UNIVERSITY OF FLORIDA

COLLEGE OF NURSING

COURSE SYLLABUS

Spring 2021

COURSE NUMBER NGR 7176

COURSE TITLE Advanced Topics in Pharmacotherapeutics & Genomics in Nursing

CREDITS 3

PLACEMENT DNP Program

PREREQUISITES NGR 6140 Physiology and Pathophysiology for Advanced Nursing Practice

NGR 6172 Pharmacotherapeutics for Advanced

 Nursing Practice

COREQUSITIE None

FACULTY

|  |  |
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| Michael D. Bumbach, PhD, APRN, FNP- BC, MSN, RN (141G)Clinical Assistant ProfessorOffice: HPNP 4201Office Phone: (352) 273-6638Office Hours: Online, by appointmentEmail: mbumbach@ufl.edu | Jennifer Dungan, PhD, MSN, RN (105F)Associate Professor (Course lead)Office: HPNP 3229Office Phone: (352) 273-6334Office Hours: Online, by appointmentEmail: jrdungan@ufl.edu |
| Keesha Powell-Roach, PhD, RN (44AE)Assistant ProfessorOffice: HPNP 2224 Phone: (352) 273-6318Email: keesha.roach@ufl.eduOffice Hours: Online, by Appointment |  |

COURSE DESCRIPTION This course presents complex nursing care issues related to pharmacotherapeutics as an integral part of overall treatment. Emphasis is on evaluation research reports and discussion of current research literature in extant drug treatment and present and future developments. Focus is on the management of complex problems and issues exemplified in case studies emerging from specialty areas of nursing practice. The impact of the increased knowledge in genomics leading to personalized medicine will also be a focus of the course.

COURSE OBJECTIVES Upon completion of this course, the student will be able to:

1. Analyze original research reports related to pharmacological regimens in specialty areas of nursing practice.
2. Analyze specific nursing practice issues related to administrative, legal and economic aspects of pharmacological management.
3. Integrate presenting symptomatology, underlying pathophysiology and responses to pharmacological agents in specialty nursing practice including targeted therapies
4. Develop pharmacotherapeutic regimens taking into consideration desired nursing outcomes, including cost, risk, manageability of side effects, potential for adherence, and genomics.
5. Evaluate the effects of information resources on prescribing trends.
6. Evaluate the impact of personalized medicine on prescribing.

# COURSE SCHEDULE

 Faculty Section Day Time

 Bumbach 141G Web-based N/A

 Dungan 105F Web-based N/A

 Roach 44AE Web-based N/A

This course will be delivered via instructional technology without face-to-face instruction. Any synchronous sessions may be audio visually recorded. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded.  If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded.  If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the “chat” feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

E-Learning in Canvas is the course management system that you will use for this course. E-Learning in Canvas is accessed by using your Gatorlink account name and password at <http://elearning.ufl.edu/>. There are several tutorials and student help links on the E-Learning login site. If you have technical questions call the UF Computer Help Desk at 352-392-HELP or send email to helpdesk@ufl.edu.

It is Important that you regularly check your Gatorlink account email for College and University wide information and the course E-Learning site for announcements and notifications. Course websites are generally made available on the Friday before the first day of classes.

# TOPICAL OUTLINE

1. Pharmacogenetics/Personalized Medicine

a. Genomics

b. Targeted Therapies

1. New and projected drug developments and uses – design, methodology, and clinical testing
2. Drug interactions and polypharmacy
3. Randomized clinical trials
4. Economic issues
5. Legal and ethical issues
6. Administrative and regulatory issues
7. Drug research, development and marketing issues
8. Reading and interpreting drug research for applicability
9. Sources of public information and influences on demand for drugs
10. Special problems regarding the decision-making process for complex pharmacological management

# TEACHING METHODS

Online Modules, Case Studies, Internet and Online Resources

# LEARNING ACTIVITIES

# Papers (At a publishable level), Evaluation of Levels of Evidence, CEU Modules, Quizzes, Group Discussions

# EVALUATION METHODS/COURSE GRADE CALCULATION

Cytochrome p450 Paper 20%

Pharmacogenetics Presentation 20%

Weekly Quizzes 25%

CEU Modules 25%

Discussion Forums 10%

Total 100%

 Students can expect to receive feedback on assignments within 2 weeks of the due date.

CLASS ATTENDANCE AND MAKE UP POLICY

Students are responsible for meeting all academic objectives as defined by the instructor. Absences count from the first class meeting. In general, acceptable reasons for absences from class include illness, serious family emergencies, special curricular requirements, military obligation, severe weather conditions, religious holidays, and participation in official University activities. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused. Other reasons also may be approved.

