PHA 5873C Patient Care 3:
Introduction to Cardiovascular & Pulmonary Diseases

Fall 2016 – Block 6
6 Credit Hours

Course Purpose:
Third of an eight course sequence that prepares the student to provide patient-centered care by serving as a collaborative interprofessional team-member who is an authority on pharmacotherapy. This courses also prepares the student to be a collaborative team member since learning involves teamwork. This course focuses on providing patient-centered care to patients who have cardiovascular and pulmonary disorders. Learners will develop, integrate, and apply knowledge from the foundational disciplines (i.e., ***pharmaceutical***, ***social/behavioral/administrative***, and ***clinical sciences***) and apply the Pharmacists' Patient Care Process in solving case-based scenarios of patients with cardiovascular and pulmonary diseases.

Course Faculty and Office Hours
(See **Appendix A** for Who to Contact)

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Core Teaching Partners:

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Appendix B contains the contact information for all teaching partners

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This Course Will Prepare You to Perform the Following Activities Which the Public Entrusts a Pharmacist to Perform:

1. **EPA A1**. Collect subjective and objective data by performing a patient assessment and gathering data from chart/electronic records, pharmacist records, other health professionals and patient/family interviews.
2. **EPA A2.** Interpret patient data, and identify medication-related problems and develop a prioritized problem list.
3. **EPA A3.** Formulate evidence-based care plans in collaboration with an interprofessional team. Utilize clinical guidelines in the development of a pharmacotherapy plan.
4. **EPA A4.** Document a patient/clinical encounter electronically/in writing.
5. **EPA A5.** Provide counseling and medications and health wellness (including referral when there are social determinants of health and disparities).
6. **EPA A6.** Assess and counsel a patient about health-wellness.
7. **EPA A7.** Present a succinct oral patient summary and plan to a health care provider. Defend a therapeutic plan verbally or in writing using references, guidelines, or primary literature.
8. **EPA A8.** Give and receive a patient handover to transition care.
9. **EPA A9.** Collaborate as a member of an interprofessional team and provide patient-centered care.

Course-Level Objectives

Upon completion of this course, the student will be able to provide patient-centered care for patients with one or more of the following disorders or pharmacotherapy needs:

- Dyslipidemia
- Hypertension
- Anticoagulation
- Ischemic Heart Disease—Stable Angina Pectoris
- Acute Coronary Syndrome
- Chronic Heart Failure
- Arrhythmias—Atrial Fibrillation
- Asthma
- COPD
- Complicated Pneumonias

1. **Specifically, given a patient with one or more of the above disorders/pharmacotherapy needs:**

    a. **Integrate knowledge and use clinical reasoning skills in accomplishing the following steps when managing a patient with the disease state:**

        i. **Collect:** Gather subjective and objective information about the patient in order to understand the relevant medical and medication history and clinical status of the patient.

            1. Subjective and objective information is collected through patient interview, medical record review, pharmacy profile review, and communication with other members of the health care team.

2. A Holistic View is initiated during collection in order to consider physiological, psychological, and sociological variables of the patient and this view is maintained throughout the patient care process.

ii. **Assess:** Assess the information collected and analyze the clinical effects of the patient's therapy in the context of the patient's overall health goals in order to identify and prioritize problems and achieve optimal care.
    1. Understand, explain, and assess a patient's health status.
    2. Interpret physical and patient assessment findings
    3. Assess each medication for appropriateness, effectiveness, safety, and patient adherence.
    4. Assess health and functional status, risk factors, health data, cultural factors, health literacy, and access to medications or other aspects of care.
    5. Assess immunization status and the need for preventive care and other health care services.
    6. Integrate knowledge, clinical experience, and patient data to formulate and test hypotheses about the etiology of medication-related problems. (Generate hypotheses)
    7. Establish potential and actual medication-related problems.

iii. **Plan:** Develop an individualized patient-centered care plan in collaboration with other health care professionals and the patient/caregiver.
    1. **Therapeutic Goals:** Develop specific and general therapeutic goals for the patient. These goals achieve clinical outcomes in the context of the patient's overall health care goals and access to care.
    2. **Therapeutic Plan:** Integrate knowledge, evidence-based literature/information, clinical experience, patient data, patient goals and desires, and the prescriber's judgment when developing the best pharmacotherapeutic plan for the patient.
        a. **Therapeutic Alternatives:** Evaluate pharmacotherapeutic alternatives for the patient before establishing the therapeutic plan.
        b. **Develop the Therapeutic Plan:** This plan addresses medication-related problems and optimizes medication therapy. Considerations for the plan include:
            i. Goals and desires of the patient
            ii. Application of established practice guidelines, evidence-based medicine, pharmacogenetics, and population-based treatment plans in developing the plan.
            iii. Accurate and patient-specific dosing (including dosage adjustment for renal/hepatic dysfunction, genotype, starting dose, maximum doses, timing of

doses and pharmacokinetic design for narrow therapeutic index drugs,).

iv. Parameters for monitoring response and frequency of monitoring

v. Parameters for monitoring adverse effect and frequency of monitoring

vi. Plan for patient counseling/education

vii. Supports care continuity, including follow-up and transitions of care as appropriate.

c. **Patient/Caregiver engagement:** The patient/caregiver are involved through education, empowerment, and self-management.

iv. **Implement:** Implement the care plan in collaboration with other health care professionals and the patient/caregiver. When implementing the care plan, the following are accomplished:

1. Medication and health-related problems are addressed.
2. Preventative care including vaccine administration are provided.
3. Medication therapy is initiated, modified, discontinued, or administered as authorized.
4. Education and self-management training is provided to the patient/caregiver.
5. Refers and provides transitions of care as needed.
6. Schedules follow-up care as needed to achieve goals of therapy.

v. **Follow-up (Monitor and Evaluate):** Monitor and evaluate the effectiveness of the care plan and modify the plan in collaboration with other health care professionals and the patient/care giver. The following are continually monitored and evaluated:

1. Medication appropriateness, effectiveness, and safety and patient adherence through available data, biometric test results and patient feedback.
2. Clinical endpoints that contribute to the patient's overall health.
3. Outcomes of care, including progress toward or achievement of goals.

vi. **Patient-Centered Care:** Foster a patient-centered care approach by accomplishing the following:

1. **Communicate:** Succinctly communicate with other health care team members and the patient/caregiver throughout the patient care process.
2. **Collaborate:** Discuss with team members the specific therapeutic approaches for individual patients based on scientifically and logically validated assessment of the patient's health care needs

and an ethical consideration of the patient's health care goals and desires.

3. **Document:** Prepare a written communication that is well-organized, logical, complete, appropriate, and evidence-based.

b. **Apply and integrate foundational knowledge (i.e., pharmaceutical, social/behavioral/administrative**, and **clinical sciences) throughout the patient care process.** This will require the ability to:

i. Describe the pathophysiology of disease state(s) and identify appropriate drug targets (cellular/molecular), biochemical processes, and organ changes for therapeutic intervention. Specifically, for a given disease state:

1. Describe the basic pathophysiology of the disease including an explanation of the abnormal processes and the resulting disease signs and symptoms.
2. Outline risk factors and/or diagnostic indicators (e.g., lab values, diagnostic test results).
3. Determine classes of drugs that will treat the disease state and ameliorate the underlying pathophysiology and signs/symptoms.

ii. Apply knowledge about structure-activity relationships and cellular/molecular mechanisms of action to identify drug classes that are appropriate for treatment of the disease state. Specifically, for each drug class:

1. Identify the relevant therapeutic targets and explain the mechanism(s) of action.

iii. Describe major pathways for metabolism and the pharmacological/therapeutic consequences of metabolism.

iv. Compare and contrast the therapeutic and adverse effects of drug classes that are appropriate for treating the disease state.

