Pharmacy Student Fundamentals of Compounding
ONLINE COURSE + LAB

SYLLABUS | Spring 2023 | Online Portion Begins February 13

Course Description

Fundamentals of Compounding is comprised of two separate parts: 1) an online component that contains approximately 4-6 hours of didactic work per week and 2) an Advanced Compounding Lab that contains two 8-hour days focused on hands-on learning. Pharmacy students may choose to take the online component individually or in combination with the lab.

The online course trains students in the more challenging aspects of pharmaceutical compounding. Materials cover the interrelationships between the physical and chemical aspects of compounding, the acceptable techniques of preparing individual prescriptions, as well as the regulatory guidelines available governing this practice. Students will also participate in live virtual discussions to uncover the importance of pharmaceutical compounding in healthcare today. Participation will facilitate the generation of a learning community among online facilitators and peers. Students choosing to take the Advanced Compounding Lab will reinforce their entire learning experience through hands-on laboratory exercises.

Requirements

Current enrollment in an accredited College/School of Pharmacy.

Required Textbook

Applied Pharmaceutics in Contemporary Compounding, 4th edition. Robert Shrewsbury, Morton Publishing, Englewood, CO, 2020. (electronic or hard copy)

Online Course Learning Objectives

At the completion of the course, the student will be able to:

1. Recognize current regulations and USP chapters that affect pharmaceutical compounding.
2. Analyze published articles which highlight different aspects of compounding in the practice setting.
3. Participate in live virtual discussions to explore current compounding topics.
4. Discuss compounding practices, quality control measures and stability parameters of various dosage forms.
5. Assess components of pharmacy ownership, including junior partnership and financial considerations.

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Online Course Outline

- Module 1: So, You Want To Compound, Do You?
- Module 2: Quality & Drug Product Stability
- Module 3: Solutions and Flavorings
- Module 4: Dispersions
- Module 5: The Semisolids (Ointments & Pastes: The Dermatologicals)
- Module 6: Semisolids Formulated with a Mold (Lozenges, Medication Sticks, Suppositories)
- Module 7: The Solids (Powders and Capsules)
- Module 8: The Solids (Tablets and Modified Release Systems)
- Module 9: Dosage Forms for Eyes, Ears and Nose
- Module 10: Evaluating the Work & Business Aspects

Module Content

- **Assigned readings:** From the textbook, journal articles and provided materials
- **Quizzes:** Multiple choice and true/false questions based on the textbook (completed online)
- **Assignments:** Multiple choice and true/false questions based on journal articles (completed online)

Hands-on Laboratory Component

- The Advanced Compounding Lab will be conducted at the PCCA facility in Houston, Texas. The laboratory will consist of a two-day, hands-on experience (total of 16 hours) that investigates the interrelationship between pharmaceutics principles and compounded formulations.
- Introductory Compounding Boot Camp is a prerequisite for attendance at the Advanced Compounding Lab. Students enrolled in Fundamentals of Compounding will be provided an opportunity to register for Boot Camp at a discounted price.

Course Grade

Quizzes	25%	Weeks 1-10
Assignments	25%	Weeks 1-10
Live Virtual Discussions	10%	Tuesday, February 21, 2023 (7:00 PM-7:30 PM CT) – 30 mins
		Tuesday, March 7, 2023 (7:00 PM-8:30 PM CT) – 90 mins
		Tuesday, April 4, 2023 (7:00 PM-8:30 PM CT) – 90 mins
Midterm Exam	20%	Tuesday, March 21, 2023 (7:00 PM-8:30 PM CT)
Final Exam	20%	Tuesday, April 18, 2023 (7:00 PM-8:30 PM CT)
Lab Session at PCCA		May 15-16, 2023 (9:00 AM-6:00 PM CT each day)
Total	100%	

Exams

The midterm and final exam will be administered online. If the scheduled exam dates or times need to be rescheduled due to an approved absence, this information must be communicated to the course facilitators at least 48 hours prior to the scheduled exam. If this information is not provided within the required 48 hours, the highest possible score a student could earn is 85%.

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Online Component

- 10 modules punctuated with active learning exercises including live virtual discussions
- Discussion topics will vary in theme and may require investigation, critical thinking and application of course concepts
- Students unable to participate in live virtual discussions must communicate this information prior to the scheduled events. Students with excused absences will be provided the opportunity to receive a discussion grade by submitting a research paper covering relevant compounding topics (details provided by course facilitator)
  - Cameras must be functional and on student during live virtual discussions in order to receive credit.

Certificate Award

To receive a certificate of completion:

1. Students must achieve a final grade of 80% or higher within the online course.
2. Students registered for the Advanced Compounding Lab must successfully complete the entire laboratory experience.

Program Fee

$995 – This fee includes access to online course material and all laboratory fees. Students are responsible for purchasing or gaining access to the required textbook. Travel arrangements and costs are student responsibilities. PCCA offers a special student rate at our recommended hotel.

* Students may register for the 10-week, online-only course option for $695.

Registration

Interested students are encouraged to register at **https://cvent.me/88V7WP**. Students must complete the Introductory Compounding Boot Camp prior to attending the Advanced Compounding Lab.

Students who have not completed the prerequisite Boot Camp course must contact the course instructor for approval. The course instructors may be reached at **pccainstitute@pccarx.com**.

Original Course Content Developer

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