

LIBYAN INTERNATIONAL MEDICAL UNIVERSITY

Form Name : Block Catalogue

Revision No. :01/2020

Form No. : QAO-OP.17

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Basic information:

| | |
|---|--|
| Program on which the Block is offered | PharmD |
| Qualification Awarded | BPharmD |
| Block title - Code - Year | Gastrointestinal and Liver Disorders– 3304– Professional Year I |
| Block Type | Professional |
| Total contact Hours / week [52 hrs.] | (Lectures: 5, Lab: 1, Tutorials: 4, TBL: 4.5, PBL: 6.5, Clinical: 2, Self-study: 26, Exams: 2) |
| ECTS Hours | 8 |
| Pre-requisites for this Block | Fundamentals of Medicinal Chemistry, Fundamentals of Pharmacology, Anatomy, Histology, Physiology, Biochemistry, Pathology, Pharmacogenomics Primer Course, Pharmaceutical Microbiology, 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 of gastrointestinal and liver disorders. 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, Pharmacotherapeutics, Medicinal Chemistry, Toxicology, Clinical Pharmacokinetics, Clinical Biochemistry, Microbiology, Pharmacogenomics, Patient assessment, self-care management, and Complementary & Alternative Medicine regarding gastrointestinal and liver disorders.
- Apply clinical pharmacokinetic principles in calculating and monitoring drug doses.
- Analyse the biochemical laboratory results of patients with gastrointestinal and liver disorders.
- Prevent, identify, and resolve drug-induced problems in gastrointestinal and liver system.
- Provide drug information, education and evidence-based pharmacotherapy services to patients with gastrointestinal and liver problems, and to other healthcare professionals.
- Provide patient-centred care as the medication expert.

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- Apply the principles of medical ethics and communication skills on patients with gastrointestinal and liver disorders.

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.

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:**
 - 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% |
| • End-block exam | • 7.5% |
| Final Exam: | 30% |
| • Written | • 20% |
| • OSCE | • 10% |
| Total: | 100% |

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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:

- 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):**
 - Allan Gaw. (2013). clinical biochemistry an illustrated colour text. Fifth edition. China.
 - Kumar, S. (2016). Essentials of microbiology. JP Medical Ltd.
 - Bauman, R. W., Machunis-Masuoka, E., & Cosby, C. D. (2012). Microbiology: with diseases by body system. Benjamin Cummings.
 - Reisner, H. (2013). Essentials of Rubin's Pathology. Lippincott Williams & Wilkins
 - Despina Sanoudou.(2012).Clinical Applications of Pharmacogenetics.1st edition.
 - Rhonda Jones. (2016). Patient assessment in pharmacy practice. 3rd edition.
 - Larry A. Bauer. (2014). Applied clinical Pharmacokinetics. 3rd edition.
 - Philip Rowe. (2012). Pharmacokinetics. (E-Book)
 - Debmalya Barh and Dipali Dhawan. (2013). Omics (Pharmacogenomics) for Personalized Medicine. Springer New Delhi Heidelberg New York Dordrecht London. 3rd edition.
 - Despina Sanoudou (2012). Clinical Applications of Pharmacogenetics. 1st edition.
 - Karen Whalen, Richard Finke Thomas A. Panavelil, 2015, Lippincott Illustrated Reviews: Pharmacology, 6th Edition
 - 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.

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- Foye`s, Principles of Medicinal Chemistry. (2012). 7th Edition, Lippincott Williams & Wilkins Publishers.
- Paul M. Dewick. (2002) (Medicinal Natural Products: A Biosynthetic Approach). 3rd edition. John Wiley & Sons.
- Lawrence Tierney, Sanjay Saint, Mary Wholey. (2011). Current Essentials of Medicine. 4th Edition. McGraw Hill Medical.
- **Recommended Books:**
 - 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., & Pfaller, M. A. (2015). Medical microbiology. Elsevier Health Sciences.
 - Geoffrey Beckett (2013). Clinical Biochemistry. 8th edition. Malaysia.
 - Papadakis M, McPhee S. (2017). Current Medical Diagnosis and Treatment. 56th Edition. McGraw Hill Education.
 - John E. Murphy. (2017). Clinical pharmacokinetics. 6th edition. American Society of Health-System.
 - Sandosh Padmanabhan. (2014). Handbook of Pharmacogenomics and Stratified Medicine. 1st Edition. Academic Press USA.
 - Meyer and Tyndale. (2005). Pharmacogenomics. Second Edition. Toronto, Ontario, Canada. United States of America.
 - Antonarakis and Motulsky. (2010). Human genetics Problems and Approaches. 4th Edition. Spain.
 - Richard N. Herrier, et al. (2015). Patient assessment in pharmacy.
 - Karen J Tietze. (2012). Clinical skills for pharmacist. Third edition.
 - G. Patrick: Introduction to Medicinal Chemistry, Oxford University Press, 2005
 - Wilson and Gisvold`s, Textbook of Organic Medicinal and Pharmaceutical Chemistry. Twelfth Edition, Wolters Kluwer Health/Lippincott Williams & Wilkins Publishers. 2011.
 - Graham L. Patrick. (2013). An Introduction to Medicinal Chemistry, Fourth Edition, Oxford University Press.
 - Gareth Thomas. (2007). Medicinal Chemistry, An Introduction. Second Edition. John Wiley and Sons Ltd. Publishers.
 - Michael Heinrich, Joanne Barnes, Simon Gibbons, Elizabeth M. Williamson (2012). (Fundamentals of Pharmacognosy and Phytotherapy E-Book) Elsevier Health Sciences. 2nd edition.
 - Bruneton Jean. (2008). (Pharmacognosy, Phytochemistry, Medicinal Plants). Lavoisier .2nd Edition.
 - Andrew chevalier. (2016). Encyclopedia of Herbal Medicine. Penguin Random House. 3rd Edition.
 - Yajuan Wang. (2008).(Micro-Acupuncture in Practice). Elsevier Health Sciences .1st Edition.