1. Identify the most common/serious drug interactions and adverse effects.
2. Identify important precautions and contraindications.

v. Compare and contrast the therapeutic and adverse effects of drugs within a given class and then recommend the best drug for the patient.

vi. Recommend any unique storage, handling, or use requirements to ensure patient safety and clinical efficacy.

vii. Discuss significant pharmacokinetic, pharmacogenetic, and pharmacodynamic considerations.

viii. Integrate the following transcending concepts when assessing a patient and developing a care plan:

1. Apply foundational concepts about health information and informatics (Informatics)
2. Evaluate cohort studies and apply to a patient need (Evidence-based practice)

3. Use clinical reasoning and clinical judgment (Problem-solving)
4. Address social considerations such as cultural sensitivity, health-related beliefs, health literacy, factors of a population including public health, access to care, quality, healthcare delivery, and policy (Social considerations)
5. Consider patient/families behavioral considerations such as attitudes about health/wellness, adherence, effect of chronic illness, stress, and death and dying when providing care (Behavioral considerations).
6. Communicate with patients, caregivers, and other health professionals.
7. Consider pharmacists' professional responsibilities including laws and ethics.
8. Consider strategies for health/wellness.
9. Consider drug delivery systems.
10. Apply pharmacokinetics pertinent to cardiovascular and pulmonary diseases.
11. Apply pharmacogenomics (Personalized Medicine)
12. Care for geriatric patients with cardiovascular and pulmonary diseases (Special populations)
13. Assess the role of nonprescription/herbal products in the treatment of pulmonary disease (Self-care)
14. Use SBAR when communicating with another health professional (Interprofessional collaboration)
15. Consider medication safety for cardiovascular and pulmonary diseases
16. Consider pharmacokinetics for cardiovascular and pulmonary diseases
17. Apply population-based care for cardiovascular and pulmonary diseases

2. **Demonstrate the ability to be an effective team member by collaborating in preparing for class sessions and in solving case studies.**

Pre-Requisite or Co-Requisite Knowledge and Skills

1. Pre-requisite: PHA 5781 Patient Care 1*
2. Pre-requisite: PHA 5755 Principles of Medical Microbiology, Immunology, and Virology*
3. Pre-requisite: PHA 5782C Patient Care 2: Infectious Diseases and Oncology*
4. Co-Requisite: PHA 5163 L Professional Practice Skills Lab III

*These pre-requisites may be waived with the consent of the Academic Performance Committee

Course Outline

Case studies will involve application of what has been learned to date during the Pharm.D. Curriculum. Students are responsible for addressing all disorders and related patient problems that have been previously learned.

Appendix C provides a guide for students in working up case studies.

ALERT about Schedule: *Please routinely check your campus calendar and the Canvas course site for any s messages about changes in the schedule including meeting dates/times, deadlines, and room changes*

Date *Recommended* Dates *for Viewing Videos*	Mod. and Unit	**Unit Topic** Learning Resources will include Lecture Videos and readings.	Faculty	Contact Hours [hr.]a
		Introduction to CV Modules (modules 1-6)		**1.5 hrs**
10/05 (W)	Intro 1	Introduction to CV Disease and overview of module	Cooper-DeHoff	45 min
10/05 (W)	Intro 2	General Cardiovascular Pathophysiology (Highlight of relevant material from 1PD year)	Keller-Wood	45 min
	1	**Module 1: Dyslipidemia**	**Pharmacology: Miller** **MedChem: Huigens** **PTR: Cooper-DeHoff** **(module leader)**	**6.75 hrs**
10/05 (W)	1.1	Dyslipidemia – Lipid Metabolism	Miller	45 min
10/05 (W)	1.2	Pharmacology of Antihyperlipidemics	Miller	60 min
10/06 (Th)	1.3	Medicinal Chemistry of Antihyperlipidemics	Huigens	45 min
10/06 (Th)	1.4	Management of Dyslipidemia	Cooper-DeHoff	90 min
10/06 (Th)	1.5	Transcending Concept: Health Information and Informatics—HIT Supporting Outpatient Drug Use	Denise Klinker	45 min
10/7 (Fr) Morning GNV 1-10 & JAX @ 8:30-10:25am GNV 11-20 & ORL @ 10:40-12:35pm Afternoon GNV 1-10 & JAX @ 1:55-3:50pm	***Intro – 1.5***	**Active Learning Session 1: *Case Studies – Dyslipidemia*** **Morning Session:** **Readiness Assessment Test #1** **Review Module Concepts as Needed** **Team Based Learning Application** **Afternoon Session:**	**Miller, Huigens, Cooper-DeHoff, Klinker**	**2** **(4 workup)**

GNV 11-20 & ORL @ 4:05-6:00pm		**Active Learning Activities**		
	2	**Module 2: Hypertension**	**<u>Pharmacology</u>: Miller** **<u>MedChem</u>: Aldrich** **<u>PTR</u>: Cooper-DeHoff** **(module leader)**	**16 hrs**
10/10 (M)	2.1	Pathophysiology of Hypertension	Keller-Wood	60 min
10/11 (Tu)	2.2	Pathophysiology and Pharmacology: Autonomic Function, Sympathetic System Drug Classes: Beta Blockers and Calcium Channel Blockers	Frazier	120 min
10/11 (Tu)	2.3	Pathophysiology and Pharmacology: Renin Angiotensin System and volume Drug Classes: ACE inhibitors, ARBs, thiazide diuretics	Krause	120 min
10/12 (W)	2.4	Medicinal Chemistry Drug Classes: beta blockers, calcium channel blockers, ACE inhibitors, ARBS, thiazide diuretics	Aldrich	105 min
10/12 (W) <u>Morning</u> GNV 1-10 & JAX @ 8:30-10:25am GNV 11-20 & ORL @ 10:40-12:35pm	***Thru 2.4***	***Q & A Discussion: Pathophysiology, Pharmacology and Medicinal Chemistry of Hypertension***	**Keller-Wood, Frazier, Krause and Aldrich (Cooper-DeHoff)**	**1 hr** **(2 workup)**
10/13 (Th)	2.5	Pharmacotherapy and Management of Hypertension	Cooper-DeHoff	120 min
10/13 (Th)	2.6	Transcending Concept: Social—Fighting Obesity; Health Disparities; Hypertension	Motycka	60 min
10/17 (M)	2.7	Transcending Concept: Behavioral—Adherence	Roane	60 min
10/17 (M)	2.8	Transcending Concept: Health-Wellness—Hypertension	Vogel-Anderson	30 min
10/19 (W) <u>Morning</u> GNV 1-10 & JAX @ 8:30-10:25am GNV 11-20 & ORL @ 10:40-12:35pm <u>Afternoon</u> GNV 1-10 & JAX @ 1:55-3:50pm GNV 11-20 & ORL @ 4:05-6:00pm	***Thru 2.8***	**Active Learning Session 2: *Case Studies – Hypertension*** **<u>Morning Session:</u>** **Readiness Assessment Test #2** **Review Module Concepts as Needed** **Team Based Learning Application** **<u>Afternoon Session:</u>** **Active Learning Activities**	**Cooper-DeHoff, Motycka, Keller-Wood, Krause, Frazier, Aldrich, Roane, Vogel-Anderson**	**2** **(4 workup)**

	3	**Module 3: Ischemic Heart Disease**	**Pharmacology: Keller-Wood** **MedChem: Y. Ding** **PTR: Cavallari (module leader)**	**5.25 hrs**
10/19 (W)	3.1	Pharmacology and Medicinal Chemistry of Nitrodilators	Ding	60 min
10/19 (W)	3.2	Management of Ischemic Heart Disease	Cavallari	75 min
10/20 (Th)	3.3	Transcending Concept: Communication—Interview Skills and Accurate Medication Lists	Roane	60 min
10/20 (Th)	3.4	Transcending Concept: Personalized Medicine—Cardiovascular Diseases	Cavallari	30 min
10/21 (F) Morning GNV 11-20 & ORL @ 8:30-10:25am GNV 1-10 & JAX @ 10:40-12:35pm Afternoon GNV 11-20 & ORL @ 1:55-3:50pm GNV 1-10 & JAX @ 4:05-6:00pm	***Thru 3.4***	**Active Learning Session 3: *Case Studies – Ischemic Heart Disease*** **Morning Session:** **Readiness Assessment Test #3** **Review Module Concepts as Needed** **Team Based Learning Application** **Afternoon Session:** **Active Learning Activities**	**Keller-Wood, Ding, Cavallari, Roane**	**2** **(4 workup)**
10/24 (M) 8:30-11:00am		**Exam #1** **(Covers Modules 1-3)**		**2**
	4	**Module 4: Anticoagulation and Acute Coronary Syndrome**	**Pharmacology: Voils** **(module leader)** **MedChem: Ding** **PTR: Vogel-Anderson**	**5 hrs**
10/24 (M)	4.1	Pathophysiology of Blood Clotting	Vogel-Anderson	60 min
10/24 (M)	4.2	Pharmacology of Anticoagulants, Fibrinolytic Agents, and Antiplatelet Therapy	Voils	120 min
10/25 (Tu)	4.3	Medicinal Chemistry of Anticoagulants, Fibrinolytic Agents, and Antiplatelet Therapy	Ding	60 min
10/25 (Tu)	4.4	Management of Acute Coronary Syndrome	Vogel-Anderson	60 min
	5	**Module 5: Heart Failure**	**Pharmacology: Keller-Wood** **MedChem: Ding** **PTR: Cavallari (module leader)**	**10.5 hrs**
10/26 (W)	5.1	Pathophysiology of Heart Failure	Keller-Wood	120 min

