Module Coverage: Endocrine/Renal/Gastrointestinal/Nutrition
Course #: 14208-349A
Year: 3rd Academic/Professional
Format: 3 credits
Faculty: Faculty and Guest lecturers
Prerequisites: All courses prior to Integrated Therapeutics II
Classroom Location: Numa Adams Building, Rm 3210

Class Schedule:
Mondays-Fridays 2:00pm – 4:15pm
**Note: Fridays are reserved for make-up lectures, self-study, quiz/exams, reviews **

Required Textbook**:
Pharmacotherapy: A Pathophysiologic Approach, 9th Edition
Editors: DiPiro, Talbert, Yee, Matzke, Wells, and Posey
Available on: Access Pharmacy online** via www.pharmacy.howard.edu

Supplemental Textbook
Applied Therapeutics: The Clinical Use of Drugs, 10th Edition
Editors: Koda-Kimble, Young, Kradjan, Guglielmo, Alldredge, Corelli
Publishers: Lippincott, Williams & Wilkins

Required Technologies/Websites:**30% of this course will be taught online**
Blackboard: http://blackboard.howard.edu
Tegrity®: via Blackboard website
HU COP: http://www.pharmacy.howard.edu for Access Pharmacy, ExamSoft ®
Selected YouTube videos
DM Educate ®: http://www.dmeducate.org; See registration instruction below.

1. Go to: https://www.dmecourse.pharmacy.pitt.edu/login/index.php
2. Select “Create new account”
3. Complete the Registration Form – Select “Create a New Account”
4. Go to your email account to “Confirm your Registration”
5. Select “Courses”; Select “Howard University” from the list of Schools
6. Enter your Enrollment Key: howardspring16
7. You will also need to enroll in the Resource Materials course shell (no enrollment key will be necessary) This is where you will find PDF files of the lectures for each module.
A medical dictionary and a drug information handbook are useful adjuvants with reading and online assignments. 

**Supplemental reading may be assigned by individual instructors and/or the course coordinator, where appropriate.**

Course Description: Integrated Therapeutics (IT) III lecture is the third component in the integrated therapeutics series designed to combine the pathophysiologic and pharmacotherapeutic management of various disease states encountered routinely by pharmacist practitioners. Where appropriate, cultural competency principles will be integrated with lecture topics. Student knowledge of basic pharmaceutical principles, acquired in IT-1, will be applied to clinical principles of additional organ systems presented in IT-III. This is a team-taught course.

The overall goal of the course is to prepare students to effectively engage in practice as clinicians-in-training during their professional experience program, providing the basis for rendering patient-centered care upon graduation.

Integrated Therapeutics III-A is a 3 credit course that is offered over 5 weeks and reviews the endocrine, renal, gastrointestinal, and nutrition principles, including parenteral and enteral nutrition. **Lectures will address the following for effective medication therapy management:** 1) definition; 2) etiology; 3) epidemiology; 4) pathophysiology/pathogenesis; 5) usual diagnostic parameters; 6) pharmacological/non-pharmacological (OTC/CAM) treatment; 7) drug therapy monitoring parameters; 8) pharmacokinetic principles, where appropriate; 9) appraisal of landmark studies for optimal disease state management utilizing concepts learned; 10) plan for individualized patient therapy; 11) application of pharmacoeconomic principles in providing cost-effective therapies; and 12) cultural competency principles, where appropriate.

Topical Outline (see lecture schedule at end of course plan):---

The following lecture topics are included in Module A: 
Diabetes Mellitus***
Thyroid Diseases
Adrenal Diseases
Pituitary Gland Disorders
Acute and Chronic Renal Failure
Dialysis and Drug Loss Issues
Portal Hypertension & Cirrhosis*
Drug-Induced Liver Disease
Viral Hepatitis
Peptic Ulcer Disease/Dyspepsia/Zollinger-Ellison Syndrome
Gastroesophageal Reflux Disease/Heartburn/Intestinal Gas
Stress-Related Gastrointestinal Bleeding
Inflammatory Bowel Diseases (Ulcerative Colitis/Crohn’s Disease)*
Nausea and Vomiting/ Constipation and Diarrhea
Irritable Bowel Syndrome/ Pancreatitis*
Disorders of the GI Systems: Cholecystitis, Appendicitis, Diverticulosis, Hemorrhoids, Celiac Disease, etc
Infectious Gastroenteritis
Nutrition (Parenteral/Enteral)
*indicate flipped sessions with online activity

Howard University Curriculum Outcomes/Objectives

DOMAIN 1: Foundation Knowledge

Outcome 1.1. Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient centered care.

