



120-Hours to CPhT Program Curriculum

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Program Director:

Aaron Emmel, PharmD, MHA, BCPS

info@pharmacytechscholar.com

904-580-6030

Office Hours:

Monday-Friday 9am-5pm (EST)

Virtual office hours by appointment

Office closes for a week 3-4 times annually with advanced notice

All program related inquiries are responded to within 72 business hours except during office closure

Rationale:

This course provides didactic education intended to satisfy all of the required knowledge areas of a Certified Pharmacy Technician (CPhT) according to the 2020 Pharmacy Technician Certification Board (PTCB) CPhT Knowledge Reference: <https://www.ptcb.org/lib24watch/files/pdf/169>. The course also prepares and qualifies individuals to take the Pharmacy Technician Certification Exam (PTCE). The goal of our program is to offer an affordable and convenient option for aspiring and current pharmacy technicians to gain the knowledge required of a CPhT, and meet the eligibility requirements for the PTCE.

Course Format:

This course is a self-paced, online module-based education program. Main knowledge domains are broken into modules, with individual chapters addressing specific knowledge areas required of a CPhT. Each chapter contains a video lecture, study reference, reading assignment, virtual flashcard set, and competency assessment developed by our organization. In some chapters, additional recommendations are made for self-study activities.

Live virtual classroom sessions are held weekly throughout the year. These are optional, but students are encouraged to attend as a way to stay engaged and address any questions or concerns that arise during their study. The agenda is updated weekly, and is intended to address questions or concerns that have arisen during the week and address trends in our student outcomes.

Course Requirements:

To complete the course, students must complete all steps in our Learning Management System (LMS). Student progress is tracked by completion of individual chapters, completion of module final exams, and completion of the course final exam.

Students will receive credit for completion of a chapter once they have watched the lecture video in its entirety, viewed the study reference material, and completed the competency assessment with a minimum percentage score of 80%. The competency assessments test knowledge of the material covering the objectives from both the internal Pharmacy Tech Scholar material and the assigned external readings. These activities are tracked by our LMS.

After completion of all chapters within a module, a student will receive credit for the completion of the module by passing the module final exam with a minimum percentage score of 80%.

After completion of all modules, a student will receive credit for completion of the course by passing the course final exam with a minimum percentage score of 80%. The final exam is formatted to be similar in presentation to the PTCE, with 90 multiple choice questions spanning all required knowledge areas to be completed in 110 minutes. Students receive their course certificate upon passing this exam.

Academic Integrity:

Each student in this course is expected to abide by the Terms and Conditions that are provided and agreed to upon enrolling in the program. Students attest that they are in fact the person taking the entirety of the course. This includes watching each lecture in its entirety, reviewing the study material, and taking the examinations. They also attest that they are not allowing anyone else to complete any aspect of the course on their behalf, nor are they completing any aspect of the course on someone else's behalf. All LMS activity is tracked and any irregularities are investigated. Violating the Terms and Conditions may cause removal from the program.

Required Textbooks:

Readings from the American Pharmacists Association (APhA) PharmacyLibrary are assigned throughout the program. Access to the required PharmacyLibrary ebooks is provided at no additional cost to all students in the program.

Optional Supplemental Textbook:

Koborsi-Tadros, Sacha. *PTCE: Pharmacy Technician Certification Exam*. Premium ed., Barron's Educational Series, 2022.

Note: Prior edition (2nd ed.) is a good supplemental text as an alternative if the student already owns it or can purchase it at a discount: Koborsi-Tadros, Sacha. PTCE: Pharmacy Technician Certification Exam. 2nd ed., Barron's Educational Series, 2019. Page numbers will be provided in parenthesis for this version.