10/26(W)	5.2	Pharmacology of Inotropic Agents, Glycosides, Neprilysin Inhibitors, Aldosterone Antagonists	Keller-Wood	75 min
10/27 (Th)	5.3	Medicinal Chemistry of Inotropic Agents, Glycosides, Aldosterone Antagonists	Ding	75 min
10/27 (Th) GNV 1-10 & JAX @ 8:30-12:35pm GNV 11-20 & ORL @ 1:55-6:00pm	***4.1-4.4***	**Active Learning Session 4: *Case Studies – Acute Coronary Syndrome*** **Readiness Assessment Test #4** **Review Module Concepts as Needed** **Team Based Learning Application** **Active Learning Activities**	**Vogel-Anderson, Voils, Ding**	**2** **(4 workup)**
10/28 (F) GNV 11-20 & ORL @ 1:55-3:50pm GNV 1-10 & JAX @ 4:05-6:00pm	***Thru 5.3***	**Active Learning Session 5: *Case Studies – Pathophysiology of Heart Failure*** **Readiness Assessment Test #5** **Review Module Concepts as Needed** **Team Based Learning Application**	**Keller-Wood, Ding, Cavallari**	**1** **(2 workup)**
10/28 (F)	5.4	Management of Chronic Heart Failure (HFrEF & HFpEF)	Cavallari	120 min
10/28 (F)	5.5	Transcending Concept: Medication Safety—Medication Reconciliation	Vogel-Anderson & Segal	60 min
10/31 (M) Morning GNV 1-10 & JAX @ 8:30-10:25am GNV 11-20 & ORL @ 10:40-12:35pm Afternoon GNV 1-10 & JAX @ 1:55-3:50pm GNV 11-20 & ORL @ 4:05-6:00pm	***Thru 5.5***	**Active Learning Session 6: *Case Studies – Heart Failure*** **Morning Session:** **Readiness Assessment Test #6** **Review Module Concepts as Needed** **Team Based Learning Application** **Afternoon Session:** **Active Learning Activities**	**Keller-Wood, Ding, Cavallari, Vogel-Anderson, Segal**	**2** **(4 workup)**
	6	**Module 6 Anticoagulation & Arrhythmias**	**Pharmacology: Keller-Wood** **MedChem: Ding** **PTR: Vogel-Anderson** **(module leader)**	**9 hrs**
11/2 (W)	6.1	Individualized Heparin and Warfarin Dosing	Vogel-Anderson	60 min
11/2 (W)	6.2	Pathophysiology of Arrhythmias	Keller-Wood	45 min
11/2 (W)	6.3	Introduction to Electrocardiology	Vogel-Anderson	45 min
11/2 (W)	6.4	Pharmacology of Antiarrhythmics	Vogel-Anderson	60 min

11/3 (Th)	6.5	Medicinal Chemistry of Antiarrhythmics	Ding	60 min
11/3 (Th)	6.6	Management of Arrhythmias	Vogel-Anderson	60 min
11/3 (Th)	6.7	Pharmacokinetics of Digoxin and Antiarrhythmics	Bihorel	30 min
11/4(F) All Campus @10:40-12:35pm	***Thru 6.7***	***Q & A: Anticoagulation & Arrhythmias***	**Vogel-Anderson**	**1** **(2 workup)**
11/7 (M) GNV 1-10 & JAX @ 8:30-12:35pm GNV 11-20 & ORL @ 1:55-6:00pm	***Thru 6.7***	**Active Learning Session 7: *Case Studies – Atrial Fibrillation*** **Readiness Assessment Test #7** **Review Module Concepts as Needed** **Team Based Learning Application**	**Keller-Wood, Vogel-Anderson, Ding, Bihorel**	**2** **(4 workup)**
11/9 (W) 4:30-7:00pm		**Exam #2** **(Covers Modules 4-6)**		**2 hrs**
	7	**Module 7: Asthma**	**<u>Pharmacology</u>: Hochhaus** **<u>Pharmaceutics</u>: Hochhaus** **<u>MedChem</u>: Aldrich** **<u>PTR</u>: Farland** **(module leader)/ J. Powell**	**8.5 hrs**
11/9 (W)	7.1	Pathophysiology of Asthma	Farland	30 min
11/9(W) – 11/10 (Th)	7.2	Pharmacology of Oral and Inhaled Corticosteroids, Short-acting Beta-agonists, Long-acting Beta-agonists, Muscarinic Agents	Hochhaus	120 min
11/10 (Th)	7.3	Medicinal Chemistry of Oral and Inhaled Corticosteroids, Short-acting Beta-agonists, Long-acting Beta-agonists, Muscarinic Agents	Aldrich	120 min
11/10 (Th)	7.4	Management of Chronic Asthma	Farland	90 min
11/10 (Th)	7.5	Transcending Concept: Personalized Medicine—Asthma	McDonough	30 min
11/14 (M) ORL & JAX @ 8:30-12:35pm ALL GNV @ 1:55-6:00pm	***Thru 7.5***	**Active Learning Session 8: *Case Studies – Asthma*** **Readiness Assessment Test #8** **Review Module Concepts as Needed** **Team Based Learning Application**	**Farland, Hochhaus, Aldrich, McDonough**	**2** **(4 workup)**
	8	**Module 8: COPD**	**<u>Pharmacology</u>: Farland** **<u>PTR</u>: Farland** **(module leader)** **K. Sando**	**5.5 hrs**
11/14 (M)	8.1	Pathophysiology of COPD	Farland	30 min
11/14 (M)	8.2	Management of COPD	Farland	60 min

11/16 (W)	8.3	Transcending Concepts: Health-Wellness—Smoking Cessation	Sando	60 min
11/16 (W)	8.4	Transcending Concept: Population-based Care & Pharmacoeconomics CEA and PROs in asthma product evaluation; value-based drug formularies (Regence example)	Navarro	60 min
11/17 (Th) ALL GNV @ 8:30-12:35pm ORL & JAX @ 1:55-6:00pm	***Thru 8.4***	**Active Learning Session 9: *Case Studies – COPD*** **Readiness Assessment Test #9** **Review Module Concepts as Needed** **Team Based Learning Application**	**Farland, Hochhaus, Aldrich, Sando, Navarro**	**2** **(4 workup)**
	9	**Module 9: Respiratory Conditions**	**PTR: Jourjy (module leader), Miller, Curtis, Peloquin**	**9.5 hrs**
11/17 (Th)	9.1	Hospital-Acquired & Ventilator-Associated Pneumonias	Jourjy	90 min
11/17 (Th)	9.2	Transcending Concepts: Self-Care—Cough & Cold (re-enforce from Patient Care 1)	Curtis	30 min
11/18 (F)	9.3	Tuberculosis	Peloquin	120 min
11/18 (F)	9.4	Lung Cancer	TBD	60 min
11/18 (F)	9.5	Transcending Concept: Interprofessional Communication - Listen actively, and encourage ideas and opinions of other interprofessional team members.	Schentrup	60 min
11/18 (F)	9.6	Transcending Concepts: Special Populations—Geriatric Drug Dosing	Miller	30 min
11/18 (F)	9.7	Transcending Concept: Evidence-Based Practice—Cohort Studies and Confounding and Bias	Wei	60 min
11/21 (M) ALL GNV @ 8:30-12:35pm ORL & JAX @ 1:55-6:00pm	***Thru 9.7***	**Active Learning Session 10: *Case Studies – Respiratory Conditions*** **Readiness Assessment Test #10** **Review Module Concepts as Needed** **Team Based Learning Application**	**Jourjy, Miller, Curtis, Peloquin, Schentrup, Wei**	**2** **(4 workup)**
	10	**Module 10: Capstone**	**Pharmacology: Keller-Wood** **MedChem: Ding** **PTR: Dupree**	**4 hrs**
11/21 (M)	10.1	Transcending Concept: Professionalism—Ethics and Law	Allen	
11/28 (M) GNV 1-10 & JAX @ 8:30-12:35pm	***Intro-10.1***	***Case Studies: Capstone*** No iRAT/tRAT Review module Concepts as Needed Team Based Learning Application	**All Faculty**	**2** **(4 workup)**

GNV 11-20 & ORL @ 1:55-6:00pm				
11/30 (W) GNV 11-20 & ORL @ 8:30-12:35pm GNV 1-10 & JAX @ 1:55-6:00pm	***Intro-10.1***	***Case Studies: Capstone*** No iRAT/tRAT Review module Concepts as Needed Team Based Learning Application		**2** **(4 workup)**
12/2 (F) 4:30-7:00pm	**All Modules**	**Comprehensive Final Exam** **(Items Cover All Modules and All Prior Coursework)**		
			Additional Hours TBD:	105 min

[a]This column contains the direct contact hours [hr]. Double the number of hours is expected to be spend out of class (readings, studying, and preparation for class. Cases will be usually 4 hours, but will only count as 2 hours of time because time is devoted for students to discuss/learn in teams and learning involves recitation.

