# UNIVERSITY OF FLORIDA COLLEGE OF NURSING COURSE SYLLABUS

Spring 2023

# 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  Clinical Assistant Professor  Office: HPNP 4201  Office Phone: (352) 273-6638  Office Hours:\* Zoom (TBD) and by appointment  Email: [mbumbach@ufl.edu](mailto:mbumbach@ufl.edu) | Jennifer Dungan, PhD, MSN, RN  Associate Professor (Course lead)  Office: Office: HPNP 3229  Office Phone: (352) 273-6334  Office Hours\*: Zoom (TBD) and by appointment  Email: [jrdungan@ufl.edu](mailto:jrdungan@ufl.edu) |
| Tracey Taylor, DNP, APRN, ACNP-BC Clinical Associate Professor  Office:  Office Phone: (352) 273-6500  Office Hours\*: Wednesday, 11:00am-1:00pm  or by appointment  Email: [traceytaylor@ufl.edu](mailto:traceytaylor@ufl.edu) |  |

\*Faculty are generally available to meet with students (in the office or virtually) as listed above. Due to professional travel and other unavoidable obligations, faculty may not be present every week without notice. It advisable that students confirm availability or make an appointment in advance.

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

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| Faculty | Section | Day | Time |
| Bumbach | 141G | Web-based | N/A |
| Dungan | 105F | Web-based | N/A |
| Taylor | 44AE | Web-based | N/A |

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

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# TEACHING METHODS

Online Modules, Case Studies, Internet and Online Resources

# LEARNING ACTIVITIES

Evaluation of Levels of Evidence, CEU Modules, Quizzes, Group Discussions, Development of publishable paper and presentation(s)

# EVALUATION METHODS/COURSE GRADE CALCULATION

Quizzes & CEU Assignments 25%

Prescriber Podcast Recording 20%

Discussion Forums 15%

Cytochrome p450 Paper 20%

Pharmacogenetics Presentation 20%

Total 100%

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

CLASS ATTENDANCE AND MAKE UP POLICY

This is an online, distance-based, self-paced course. Students are expected to engage with all required modules and materials in Canvas. Faculty may evaluate Canvas user statistics as a proxy for attendance. Acceptance of late assignments is at the discretion of the section faculty. Students must contact and gain approval from faculty before the submission due date to discuss the extenuating circumstances.

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/GRADE 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)

\* 84 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.

INCLUSIVE LEARNING ENVIRONMENT

We strive to provide an inclusive learning environment as we prepare graduates who care, lead, and inspire. As we share our nursing values and personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels they belong to the College of Nursing community. <https://nursing.ufl.edu/wordpress/files/2022/08/BSN_DNP-Handbook-Jul-28-2022.pdf>

CIVILITY STATEMENT

Civility among all individuals in the CON (faculty, staff and students) is vital for an inclusive environment that fosters personal reflection, growth and a collective harmony. <https://nursing.ufl.edu/wordpress/files/2022/08/BSN_DNP-Handbook-Jul-28-2022.pdf>

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/>)

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# REQUIRED TEXTBOOKS

Rosenthal, L. D., & Burchum, J. R. (2021). *Lehne's pharmacotherapeutics for advanced practice providers, 2nd Edition*. St. Louis, MO: Elsevier. ISBN: 9780323554954

OPTIONAL TEXTBOOK

Zdanowicz, M. (2017). Concepts in Pharmacogenomics: Fundamentals and Therapeutic Applications in Personalized Medicine, 2nd Edition. ASHP.

Online IBSN: 9781585285174

Print IBSN:9785852851

WEEKLY CLASS SCHEDULE

\* *The weekly class schedule is subject to change based on course needs.*

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| **DATE** | **TOPIC/EVALUATION** | **READINGS** | **Program**  **Objectives** |
| **Wk 1:** Jan 9 | **Course Introduction** | Canvas module | **--** |
| **Wk 2:** Jan 17\* (16th MLK observed) | **Evidence Based Health Care** | Canvas module | 1,2,4,5 |
| **Wk 3**: Jan 23 | **Cytochrome p450 Drug Interactions – Part 1** | Canvas module | 1,3,4,5 |
| **Wk 4:** Jan 30 | **Cytochrome p450 Drug Interactions – Part 2** | Canvas module | 1,3,4,5 |
| **Wk 5:** Feb 6 | **Polypharmacy** | Canvas module | 1,2,5,6 |
| **Wk** **6:** Feb 13 | **Complementary and Alternative Medicine** | Canvas module | 1,2,5,6 |
| **Wk 7:** Feb 20 | **Controlled Substances: Prescribing, Monitoring and Abuse** | Canvas module | 1,2,3,5,6 |
| **Wk 8:** Feb 27 | **Legal/Ethical Issues** | Canvas module | 2,3,4,5,6 |
| **Wk 9:** Mar 6 | **Clinical Decision Making in Complex Illness** | Canvas module | 1,2,3,5,6 |
| **Wk 10:** Mar 13 | **SPRING BREAK** | NO CONTENT OR ASSIGNMENTS | **--** |
| **Wk 11:** Mar 20 | **Human Genetic Variation & Precision Medicine** | Canvas module | 1,4,5,6 |
| **Wk 12:** Mar 27 | **Pharmacogenetics and Pharmacogenomics** | Canvas module | 1,2,3,4,5 |
| **Wk 13:** Apr 3 | **Drug Research, Development, & Marketing** | Canvas module | 1,4,5,6 |
| **Wk** **14:** Apr 10 | ***Work on Pharmacogenetics presentation (No new content)*** | Not applicable | **--** |
| **Wk 15:** Apr 17 | ***Engage in Post-Presentation Discussion Forum (No new content)*** | Discussion Forum reading | **--** |

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 system

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

Faculty: 03/05; 06/15

UF Curriculum: 02/06; 09/15