Curriculum Outline

1. Introductory Module: Getting Started: Course Introduction and Tutorial (1 hour)
 - a. Chapter 1: Planning for Success: Introduction to Our Course (0.5 hour)
 - i. Required material
 1. Navigating course tutorial video
 2. Practice competency evaluation
 - ii. Recommended Activities
 1. Develop Personal Learning Plan (template provided)
 - b. Chapter 2: Understanding the Pharmacy Technician Certification Exam (0.5 hour)
 - i. Required material
 1. "Understanding the Pharmacy Technician Certification Exam" lecture video
 2. Acknowledgement of program completion requirements and academic honesty
 - ii. Required reading
 1. PTCB General Policies:
<https://www.ptcb.org/guidebook/general-policies?print=1>
 2. PTCB CPhT Program:
<https://www.ptcb.org/guidebook/ptcb-certified-pharmacy-technician-cpht-program?print=1>
 3. PTCE Content Outline:
<https://www.ptcb.org/guidebook/ptce-content-outline>
 - iii. Recommended activities
 1. Create PTCE Content Outline Study Grid (template provided)
 - iv. Optional reading
 1. Koborsi-Tadros pgs 1-3 (pgs 3-4 in 2nd ed.)
2. Module 1: Medications (41 hours)
 - a. Chapter 1: Introduction to Medications (4 hours)
 - i. Objectives:
 1. Broadly introduce the concept of medication
 2. Provide a high-level overview of pharmacology
 3. Differentiate between prescription and over-the-counter medications
 4. Define therapeutic equivalence and implications in pharmacy
 5. Highlight the Pharmacy Technician's role in the medication use system
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency assessment (20 questions)
 - iii. Required reading
 1. American Society of Health-System Pharmacists. Pharmacy Technician Career Overview:
<https://www.ashp.org/pharmacy-technician/about-pharmacy-technicians/pharmacy-technician-career-overview?loginreturnUrl=SSOCheckOnly>
 2. Food and Drug Administration: Orange Book Preface, Intro and Sections 1.1 through 1.3:

<https://www.fda.gov/drugs/development-approval-process-drugs/orange-book-preface>

3. Complete Review for the Pharmacy Technician, 4th ed. Chapter 1: Drug Classifications and Formulations
 - a. Beginning of chapter through section on Pharmacodynamics
- iv. Recommended activities
 1. Create flashcards of all key and highlighted terms from the lecture
 2. Complete therapeutic equivalence activity (template provided)
 3. Complete the
- v. Optional reading
 1. Koborski-Tadros pgs 33-34,36-38 (34, 36-38 in 2nd Ed.)
- b. Chapter 2: Medication Formulations and Administration (4 hours)
 - i. Objectives:
 1. Review the various dosage forms in which drug products may be formulated and the products used in their packaging and preparation
 2. Describe the routes in which medications may be administered
 3. Identify important special handling and administration instructions
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency assessment (20 questions)
 - iii. Required reading
 1. Kim J, De Jesus O. Medication Routes of Administration. StatPearls. Feb 2022: <https://www.ncbi.nlm.nih.gov/books/NBK568677/>
 2. Complete Review for the Pharmacy Technician, 4th ed. Chapter 1: Drug Classifications and Formulations
 - a. Section on Strengths and Dosage Forms
 - iv. Optional reading
 1. Koborski-Tadros pgs 34-35 (same in 2nd Ed.)
- c. Chapter 3: Top 200 Drugs: Cardiovascular (5 hours)
 - i. Objectives:
 1. Review the most common drug classes used primarily for cardiovascular indications, including the brand and generic names for drugs falling in the top 200 list.
 2. Review selected indications
 3. Review selected side effects for drug classes
 - ii. Required material:
 1. Lecture video, study reference, and flash cards
 2. Competency assessment (35 questions)
 - iii. Required reading:
 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 1: Drug Formulations and Classifications
 - a. Table 1.3: Cardiac and Vascular Agents
 2. Intermountain Healthcare. Table of Common Heart Medications: <https://intermountainhealthcare.org/-/media/files/services/heart-care/table-common-meds.pdf?la=en>
 - iv. Optional reading:
 1. Koborski-Tadros pgs 59-63 (same in 2nd Ed.)
- d. Chapter 4: Top 200 Drugs: Endocrine, Hormone, and Gastrointestinal (5 hours)
 - i. Objectives:

1. Review the most common drug classes used primarily for endocrine, hormone, and gastrointestinal related indications, including the brand and generic names for drugs falling in the top 200 list.
2. Review selected indications
3. Review selected side effects for drug classes
- ii. Required material:
 1. Lecture video, study reference, and flash cards
 2. Competency assessment (42 questions)
- iii. Required reading:
 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 1: Drug Classifications and Formulations
 - a. Table 1.3: Gastroenterologic and Endocrinologic Agents
- iv. Optional reading:
 1. Koborsi-Tadros pgs 69-76, 81-84 (same in 2nd Ed.)
- e. Chapter 5: Top 200 Drugs: Central Nervous System (5 hours)
 - i. Objectives:
 1. Review the most common drug classes used primarily for neurologic, behavioral health, and pain indications, including the brand and generic names for drugs falling in the top 200 list.
 2. Review selected indications
 3. Review selected side effects for drug classes
 - ii. Required material:
 1. Lecture video, study reference, and flash cards
 2. Competency assessment (24 questions)
 - iii. Required reading:
 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 1: Drug Classifications and Formulations
 - a. Table 1.3: Central Nervous System Agents
 - iv. Optional reading:
 1. Koborsi-Tadros pgs 44-46, 76-79 (same in 2nd Ed.)
- f. Chapter 6: Top 200 Drugs: Infectious Disease, Respiratory, and Others (5 hours)
 - i. Objectives:
 1. Review the most common drug classes used primarily for infectious disease, respiratory, and other indications not covered previously, including the brand and generic names for drugs falling in the top 200 list.
 2. Review selected indications
 3. Review selected side effects for drug classes
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency assessment (36 questions)
 - iii. Required reading:
 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 1: Drug Classifications and Formulations
 - a. Table 1.3: Eye, Ear, Nose and Throat Agents, Respiratory Agents, Genitourinary Agents, Anti-Infective Agents, Antiviral Agents, Oncolytic Agents, Dermatologic Agents, and Nutritional Agents
 - iv. Optional reading:

1. Koborsi-Tadros pgs 47-58, 64-69, 80-81, 84-91, 93-94 (pgs 47-58, 64-69, 80-81, 84-94 in 2nd Ed.)
- g. Chapter 7: Drug Interactions, Contraindications, and Allergies (4 hours)
- i. Objectives:
 1. Differentiate ways in which medications may interact with each other
 2. Define contraindication and common reasons for a contraindication
 3. Describe specific common and life-threatening drug interactions
 4. Describe specific common and life-threatening drug-disease interactions and contraindications
 5. Define drug allergy and common issues related to allergic reactions
 - ii. Required material:
 1. Lecture video, study reference, and flash cards
 2. Competency assessment (28 questions)
 - iii. Required reading:
 1. Food and Drug Administration. Drug Interactions: What you Should Know.
<https://www.fda.gov/drugs/resources-you-drugs/drug-interactions-what-you-should-know>
 2. American Academy of Allergy Asthma & Immunology. Medications and Drug Allergic Reactions.
<https://www.aaaai.org/tools-for-the-public/conditions-library/allergies/medications-and-drug-allergic-reactions>
 - iv. Optional reading:
 1. Koborsi-Tadros pg 36 (same in 2nd Ed.)
- h. Chapter 8: Narrow Therapeutic Index Drugs (4 hours)
- i. Objectives:
 1. Define narrow therapeutic index and implications in medication therapy
 2. Review specific narrow therapeutic index drugs, including important monitoring considerations and problems related to their narrow therapeutic index
 - ii. Required material:
 1. Lecture video, study reference, and flash cards
 2. Competency assessment (13 questions)
 - iii. Required reading:
 1. Pope N. Generic Substitution of Narrow Therapeutic Index Drugs. June 2009.
<https://www.uspharmacist.com/article/generic-substitution-of-narrow-therapeutic-index-drugs>
 - iv. Optional reading:
 1. Koborsi-Tadros pg 40-42 (pgs 41-42 in 2nd Ed.)
- i. Chapter 9: Drug Stability, Compatibility, and Storage (4 hours)
- i. Objectives:
 1. Define drug stability
 2. Discuss physical and chemical instability
 3. Define beyond use dates in the context of non-sterile compounding
 4. Review stability and beyond use dating considerations for:
 - a. Oral suspensions and reconstitutables
 - b. Insulin
 - c. Injectables

- d. Vaccines
 - ii. Required material:
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency assessment (21 questions)
 - iii. Required reading:
 - 1. Complete Review for the Pharmacy Technician, 4th Ed, Chapter 5: Drug Formularies, Storage, Recalls, Shortages, and Diversion
 - a. Section on Drug Storage
 - iv. Optional reading:
 - 1. Koborsi-Tadros pgs 38-40, 42-43 (pgs 38-40, 42-44 in 2nd Ed.)
 - j. Module completion requirements (1 hour)
 - i. Top 200 Drugs Competency Assessment
 - ii. Medications Final Exam
 - k. Recommended additional study
 - i. Koborsi-Tadros pgs 95-97, 219-241
3. Module 2: Federal Requirements (21 hours)
 - a. Chapter 1: Intro to Law and Handling and Disposal of Substances and Waste (4 hours)
 - i. Objectives:
 - 1. Review the history of pharmacy law and how pharmacy is regulated at both the federal and state levels
 - 2. Identify the process for determining the state, federal, and local laws and regulations that apply to one's practice site
 - 3. Identify the agencies that regulate or publish standards on hazardous materials, medications as substances, and waste
 - 4. Understand how medications may be identified as hazardous
 - 5. Review labeling and safety data sheet (SDS) requirements for hazardous chemicals as defined in the OSHA Hazard Communication Standard
 - 6. Describe important regulations and standards regarding handling of hazardous drugs
 - 7. Review OSHA requirements for prevention and treatment of hazardous substances exposure
 - 8. Understand how waste is categorized, and identify the classification of commonly used medications
 - 9. Describe important regulations and standards around disposal of pharmaceutical waste
 - ii. Required material
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency assessment (29 questions)
 - iii. Required Reading
 - 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 3: Pharmacy Law and Regulation
 - iv. Optional reading
 - 1. Koborsi-Tadros pgs 99-102, 108-110 (pgs 99-102, 110-111 in 2nd Ed.)
 - b. Chapter 2: Controlled Substance Prescriptions (4 hours)
 - i. Objectives:
 - 1. Identify why a substance would be controlled, and which organizations/agencies are involved in the process
 - 2. Understand the difference between the various controlled substance schedules