This course is estimated to require 270 hours over 7.5 weeks (i.e., 36 hours per week for a 6-credit-hour course) = 90 hours (i.e., 12 hours per week) of "direct faculty instruction" (videos and in-class time) and a minimum of 180 hours (i.e., 24 hours per week) of "out-of-class" (readings, studying, and preparation for cases) work. Note: As noted by UF policy, for each hour of "Instructor Contact," students are expected to spend a minimum of 2 hours of additional time completing learning activities. Thus, if a week has 15 hours of Instructor Contact, the student should plan on a minimum of 30 additional hours of study. Therefore, they typical student will devote 45 hours of effort to the course that week. The course hours estimated in this syllabus are for a "typical" student – some students will find that they will devote less time, while others will need to devote more time.

Textbooks

The following textbooks are required:

1. Foye WO, Lemke T, Williams DA. Foye's Principles of Medicinal Chemistry, Wolters Kluwer Health/Lippincott Williams & Wilkins, Philadelphia, PA, 7th Edition, 2013. ISBN-13:978-1609133450; ISBN-10:1609133455
2. AccessPharmacy, McGraw-Hill Professional, New York, NY (This resource is available through the UF Health Science Center Library.) The following resources will be frequently used:
    - Brunton L. Goodman and Gilman's The Pharmacological Basis of Therapeutics, McGraw-Hill Professional, New York, NY, 12th Edition, 2011. ISBN-13:978-0071624428; ISBN-10:0071624422 (Available in Access Pharmacy)
    - Dipiro, J, Talbert R, Yee G, Matzke G, Wells B, Posey L. Pharmacotherapy – A pathophysiologic approach. McGraw-Hill Professional, New York, NY, 9th Edition, 2014. ISBN-13:978-0071800532; ISBN-10:0071800530 (Available in Access Pharmacy)
    - Other available resources include: Multiple textbooks, Calculators, Pharmacotherapy Casebook and Care Plans, Cases, Self-Assessments and Multimedia Videos

3. Krinsky DL, Ferreri SP, Hemstreet B, et al. Handbook of nonprescription drugs: An interactive approach to self-care. 18th ed. Washington, D.C.: American Pharmacists Association; 2015. ISBN-13: 978-1582122250
4. Other readings may be assigned.

Materials and Supplies Fees:

None

Student Evaluation & Grading

Evaluation Methods and how grades are determined

The Canvas© gradebook will be set up using the percentages below to compute the grade. The Case Studies Sessions and the Capstone will involve students working in assigned teams and collaboratively preparing for the class sessions and solving the case studies.

Assessment Item	Grade Percentage
Individual Quizzes* Each Case Studies Session includes an individual quiz (N = 10)	10*
Team Assessment** Each Case Studies Session includes a group quiz (N = 10)	20**
Exam #1	20
Exam #2	20
Final Exam	30
Total	100%

*Please note that the lowest of ten individual assessments [not team assessments] will be dropped.

** Please note that team quiz points earned in this course will be reduced with an up to a 5-point deduction should your contribution to your team's effectiveness, assessed using CATME (**Appendix D** [peer assessment]), finds that your performance requires improvement. For example, a student earning 13 of 15 possible points for a tRAT could see earned points drop to 8 out of the 15 possible points.

Grading Scale (The following grade scale is used across all courses)

> 92.5%	A
89.5-92.4%	A-
86.5-89.4%	B+
82.5-86.4%	B
79.5-82.4%	B-
76.5-79.4%	C+
72.5-76.4%	C

69.5-72.4%	C-
66.5-69.4%	D+
62.5-66.4%	D
59.5-62.4%	D-
< 59.4%	E

Rounding of grades: Final grades in Canvas will be rounded to the 2nd decimal place. If the decimal is X.495 or higher, Canvas will round the grade to X.50. The above scale depicts this policy and grades are determined accordingly. Grade assignment is made using this policy and no exceptions will be made in situations where a student's grade is "close."

Educational Technology Use

The following technology below will be used during the course and the student must have the appropriate technology and software. **Appendix A** outlines who to contact if you have questions about technology.

1. ExamSoft®
2. Canvas® Learning Management System

Policies

Policies Across All 1PD-3PD courses:

Class Attendance & Excused/Unexcused Absences

Attendance and punctuality are expected of pharmacists in practice since they are essential elements in maintaining quality patient care, including patient safety. The Pharm.D. program has firm policies about attendance in order to instill good habits that will be needed in practice, and also because class participation is essential for developing the knowledge, skills, and attitudes essential for success as a pharmacist. Class attendance is mandatory for active learning sessions such as problem-solving sessions, case discussions, laboratory sessions, and other activities that the instructor designates as required attendance. Similar to the employment expectations in pharmacy practice, **tardiness and unexcused absences are not tolerated.**

Student attendance may be excused in the following situations: serious illness (3 or more consecutive days requires a health care provider note/documentation), serious family emergencies, military obligation, severe weather conditions, religious holidays, and other reasons of that are of a serious nature or unexpected. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) **will be** excused. The Pharm.D. calendar allows for participation in special curricular requirements (e.g., professional meetings). For unusual situations (e.g., wedding that was planned before admission), the student is expected to have already informed the Office of Student Affairs.

Students who have an infectious illness that is in the contagious phase should not come to class. This is an excused illness. The grade book will show EX or excused for the grade of a missed quiz or iRAT and the course grade will be computed without consideration of these missing points unless a makeup is assigned. If the instructor assigns a makeup assignment, the EX grade will be replaced with the grade earned on the makeup assignment.

Both excused and unexcused absences are tracked across the curriculum. Students with repeated absences may be requested to provide a higher level of documentation and the course leader will include the Associate Dean for Student Affairs in addressing the issue.

Requests for Excused Absence

A request for an excused absence must be communicated prior to the class session by email. The email format below must be used for all communications about absences. The email must be addressed to absent2PD@cop.ufl.edu. This message will be received by the Academic Coordinator, distant campus, and Education Coordinator. The Academic Coordinator will communicate the information to the Teaching Partnership Leader/Course Director. If email is not possible, the student should call the Academic Coordinator (see phone number in syllabus). The Academic Coordinator will coordinate all communications about the absence request and therefore, serve as the point of contact about decisions and other information. Students are encouraged to call the Academic Coordinator for assistance with excused absences.

The following format is recommended:

To: absent2PD@cop.ufl.edu
Subject: PHA XXXX – Excused Absence request
Dear _____,
Professionally and politely request an excused absence.
Explain the nature of conflict and rationale for receiving an excused absence.
Thank the faculty/staff member for their consideration of your special request.
Salutation,
Type in your full name and last 4 digits of UF-ID #, and Campus Name

on will be exempted in situations where there was an emergency situation such as an accident or similar serious situation.

A request for an "excused absence" does not guarantee acceptance. No precedence can be drawn from any courses in the College of Pharmacy or any other college within University of Florida.

The student is responsible for follow up and confirming whether the absence is excused or unexcused.

Make-Up Assignments

Makeup assignment(s) may be provided for any excused absence(s). Due to the block curriculum model, students are encouraged to complete the make up ***within one-week of the missed session(s)***. If the situation leads to missing multiple class sessions and makeup by end of the course becomes difficult, the student and Teaching Partnership Leader/Course Director will meet with the Associate Dean of Student Affairs to develop options such as a makeup/remediation plan or course withdrawal. The time period for this make up will be consistent with the UF attendance policies.

Please refer to the University Attendance Policy at
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Professionalism Assessments

Professionalism is an educational outcome of the Pharm.D. program and therefore, is continually assessed. Professional behaviors and attitudes are evaluated at each annual milestone to determine progression and eventual readiness for graduation.

Unprofessional behaviors and attitudes will result in a deduction of points in the overall course grade in which the event occurred. **Unexcused absences are considered to be unprofessional behavior**. Other forms of unprofessional behavior include: lateness to class resulting in missing the start of the application exercises/discussions unless permitted by instructor; classroom behaviors that are distracting or disruptive to others; use of cell/smart phones during class; reading emails/messages; use of social media; leaving class early without informing the faculty or staff member; disrespectful behaviors toward faculty, staff, or other students; and inappropriate discussion board or social media postings. For incidents of lateness to class, an assessment will be made about the seriousness of the tardiness, and this will be used to determine the course of action. Nonadherence to the dress code policy is also considered unprofessional behavior. Students who do not comply with the dress code will be assessed as unprofessional and also asked to leave class as noted in the dress code policy.