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- **Periodicals and websites:**

- Nature Reviews Drug Discovery
- Drug Discovery Today
- Brandt, L. J. (2013). American Journal of Gastroenterology Lecture: intestinal microbiota and the role of fecal microbiota transplant (FMT) in treatment of C. difficile infection. The American journal of gastroenterology, 108(2), 177.
- Llorente, C., & Schnabl, B. (2015). The gut microbiota and liver disease. Cellular and molecular gastroenterology and hepatology, 1(3), 275-284.
- Chadwick Williams, Remo Panaccione, Subrata Ghosh and Kevin Rioux. (2011). Optimizing clinical use of mesalazine (5-aminosalicylic acid) in inflammatory bowel disease. 4(4): 237–248.
- Derijks LJJ, Wong DR, Hommel DW and van Bodegraven AA. (2018). Clinical Pharmacokinetic and Pharmacodynamic Considerations in the Treatment of Inflammatory Bowel Disease. 57(9):1075-1106.
- Enrique Rey, Fermín Mearin, Javier Alcedo, Constanza Ciriza, Silvia Delgado-Aros, Teresa Freitas, Miguel Mascarenhas, Miguel Mínguez, Javier Santos, and Jordi Serra. (2017). Optimizing the Use of Linaclotide in Patients with Constipation-Predominant Irritable Bowel Syndrome: An Expert Consensus Report. 34(3): 587–598.
- Giovanni Sarnelli, and et al. (2013). Genetic contribution to motility disorders of the upper gastrointestinal tract. World J Gastrointest Pathophysiol :15; 4(4): Page : 67, 69-70
- Marie Pierik, and Paul Rutgeerts. (2006). Pharmacogenetics in inflammatory bowel disease. World J Gastroenterol :21; 12(23): Page 3660.
- Manuela Scorza and Ausilia Elce. (2014). Genetic Diseases That Predispose to Early Liver Cirrhosis. International Journal of Hepatology:(2014), pages: 1-7.
- Pandit, A., Sachdeva, T., & Bafna, P. (2012). Drug-Induced Hepatotoxicity: A Review. Journal of Applied Pharmaceutical Science. 02 (05): 233-243.
- Ashton M. Atkins, Chandra Sekar, Proton Pump Inhibitors: Their Misuse, Overuse, And Abuse Iosrphr.Org Volume 3, Issue 2 (March 2013), Pp 25-29,
- M J Carter, A J Lobo, S P L Travis, (2004) Guidelines for the management of inflammatory bowel disease in adults, Gut;53(Suppl V):v1–v16.
- Fukui et al, (2016) Evidence-based clinical practice guidelines for liver cirrhosis 2015, J Gastroenterol 51:629–650
- <https://www.guidelinesinpractice.co.uk/liver-disease/liver-blood-tests-how-to-interpret-abnormal-results/453912.article>
- <https://gut.bmj.com/content/67/1/6> Guidelines on the management of abnormal liver blood tests
- www.paediatrics.uct.ac.za/.../Lentze%20Congenital%20and%20genetic%20chronic%20
- <https://microbiologyinfo.com/>
- http://ub-edu.tripod.com/free_online_microbiology_course.html
- www.allergan.com/assets/pdf/linzess_pi

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- <https://www.medicalnewstoday.com/articles/323761.php>.
- [Acupuncture and Massage College. Copyright 2019.](#)
- <https://www.cdc.gov/>

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.