Cystic Fibrosis Elective
PHAR 7232
Fall Semester 2020

Course Description
This course provides an in-depth review of cystic fibrosis (CF) evidence-based medicine.

Additional Course Information
Students will follow a progressive patient case from birth through adolescence and develop plans accordingly to address CF self-care, pharmacotherapy, pulmonary exacerbations, related complications, and common patient barriers to care.

Course Credit
2 credit hours

Pre-Requisites
PHAR 7481 and PHAR 7582

Class Meeting Days, Time & Location
Wednesday 2:00 pm – 5:00 pm *(every other week)*
W.T. Brookshire Hall - Room WTB 234

Course Coordinator
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Office hours: Friday 9:00 - 12:00 pm or by appointment
Preferred method of contact: Email

Fisch College of Pharmacy (FCOP) and UT Tyler Policies

Fisch College of Pharmacy (FCOP) and UT Tyler Policies

This is part 1 of the syllabus. Part 2 contains UT Tyler and the FCOP course policies and procedures and Part 3 contains policies specific to Fall 2020.
These are available as a PDF at https://www.uttyler.edu/pharmacy/academic-affairs/. For experiential courses (i.e., IPPE and/or APPE), the Experiential Manual contains additional policies and instructions that supplement the Syllabus Part 1 and 2. Please note, the experiential manual may contain policies with different deadlines and/or instructions. The manual should be followed in these cases.

Required Materials
Most course required materials are available through the Robert R. Muntz Library. These materials are available either online* (http://library.uttyler.edu/) or on reserve.

1. All materials will be posted to UT Tyler BlackBoard or available through AccessPharmacy*. The site address is: https://blackboard.uttyler.edu/webapps/login/.
2. Beringer P. Condren M. Chronic Illnesses IV and Pediatrics: Cystic Fibrosis. Pharmacotherapy Self-Assessment Program. 5th Edition. pg 181-204.
3. Borowitz D., et al. Cystic Fibrosis Foundation Evidence-Based Guidelines for Management of Infants with Cystic Fibrosis. J Pediatr. 2009;155:S73-93.
4. Flume P., et al. Airway Clearance Therapies. Respir Care. 2009;52(4):522-537.

5. Flume P., et al. Cystic Fibrosis Pulmonary Guidelines: Treatment of Pulmonary Exacerbations. Am J Respir Crit Care Med. 2009;180:802-808.
6. Senavides S. Approach to the Pediatric Prescription in a Community Pharmacy. J Pediatr Pharmacol Ther. 2011;16(4):298-307.
7. Yin HS, Parker RM, Sanders LM, et al. Liquid Medication Errors and Dosing Tools: A Randomized Controlled Experiment. Pediatrics. 2016;138(4):e20160357.
8. *Koren G. Special Aspects of Perinatal & Pediatric Pharmacology. In: Katzung BG, Trevor AJ. eds. Basic & Clinical Pharmacology, 13e. New York, NY: McGraw-Hill; 2015.
9. Wainwritght C, et al. Lumacaftor-Ivacaftor in Patients with Cystic Fibrosis Homozygous for Phe508del CFTR. N Engl J Med. 2015;373:220-31.
10. Nelson K. Sawicki G. Gilead Sciences. CF R.I.S.E. – Care Team Training Session. 2015. Available at: https://clinicalmicrosystem.org/wp-content/uploads/2014/11/CF-RISE-Training-Presentation-Final-v7.pdf. Accessed on September 16, 2016.
11. Mogayzel P., et al. Cystic Fibrosis Foundation Pulmonary Guidelines: Pharmacologic Approaches to Prevention and Eradication of Initial Pseudomonas aeruginosa. Infection. Ann Am Thorac Soc. 2014;11(10)1640-1650.
12. Yankaskas J, Marshall B, Sufian B, Simon R, Rodman D. Cystic Fibrosis Adult Care. CHEST 2004; 125:1S-39S.
13. **Other required materials will be posted on the classes' Canvas site. The site address is: uttyler.edu/canvas.**

Recommended Materials

The course recommended materials are available through Blackboard.

1. Brunzell C, Hardin D, Kogler A, Moran A, Schindler T. Managing Cystic Fibrosis-Related Diabetes: An Instructional Guide for Patients and Families. 6th Edition. Cystic Fibrosis Foundation. 2015.
2. Cystic Fibrosis Canada. Sexuality, Fertility, and Cystic Fibrosis for Adults. Toronto, Ontario M4P 2C9.