Across the academic year, unprofessional behaviors will be tracked across all courses. Each offense will result in a grade deduction in the course in which the unprofessional behavior occurred. The maximum grade deduction that will be applied to each course is **5% from the final course percentage grade**. Repeated unprofessional behaviors will also be evaluated as an end of year milestone, and can negatively impact curricular progression.

Quiz & iRAT/tRAT Policies

1. Students must bring their laptop or tablet to class in order to participate in the quiz/iRAT/tRAT.
2. All quizzes/iRATs/tRATs are closed book unless otherwise noted by the instructor.
3. At the start of the quiz/iRAT, the access code will be provided. Students who miss getting the access code because they were late will not be allowed to take the quiz/iRAT and a grade of zero will be assigned unless there is an excused absence.
4. When a student completes a quiz/readiness-assessment test (RAT), they **must close their laptop or turn over their tablet** to indicate they are finished with the assessment. These devices should not be used until the instructor has announced that the quiz/RATs have ended.
5. Students who miss the iRAT may take the tRAT if they are in class at the start of the tRAT. (The Academic or Education Coordinator will assess the time of arrival and indicate to students who enter the classroom late whether they can join their team and participate in the tRAT.)
6. Students may not leave the room during the iRAT and tRAT.
7. All students must remain quiet during the iRATs and as other team are completing the tRATs .
8. For tRATs, a team may appeal the answer to a question to the instructor after the active learning session within 24 hrs. The appeal must be evidence-based and in writing. Such an appeal process is not applicable to quizzes, iRATs, and exams.

Exam Policy

During any Exam:

1. Students must wait outside the testing room until the proctor enters.
2. The following items are not allowed to be accessed during the exam: cell phones, other electronic or digital devices including smart watches, pagers, photographic devices, and recording devices. Any watches must be placed on the top of the desk for proctor review.
3. All backpacks, purses or other bags should be kept away from the student's designated testing space and must not be accessed during the exam. Nonessential materials are NOT allowed at the student's desk during examination periods. Please leave all nonessential materials outside of or in the front of the examination room.
4. <u>Students must arrive and be seated promptly</u> to be eligible to take the exam. <u>To maintain exam security, students who arrive late for the exam will not be allowed to start the exam if they are more</u>

than 30 minutes late or if another student has left the room after seeing the exam. Students who have valid reasons for arriving late at the exam may request a makeup exam as outlined below.

5. There must be no talking or other disruptive behavior during the distribution or taking of the exam.
6. Calculators must meet the following requirements: Only nonprogrammable calculators are allowed unless the course has a specific policy.
9. If you encounter calculator problems (e.g., dead battery), contact the Proctor.
10. Other exam rules may be instituted during the progression of the course.
11. Once the exam commences, students may not leave the room without first turning in the exam. Once the exam is turned in, the examination period for the student is considered complete and the student must leave the examination room.
12. If there is urgent need to use the restroom, the Proctor will provide guidance.

Failure to follow exam rules may be considered as evidence of academic dishonesty.

After an Exam

Policy across All 1PD-3PD courses where ExamSoft is used:

1. Students are required to upload the encrypted exam file within 24 hours of completing the exam to the SofTest website.
    a. If the encrypted file is not uploaded within 24 hours, the student's exam score will be reduced by 10%.
2. Graded exam appeals
    a. There are no exam appeals except in instances where the student deems there is a possible grading/grade calculation error. Following release of the exam grades, the student has 3 business days to contact the Teaching Partner and Academic Coordinator to clarify questions and appeal any possible grading errors.

Make-up Quiz/iRAT/tRAT/Exam Policy

Policy across All 1PD-3PD courses:

Makeup exams are given only under special circumstances and only for excused absences. (The policies related to requesting an excused absence also apply to makeup requests for quizzes/iRATs and exams.) If the student is unable to take a scheduled assessment, the Teaching Partnership Leader/Course Director and Academic Coordinator must be notified before the assessment or if it is an emergency situation, as soon as possible. The instructor will arrange an alternate deadline for the assessment consistent with the University examination policies.

The questions on the makeup assessment may be in the form of essay, short answer, or multiple-choice and will be the same level of difficulty as the assessment administered during the scheduled time. With the exception of highly extenuating circumstances, failure to follow the prescribed procedures or failure to be present for the make-up assessment will result in a grade of zero for that exam. No precedence can be drawn from any courses in the College of Pharmacy or any other college within University of Florida.

Course-Specific Class Policies

Enter Course-Specific Policies Here

General College of Pharmacy Course Policies

The following policies apply to all courses in the College of Pharmacy and are available on the COP website:

University Grading Policies

Please visit the following URL to understand how the University uses the course grade to compute your overall GPA: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Concerns, Appeals, and Complaints

Students who have concerns about their evaluation of performance and/or student-faculty relations should review the Student-Faculty Handbook for guidance. The Student-Faculty Handbook also outlines the chain of command for any appeals and/or complaints.

Academic Integrity Policy

Students are expected to act in accordance with the University of Florida policy on academic integrity (http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php). This Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the course's Teaching Partnership Leader/Course Director.

Students are also expected to abide by the UF Honor Code.

The following is the UF Honor Pledge: *We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor Code.*

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

Psychomotor and Learning Expectations

Psychomotor expectations relate to the ability to meet the physical demands of the pharmacy curriculum. Physically impaired students and students with learning disabilities such as hearing impairment, visual impairment, dyslexia or other specific learning disabilities such as sensory deficit or sensory-motor coordination problems should cooperate with the faculty and staff in addressing these circumstances in order to meet academic standards.

How to Request Learning Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered with the Disability Resource Center, students will receive an accommodation letter which must be presented to both the instructor and academic coordinator to utilize classroom accommodations. Students registered with the Disability Resource Center who are requesting clinical accommodations for

rotations or clinical experiences should contact their Learning Specialist in the Disability Resource Center. Students with disabilities should follow this procedure as early as possible in the semester.

Additionally, students at all College of Pharmacy campuses are expected to provide a copy of the accommodation letter of the Office of Student Affairs by email (carswell@cop.ufl.edu), fax (352-273-6219) or in person at G235 (Student Services Suite) of the Health Professions, Nursing and Pharmacy Building since some learning activities, exams, and assessments require additional assistance. The College of Pharmacy highly encourages that this procedure be completed before each course begins. Being proactive in this process will ensure that accommodations are in place for each student's learning activities, exams, and assessments because grades cannot be retroactively changed.

Faculty and Course Evaluations

Students are expected to provide feedback on the quality of instruction in every course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu . Evaluations are typically open around mid-semester and need to be completed by the established deadline. Summary results of these assessments are available to students at https://evaluations.ufl.edu .

Computer and Other Technology Requirements

Students are required to meet the following computer and technology requirements:
http://pharmacy.ufl.edu/education/student-affairs/admissions/student-computer-requirements/

ExamSoft® is used for administration of exams and students are required to follow the procedures that are established for exam administration. Students must bring a laptop to class to complete exams and this laptop must meet the computer and technology requirements established by the College. Students must also complete mock exams prior to the actual exam to assure that all computer features are supported by ExamSoft®.

Expectations in Class and Other Learning Activities

Students are expected to:

- Be diligent and timely in studying the course material.
- Be on time for class sessions, quizzes, and exams.
- Be prepared for group discussions and conference calls.
- Do your own work.
- Actively collaborate with peers when assigned to groups.
- Inform the Academic Coordinator about an absence from an exam or other assigned class activity at least 24 hours prior to the event.
- Dress appropriately for class sessions or clinically related activities.
- Turn off cell phones and other electronic communication devices during a class session or phone conference.
- Be quiet during class sessions including peer presentations.
- Be focused and avoid distractive behaviors in class.
- Appropriately use the computer in class, i.e., do not be looking at unrelated information on the web site during class.
- Participate in class or group discussions.
- Raise one's hand to be recognized before making a comment during a class session.

- Be respectful to the teacher.
- Be respectful to fellow students in discussions.
- Be courteous, respectful, and civil when using discussion boards.
- Focus on the course learning activities; it is not respectful to study for other coursework during the class session.
- Address faculty with the appropriate title and name, i.e., Dr. (last name) or Professor (last name).
- Address concerns about performance or course material directly with the Teaching Partnership Leader/Course Director.
- Seek assistance with academic or personal difficulties as soon as possible.

Communications

Course-related Communications

Students with questions about course content should post questions on the discussion board. As noted in the attendance policy, communications about class attendance/absence should be emailed to absent2PD@cop.ufl.edu . The student may email the course leader for any other needs that are personal in nature (e.g., request for accommodations, personal issues such as illness, emergencies).

Faculty member Response Time:

1. The course faculty will work to respond to discussion board postings and email communications within 24 hours of the posting between Monday and Friday 12N. Responses on weekends and holidays will be sporadic. (On weekends when assignments are due, students are advised to post questions before 12 Noon on Friday.)

