Wilkes University School of Pharmacy

Department of Pharmacy Practice

Comprehensive Diabetes Management

Spring 2014 Syllabus

On Campus Instructor:

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Course Title: <u>Comprehensive Diabetes Management</u>

Course Number: PHA 540

Credits: 3

Time/Location: Class will be held as scheduled (see schedule of topics and classes). Class is held in SLC 105. Online material is at www.dmeducate.org

Pre-requisite: None

Course Time – The majority of this course is independent self-study of online lectures and material. The on campus discussions will be held on Thursday 9:15-10:45 in the Pharmacy Care Lab.

Course Description:

This course has been developed to provide a multidisciplinary foundation for health professionals in the principles of diabetes management. Students who successfully complete the course will have knowledge and basic skill set that is needed to begin practicing diabetes management.

Professional Outcomes:

Section 1

To provide pharmaceutical care in cooperation with patients, prescribers, and other members of an interprofessional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social, economic, and professional issues, emerging technologies, and evolving pharmaceutical, biomedical, sociobehavioral, and clinical sciences that may impact therapeutic outcomes, **upon completion of this course, students will be able to**:

<u>Knowledge of Basic Science, Math, Economic, and Regulatory Principles</u>

1.1.4. Demonstrate knowledge of drug mechanisms of action and toxicities.

<u>Evaluate the Prescription, Prepare, and Dispense Medication</u>

1.2.3. Determine the appropriateness of drug doses, dosage forms, routes of administration, and frequencies of administration.

Manage Medication Information

1.3.1 Recognize and articulate an information need
1.3.2 Efficiently retrieve information and evaluate it for relevance and validity
1.3.3 Synthesize and apply the information in context of the situation or question/need
1.3.4 Use the information gathered to formulate evidence-based answers
1.3.5 Effectively communicate medical information with appropriate written and/or verbal language.

Obtain and Organize Patient Information

1.4.1. Interview patients and healthcare providers.

Assess and Interpret Patient Information

1.5.2.Explain the purpose / indication for drug therapy.
1.5.4 Explain the risks and benefits of current and alternative therapies.
1.5.5 Assess the patient for potential drug interactions.
1.5.6 Assess the patient for possible adverse drug reactions.

Design and Implement a Patient-Specific Pharmaceutical Care Plan

1.6.1. Utilize basic science, math, economic and therapeutic principles in selecting and justifying drug therapy for a patient.
1.6.2 Recommend drug therapies based on patient-, drug-, and disease-specific parameters.
1.6.3 Recommend appropriate preventative medicine and non-pharmacologic therapy including dietary and alternative medicine.
1.6.4 Develop therapeutic goals and measurable outcomes for a patient's drug therapy.
1.6.5 Justify recommendations with supporting evidence from appropriate sources.
1.6.7 Counsel patients and caregivers about appropriate therapy.
1.6.9 Provide drug and disease information to patients, caregivers and health care providers.

Section 3 Public Health

To promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an interprofessonal team of health care providers, ***at the completion of this course, students will be able to:***

3.2. Provide broad-based educational programs regarding the prevention and treatment of diseases.
3.3. Provide care to large patient populations such as immunizations.
3.5. Advocate, develop and participate in programs to improve public health outcomes.

Section 4
To be successful in their professional and personal lives, **at the completion of the course, students will be able to:**

4.2. Relay and respond to information effectively and appropriately using verbal, non-verbal, written and technological methods of communication. (Ability to Communicate)
4.4. Demonstrate an awareness and sensitivity of social and cultural issues and actively participate in community and civic initiatives. (Citizenship)
4.6. Actively, effectively, and appropriately participate in group interactions to achieve common goals. (Group Collaboration)
4.7. Practice pharmacy (or carry out duties) in accordance with legal, ethical, social, economic, and professional guidelines.