Course Format

The course may include, but are not limited to, the following activities:

1. Independent study of selected readings
2. Individual readiness assessment tests (iRATs)
3. Team-based learning, active learning strategies:
    a. Team readiness assessment tests (tRATs)
    b. Team application of content and concepts

Course Learning Outcomes (CLOs)

CLOs	Related PLO(s)	Assessment Methods	Grading Method	JCPP Skill(s) Assessed	AACP Std. 11 & 12
1. Describe the genetics, pathophysiology, and subsequent complications associated with CF utilizing jargon sensitive to health literacy.	7, 11, 15	BAT, CAT	ES	4	4
2. Explain the different types of pulmonary, gastrointestinal, hepatic, genetic, and endocrine CF therapies utilizing jargon sensitive to health literacy.	7, 11,15	BAT, CAT	ES, RUB	4	4
3. Select and continually reassess the best therapeutic options for treating pulmonary, gastrointestinal, hepatic, genetic, and endocrine	1, 2	BAT, CAT	ES	2, 3, 4, 5	4

	CF-related complications given a progressive patient case.					
4.	Determine the best medication formulation given a pediatric patients age and insurance.	8	BAT, CAT	ES	2,3, 4	4
5.	Select appropriate laboratory values for monitoring and how often they should be obtained for a patient with CF.	2	BAT, CAT	ES	5	4

Course Assessment Methods

	Assessment Method	Description
1	Final Exam Multiple Choice or Multiple Selection Question(s)	*Standard MCQ for Assessment 1 and Final Written exam*
2	Skills Assessment	*Oral practical for recommendation/counseling*

Grading Policy & Grade Calculation

Grades will be determined based on evaluation of individual and team readiness assessment tests (iRATs, tRATs), individual and team cumulative assessment tests (iCATs, tCATs), midterm examinations, final written examinations, skills assessments, graded application assignments, participation in team-based projects, peer evaluations and other assessment methods that may include Objective Structured Clinical Examinations (OSCE). Examinations, RATs and CATs may consist of multiple-choice, true/false, short-answer, essay, and problem-based questions.

During the time the course is in progress, students whose cumulative course percentage falls below 70.0% may receive an academic alert and be subject to periodic course content review in special sessions with the course instructor(s). The student's faculty advisor may receive an academic alert to act upon on the student's behalf.

All examinations, tests, and assignments, including the final examination, may be **cumulative.** Students are responsible for material presented during the prior courses. The grading scale for all graded material is below. The final course grade will be assigned according to the calculated percentage and the percentages will not be rounded upward or downward. For additional information, see examination/assessment policy below.

Standard Grade Calculation*

iRATs	10%
Assessment 1	25%
Final Written Exam	25%
Final Practical	25%
tRATs	5%
Team Applications	10%
Total	**100%**

** If the student's weighted average for the summative assessments (CATs/midterms/assessments/Final Exam) is < 70%, the weighted average corresponds to the respective letter grade and is the final course grade.*

A	90 - 100 %
B	80 - 89.99$\bar{9}$ %
C	70 - 79.99$\bar{9}$ %
D	65.0 - 69.99$\bar{9}$ %
F	< 65.0 %

PHAR 7232 Course Schedule Fall 2019

Week	Topic	Readings	CLO	WSOP Category
1 (8/26)	The Basics: - Pathophysiology and diagnosis of CF - Affected organ systems - Routine labs - Interviewing Complications: Gastrointestinal - Pancreatic insufficiency - Vitamin replacement	PSAP article Infant Guidelines	1, 2, 3, 5	S02.03, S18.01
2 (9/9)	Complications: Lungs - Airway clearance - Inhaled medications	PSAP article Infant guidelines Airway clearance guidelines	1, 2, 3, 5	S02.03, S18.01
3 (9/23)	Complications: Outpatient Exacerbation - Antibiotic selection - Pediatric dosing considerations	PSAP article Exacerbation guidelines Approach to the Peds Prescription Liquid Medication Errors and Dosing Tools Basic and Clinical Pharmacology- Chapter 59: Pediatric Dosage Forms and Compliance	1, 2, 3, 4, 5	S02.03, S18.01
4 (10/7)	***Assessment 1***	***Through Week 3***	1, 2, 3, 4, 5	S02.03, S18.01
5 (10/21)	Complications: Hepatic disease - Gene targeted therapy - CF Rise Program	PSAP article Ivacaftor/lumicaftor study CF Rise PowerPoint	1, 2, 3, 5	S02.03, S18.01
6 (11/4)	Complications: Pseudomonas Exacerbation - Antibiotic selection	Pseudomonas eradication guidelines CFRD guidelines	1, 2, 3, 5	S02.03
7 (11/18)	Complications: - Cystic Fibrosis-Related Diabetes - Women's Health	CFRD guidelines Women's Health reading	1, 2, 3, 5	S02.03
8 (12/2)	Final Assessments: - Written exam - Practical exam	All readings	1, 2, 3, 4, 5	S02.03, S18.01

Please note that dates, topics, and assignments are subject to change. In the event of a change, you will be given ample notification of the change.