Email Communications:

1. When communicating with faculty via email, the subject line needs to include the course number & title.
2. At the end of the email, in addition to listing your name, list your academic year and campus/site.

Discussion Board Policy

The purpose of the discussion board is to provide a venue for you to enhance your learning. This is accomplished by having a thread for each module where you can post questions to the course faculty. (A thread is a single link that is devoted to a topic.) The discussion board is also a place where your instructors may post virtual cases for you to work up.

Such interaction on the discussion boards with the instructors will allow you to clarify your questions and apply what you are learning in other parts of the course. The goal of these discussions is to help you learn.

Student Netiquette on the Discussion Board:

1. Post your comment on the correct discussion thread. If you have a question about A1 (Unit A - Module 1), post it in the discussion thread for A1 and not the B1 thread.
2. The discussion board is not a place to complain. Complaints should instead be directed directly to the Teaching Partnership Leader/Course Director via a professional email. This allows the Teaching Partnership Leader/Course Director to quickly address your concern without causing distraction to other students who have limited time and want to focus on learning.
3. Use "netiquette." If you have never learned "netiquette" - please visit the following URL:

http://www.albion.com/netiquette/corerules.html If you follow the rules of netiquette described in this URL, you will avoid posting an embarrassing or inappropriate comment.

4. The discussion board has been designed to allow you a place to ask further questions on the material to clarify any confusion, gain a deeper understanding of the material, or ask general course questions. A question you might see on a discussion board is "What do I need to study for the exam?" Please reflect on how this question can be perceived by your lecturing faculty as well as your fellow classmates. Rewording the question to address a specific topic would be more appropriate. For example, "Dr. XX, you listed numerous side effects for drug XX on slide XX. Of those, what are the most relevant that we could expect to occur and monitor for in clinical practice." The type of material that is covered in these classes is material that is important for patient care. All of this material is important. There are variations in courses, but please make use of your syllabus since there might be guidance on how to prepare for various exams in your classes.
5. In most situations, lectures are released as planned by the Teaching Partnership Leader/Course Director. Clarifying at the beginning of a semester on the planned release date/time, if not posted in the syllabus, is appropriate. Continual posts on the discussion board on weekly basis can become overwhelming for the course coordinator as well as your fellow students.

Question/Answer sessions in live class sessions:
Time is usually reserved at the end of the class for questions regarding the material to clear up any confusion or expand on material covered in the particular section. This is a valuable time for all students and since time is limited, the questions should focus on the topics at hand. Questions such as, "What material will be covered on an upcoming exam?" or, "Do we need to know dosing for the exam?" are inappropriate during this time period. In our profession, all material is important. However, if this question does need to be asked, please consider using the discussion board to clarify any specific exam questions.

Student Complaint Process

Concerns about the course (e.g., course requirements, quizzes, exams) should first be discussed with the appropriate course instructor and the Teaching Partnership Leader/Course Director. If a satisfactory resolution is not achieved, the student may appeal to the Associate Dean for Curricular Affairs and Accreditation who will also engage other individuals depending on the request (e.g., campus dean, department chair, Associate Dean for Student Affairs). If the student finds the decision unsatisfactory, the student may appeal to the Dean of the College of Pharmacy. If this decision is unsatisfactory, the student may appeal to the Ombuds office:
(https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf).

Religious Holidays

Please see the University policy on attendance and religious holidays:
http://www.registrar.ufl.edu/catalog/policies/regulationattendance.html#religious.

Counseling and Wellness Center

Students who are experiencing issues and events that could adversely affect academic performance and personal health should be encouraged to meet with the Teaching Partnership Leader/Course Director or Associate Dean for Student Affairs for guidance. Students in the Gainesville area may contact the UF Counseling and Wellness Center for Gainesville students (352-392-1575;

http://www.counseling.ufl.edu). Students outside the Gainesville area may obtain similar contact information from the campus/program administrator.

Emergencies

Call the University Police Department for emergencies: 392-1111 or 9-1-1

Student Crisis

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Students who are experiencing issues and events are also encouraged to contact their local crisis center. For Alachua County the Crisis Center number is 352-264-6789; for Jacksonville and Duval County 904-632-0600 and toll free for Northeast Florida at 1-800-346-6185; and for Orlando 407-425-2624.
The following national call numbers are also available for students who reside outside of the main COP campuses: a) 1-800-273-8255, and b) 1-800-784-2433.

How to Access Services for Student Success

Students who need guidance for course success or who are having academic difficulty should contact the Teaching Partnership Leader/Course Director. In addition, students are encouraged to contact their advisor or Campus Director/Associate Dean for Student Affairs for assistance.

Faculty Lectures/Presentations Download Policy

Photography, audio-visual recording, and transmission/distribution of classroom lectures and discussions is prohibited unless there is expressed written permission. Recorded lectures and class sessions are authorized solely for the purpose of individual or group study with other UF College of Pharmacy students enrolled in the same class. Such recordings may not be reproduced, shared, or uploaded to publicly accessible web environments. Students who do not adhere to this policy will be considered to be breeching COP copyrights and/or FERPA law.

Appendix A. Faculty and Staff: Who to Contact

Academic Coordinator/Education Coordinator:

- Issues related to course policies (absences, make up exams, missed attendance)
- Absence requests (Only the Academic Coordinator handles absence requests)
- Questions about dates, deadlines, meeting place
- Availability of handouts and other course materials
- Assignment directions
- Questions about grade entries gradebook (missing grades, wrong grade)
- Assistance with ExamSoft® (Distant campus students may contact Education Coordinator for use of SofTest and assistance during exams. The Academic Coordinator is the contact person for issues related to grading and posting of ExamSoft grades.)

Teaching Partnership Leaders/Course Directors

- Questions about grades
- Concerns about performance
- Guidance when there are performance problems (failing grades)
- General questions about content

Other Teaching Partnership Faculty Members

- Questions about specific content

Technical Support:

For technical support related to eLearning, educational videos, mobile learning tools and other course-related issues, contact **College of Pharmacy Educational Technology Support** at:

- Gainesville Office Hours: HPNP Rm. 4309 or 4312, Monday – Friday, 8:30 am to 4:30 pm
- E-mail: edu-help@ahc.ufl.edu
- Phone: 352-273-9492

Contact the **University of Florida Computing Help Desk** for issues related to Gatorlink accounts, UF e-mail, ONE.UF, myUFL and other centralized UF systems, contact UF Computing Help Desk at:

- Website: https://my.it.ufl.edu/CherwellPortal/UFITServicePortal
- E-mail: helpdesk@ufl.edu
- Help Wiki: https://wiki.helpdesk.ufl.edu/
- Phone: (352) 392-4357

Appendix B. Teaching Partners

Name	Email	Phone
Jane Aldrich, Ph.D.	JAldrich@cop.ufl.edu	352-273-8708
William (Bill) Allen, J.D, M.Div.	wmallen@ufl.edu	352-273-5155
Sihem Bihorel, Ph.D., Pharm.D., M.S.	sihem.bihorel@ufl.edu	407-313-7037
Larisa Cavallari, Pharm.D.	LCavallari@cop.ufl.edu	352-273-8245
Stacey Curtis, Pharm.D.	SCurtis@cop.ufl.edu	352-273-6228
Rhonda DeHoff, Pharm.D., M.S.	Dehoff@cop.ufl.edu	352-273-6184
Yousong Ding, Ph.D.	yding@cop.ufl.edu	352-273-7742
Lori Dupree, Pharm.D.	ldupree@cop.ufl.edu	904-244-9590
Michelle Farland, Pharm.D.	mfarland@cop.ufl.edu	352-273-6293
Charles Frazier, Ph.D.	frazier@cop.ufl.edu	352-273-7686
Guenther Hochhaus, Ph.D.	hochhaus@cop.ufl.edu	352-273-7861
Robert Huigens, Ph.D.	RHuigens@cop.ufl.edu	352-273-7718
Jackie Jourjy, Pharm.D.	JJourjy@cop.ufl.edu	407-313-7006
Maureen Keller-Wood, Ph.D.	kellerwd@cop.ufl.edu	352-273-7687
Denise Klinker, Pharm.D.	DKlinker@cop.ufl.edu	352-273-6227
Eric Krause, Ph.D.	EKrause@cop.ufl.edu	352-273-6977
Caitrin McDonough, Ph.D.	cmcdonough@cop.ufl.edu	352-273-6435
Shannon Miller, Pharm.D.	SMiller@cop.ufl.edu	407-313-7031
Carol Motycka, Pharm.D.	Motycka@cop.ufl.edu	904-244-9590
Robert Navarro, Pharm.D.	RNavarro@cop.ufl.edu	352-273-5526
Priti Patel, Pharm.D.	PPatel@cop.ufl.edu	727-394-6213
Charles Peloquin, Pharm.D.	peloquin@cop.ufl.edu	352-273-6266
Teresa Roane, Pharm.D.	TRoane@cop.ufl.edu	352-273-9692
Karen Sando, Pharm.D.	KSando@cop.ufl.edu	352-273-6224
Anzeela Schentrup, Pharm.D., Ph.D.	schena@shands.ufl.edu	352-265-8309
Richard Segal	segal@ufl.edu	352-273-6265
Katie Vogel Anderson, Pharm.D.	kvanderson@cop.ufl.edu	352-273-6413
Stacy Voils, Pharm.D., M.S.	SVoils@cop.ufl.edu	352-294-5276
Yu-Jung (Jenny) Wei, Ph.D.	jenny.wei@cop.ufl.edu	352-294-5340

Appendix C. Student Guide for Case Studies

Students are accountable for recalling and applying content learned in all prior courses.