Learning Objectives:
1.1.1. Analyze mechanisms of disease and related mechanisms of actions of drugs for treatment
1.1.4. Integrate knowledge of pharmaceutical, social/behavioral/administrative, and clinical sciences to solve therapeutic problems.
1.1.6. Perform error-free mathematical calculations with regard to drug dosing, pharmacokinetics, and compounding dosage forms

DOMAIN 2: Essentials for Practice & Care

Outcome 2.1. Patient-centered care (Caregiver) - Provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).

Learning Objectives:
2.1.1. Gather and organize patient information in order to identify ongoing or potential drug-related problems and the root cause of the problems.
2.1.2. Interpret and evaluate pharmaceutical data and related information needed to prevent or resolve medication-related problem.
2.1.7. Select the proper drug, dose, and dosage form for a specific patient.
2.1.8. Design, implement, and evaluate patient specific pharmacotherapeutic regimens.

Outcome 2.4. Population-based care (Provider) - Describe how population-based care influences patient centered care and influences the development of practice guidelines and evidence-based best practices.

Learning Objectives:
2.4.1. Assess, analyze and apply population-specific (sociologic, epidemiologic and pharmacoeconomic) data to determine the needs of a target population relative to health promotion and disease prevention or detection.
2.4.3. Assess the need for population-based pharmaceutical care services

DOMAIN 3: Approach to Practice

Outcome 3.1. Problem Solving (Problem Solver) – Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.

Learning Objectives:
3.1.1. Demonstrate reasoned and reflective consideration of evidence in a particular context to make a judgment
3.1.2. Apply critical thinking skills, including identification, investigation, application, analysis, creativity, synthesis and evaluation, to clinical or other professional problem-solving and decision making.

Outcome 3.5. Cultural sensitivity (Includer) - Recognize social determinants of health to diminish
disparities and inequities in access to quality care.

Learning Objectives:
3.5.1. Recognize and demonstrate a commitment to addressing health disparities
3.5.5. Integrate cultural, sociological, behavioral, economic and environmental aspects of patient care into professional practice.

Course Level Learning objectives

Flipped session #1:
What will students be able to do at the end of the lesson?
1. Read the E-Book, Pharmacotherapy by DiPiro via Access Pharmacy on Diabetes Introduction & Epidemiology, Chapter 57
2. Distinguish between the different types of diabetes
3. Recognize the clinical presentation of diabetes

Flipped session #2:
What will students be able to do at the end of the lesson?
1. Read the E-Book, Pharmacotherapy by DiPiro via Access Pharmacy on Treatment of Diabetes, Chpt 57
2. Compare and contrast the available pharmacological options for diabetes
3. Evaluate the differences between the two available type 2 diabetes treatment algorithms

Flipped session #3:
What will students be able to do at the end of the lesson?
1. Read the American Diabetes Association(ADA) 2016 Diabetes guideline, sections on Approaches to Glycemic control/Macrovascular & Microvascular management of diabetes
2. Differentiate the pharmacokinetics of available insulins, Dipiro Chapter 57
3. Recommend optimal insulin dosing for diabetes management

Flipped session #4:
What will students be able to do at the end of the lesson?
1. Read the E-book, Pharmacotherapy by DiPiro via Access Pharmacy on Portal Hypertension, Cirrhosis, Drug-Induced Liver Disease, Chapters e17, 24
2. Differentiate between Portal Hypertension and Cirrhosis
3. List the most common agents associated with drug-induced liver disease and how to determine the drug monitoring plan for hepatotoxic drugs

Flipped session #5:
What will students be able to do at the end of the lesson?
1. Read the E-book, Pharmacotherapy by DiPiro via Access Pharmacy on Inflammatory Bowel Disease, Chapter 21
2. Compare and Contrast the clinical presentation and treatment of ulcerative colitis and crohn’s

Flipped session #6:
What will students be able to do at the end of the lesson?
1. Read the E-book, Pharmacotherapy by DiPiro via Access Pharmacy on Irritable Bowel Syndrome (IBS)/Pancreatitis, Chapters 23, 25
2. List the clinical presentation of IBS and evaluate the available treatment options
3. Describe the treatment for acute and chronic pancreatitis
Instructional Methodology
Active learning strategies will be utilized to drive student learning through use of case studies, interactive online and face-face discussions, question and answer sessions. **DM Educate® is an online comprehensive diabetes management course that provides users a multidisciplinary foundation in the principles of diabetes management; is a required resource for this course. Each student is also expected to register for Access Pharmacy and complete the organ system-based questions assigned on the course schedule.**

