



**FAIRLEIGH
DICKINSON
UNIVERSITY**

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HENRY P BECTON SCHOOL OF NURSING AND ALLIED HEALTH

Course: NURS 6615

Semester: Spring 2003

Credits: 3

Title: Prescriptive Practice

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Course Description:

This course provides clinical pharmacotherapeutic information which will guide practitioners and students in drug therapy decision-making in the clinical setting. Pharmacologic actions and modifications related to age and disease entity will be explored. Legal implications and the role of the advanced practice nurse will be examined.

Prerequisite/Corequisites: None

Educational Outcomes: At the completion of this course the student will:

1. Demonstrate understanding of the principles of clinical pharmacokinetics.
2. Demonstrate understanding of the principles of drug selection and dosing considerations.
3. Identify the variables influencing drug interactions and incompatibility.
4. Formulate a therapeutic, pharmacologic plan for clients with selected acute and chronic medical conditions.
5. Describe the role and responsibilities of the advanced practice nurse in medication administration.
6. Demonstrate understanding of the legal and regulatory implications of prescriptive practice.

Teaching-Learning Strategies:

- Lecture/discussion
- Case Studies
- Assigned readings
- Scholarly writing
- Objective written examinations.
- Online assignments

Evaluation Method

Exam 1	20%
Exam 2	20%
Exam 3	20%
Case Studies	30%
Class Participation	10%

Required Texts

Brenner, G. (2000). *Pharmacology*. Philadelphia: W.B. Saunders. ISBN: 0-7216-7757-6.

Brenner, G. (2000). *Pharmacology review*. Philadelphia: W.B. Saunders. ISBN: 0-7216-7758-4

Tierney L.M. (2003). *Current Medical Treatment and Diagnosis* (42nd ed). NY: Lange/McGraw Hill
ISBN: 0-07-121303-1

This text is excellent and overall one of the best for both the student and the experienced clinician. Provides comprehensive information which will enable students to evaluate the case studies. This text is normally used the following semester(s) for the primary care course work.

Ellsworth A.J. et al (2003). *Mosby's Medical Drug Reference*. St. Louis: Mosby ISBN: 0-323-02219-7

Recommended Texts and Online Services

MD Consult available online at www.mdconsult.com

This site is an on-line fee for service site developed by WB Saunders Co. which provides dozens of best-selling medical texts as well as thousands of journals and other resources on-line. Registered FDU students may access this site at a considerable discount at www.npceu.com/fdu. Students wishing to subscribe should be certain to access the site from the FDU page of NPCEU website as opposed to the NPCEU homepage which does not offer the same discounted rate offered to the FDU students..

Pagana K..D. & Pagana T.J. (2001). *Diagnostic and Laboratory Test Reference* (5th ed.). Philadelphia: W.B Saunders. ISBN 0-323-01178-0

Highly recommended text for interpreting lab values and particularly useful for evaluating the lab results provided in the case studies case studies. Readable and readily comprehensible. It is a quick and easy to use reference.

Wallach, J.B. (2000). *Interpretation of Diagnostic Tests* (7th ed). Philadelphia: Lippincott.
ISBN: 07817165594

Provides significantly more detail than Pagano and written on a more advanced level, however, in the opinion of the instructor, it is somewhat less useful due to its complexity. Probably more information than is needed for purposes of this course and considerable more difficult to use.

Mycek M.J, Harvey, R.A. & Champe, P.C. (2000). *Lippincott's Illustrated Review of Pharmacology*:
ISBN: 0-7817-2413-9.

Extremely popular best-seller text which provides illustrations and summaries of concepts to explain the principles of pharmacology found in standard text books. It is designed as a supplement to help the student understand principles found in traditional books.

Page, C.P., Sutter, M.C., Walker, M.J.A., & Hoffman, B. (2002). *Integrated pharmacology* (2nd ed.). St. Louis: Mosby. ISBN: 07234322X

Popular text which integrates physiology and pharmacology. Particularly good for students who would like to brush up on the physiology of various organ systems for purposes of understanding the pharmacology for that system. Large numbers of clinical photographs of various disease states are included. Text integrates physiology, pathophysiology and pharmacology although it is somewhat less clinically focused than the current course text.

Gomella, L (2002). *Clinician's pocket reference* (9th ed) and *Drug Reference 2002* (packaged set). New York: McGraw-Hill/Appleton Lange. ISBN: 0071392327 (\$39.95).

