Form Name : Block Catalogue Revision No. :01/2020

Form No. : QAO-OP.17 Page :1 of 6

Basic information:	
Program on which the Block is offered	PharmD
Qualification Awarded	BPharmD
Block title - Code - Year	Life Stages– 3404– Professional Year II
Block Type	Professional
Total contact Hours / week	(Lectures: 5, Lab: 0, Tutorials: 1, TBL: 4.5, PBL: 6.5,
[47 hrs.]	Clinical: 2, Self-study: 26, Exams: 2)
ECTS Hours	8
Pre-requisites for this Block	Fundamentals of Pharmacology, Anatomy, Histology,
	Physiology, Biochemistry, Pathology,
	Pharmacogenomics Primer Course, Biopharmaceutics,
	Pharmaceutical Calculations, Drug Quality
	Assurance, Biotechnology, Pharmacy Practice, and
	Clinical Skills.
Week period	4

Block Description:

This block covers aetiology, pathophysiology, clinical presentation, complications, investigations, clinical assessment, management and treatment in pregnancy and lactation, paediatrics, geriatrics, and menopause life stages. Problem-Based learning and Team-Based learning strategies are utilized in this block to assist in combining clinical expertise, patient characteristics and medical evidence for clinical decision-making.

Block Objectives:

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

- Demonstrate comprehensive knowledge, and clear understanding of Pathophysiology, Clinical Pharmacology, Clinical Biochemistry, Clinical Pharmacokinetics, Pharmacotherapeutics, Parasitology, Microbiology, Pharmacogenomics, Toxicology, Patient Assessment, Self-care Management, Complementary and Alternative Medicine regarding pregnancy and lactation, paediatrics, geriatrics, and menopause.
- Apply clinical pharmacokinetic principles in calculating and monitoring drug doses.
- Analyse the biochemical laboratory results of patients in pregnancy and lactation, paediatrics, geriatrics, and menopause.
- Prevent, identify, and resolve drug-induced problems in pregnancy and lactation, paediatrics, geriatrics, and menopause.

Form Name : Block Catalogue Revision No. :01/2020

Form No. : QAO-OP.17 Page :2 of 6

• Provide drug information, education and evidence-based pharmacotherapy services to patients in pregnancy and lactation, paediatrics, geriatrics, and menopause, and to other healthcare professionals.

- Provide patient-centred care as the medication expert.
- Apply the principles of medical ethics and communication skills on patients in pregnancy and lactation, paediatrics, geriatrics, and menopause.

Learning and Teaching Methods, & Assessment Methods

Learning and Teaching Methods:

- Problem-Based Learning (PBL)
- Team-Based Learning (TBL)
- Lectures
- Tutorials
- Practice in lab
- Independent study assignments
- Presentations
- Clinical teaching: Clinical skills lab, Simulation, Field trips.
- Debate

Assessment methods:

- Continuous assessment:
 - Problem Based Learning sessions (Brainstorming/Debriefing)
 - Reports
 - Individual reassurance test (IRAT): MCQs
 - Group reassurance test (GRAT): MCQs
 - Problem solving (mini cases)
 - Presentations (oral/ poster/brochure)
 - Practice in lab
 - Clinical sessions
 - Open-book/open-web exam
- End-Block exam:
 - o Written
- Final-Block exam:
 - Written
 - Objective structured clinical examination (OSCE)

Weighting of Assessment:	
Continuous assessment:	70%
PBL sessions	• 25%
TBL sessions	• 25%
Clinical sessions	• 12.5%

Form Name : Block Catalogue Revision No. :01/2020

Form No. : **QAO-OP.17 Page** :3 of 6

End-block exam	• 7.5%
Final Exam:	30%
Written	• 20%
• OSCE	• 10%
Total:	100%
Assessment Schedule:	
Continuous assessment:	During the block
PBL sessions	Weeks 1-4
TBL sessions	Weeks 1-4
Clinical sessions	Weeks 1-4
End-block exam	At the end of the block
Final exam:	At the end of the year
Written	At the end of the year
• OSCE	At the end of the year
Examination Regulations:	

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):

- Anne Ballinger. (2018). Essential of Kumar & Clarks Clinical Medicine. 6th edition.
- Current Medical Diagnosis & Treatment. 59th Edition.
- Bogitsh, B. J., Carter, C. E., & Oeltmann, T. N. (2018). Human parasitology.
 Academic Press.
- Gupte, S. (2010). The Short Textbook of Medical Microbiology: Including Parasitology. Jaype Brothers Medical Publishers.
- Bauman, R. W., Machunis-Masuoka, E., & Cosby, C. D. (2018). Microbiology: with diseases be body system. Benjamin Cummings.
- Kumar, S. (2016). Essentials of microbiology. JP Medical Ltd.
- Larry A. Bauer. (2014). Applied clinical Pharmacokinetics. 3rd edition.
- John E. Murphy. (2017). Clinical pharmacokinetics. 6th edition. American Society of Health-System.

Form Name : Block Catalogue Revision No. :01/2020

Form No. : **QAO-OP.17 Page** :4 of 6

 Edward P. Claus. (2016). Pharmacognosy for Lea & Febiger. 4th edition. University of Minnesota.