Students may not attend classes unless they are registered officially or approved to audit with evidence of having paid audit fees. After the end of drop/add, the Office of the University Registrar provides official class rolls/addenda to instructors. Students who do not attend at least one of the first 2 class meetings of a course or laboratory in which they are registered and who have not contacted the academic unit to indicate their intent may be dropped from the course. **Students must not assume that they will automatically be dropped if they fail to attend the first few days of class.** The academic unit will notify students dropped from courses or laboratories by posting a notice in the academic unit office. Students may request reinstatement on a space-available basis if documented evidence is presented. The University recognizes the right of the individual professor to make attendance mandatory. After due warning, professors may prohibit further attendance and then assign a failing grade for excessive absences. Students who have registration changes, at any time during the semester, should verify their registrations before the last day of class of the term. Retroactive drop/add or other registration changes will not be permitted.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/graduate/regulations/#text>

GRADING SCALE/QUALITY POINTS

 A 95-100 (4.0) C 74-79\* (2.0)

 A- 93-94 (3.67) C- 72-73 (1.67)

B+ 91- 92 (3.33) D+ 70-71 (1.33)

 B 84-90 (3.0) D 64-69 (1.0)

 B- 82-83 (2.67) D- 62-63 (0.67)

 C+ 80-81 (2.33) E 61 or below (0.0)

\* 74 is the minimal passing grade

For more information on grades and grading policies, please refer to University’s grading policies: <https://catalog.ufl.edu/graduate/regulations/>.

COURSE EVALUATION

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

ACCOMMODATIONS DUE TO DISABILITY

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://disability.ufl.edu/> ) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

PROFESSIONAL BEHAVIOR

The College of Nursing expects all Nursing students to be professional in their interactions with patients, colleagues, faculty, and staff and to exhibit caring and compassionate attitudes. These and other qualities will be evaluated during patient contacts and in other relevant settings by both faculty and peers. Behavior of a Nursing student reflects on the student’s individual’s ability to become a competent professional Nurse. Attitudes or behaviors inconsistent with compassionate care; refusal by, or inability of, the student to participate constructively in learning or patient care; derogatory attitudes or inappropriate behaviors directed at patients, peers, faculty or staff; misuse of written or electronic patient records (e.g., accession of patient information without valid reason); substance abuse; failure to disclose pertinent information on a criminal background check; or other unprofessional conduct can be grounds for disciplinary measures including dismissal.

***As students in the health professions at UF Health, you are expected to promote safety and a culture of care and concern for each other and for patients. Across our academic health center’s missions of research, teaching and patient care, nursing students must lead by example and take individual responsibility for modeling healthy habits and behaviors to minimize the spread of COVID-19. Failure to comply with the established public health measures, both on and off campus, is considered a serious breach of professional conduct*.**

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT

Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/> . Students are required to provide their own privacy screen for all examination’s administered to student laptops. No wireless keyboards or wireless mouse/tracking device will be permitted during examinations.

University and College of Nursing Policies

Please see the College of Nursing website for student policies (<http://students.nursing.ufl.edu/currently-enrolled/student-policies-and-handbooks/>) and a full explanation of each of the university policies – (<http://students.nursing.ufl.edu/currently-enrolled/course-syllabi/course-policies>)

UF Grading Policy

Religious Holidays

Counseling and Mental Health Services

Student Handbook

Faculty Evaluations

Student Use of Social Media

# REQUIRED TEXTBOOK

This course will use publicly available resources that are free to health-care providers and consumers and online library material.

Strongly Suggested for Review

Go to <http://www.cincinnatichildrens.org/education/clinical/nursing/genetics/instruction/default/>

Complete the modules on: Chromosomes, DNA and Gene presentation, Genetics is Relevant Now and Mendelian Inheritance

Graduate Level QSEN Competencies.

<http://www.aacn.nche.edu/faculty/qsen/competencies.pdf>

RECOMMENDED TEXTBOOKS Recommended References: These books available through e-books on the HSC library Web site with links on the Canvas course site.

Bertino, Jr, J.S., DeVane, C.L., Furh U., Kashuba, A.D., & Ma, J.D. (2013) *Pharmacogenomics: Introduction and clinical perspective*. (1st ed). New York, N.Y.: McGraw-Hill.

Brunton, L., Lazo, J. and Parker, K. (2009). *Goodman and Gilman’s the Pharmacological Basis of Therapeutics*. (12th ed). New York, N. Y.: McGraw- Hill.

ASSIGNMENTS (GRADE WEIGHTS) & DUE-DATES (always at 11:59 pm EST)

|  |  |  |
| --- | --- | --- |
| **Assignment** | **Final Grade Weight** | **Due Dates** **(always 11:59 pm EDT)** |
| Quizzes | 25% (quiz average) | **Jan** 16, 23, 30**Feb** 6, 13, 20, 27**Mar** 6, 20**Apr** 3 |
| CEU Modules | 25% (module average) | **Feb** 6**Mar**  27**Apr** 10 |
| Cytochrome p450 Paper (G) | 20% | **Mar** 13  |
| Discussion Forums | 10% (forum average) | **Mar** 6, 13**Apr** 20 |
| Pharmacogenetics Presentation (G) | 20% | **Apr** 17 |
| TOTAL | 100% |  |
| \*(G) indicates group assignment |  |  |