**Blackboard** is the main online platform for the course instruction, thus students are responsible for all instructions posted concerning the module. **Tegrity** is the lecture capture system for the course and students have access to lectures recorded before or during the class sessions for learning. Students will also be instructed to view instructional online videos (eg. YouTube, TED talk) for knowledge enhancement.

The course is comprised primarily of lecture series. Lecture styles may vary and students are expected to adapt to faculty manner of teaching. Students are advised to discuss any difficulties in following a particular lecture with the responsible faculty lecturer. It is assumed that the student is familiar with normal anatomic constructions, physiologic processes, biological and cellular chemistry. It is assumed that this knowledge had been acquired in the student’s foundation courses in the basic sciences and/or all prerequisite courses. To outline the student’s minimal responsibilities, each topic will have learning objectives and required text readings/references.

Online Activity/Flipped Sessions

**Online Activity/Flipped Sessions**

**30%(6 class sessions) of this module** material are taught online and flipped teaching sessions. As such, it is important that each student completes all pre-class online assignment prior to the respective flipped class session. It is imperative for students to attend the “flipped” class session where the pre-class material will be further developed and expanded using case studies along with mini-lectures in order to ensure student learning via integration of previous and current knowledge. The online activities include: quiz, Tegrity videos, YouTube videos, DM Educate, TED talk videos, and online discussion forums. There are 2 online discussion forums in this module based on the TED talk videos. Students should write (at least 150 words to provide cons/pros to the talk). Also, student must respond to at least 1 other student’s post on discussion board (50 words—why he/she agrees or disagrees with student comments). The online discussion forum would be evaluated based on: meeting of posting deadline, word length, content, and completion of tasks.

**Course Instructors:** This course is team-taught and some lecturers come from area institutions and practices. Students are expected to function in a professional manner for all classroom sessions.

**Reading Assignments:** Students are expected to review assigned reading materials and supplemental articles provided by the instructor prior to the start of the scheduled lecture or series.

Flipped sessions: 30% of the course is online and pre-class assignments must be completed as instructed in order to excel in the flipped class sessions.

**Class Participation:** Students are expected to participate in all activities and are held responsible, even when absent.

**Class Attendance**

All students are expected to attend all scheduled classes. In addition, each student will be expected to comply with the Howard University College of Pharmacy Student Handbook.

1. All students are expected to attend classes regularly and promptly.
2. Students who abstain from attending classes are held responsible for the all course work.
3. No food or drinks are allowed in class during the lectures/conferences.

Course Grading Policies

| Quiz #1 | --- | 50 points (from assigned reading and lecture) |
| Quiz #2 | --- | 50 points (from assigned reading and lecture) |
| Mid-term Exam | --- | 100 points |
| Final Exam | --- | 100 points |
| Blackboard quiz | --- | 60 points (from the 6 flipped session pre-class assignments) |
| In-class Case study | --- | 30 points |
| Online Discussion forum | --- | 10 points (from the 2 required online discussion forums) |

Total --- 400 points

Final Grade:

A  90-100%
B+ 86-89%
B  80-85%
C+ 76-79%
C  70-75%
F  <70%

Policies related to taking quizzes and examinations:

Each student will be expected to comply with the *Howard University College of Pharmacy Examination Procedures* outlined in the *Howard University College of Pharmacy Student Handbook (H-Book)*.

- Students are expected to take scheduled online quiz/in-class quiz & examination on the announced date and time.

- Students are expected to arrive for the in-class quiz/exam site **at least 10 minutes prior to assessment time.** Students who arrive at the quiz/examination site beyond 5 minutes past the scheduled start time will be subject to penalty and/or may not be admitted. All major quiz and exam assessment will be conducted via ExamSoft®. Make sure your laptop computer is fully functional and charged. In-class Quizzes/Exams should be downloaded prior to the scheduled time as specified by the course coordinator.