Learning Objectives:

At the completion of this course, the student should be able to:

1. Identify the place in therapy for the various pharmacological agents (oral and injectable medications) available to treat diabetes

2. Discuss strategies to prevent medical complications that arise from diabetes

3. Describe cultural and psychological influences on the management of diabetes

4. Formulate a care plan for special populations including children, adolescents, and pregnant patients

5. Provide disease state management counseling in the area of diabetes in the following areas: drug therapy, nutrition, exercise, glucose monitoring, devices, and injection technique

Course Assessment:

Class quizzes	30%
Online quizzes	30%
Final exam	10%
Nutrition Assignment	10%
Virtual Patient/Provider	10%
Reflection/Day as Diabetic	10%
Total	100%

***** Students may choose to complete additional online modules in the course that are not required. The quiz grade (in points) from any additional modules completed will be added to the online quiz point total. For example, if the required module quiz grade point total was 150 and 8 additional extra credit points were earned from a non-required module, the final point value would be 158. Students cannot achieve higher than a 100% in the online quiz percentage total.

**** All required modules and online quizzes, as listed in the course schedule, must be complete or a "0" will be issued for the course.**

***** All required modules/online quizzes, as listed in the course schedule, must be completed 24 hours prior to the in-class quiz or the student will be issued a zero for all questions related to that module.**

Course Grade Scale:

90 - 100	4.0
85 - 89	3.5
80 - 84	3.0
75 - 79	2.5
70 - 74	2.0
65 – 69	1.5
< 65	0.0

Assignment Policy:
There will be announced and unannounced activities assigned both in and out of class. All students are responsible for turning in these assignments individually unless otherwise announced by the instructor. In-class assignments may be hand-written, but must be submitted in a legible form. Illegible assignments will be returned.

1) Virtual Patient/Provider: This assignment is designed to apply the knowledge learned in class to realistic scenarios that may be encountered in practice. You will be assigned to groups of 3 or 4. Towards the end of the semester you will receive communication via e-mail from a faculty member. These are real questions from patients or healthcare providers. You will be allowed to prompt the faculty member with questions to obtain information one time. You will answer the questions and e-mail your response to the faculty member. Your response should be professional, organized, clear, and accurate. The graded responses will make up 10% of your total grade. You will be evaluating the participation of each member of your group. Your participation as determined by peer evaluations contributes to this grade. This assignment will be issued towards the end of the semester.

2) Day as a Patient with Diabetes: You will be provided with a glucose meter and asked to check your sugar four times daily as would a type 1 diabetic for 2 days. This

assignment will take place over a 48 hour time period. A two page reflection should be written to reflect upon your experience. Example issues to discuss include: How did it feel to check your sugar in public (school, restaurants, work)? How did other people react? Do you think you could be adherent with this everyday? Did you experience any physical pain with testing? Did you skip testing at a certain time, why? Completion of this assignment and the reflection will be 10% of your total grade. This assignment can be completed at anytime during the semester, Dr. Olenak will provide the testing supplies.

3) Nutrition Assignment: You will be asked to complete a nutrition assignment following the in-class session on nutrition. Details of the assignment and due date will be provided during that class. This assignment should be typed up in a word document and is worth 10% of your grade.

4) Community Outreach: You are strongly encouraged to volunteer in one diabetes screening event held in the community. Several dates will be available throughout the semester through APhA Operation Diabetes. Students will be expected to dress professionally and wear Wilkes Pharmacy lab coat. A faculty member will be in attendance at each event(Dr. Olenak or Dr. Orloski). As dates become available during the semester, students will be notified via e-mail to sign-up.

Attendance Policy:
Attendance and participation is expected in this course. Consistent with University policy, repeated unexcused absences would result in course failure. There will be no make-up exams or quizzes for in- and out of class assignments for unexcused absences. A grade of zero will be given. In the case of an unusual circumstance in which the absence is excusable, the student must contact **Dr. Olenak (x 4288)** at least one-half hour before class. Make-up exams or assignments for these cases will be given at the discretion of the instructor.

