Brien Holden® VISION INSTITUTE ACADEMY

Global Optometry Resources

Ocular Pharmacology

OCULAR PHARMACOLOGY

STUDENT MANUAL

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Brien Holden Vision Institute Foundation (formerly ICEE) is a Public Health division of Brien Holden Vision Institute

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COURSE OUTLINE

COURSE AIM

This course aims to introduce the learner to basic pharmacology as applied to ocular environments and its systemic interactions.

COURSE OBJECTIVES

By the end of the module the student will be able to understand the pharmacotherapeutic basis of common systemic diseases and apply pharmacological concepts in the diagnosis and management of ophthalmic conditions.

By the end of the module the student should be able to:

- explain the basics of pharmacology.
- describe the pharmacological basis and mechanism of action in the management of common systemic and ocular conditions
- explain the application of Ophthalmic and Optometric drugs
- Interpret prescriptions using the principles of pharmacology during therapeutic interventions.
- describe indications and contra-indications in the use of ophthalmic agents

COURSE CONTENT

The topics covered in this course include:

- Ophthalmic drug formulations
- General pharmacology
- Pharmacology
- Autonomic nervous system
- Mydriatcs and mioticsImmune system
- Ocular topical anaesthetics, NSAIDs, Steroids
- Dry eye assessment
- Contact lens solutions
- Glaucoma treatment
- Ocular adverse effects
- Basic microbiology
- Differential diagnosis red eye

COURSE DELIVERY

This module is designed to be delivered over 1 semester. Total delivery time for Ocular Pharmacology is 26 hours of lectures.

Learning and Teaching Methods & Resources

The suggested teaching methods for this course include: PowerPoint presentations, discussions, case studies, clinical attachments, question and answer sessions, and general observation.

Suggested equipment for teaching includes:

- Computer & projector
- White board
- Handouts

RECOMMENDED ASSESSMENT

- Written examination

TEXT BOOKS

Prescribed texts

- Brien Holden Vision Institute Global Optometric Resource Module. Brien Holden Vision Institute. 2010.
- Hopkins G and Pearson R. Ophthalmic Drugs: Diagnostic and Therapeutic Uses. 5th Edition. Edinburgh: Butterworth Heinemann/ Elsevier. 2007
- Rang HR, Dale MM, Ritter JM and Flower RJ. Rang & Dale's Pharmacology. 6th Edition. Churchill Livingstone. 2011.
- Doughty M. Ocular Pharmacology and therapeutics: A primary care guide. Philadelphia: Butterworth-Heinemann. 2001.
- Vale J and Cox B. Drugs and the eye. 3rd Edition. London: Butterworth-Heinemann. 1991.
- Bartlett JD, Bennett ES, Fiscella RG, Jaanus SD, Rowsey JJ. 21st Edition. Ophthalmic Drug Facts. St. Louis: Facts and Comparisons, Annual. 2009.
- Gerstenblith AT, Rabinowitz MP, Barahimi BI, Fecarotta CM, Friedberg MA and Rapunao CJ. The Wills Eye Manual: Office and Emergency Room Diagnosis & Treatment of Eye Disease. 6th Edition. Philadelphia: Lippincott, Williams and Wilkins. 2012.
- Bartlett JD and Jaanus SD. Clinical ocular pharmacology. 5th Edition. St. Louis: Butterworth-Heinemann/Elsevier. 2008.

Recommended texts

- Davies PHO, The Actions and Uses of Ophthalmic Drugs, Butterworths, 1989.
- Catania Louis J., Primary Care of the Anterior Segment, Norwalk, CT: Appleton & Lange; 1994.
- Riordan-Eva P, Asbury T, Whitcher JP, Vaughan & Asbury General Ophthalmology. Lange Medical Books/MacGraw-Hill, 2004
- Bartlett JD, Ophthalmic Drug Fact 2010, Facts & Comparisons, 2010

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