

UNIVERSITY OF PENNSYLVANIA
School of Nursing
FALL SESSION – 2013

Title: Nurs 608 – Advanced Pharmacology & Therapeutics for Advanced Nursing Practice

Course Units: 1 credit unit (3 hours/week)

Catalog Description:

Advanced principles of clinical pharmacology and therapeutics are applied to the nursing care of individuals across the life-stage spectrum. The course focuses on the content and knowledge employed by the advanced practice registered nurse in the management of various conditions and disease states. It builds on the pharmacology knowledge base acquired in the baccalaureate nursing program. The advanced pharmacology and therapeutics of several common diseases or conditions found in the acute care and primary care setting are presented. The course material is supplemented with self-directed pharmacotherapy assignments to meet program-specific needs.

Placement: Fall Session – 2013

Mondays 5:00-8:00 PM

Room G-17 (Cohen Hall)

Faculty:

Lawrence Carey, PharmD

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Professor of Pharmacology

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Teaching Assistant

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Prerequisites: Undergraduate pharmacology, Nurs607 or Nurs685

Course Overview:

Advanced principles of pharmacology are presented as a foundation for the focus on safe, evidence-based, and life-stage appropriate pharmacotherapy of common diseases or conditions present in acute and primary care settings.

Advanced pharmacology of broad categories of agents used in acute or primary care is included. The available drug options for each disease or condition are discussed and then applied by describing therapeutic goals,

presenting

evidence-based management guidelines, and discussing drug selection and monitoring. Emphasis is placed on monitoring for improved outcomes as well as adverse drug events. The course is structured to assist the student in gaining a deeper insight into the proper application of advanced pharmacology to the therapeutics of diverse patient populations. As a bridge between the content of this course and the role and clinical courses, a number of self-directed pharmacotherapy assignments will be available to further address more programspecific content.

Course Objectives:

Upon completion of the course, the student should be able to:

1. Demonstrate sound critical thinking and clinical decision making in the pharmacotherapeutic approach to the patient.
2. Understand basic and advanced pharmacologic principles including pharmacokinetics, pharmacodynamics, and pharmacogenetics.
3. Explain the mechanisms of action, dosing features, and rationale for the use of different classes of drugs in treating the various diseases/conditions considered.
4. Discuss important cautions and contraindications as well as potential adverse drug events – side effects, reactions, and interactions – for the use of different classes of drugs in treating the various diseases/conditions considered.
5. Discuss the unique approaches to the use of those drugs intended for specific patient populations or life stages.
6. Assess a patient taking actual or potential drug-related problems into consideration.
7. Develop an effective and appropriate patient care plan that accurately and safely addresses drug-related issues.
8. Integrate the available data on the patient's physiology and pathophysiology with medications to develop a plan that includes specific orders, counseling or education, implementation and evaluation strategies.
9. Analyze of the most current evidence in selecting the optimal drug therapy regimen and monitoring plan for an individual taking into account both patientrelated and drug-related variables.
10. Safely select the appropriate drug therapy as well as provide appropriate monitoring and follow-up while assuming responsibility for safe drug use.

Teaching Methods:

Lecture/Discussions, and Assigned Readings

Evaluation Methods:

One quiz and two theoretical examinations will be administered per session. With a valid reason, only one make-up examination or quiz is permitted per session. Examinations missed for valid reasons must be made up on a day and

time designated by the instructor. Additionally, each student will be required to complete at least 2 self-directed pharmacotherapy assignments. These will be selected by the student from a menu of assignments in consultation with the student's program director. The grades from these assignments will be incorporated into the Advanced Pharmacology course grade. All grades are final.

Quiz 10%

1st Examination 35%

Assignments 20%

2nd Examination 35%

Course Grading Methods:

A+ = 97-100

B+ = 87-89

C+ = 77-79

F = below 70

A = 93-96

B = 83-86

C = 73-76

A- = 90-92

B- = 80-82

C- = 70-72

Bibliography:

REQUIRED TEXTS

1. Chisholm-Burns MA, Wells BG, Schwinghammer TL, et al (eds). Pharmacotherapy principles and practice, 3rd edition. New York, NY:McGraw-Hill Medical, 2013.

2. Katzung BG. Basic and clinical pharmacology, 12th edition. New York, NY:Lange/McGraw-Hill, 2012.

Available through

<http://www.accessmedicine.com/resourceTOC.aspx?resourceID=16>

(Links to an external site.)

(You can access the textbook for free while on-campus. When you are off-campus, you may be able to access the textbook through biomedical library. Go to <http://www.library.upenn.edu/biomed/>

(Links to an external site.)

and click on 'eBooks' and search the book. The full chapters will be available for you.)