Case studies will also require application of one or more of the following Transcending Concepts:

☐ Evidence-based practice	☐ Informatics	☐ Problem solving
☐ Social considerations	☐ Behavioral considerations	☐ Communications
☐ Law and ethics	☐ Health-wellness	☐ Drug delivery systems
☐ Pharmacokinetics	☐ Personalized medicine	☐ Special populations
☐ Self-care	☐ Interprofessional collaboration	☐ Medication safety
☐ Pharmacoeconomics	☐ Population-based care	

COLLECT *(SO: Subjective and Objective Data)*

Students/teams must be able to gather subjective and objective information about the patient in order to understand the relevant medical and medication history and clinical status of the patient. Data are collected by simulated patient interview, medical record review, pharmacy profile review, and/or communication with other members of the healthcare team. Physiological, psychological, and sociological variables are expected to be considered.

1. Patient Name:
2. Main Disease Focus:
3. Type of Encounter/Setting [new patient, established, ED, hospital, clinic, refill, etc]:
4. Opening Statement from the Patient:
5. If patient is “unavailable” identify who represents the patient:
6. Age:
7. Gender:
8. Marital Status:
9. Height/Weight:
10. Socioeconomic Status:
11. Language:
12. Appearance:
13. Dress:
14. Other Family Members:
15. Patient History [What has been happening?]:
16. Chief Complaint(s):
17. Symptoms:

18. Characteristics:
19. History/Onset/Acuity/Severity/Progression/Location/Aggravating Factors/Relieving Factors:
20. Actual/Feasible Diagnoses:
21. Current Medical Problems:
22. Relevant Past Medical History:
23. Medication List [Name, strength, dose, interval, duration, indication [if known], persistence, adherence]:
    a. -From Patient
    b. -From Pharmacies
    c. -From Primary Care Physician
    d. -From Specialty Physicians/Hospitalization/ED/Clinic
    e. -Nonprescription
    f. -Dietary Supplements
24. Reasons for nonpersistence or adherence:
25. Information that the patient gives about their medications:
26. Immunization History:
27. Smoking History:
28. Alcohol Use/History:
29. Caffeine Intake:
30. Illicit Drug Use:
31. Sleep Habits:
32. Pertinent Laboratory Findings:
33. Pertinent Vital Signs:
34. Pertinent Physical Exam Findings:
35. Other Diagnostic Tests:
36. Allergies [include rationale]:
37. Intolerance [include history]:
38. Patient's Affect:
39. Patient's Attitude/Agenda:
40. Patient Mannerisms/Nonverbal Behaviors:

Students/teams will also be expected to ask questions during case discussions or simulated patient encounters to gather information not readily available in the chart/written case document.

ASSESS *(A: Assessment; Ask Clinical Questions; Acquire the Best Evidence; and Appraise)*

Students/teams will be expected to assess the information collected and the clinical effects of the patient's therapy in the context of the patient's overall health goals in order to identify and prioritize problems and achieve optimal care.

1. This evaluation will require:
    i. understanding, explaining, and assessing the patient's health status;
    ii. interpretation of physical and patient assessments;
    iii. assessment of each medication for appropriateness, effectiveness, safety, economics, persistence, and adherence;
    iv. assessment of health and functional status, risk factors, health data, cultural factors, health literacy, access to medications, and other aspects of care;
    v. assessment of immunization status and need for preventative care;
    vi. integration of knowledge, clinical experience, and patient data to formulate and test hypotheses about the etiology of medication-related problems; and,
    vii. identification of potential and actual medication-related problems.

Students/teams will also be expected to accomplish the following:

1. Outline a list of Drug-related Problems.
2. Explain Each Basic Science Concept Emphasized:
    a. **Pathophysiology:**
        i. Describe the pathophysiology of disease state(s) and identify appropriate drug targets (cellular/molecular), biochemical processes, and organ changes for therapeutic intervention.
        ii. Specifically, for a given disease state: describe the basic pathophysiology of the disease including an explanation of the abnormal processes and the resulting disease signs and symptoms; outline risk factors and/or diagnostic indicators (e.g., lab values, diagnostic test results); and, determine classes of drugs that will treat the disease state and ameliorate the underlying pathophysiology and signs/symptoms.
    b. **Pharmacology:**
        i. Compare and contrast the therapeutic and adverse effects of drug classes that are appropriate for treating the disease state.
        ii. Describe major pathways for metabolism and the pharmacological consequences of metabolism.
        iii. Identify the most common/serious drug interactions and adverse effects. Identify important precautions and contraindications.
        iv. Compare and contrast the therapeutic and adverse effects of drugs within a given class.
        v. Discuss significant pharmacodynamic considerations.

c. **Medicinal Chemistry:**
    i. Apply knowledge about structure-activity relationships and cellular/molecular mechanisms of action to identify drug classes that are appropriate for treatment of the disease state.
    ii. Specifically, for each drug class: Identify the relevant therapeutic targets and explain the mechanism(s) of action.
d. **Pharmaceutics:**
    i. Recommend any unique storage, handling, or use requirements to ensure patient safety and clinical efficacy.
    ii. Discuss significant pharmacokinetic considerations (e.g., effect of food of absorption, influence of route of administration on onset, dose, elimination, etc).

3. Explain Each Transcending Concept Emphasized in this Case:
4. Discuss Drug Information Questions/PICOT Statements Relevant to this Case and accurate/complete responses for each question:
    a. Patient-Population-Problem/Intervention/Comparison/Outcomes/Time Frame
5. Summarize the Best Evidence for Each Problem/Question:
    a. -Search Strategy
    b. -Guidelines
    c. -Landmark Clinical Trials
    d. -Best Available Evidence [with Limitations]
6. Identify important Literature Appraisal Issues.

PLAN *(P: Plan)*

Students/teams will be expected to develop an individualized **patient-centered** care plan in collaboration with the patient [and/or their caregiver], other healthcare professionals, and other interested parties.

1. Specific and General Therapeutic Goals
    a. Consider clinical outcomes in the context of the patient's overall health and access to care
2. Therapeutic Plan
    a. Develop an individualized patient-centered plan in collaboration with the patient, caregiver, in collaboration with other healthcare professionals, and other interested parties.
        i. Therapeutic Alternatives: Evaluate alternatives for the patient before establishing the plan
        ii. Develop the Therapeutic Plan:

1. Address medication-related problems and optimizes therapy considering the goals and desires of the patient;
2. application of established guidelines, evidence-based medicine, and population-based treatment plans;
3. accurate and patient-specific dosing (including dosage adjustment for renal/hepatic dysfunction, starting dose, maximum doses, timing of doses, effects of food on absorption, route of administration, and pharmacokinetic design for narrow therapeutic index drugs;
4. parameters for monitoring response and frequency of monitoring;
5. parameters for monitoring adverse effects and frequency of monitoring;
6. plan for patient counseling/education;
7. plan for patient counseling/education; and
8. Considerations for care continuity, including follow-up and transitions of care as appropriate.

3. Patient/Caregiver Engagement: Involve the patient through education, empowerment, and self-management

IMPLEMENT *(Apply)*

Students/teams will be expected to implement the care plan in a simulated situation that requires collaboration with the patient/caregiver, other healthcare professionals, and other interested parties.

1. When implementing the care plan, the following are to be accomplished:
    a. medication and health-related problems are addressed;
    b. preventative care including vaccine administration are provided;
    c. medication therapy is initiated, modified, discontinued, or administered as authorized;
    d. education and self-management training is provided to the patient/caregiver;
    e. refers and provides transitions of care as needed;
    f. barriers are identified and addressed, when possible; and, schedules follow-up care as needed to achieve goals of therapy.

FOLLOW-UP, MONITOR, & EVALUATE

Students/teams are expected to monitor and evaluate the effectiveness of their care plan and modify the plan in collaboration with other health care professionals and the patient/care giver.