- The exam schedule appears in the Lectures/Exams Schedule as outlined. However, the class, through its President, may request changing any or all of the scheduled examinations because of conflict with other courses **only within the first five (5) working days** of the semester. The Course Coordinator shall attempt to accommodate this request while taking into account the need to include in each examination a reasonable amount of course material. After distributing the final revision, no change in the examination schedule shall be permitted except under unforeseen circumstances determined by the Course Coordinator.

- To insure fairness in the conduct of quizzes/examinations, no tardy student shall be allowed into the quiz/examination room after any other student has left the room. A student who reports to the examination hall late shall not be given any extra time to complete the quiz/examination. Lateness distracts your colleagues who arrived on time and may lead to lower quiz/examination performance.
To insure fairness, poorly/incorrectly written question/answer will be dropped from the quiz/exam. Thus, the assessment grade would be **adjusted to exclude** the poorly/incorrectly written question/answer.

A student who fails to appear and take the quiz or exam on its scheduled date and time, shall earn the grade of "zero" unless his/her absence is considered excused. An absence from an quiz/examination shall be considered "excused," in which the student is allowed to take a makeup quiz, exam, if it occurs because of any one of the following circumstances:
(a) Hospitalization of the student due to illness or accident.
(b) Death in the student’s immediate family (e.g., spouse, parents, guardians, siblings and/or children).
(c) Summons of the student to appear for Jury Duty or before a court of law.

In these cases, the absentee student shall submit documents supporting the above claims (Hospital Admission Form, Death Certificate or Government/ Court Subpoena) to the Course Coordinator. Upon satisfactory verification, the student shall be allowed to take a makeup quiz/exam. The makeup quiz/exam may be an essay or a multiple-choice type, a research paper, or any other assignment at the discretion of the Course Coordinator. If the student is absent from the exam for a reason known prior to the quiz/exam, but fails to contact the Coordinator to discuss the potential excused absence, no excuse will be accepted and the grade will be recorded as zero. Also, the student must submit the “excuse request” immediately upon returning to the class. **Excuse requests submitted after 3 days of returning to the class will not be honored.**

In cases other than those listed above, the absentee student shall submit a written petition to the course coordinator explaining the circumstances of missing the exam and shall attach documents (Student’s health form is not sufficient) supporting his/her claim. The course coordinator shall submit the petition and documents to the Department of Clinical and Administrative Pharmacy Sciences which shall hold a “hearing” in the student’s presence. The Department shall take one of the following actions:

- Consider the absence as “excused” and allow the student to take a makeup exam without any stipulation. In this case, the student shall earn the score he/she received on the exam. The makeup exam may be an essay or multiple-choice, a term paper, or any other assignment at the discretion of the course coordinator.
- Consider the absence as “unexcused”. In this case, the student shall be given a “zero” in this exam.

**Exam Review:** A time will be scheduled and announced for the class to view the correct exam answers. Duplication of the exam questions (via writing or electronic means) will not be allowable during the exam review session and would be considered as an act of academic dishonesty.

**Final Course Grade:** The final course grade will be posted on Blackboard and Bison Web at the end of the semester.

**Remediation Policy**
Students who fail to pass with course grade between 65-70% after final exam are possible candidates for remediation process. **Eligibility requirement** for remediation are participation in all assessment activities,
reading of all assignments, attendance in at least 85% (17) of the class sessions, completion of all online activities, and attendance to tutorial sessions. Tutorial sessions are available through the Center of Excellence office on course lecture content.

The remediation process will consist of self-study and a remediation exam.

**Students that previously failed this module ARE NOT eligible for remediation**

A. A student who has a class average between 65-70% after the final exam and has adhered to all conditions stipulated by the course coordinator (see F below) will qualify to take a remediation examination.

B. The remediation exam will be cumulative in nature.

C. The remediation exam content will be comparable in content and rigor to prior assessments.

D. Remediation exams must take place during the college’s designated Remediation Exam Period which is after the COP Final Examination Period and before the End of the Semester.

E. Students will be allowed to take no more than 2 remediation exams per semester.

F. The coordinator will require that certain criteria are met by students for eligibility to participate in the remediation process. These criteria include but are not limited to class attendance, review of failed exam(s), submission of a remediation plan, additional reading assignments, online completion of topic review activities, attending tutorials, and any other stipulations set forth by the course coordinator.

G. Students will receive a grade of Incomplete F (IF) for the course until after the remediation process is complete. At that time, the final course grade will be given.

H. A passing score (determined by the course coordinator) on the remediation exam and in any faculty- assigned remediation activities will result in a satisfactory grade for the course.