- Michael Heinrich, Joanne Barnes, Simon Gibbons, Elizabeth M. Williamson (2012).
 Fundamentals of Pharmacognosy and Phytotherapy. 2nd edition. (E-Book). Elsevier Health Sciences.
- Karen Whalen, Richard Finke Thomas A. Panavelil, 2015, Lippincott Illustrated Reviews:
 Pharmacology, 6th Edition.
- Lawrence Tierney, Sanjay Saint, Mary Wholey. (2011). Current Essentials of Medicine. 4th
 Edition. McGraw Hill Medical.
- Harsh Mohan. (2010). Textbook of Pathology. 6th Edition. Jaypee Brothers Medical Publisher.
- Roger Walker, Cate Whittlesea. 2012, Clinical Pharmacy and Therapeutics, 5th edition, Elsevier Ltd. London, UK. International ISBN – 978-0-7020-4294-2.
- Casarett and Doull's. (2008). Toxicology: The Basic Science of Poisons 7th edition.
- Allan Gaw. (2013). Clinical Biochemistry an Illustrated Colour text. Fifth edition. China.
- Geoffrey Beckett (2013). Clinical Biochemistry. 8th edition. Malaysia.
- Despina Sanoudou. (2012). Clinical Applications of Pharmacogenetics. First edition. USA
- Sandosh Padmanabhan. (2014). Handbook of Pharmacogenomics and Stratified Medicine.
 1st Edition. Academic Press USA.
- Lesley Braun, Marc Cohen(2015).(Herbs and Natural Supplements, Volume 2: An Evidence-Based Guide, Volume 2) for Elsevier Health Sciences. 4th edition.
- B. G. Katzung, (2018) Basic & Clinical Pharmacology, Fourteenth Edition, United States of America: McGraw-Hill Education,

Recommended Books:

- Stanty Davidson. (2018). Davidson's Principle & Practical of Medicine. 23rd edition.
- Harrison Principle of Internal Medicine. (2017). 20th edition.
- Garcia, L. S. (2007). Diagnostic medical parasitology. American Society for Microbiology Pres
- Leon Shargel. (2016). Applied Biopharmaceutics and Pharmacokinetics. 7th Edition.
- Philip Rowe. (2012). Pharmacokinetics. (E-Book)
- Bruneton Jean. (2008). (Pharmacognosy, Phytochemistry, Medicinal Plants). Lavoisier.
 2nd Edition.
- Elliott, T., Casey, A., Lambert, P. A., & Sandoe, J. (2012). Lecture Notes: Medical Microbiology and Infection. John Wiley & Sons.
- Murray, P. R., Rosenthal, K. S., & Damp; Pfaller, M. A. (2015). Medical microbiology. Elsevier Health Sciences.
- Antonarakis and Motulsky. (2010). Human genetics Problems and Approaches. 4th Edition. Spain.

Form Name : Block Catalogue Revision No. :01/2020

Form No. : **QAO-OP.17 Page** :5 of 6

 David N. Cooper and Jian-Min Chen (2012). Mutations in human genetic disease. First edition. Croatia.

- James Ritter, Lionel Lewis, Timothy Mant, Albert Ferro. Goodman & Gilman's: The Pharmacological basis of Therapeutics. 12th Edition. McGraw Hill Education.
- Gary Hammer, Stephen McPhee. (2014). Pathophysiology of Disease: An Introduction to Clinical Medicine. 7th Edition. McGraw Hill Lange.
- Kumar, Abbas, Aster. (2018). Robbins Basic Pathology. 7th Edition. McGraw Hill Lange.
- H. P. Rang, J. M. Ritter, R. J. Flower, G. Henderson (2016) RANG & DALE'S Pharmacology, eight edition, China: Elsevier Ltd.
- R. M. Kliegman, B. F. Stanton, J.W. Geme, N. F. Schor, R. E. Behrman(2016)
 NelsonTEXTBOOK of PEDIATRICS, 20th edition, Canada: Elsevier Ltd.

Periodicals and websites:

- Nature Reviews Drug Discovery
- Drug Discovery Today
- <u>Loebstein R¹</u>, <u>Lalkin A</u>, <u>Koren G</u>. (1997). Pharmacokinetic changes during pregnancy and their clinical relevance. 33(5):328-343.
- Maisa Feghali, MD, <u>Raman Venkataramanan</u>, PhD, and <u>Steve Caritis</u>. (2015).
 Pharmacokinetics of drugs in pregnancy. 39(7): 512-519.
- Sera LC, McPherson ML. (2012). Pharmacokinetics and Pharmacodynamic Changes
 Associated with Aging and Implications for Drug Therapy. Clin Geriatr Med 28(2): 273–286.
- Josef Widerhorn, J. Nathan Rubin, William H. Frishman, and, Uri Elkayam. Cardiovascular drugs in pregnancy. Special Topics in Cardiovascular Pharmacotherapy. 651-674.
- George J. Schwartz and Dana F. Work. (2009). Measurement and Estimation of GFR in Children and Adolescents. 4 (11): 1832-1843
- https://www.ncbi.nlm.nih.gov/pubmed/30407107
- https://nursing.unboundmedicine.com/nursingcentral/view/Davis-Drug-Guide/109514/all/Pediatric Dosage Calculations
- https://www.umassmed.edu/globalassets/anesthesiology/files/resources/2016resources/pediatric-guidelines-for-medications.pdf
- https://www.medicalnewstoday.com/articles/317530.php
- https://www.cdc.gov/

Block Policies:

Code of conduct

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

Form Name : Block Catalogue Revision No. :01/2020

Form No. : **QAO-OP.17 Page** :6 of 6

Academic integrity

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