Assigned Readings – Will come from the required texts; lecturers will provide a link to any additional reading materials for their topic

ADDITIONAL REFERENCES

General Pharmacology References

1. Aschenbrenner DS, Venable SJ. Drug therapy in nursing, 3rd edition. Philadelphia, PA:Wolters Kluwer / Lippincott Williams & Wilkins, 2009.
2. Brunton, LL, Chabner, BA, Knollman, BC. Goodman & Gilman's The Pharmacological Basis of Therapeutics, 12th edition. New York, NY:McGraw-Hill, 2011.
3. Gutierrez K, Queener SF. Pharmacology for nursing practice. St. Louis,MO:CV Mosby, 2003.
4. Karch AM. Focus on nursing pharmacology, 4th edition. Philadelphia,PA:Lippincott, Williams and Wilkins, 2007.
5. Kee JL, Hayes ER, McCuiston LE. Pharmacology: a nursing process approach, 7th edition. St. Louis,MO:Saunders, 2012.
6. ¶ Lehne RA. Pharmacology for nursing care, 8th edition. St.Louis,MO:Saunders, 2012.

¶ - Textbook used for undergraduate nursing pharmacology

7. Lilley LL, Harrington S, Snyder JS. Pharmacology and the nursing process,5th edition. St. Louis,MO:CV Mosby, 2007.
8. Rang, HP, Dale, MM, Ritter, JM, Flower, RJ, Henderson, G. Rang and Dale's Pharmacology, 7th edition. Elsevier, 2012.
9. Rowland, M, Tozer, TN. Clinical Pharmacokinetics and Pharmacodynamics, 4th edition. Wolters Kluwer/Lippincott Williams & Wilkins, 2011.

General Pharmacotherapeutics References

1. Aldredge B, et al (eds). Koda-Kimble & Young's Applied therapeutics: the clinical use of drugs, 10th edition. Philadelphia, PA:Wolters Kluwer /Lippincott Williams & Wilkins, 2012.
2. Arcangelo VP, Peterson AM. Pharmacotherapeutics for advanced practice: a practical approach, 3rd edition. Philadelphia, PA:Lippincott Williams & Wilkins, 2012.
3. Gutierrez K. Pharmacotherapeutics: clinical reasoning in primary care, 2nd edition. St. Louis,MO:Saunders / Elsevier, 2008.
4. Helms RA, Quan DJ, Herfindal ET, Gourley DR (eds). Textbook of therapeutics: drug and disease management, 8th edition. Philadelphia, PA:Lippincott Williams & Wilkins, 2006.
5. Woo TM, Wynne AL. Pharmacotherapeutics for nurse practitioner prescribers, 3rd edition. Philadelphia, PA:FA Davis Company, 2011.

Classroom Schedule

Date	Hours	Tentative Topics	Chisholm Chapters
9 Sept 16 Sept	3 3	General Principles for Advanced Pharmacology	1

		Introduction, drug-use process, medication errors, pharmacodynamics, pharmacokinetics	
23 Sept	3	Population-Specific Pharmacotherapeutic Issues Pregnancy, lactation, pediatrics, geriatrics, critically ill, renal failure, malnutrition; pharmacogenetics	2,3
30 Sept	0.5	QUIZ	
30 Sept 7 Oct	3 3	Infectious Diseases Advanced pharmacology & therapeutics of antimicrobials; management of pneumonia	69,71
14 Oct 21 Oct	3 3	Cardiovascular Advanced pharmacology & therapeutics of CV medications; management of hypertension, heart failure, and dyslipidemia	5,6,12
28 Oct	3	Pulmonary Advanced pharmacology & therapeutics of pulmonary meds; management of asthma	14,15
4 Nov	2	EXAM #1	
11 Nov 18 Nov	3 3	Neurology-Psychiatry Advanced pharmacology & therapeutics of neuro agents; management of pain, epilepsy, and mood disorders	31,34, 38,39,40
25 Nov	3	Gastrointestinal Advanced pharmacology & therapeutics of GI medications; management of acid disorders and motility disorders	17,18, 20,21
2 Dec 9 Dec	3 3	Endocrine Advanced pharmacology & therapeutics of endocrine meds; management of diabetes, osteoporosis, chronic kidney disease	43,56,26
18 Dec	2	EXAM #2	

QUIZ DATE

Assignments

#1 30 Sept 2013

EXAM DATES

#1 4 Nov 2013
#2 18 Dec 2013 (3-5pm)

Completed

All 18 Nov 2013

Assignments

- Antimicrobial considerations in neonatal and pediatric acute care
- Dermatologic medications
- Immunizations
- Intravascular volume management
- Safe prescribing for older adults
- Vasoactive medications

Total Number of Theory Hours: 45

Hours: 4.5

Total Number of Clinical Hours: 0

Total Number of Test

28 August 2013