Pharmacy: A theoretical framework for practice.
  - Strathclyde University. Equality and Diversity. Available online: https://www.strath.ac.uk/equalitydiversity/

Block Policies:

Code of conduct

Please refer to LIMU code of ethics http://limu.edu.ly/images/11/ethcode.pdf

Academic integrity

Please be aware that cheating, plagiarism, in-class disruption and dishonesty are vigorously prosecuted and that LIMU has a zero-tolerance policy.