1. The following are continually monitored and evaluated:
    a. medication appropriateness, effectiveness, and safety and patient adherence through available data, biometric test results and patient feedback;
    b. clinical endpoints that contribute to the patient's overall health; and, outcomes of care, including progress toward or achievement of goals.
2. Specific Recommendations for Follow-up and Monitoring
3. List of Quality Improvement Outcomes

a. Process Measures
b. Clinical Outcomes

COLLABORATE

Students/teams will be expected to role play collaborating with patients, caregivers, other healthcare providers, and interested parties when taking care of patients.

COMMUNICATE

Student/teams will be expected to succinctly communicate with patients/caregivers, other healthcare team members, and other interested parties (policy makers, employers, insurance companies, payers) throughout the patient care process.

Examples of typical communications are:

1. Important Communication Points and Methods for Data Collection
2. Important Communication Points for Assessment
3. Collaborate with Team Members: Specific therapeutic approaches for individual patients based on scientifically and logically validated assessment of the patient's health care needs and an ethical consideration of the patient's health care goals and desires
4. Communicate the Assessment and Plan via Face-to-face, Telephone, and/or Written documentation
5. Communicate Benefits, Risks, Economics, & Other Factors to:
    a. Patient/Family
    b. Prescribers
    c. Policy Makers
    d. Payers (Insurance Companies, PBMs, Employers, and/or Hospitals)

DOCUMENT

Students/teams will be expected to create written patient care notes (SOAP notes, intervention notes, consultation notes) using the standardized formats learned in prior classes and this course.

1. SOAP notes are expected to include the following elements
    a. Subjective
        i. Clear
        ii. Complete Pertinent Information
        iii. Only Pertinent Information
    b. Objective
        i. Verified Medication List
        ii. Clear
        iii. Complete Pertinent Information
        iv. Only Pertinent Information
    c. Assessment
        i. Complete and Prioritized List of Medication-related Problems

ii. Therapeutic Goals
    1. Alternatives are Accurately Presented
iii. Findings Synthesized with Enough Depth to Explain but are a Concise Assessment
iv. Clear Positions

d. Plan
    i. Pertinent Plan with Necessary Instructions
    ii. Balances Benefits, Risks, and Costs
    iii. Education and Follow-up is Collaborative and Considers Systems
    iv. Specific Monitoring Plan

2. Responses to Drug Information Questions in the PICOT Format with Summary of the Evidence
    a. Limitations of the Evidence Stated

Appendix D. Comprehensive Assessment of Team Member Effectiveness (CATME)

This web-based instrument collects data on team member effectiveness in five areas research has shown to be important.

1. Contributing to the team's work
2. Interacting with teammates
3. Keeping the team on track
4. Expecting quality
5. Having relevant knowledge skills and abilities.

The CATME Peer Evaluation instrument is a behaviorally anchored rating scale that describes behaviors typical of various levels of performance in each of the above five categories. Raters select the category of behaviors that most closely matches the behavior of each student on their team (including themselves). The CATME website shows the instrument and allows faculty and students to practice using the system by rating fictitious team members.

A special feature is helping professors understand what is happening in student teams. The system alerts faculty to exceptional conditions that are rating patterns that warrant attention.

- Low—a student who rates him/herself as ineffective and who also receives "ineffective" ratings by teammates.
- Overconfident—a student rated as "ineffective" by teammates but rates him/herself as much more effective.
- High—a student who is rated as highly effective according to both teammate and self ratings.
- Underconfident—a student rated as highly effective by teammates but who under-rates her/himself.
- Manipulator—a student who rates him/herself as highly effective and who rates teammates as ineffective in disagreement with teammates. Such a student may be trying to influence the distribution of grades unfairly.
- Conflict—a team in which there is considerable disagreement among the various raters about the effectiveness of an individual student.
- Clique—a team in which cliques appear to have formed. The ratings show that subsets of the team rate members of their subset high and members of other subsets low.

Some of these conditions have more than one explanation. A student flagged as a "manipulator" might actually have performed a disproportionately large amount of the work on the project even though they worked to engage their teammates in the process. Thus, an instructor's involvement and judgment are critical when exceptional conditions are flagged. Though the formal study of these exceptions has not been completed, faculty using the system have reported that both the clique and conflict conditions have accurately provided early warnings of those condition

Comprehensive Assessment of Team Member Effectiveness—Behaviorally Anchored Rating Scale (BARS) Version

	Your name					← Write the names of the people on your team including your own name. This self and peer evaluation asks about how you and each of your teammates contributed to the team during the time period you are evaluating. For each way of contributing, please read the behaviors that describe a "1", "3," and "5" rating. Then confidentially rate yourself and your teammates.
Contributing to the Team's Work	5	5	5	5	5	• Does more or higher-quality work than expected. • Makes important contributions that improve the team's work. • Helps to complete the work of teammates who are having difficulty.
	4	4	4	4	4	Demonstrates behaviors described in both 3 and 5.
	3	3	3	3	3	• Completes a fair share of the team's work with acceptable quality. • Keeps commitments and completes assignments on time. • Fills in for teammates when it is easy or important.
	2	2	2	2	2	Demonstrates behaviors described in both 1 and 3.
	1	1	1	1	1	• Does not do a fair share of the team's work. Delivers sloppy or incomplete work. • Misses deadlines. Is late, unprepared, or absent for team meetings. • Does not assist teammates. Quits if the work becomes difficult.
Interacting with Teammates	5	5	5	5	5	• Asks for and shows an interest in teammates' ideas and contributions. • Improves communication among teammates. Provides encouragement or enthusiasm to the team. • Asks teammates for feedback and uses their suggestions to improve.
	4	4	4	4	4	Demonstrates behaviors described in both 3 and 5.
	3	3	3	3	3	• Listens to teammates and respects their contributions. • Communicates clearly. Shares information with teammates. Participates fully in team activities. • Respects and responds to feedback from teammates.
	2	2	2	2	2	Demonstrates behaviors described in both 1 and 3.
	1	1	1	1	1	• Interrupts, ignores, bosses, or makes fun of teammates. • Takes actions that affect teammates without their input. Does not share information. • Complains, makes excuses, or does not interact with teammates. Accepts no help or advice.
Keeping the Team on Track	5	5	5	5	5	• Watches conditions affecting the team and monitors the team's progress. • Makes sure that teammates are making appropriate progress. • Gives teammates specific, timely, and constructive feedback.
	4	4	4	4	4	Demonstrates behaviors described in both 3 and 5.
	3	3	3	3	3	• Notices changes that influence the team's success. • Knows what everyone on the team should be doing and notices problems. • Alerts teammates or suggests solutions when the team's success is threatened.
	2	2	2	2	2	Demonstrates behaviors described in both 1 and 3.
	1	1	1	1	1	• Is unaware of whether the team is meeting its goals. • Does not pay attention to teammates' progress. • Avoids discussing team problems, even when they are obvious.
Expecting Quality	5	5	5	5	5	• Motivates the team to do excellent work. • Cares that the team does outstanding work, even if there is no additional reward. • Believes that the team can do excellent work.
	4	4	4	4	4	Demonstrates behaviors described in both 3 and 5.
	3	3	3	3	3	• Encourages the team to do good work that meets all requirements. • Wants the team to perform well enough to earn all available rewards. • Believes that the team can fully meet its responsibilities.
	2	2	2	2	2	Demonstrates behaviors described in both 1 and 3.
	1	1	1	1	1	• Satisfied even if the team does not meet assigned standards. • Wants the team to avoid work, even if it hurts the team. • Doubts that the team can meet its requirements.
Having Relevant Knowledge, Skills, and Abilities	5	5	5	5	5	• Demonstrates the knowledge, skills, and abilities to do excellent work. • Acquires new knowledge or skills to improve the team's performance. • Able to perform the role of any team member if necessary.
	4	4	4	4	4	Demonstrates behaviors described in both 3 and 5.
	3	3	3	3	3	• Has sufficient knowledge, skills, and abilities to contribute to the team's work. • Acquires knowledge or skills needed to meet requirements. • Able to perform some of the tasks normally done by other team members.
	2	2	2	2	2	Demonstrates behaviors described in both 1 and 3.
	1	1	1	1	1	• Missing basic qualifications needed to be a member of the team. • Unable or unwilling to develop knowledge or skills to contribute to the team. • Unable to perform any of the duties of other team members.

For further information on the design of the CATME Peer Evaluation instrument, research supporting its use, or to request an account, go to www.CATME.org. The instrument is copyrighted. CATME Peer Evaluation is part of the CATME SMARTER Teamwork system, which includes other team-support tools. The CATME online interface was developed by Deer Run Associates. This material is based upon work supported by NSF Awards 0243254 and 0817403.