An excellent pocket text for the clinical setting, designed to introduce the neophyte to the world of clinical medicine. While intended for 3rd and 4th year medical students doing clinical rotations, the information is very relevant for nurse practitioners learning to assess and diagnosis patients from a medical perspective. It now comes packaged with a pocket drug reference as well. This text will be required next semester for the courses which follow this course. It is useful but it is not essential for this course, however.

TOPICAL OUTLINE and ASSIGNMENTS

Week 1 INTRODUCTION TO PHARMACOLOGY

- Pharmacokinetics
- Pharmacodynamics
- Drug Interaction
- Adverse Drug Reactions
- Therapeutic Drug Monitoring
- Therapeutic and Toxic Potential of OTCs
- Geriatric Pharmacology - Pediatric Pharmacology

Week 2 AUTONOMIC NERVOUS SYSTEM

CNS AGENTS

- Cholinergic Drugs
 - Direct Acting (Stimulation of Receptors)
 - Indirect Acting (Inhibit Cholinesterase)
 - Miscellaneous

- Anticholinergic Drugs
 - Antimuscarinic
 - Ganglionic Blocking Agents
 - Adrenergic Drugs
 - Adrenoceptor-Activating -

- Sympathomimetic
 - Antiadrenergic Drugs
 - Endogenous Catecholamines
 - Synthetic Catecholamines
 - Vasopressor Amines
 - Nasal/Ophthalmic Decongestants
 - Sympathomimetic Bronchodilators
 - Smooth Muscle Relaxants
 - CNS Stimulants (Class 14)

LOCAL CONTROL SUBSTANCES

- Histamine and Histamine Agonists
- Serotonin, Anti-serotonin Agents
- Ergot Alkaloids/ Skeletal Muscle Relaxants

DISCUSSION: GERIATRIC CASE STUDY

Week 3 ANTIHYPERTENSIVE AGENTS AND DIURETICS

ANTIHYPERTENSIVE AGENTS

- Beta Blockers
- Calcium Channel Blockers
- ACE Inhibitors
- Angiotensin II Blockers
- Alpha Adrenergic Blockers
- Peripheral Adrenergic Inhibitors
- Central Alpha Agonists
- Direct Vasodilators

DIURETICS

- Thiazide
- Loop
- Potassium Sparing
- Thiazide
- Loop
- Potassium Sparing

DISCUSSION: HYPERTENSION CASE STUDY

Week 4 CARDIOVASCULAR AND HEMATOPOIETIC AGENTS

CARDIOVASCULAR MEDICATIONS

- Drugs used to treat CHF
- Anti-anginals
- Anti-Hyperlipidemic Agents
- Anti-arrhythmics

HEMATOPOIETIC AGENTS

- Antianemia Agents
- Anticoagulant and Procoagulant Drugs

DISCUSSION: CHEST PAIN CASE STUDY

Week 5 **EXAM 1** (Weeks 1-4)

LEGAL ASPECTS OF PRESCRIBING

- Legal Aspects of Prescribing
- Current Legislation
- Prescription Writing
- Drug Abuse
- Information and Learning Resources
- FDA Pregnancy Categories
- FDA Schedule of Controlled Drugs
- Orphan Drugs
- New Drug Development

Week 6 RESPIRATORY MEDICATIONS -

RESPIRATORY MEDICATIONS

- Asthma Management
- COPD Medications
- Antitussives, Expectorants, Mucolytics
- URI/Viral Syndrome Agents
- OTC agents

DISCUSSION: RESPIRATORY CASE STUDY

Week 7 GASTROINTESTINAL MEDICATIONS

GASTROINTESTINAL MEDICATIONS

- Antacids
- Anti-Secretory Agents
- H2 Blockers
- Proton Pump Inhibitors
- Treatment regimens for H. pylori
- Anticholinergics
- Cytoprotective agents
- Agents for Inflammatory Bowel Disease
- Agents for Irritable Bowel Disease
- Agents for Motility Disorders
 - Laxatives
 - Antiemetics
 - Prokinetic Agents

DISCUSSION: GASTROINTESTINAL CASE STUDY

Week 8 ANTI-INFECTIVES PART 1

ANTI-INFECTIVES PART I

- General Concepts of Antimicrobial Therapy
- Penicillins/Cephalosporins
- Macrolides
- Tetracyclines and Chloramphenicol
- Sulfonamides and Trimethoprim
- Quinolones
- Metronidazole
- Nitrofurantoin and Urinary Antiseptics
- Aminoglycosides and Polymyxins