**WEEKLY CLASS SCHEDULE – Spring 2021**

NGR 7176: Advanced Topics in Pharmacotherapeutics & Genomics in Nursing

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| --- | --- | --- | --- |
| **Week/**Date | **Module #**Topic | **ASSIGNMENTS****(See Canvas for full assignment description)** |  **Program Outcomes** |
| **Week 1:** Jan 11-16 | **Module 00** * Course Introduction
 | * **Post your Introduction Collage on the Discussion Board**
* **Quiz #1 Module 00-Syllabus, Due January 16**
 | N/A |
| **Week 2:** Jan 19-23*Holiday 1/18* | **Module 01*** Evidence Based Health Care
 | * **Quiz #2 Module 01 Due January 23**
 | 1,2,4,5 |
| Jan 25-30 | **Module 02*** Human Genetic Variation & Precision Medicine
 | * **Quiz #3 Module 02 Due January 30**
 | 1,4,5,6 |
| **Week 3:** Feb 1-6 | **Module 03*** Pharmacogenetics and Pharmacogenomics
 | * **Quiz #4 Module 03 Due February 6**
* **CEU Assignment #1(G3C) Due February 6**
 | 1,2,3,4,5 |
| **Week 4:**Feb 8-13 | **Module 04 - Part 1** * Cytochrome p450 Drug Interactions
 | * **Quiz #5 Module 04 – Part 1 Due by February 13**
* **Sign up genius for CYP450 Topic/Group\* Due February 13**
 | 1,3,4,5 |
| **Week** **5:** Feb 15-20 | **Module 04 - Part 2*** Cytochrome p450 Drug Interactions
 | * **Quiz #6 Module 04 – Part 2 Due by February 20**
 | 1,3,4,5 |
| **Week 6:** Feb 22-27 | **Module 05*** New and Projected Drug Development Clinical Trials
 | * **Quiz #7 Module 05 Due by February 27**
 | 1,4,5 |
| **Week 7:**Mar 1-6 | **Module 06** * Drug Research Development and Marketing Issues
 | * **Quiz #8 Module 06 – Due by March 6**
* **Discussion Forum #1 Due by March 6**

**(Drug Development, Marketing & Advertising)** | 1,4,5,6 |
| **Week 8:** Mar 8-13 |  **Module 07**Legal/Ethical Issues | * **Cytochrome P-450 Paper Due by March 13**
* **Discussion Forum #2 Due by March 13 (ELSI)**
 | 2,3,4,5,6 |
| **DATE** | **TOPIC** | **ASSIGNMENTS** |  |
| **Week 9:**Mar 15-20 | **Module 08*** Polypharmacy
 | * **Quiz #9 Module 08, Due by March 20**
 | 1,2,5,6 |
| **Week 10:**Mar 22-27 | **Module 09*** Complementary and Alternative Medicine
 | * **CEU Assignment #2 (NCCAM), Due by March 27**
 | 1,2,5,6 |
| **Week 11:**Mar 29-Apr 3 | **Module 10*** Clinical Decision Making in Complex Illness
 | * **Quiz #10 Module 10, Due by April 3**
 | 1,2,3,5,6 |
| **Week** **12:**Apr 5-10 | **Module 11*** Controlled Substances: Prescribing, Monitoring and Abuse
 | * **CEU Assignment #3 (PRIMED & CDC) Due by April 10**
 | 1,2,3,5,6 |
| **Week 13:**Apr 12-17 | *No new content: Finish Pharmacogenetics Presentation* | * **Pharmacogenetics Presentation, Due by April 17**
 | 1,2,3,4,5,6 |
| **Week 14:** Apr 19-21 | *Engage in Discussion Forums* | * **Discussion #3: Discuss Presentations, Due by April 20**
 | 3,4,6 |

The purposes of the curriculum leading to the degree Doctor of Nursing Practice are to:

1. Prepare the student to acquire advanced competencies in increasingly complex practice and emerging leadership roles.
2. Provide the student with a significant and comprehensive knowledge base that supports scientific skepticism and the incorporation of new knowledge in advanced nursing practice.
3. Provide the student with enhanced knowledge for the acquisition of leadership skills used to improve nursing practice and patient outcomes.

Upon completion of the doctoral program, the graduate will be able to:

1. Evaluate scientific bases from extant and emerging areas of knowledge for advanced nursing practice.
2. Evaluate decision support systems to solve clinical problems for individuals, aggregates and systems.
3. Develop advanced leadership and collaborative skills to mobilize interdisciplinary teams to solve highly complex clinical problems.
4. Develop expertise to formulate health policy and provide leadership in establishing clinical excellence and creating new models of cost-effective health care delivery.
5. Critically assess, plan, intervene and evaluate the health experiences of individuals, aggregates and systems to provide safe, evidence-based care.
6. Synthesize knowledge of cultural diversity and global perspectives in delivering health care and in critiquing nursing systems.

Approved: Academic Affairs Committee: 02/05; 03/05; 06/15

 Faculty: 03/05; 06/15

 UF Curriculum: 02/06; 09/15