Examination policy
Prior to the test, no student may enter the examination room. An examination room may not necessarily be the lecture room. Upon entry into the examination room, there will be no talking. All personal items, including backpacks and coats, must be kept at the front or side of the room. The students will be given assigned seats. The examination paper should not be turned over until instructed to do so by the proctors. The students should check that the examination is complete and read all the instructions. After the first test is returned to the proctors, tardy students will not be allowed to start the exam and will be given a zero for the test, and students may not be excused from the room without turning in their exam for grading, even if incomplete.

Calculators:
Students will be required to possess a basic scientific non-programmable, non-graphing calculator that is capable of solving base-10 and natural log functions. These calculators may be required for examinations or other assignments within this course.

Academic Honesty:
Any violation of the Academic Honesty Policy of the University and plagiarism as defined by the English department will not be tolerated. Violators will be subject to disciplinary action, which may include failure of the course. (see Student Handbook for details).

Professionalism and Civility Policy:
As consistent with the expectations of a professional and practice environment, professional behavior and attitudes are expected for all students enrolled in this module. Examples of professional behavior include, but are not limited to, appropriate demeanor, grooming, punctuality, and civility. Lack of respect for the other students, professors or staff as demonstrated by comments, tone of voice, or disruptive behavior will not be tolerated. Everyone has a right to be heard and should be able to express his or her constructive comments without ridicule. When expressing opinions etc. "I" phrase should be used. Anyone who does not adhere to this policy will be asked to leave the classroom. To be admitted into the class again, the student will be required to write an essay on the importance of manner and civility. If another incident occurs, the student will be excused from class. Additionally, only plain water in a bottle or cup with a lid is allowed in the classroom.

Course Schedule

Dates	Online Module	On-Campus Quiz/Topic
Week of 1/13	Web registration and Introduction: Module 1: History of Diabetes	
Thursday 1/16	**CLASS**	**Course Intro/Operation Diabetes Training**
Week of 1/20	Module 2: Definition and Pathophysiology Start-- Module 4: Treatment of Diabetes: Oral Drug Pharmacotherapy	
Week of 1/27	Continue--Module 4: Treatment of Diabetes: Pharmacotherapy (Oral Drug Pharmacotherapy) Module 4: Non-insulin Injectables	
Week of 2/3	Module 4: Non-prescription products Module 4: Insulin Therapy	
Week of 2/10	Module 4: Insulin Dosing Module 4: Insulin Devices	
Thursday 2/13	**CLASS**	**Review of oral agents place in therapy** ***Required for P-2, optional for P-3**
Week of 2/17	Module 4: Medication Safety Module 4: Complementary and Alternative Medicines **OR** Module 5: Treatment of Diabetes: Inpatient Diabetes Management	Due to time constraints of the course. For this week only you can pick the Alternative Medicine OR Inpatient management to complete. Medication Safety must be completed.

Thursday 2/20	**CLASS**	**Review of Insulin Cases** **Quiz of Module 2 and Module 4 (oral agents and non-insulin injectable agents)**
Week of 2/24	Module 6: Treatment of Diabetes: Medical Nutrition Therapy	
Week of 3/3	*Spring Break*	
Week of 3/10	Module 7: Treatment of Diabetes: Exercise Therapy	
Week of 3/17	Module 9: Complications of Diabetes	
Thursday 3/20	**CLASS**	**Quiz of Module 4 (Insulin)** **Review of Nutrition**
Week of 3/24	Module 10: Special Populations: Children and Adolescents, Pregnancy, Older Adults, and Older Adults	
Week of 3/31	Module 11: Psychological Issues	
Thursday 4/3	**CLASS**	**Quiz Module 6,7** **Device Discussion**
Week of 4/7	Module 15: Motivational Interviewing	
Thursday 4/10	**CLASS**	**Quiz Module 9,10** **Case Day**
Week of 4/14	Module 13: The Pharmacist's Role in Management of the Patient with Diabetes	
Holiday break off Thursday, Friday, and Monday		
Week of 4/21	Conclusion: Module 16: The History of Diabetes Living with Diabetes	
Tuesday 4/29 ***Thursday Schedule**		**FINAL EXAM**