DISCUSSION: ANTIMICROBIAL CASE STUDY

Week 9 ANTI-INFECTIVES PART II - DERMATOLOGIC AGENTS

ANTI-INFECTIVES PART II

- Antifungal Agents
- Antiviral Agents
- Antiprotozoal Agents
- Antiparasitic Agents
- Anthelmintic Agents
- TB medications

DERMATOLOGIC AGENTS

- Acne Management
- Antipsoriatic Agents
- Topical Steroids
- Keratolytics

Week 10 EXAM AND SNOW DAY MAKE-UP TOPICS

EXAM 2 (Weeks 5-9)

If no make-up time needed will start endocrine

Week 11 ENDOCRINE SYSTEM AGENT PART I

PANCREAS, THYROID, ADRENAL, PITUITARY-HYPOPHYSEAL

Overview Endocrine System
Oral Hypoglycemics
Insulin Therapy
Thyroid/parathyroid Medications
Corticotropins/Corticosteroids
Pituitary Hormones
Hypophysial Hormones

DISCUSSION: ENDOCRINE CASE STUDY

Week 12 ENDOCRINE SYSTEM PART II

REPRODUCTIVE ENDOCRINE PHARMACOLOGY

Estrogen/Progesterone Therapy
HRT: Oral and Non-Oral Agents
Norplant/Depo-Provera
IUD Devices
Androgens/Anabolic Steroids
Fertility Agents

DISCUSSION: REPRODUCTIVE CASE STUDY

Week 13 CNS AGENTS PART I

CNS AGENTS PART I

Sedatives/Hypnotics
Anxiolytics
Ethanol and related alcohols
Psychotomimetic Drugs
CNS Stimulants
Antipsychotic Drugs and Lithium
Antidepressant Drugs

DISCUSSION: CENTRAL NERVOUS SYSTEM CASE

Week 14 CNS AGENTS PART II and DERMATOLOGIC AGENTS

CNS AGENTS PART II

Anticonvulsant Drugs
Antiparkinsonian Drugs
Headache/Migraine Management

ANALGESICS AGENTS AND ANTIARTHRITIC AGENTS

Acetaminophen
Prostaglandin and Related Eicosanoids
NSAIDS and Cox 2 Inhibitors
Narcotic Analgesics
Tramadol
Drugs Used to Treat Gout
DMARDs
Local Anesthetics

DISCUSSION PAIN MANAGEMENT CASE

Week 15 **EXAM 3** (Weeks 10-14)

CLASS CALENDAR AND ASSIGNMENTS DUE

WEEK	DATE	ASSIGNMENT
1	Jan 30, 2003	INTRODUCTION TO PHARMACOLOGY <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 1, 2, 3 • Brenner Review: Chpt: 1, 2, 3
2	Feb 06, 2003	AUTONOMIC NERVOUS SYSTEM <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 5, 6, 7, 8, 9, 26 • Brenner Review: Chpt: 5, 6, 7, 8, 9, 26 Geriatric case study due
3	Feb 13, 2003	ANTIHYPERTENSIVES AND DIURETICS <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 10, 13 • Brenner Review: Chpt 10, 13 Hypertension case study due
4	Feb 20, 2003	CARDIOVASCULAR AND HEMATOPOIETIC AGENTS <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 11, 12, 14, 15, 16, 17 • Brenner Review: Chpt: 11, 12, 14, 15, 16, 17 Chest pain case study due
5	Feb 27, 2003	EXAM 1 (Weeks 1-4) LEGAL ASPECTS OF PRESCRIBING <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 4 • Brenner Review: Chpt: 4
6	Mar 06, 2003	RESPIRATORY MEDICATIONS <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 27 • Brenner Review: Chpt: 27 Respiratory case study due
7	Mar 13, 2003	GASTROINTESTINAL MEDICATIONS <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 28 • Brenner Review: Chpt: 28 • Gastrointestinal case study due
	Mar 20, 2003	SPRING BREAK - No Class

WEEK	DATE	ASSIGNMENT
8	Mar 27, 2003	ANTIMICROBIAL I <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 37, 38, 39 • Brenner Review: Chpt: 37, 38, 39 Antimicrobial case study due
9	Apr 3, 2003	ANTIMICROBIAL II and DERMATOLOGIC AGENTS <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 40, 41, 42, 43, 44 • Brenner Review: Chpt: 40, 41, 42, 43, 44
10	Apr 10, 2003	EXAM 2 (Weeks 5-9) Snow day make-up - If no snow days we will start endocrine
11	Apr 17, 2003	ENDOCRINE I <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 31, 32, 33, 35, 36 • Brenner Review: Chpt: 31, 32, 33, 35, 36 Endocrine case study due
12	Apr 24, 2003	ENDOCRINE II <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 34 • Brenner Review: Chpt: 34 Reproductive case study due
13	May 1, 2003	CNS I <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 18, 19, 22 • Brenner Review: Chpt: 18, 19, 22 Central nervous system case study due
14	May 8, 2003	CNS II <ul style="list-style-type: none"> • Brenner Pharm: Chpt: 20, 21, 23, 24, 25, 29, 30 • Brenner Review: Chpt: 20, 21, 23, 24, 25, 29, 30 Pain management case study due
15	May 14, 2003	EXAM 3 (Weeks 10-14)

GUIDELINES FOR PREPARING CASE STUDIES.