I. The maximum course grade for students after a remediation exam is 70%.

Course Evaluation

Students will complete online course evaluations anonymously as scheduled in the course outline via the College of Pharmacy.

Course Withdrawal Policy

The deadline or last day to withdraw from this course is five (5) business days prior to the date set for the final examination for the course.

DRESS CODE/PROFESSIONALISM:

Students are expected to demonstrate a professional attitude at all times. The college dress code as described in the COP orientation/student Manual shall apply to this course.

POLICY REGARDING CHEATING

Students are referred to the “Academic Code of Conduct” which is published in the H-Book and the Student Reference Manual and Directory of Classes. Pharmacy students are professional students and only the highest level of honor and integrity are expected. Just a reminder: Academic dishonesty, including plagiarism will result in zero grade. This applies to both in-class and online assessments.

POLICY REGARDING Audio or Video Recordings

The College has adopted a lecture capture system in the form of “Tegrity”. Please keep in mind that this system doesn’t substitute your full attendance and participation in the course. The Tegrity system is meant
to simply supplement the instructional methods utilized in this course.

**Netiquette**

You are expected to be professional in all your online interactions, including the DISCUSSION BOARD. You should provide meaningful and tactful responses via your discussion board postings and replies to your classmates. Avoid use of profanity, rudeness and any unprofessional behavior during all online interactions with instructor and students. Your violation of professional netiquette will be addressed similarly as other unprofessional behavior according to the Howard University College of Pharmacy Academic Code of Conduct. Click **NETIQUETTE** for more information.

**Writing Matters**

Writing is an essential tool for thinking and communicating in virtually every profession. Therefore, in this seminar any writing you produce is expected to be thoughtful and accurate, as well as organized, clear, and consistent with the rules of Standard English. If your writing does not meet these standards, the instructor may deduct points or ask you to revise. For assistance with your writing, go to the student section of the Writing across the Curriculum (WAC) website [http://www.cetla.howard.edu/wac/students.aspx](http://www.cetla.howard.edu/wac/students.aspx).

**Technology Requirements**

You need to update your email account in Blackboard. To do so, visit your Blackboard homepage, click on the TOOLS to update your e-mail address under PERSONAL INFORMATION. **Note: In case you are using a non-HU email account, check your SPAM email folder for messages.** Visit Blackboard FAQs for Students [http://www.cetla.howard.edu/teaching_resources/blackboard/BBStudentsFAQ.html](http://www.cetla.howard.edu/teaching_resources/blackboard/BBStudentsFAQ.html)

**WARNING:** You will encounter problems with Blackboard unless you disable your pop-upblockers for this site and use Firefox as your web browser.

**For Tegrity: HELP FOR STUDENTS:** [https://help.tegrity.com/help-for-students.html](https://help.tegrity.com/help-for-students.html) for student viewing

**For General Technical Support:** Contact HU Computer Help Desk at (202) 806-2020 or [http://www.howard.edu/technology/services/service_desk.html](http://www.howard.edu/technology/services/service_desk.html). Services provided include operating system support, wireless connectivity, software support and installation, etc.

**Hardware/Software Required:** computer with internet capability AND MicroSoft office software, Adobe Reader, and ExamSoft download.

**Privacy Notice**

In order to improve teaching and learning, student work may be shared anonymously with other Howard University faculty unless a student written requests to decline the dissemination is received. In the event that I choose to publish student work, an Informed Consent from student will be sought. Student’s decision to dissemination of work would not affect grade.

**NON-REGISTERED STUDENTS**

A non-registered student is not authorized or permitted to continue in Integrated Therapeutics 3A past the final day for registration. No exceptions are permitted. Non-registered students will not be allowed to remain in the class or participate in any class activity. If you have registered for the course and paid your fees but your name is not on the class roll, you may show the instructor an official University paid receipt for the course to remain temporarily in class while you follow University procedure to be placed on the
University Official class roster as quickly as possible. Registration printout is not acceptable.

HOWARD UNIVERSITY STATEMENT ON ADA PROCEDURES

Howard University is committed to providing an educational environment that is accessible to all students. In accordance with this policy, students in need of accommodations due to disability should contact the Office of the Dean for special Student Services for verification and determination of reasonable accommodations as soon as possible after admission to the University or at the beginning of each semester. The Dean of the Office of Special Student Services, Dr. Barbara Williams, can be reached at (202) 238 2420.