Ten written case studies are required to pass the course. These cases are designed to afford the student an introduction to prescribing medications for common health problems. The cases are drawn from actual patients who have presented in the clinical setting and will afford the opportunity for the student to begin the process of diagnosing and treating illness. The case studies are to be prepared as an individual exercise and submitted in written form to the instructor on the date due. Late papers will be accepted only with prior permission of the instructor. Cases will be discussed in class and student participation will factor in the calculation of the student participation grade

The case studies are available online at www.npceu.com/fdu. Clicking on the link which references this course and then clicking on the link for the case studies will allow students to access and print out the cases. To do so, students will need to have Adobe Reader installed on their computers. This program is available without charge at www.adobe.com.

Cases must be prepared in compliance with APA-formatting guidelines and should be three (3) to six (6) pages in length, excluding the title and reference page. Students who need more space to answer the questions and/or discuss the case may submit a longer text. Cases are graded on the basis of information submitted, critical thinking, and effort put into the assignment. As this course is designed for the novice with respect to prescriptive practice, effort put into the assignment is a particularly important component of the grading process.

Several references (3-5) for each case study must be submitted to support the discussion. It is acceptable to use text books, however, cases which earn the highest grades will be those which include at least one (or more) references from a current journal. A particularly good source of journal articles, particularly for busy professionals who have little time for library visits, is MdConsult, Inc. at www.mdconsult.com. Please see "Recommended Text and Online Services" for additional information on this service. The course text, *Current Medical Diagnosis and Treatment*, is a comprehensive reference which should serve as a guideline for preparing the case studies

GUIDELINES FOR CLASS PARTICIPATION

Students are expected to attend all scheduled classes and to be punctual unless excused by the instructor for reasons of illness, emergency or other unforeseen circumstances. Students experiencing these problems should notify the instructor via email at leb@npceu.com as soon as possible regarding the circumstances which will prevent them from attending class. Consistent tardiness or unexcused absenteeism will impact on the student's participation grade. Moreover, students are expected to participate in the class discussion of the case studies. Interest in the topic at hand, participation in case study discussion and class attendance will all factor into the grade for class participation.

OTHER COURSE INFORMATION

Lecture handouts are available for all of the topics at www.npceu.com/fdu. Please click on the link for this course and then on the link for the handouts. Your instructor will provide you with a username and password in class. As with the case studies, you will need Adobe Reader to access this information. If you do not already have this program, please download it at www.adobe.com and install it on your computer. There is no charge for this program. Students who fail to show up for a test will receive a grade of zero (0) for that test unless previously excused by the instructor. Students will be excused only for emergency and other unforeseen, exigent circumstances and will need to take a make-up exam at the convenience of the instructor.

FDU ACADEMIC POLICY

PLEASE NOTE:

- Students are expected to be aware of FDU Academic Integrity Policy
- Grades are assigned according to the Student Handbook procedure. Students must earn a grade of 75 or better in order to pass the course. Graduate students are expected to maintain a B average (80) for all course work.
- Written assignments are in accord with the critical elements for writing located in the Student Handbook
- APA style is required for written work
- Assignments are due on or before due date. **NO EXCEPTIONS, EXCEPT WITH PERMISSION FROM THE INSTRUCTOR 48 HOURS PRIOR TO THE DUE DATE**
- Students are expected to attend class on a regular basis
- Unsatisfactory grade (U) earned in the clinical laboratory experience constitutes a failure for the course, regardless of the grade earned in the classroom. Students are evaluated both in the clinical and the classroom (Student Handbook) Grounds for clinical dismissal are as follows:
 1. Failure to meet clinical outcomes
 2. Behavior that requires direct instructor intervention to prevent omissions or incomplete or unsafe application of the component of the clinical outcomes which action would result in actual or potential physical or emotional harm to the client (Student Handbook)
- It is not possible to withdraw from the course because of academic failure after the ninth week of class