3. Describe the following processes required for the fulfillment of a controlled substance prescription:
 - a. DEA Registration
 - b. Prescription information
 - c. Receiving, refilling, and transferring of controlled substance prescriptions
- ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (30 questions)
- iii. Required reading
 1. United States Drug Enforcement Administration. Drug Scheduling. <https://www.dea.gov/drug-information/drug-scheduling>
 2. United States Drug Enforcement Administration. The Controlled Substances Act. <https://www.dea.gov/drug-information/csa>
- iv. Optional reading
 1. Koborsi-Tadros pgs 102-106 (same in 2nd Ed.)
- c. Chapter 3: Federal Requirements for Controlled Substances (4 hours)
 - i. Objectives:
 1. Review the recordkeeping and reporting requirements for controlled substance inventory
 2. Understand how controlled substances must be ordered
 3. Describe requirements for dispensing controlled substances
 4. Identify labeling requirements for controlled substances
 5. Understand how controlled substances must be stored
 6. Review what actions must be taken in the case of theft or diversion of controlled substances
 7. Describe legal requirements for disposal and take-back programs
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (14 questions)
 - iii. Required reading
 1. Gabay M. Federal Controlled Substances Act: Controlled Substance Prescriptions. Hospital Pharmacy. 2013. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3847977/>
 - iv. Optional reading
 1. Koborsi-Tadros pgs 102-106 (same in 2nd Ed.)
- d. Chapter 4: Federal Requirements for Restricted Drug Programs (4 hours)
 - i. Objectives:
 1. Review the restrictions on ephedrine and pseudoephedrine purchases according to the Combat Methamphetamine Epidemic Act of 2005
 2. Understand the purpose and goals of a Risk Evaluation and Mitigation Strategy (REMS)
 3. Identify the various components that can be included in a REMS
 4. Apply the learnings in reviewing an actual REMS for an FDA approved medication
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (11 questions)
 - iii. Required reading

1. Drug Enforcement Administration. General Information Regarding the Combat Methamphetamine Epidemic Act of 2005.
<https://www.deadiversion.usdoj.gov/meth/cma2005.htm>
 2. Food and Drug Administration. What's in a REMS?
<https://www.fda.gov/drugs/risk-evaluation-and-mitigation-strategies-rems/whats-rems>
 3. Food and Drug Administration. Frequently Asked Questions about REMS.
<https://www.fda.gov/drugs/risk-evaluation-and-mitigation-strategies-rems/frequently-asked-questions-faqs-about-rems>
 4. Food and Drug Administration. Roles of Different Participants in REMS.
<https://www.fda.gov/drugs/risk-evaluation-and-mitigation-strategies-rems/roles-different-participants-rems>
 5. Food and Drug Administration. FDA's Role in Managing Medication Risks.
<https://www.fda.gov/drugs/risk-evaluation-and-mitigation-strategies-rems/fdas-role-managing-medication-risks>
- iv. Optional reading
 1. Koborsi-Tadros pgs 106-108 (pgs 107-109 in 2nd Ed.)
- e. Chapter 5: Drug Recalls and Patient Privacy (4 hours)
 - i. Objectives:
 1. Define a drug recall
 2. Describe the FDA's role in a drug recall
 3. Describe the technician's role in a drug recall
 4. Understand HIPAA requirements for confidentiality
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (10 questions)
 - iii. Required reading
 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 5: Drug Formularies, Storage, Recalls, Shortages, and Diversion
 - a. Sections on recalls of drug products, shortages of drug products, and theft and diversion of drugs
 2. Complete Review for the Pharmacy Technician, 4th ed. Chapter 3: Pharmacy Law and Regulation
 - a. Section on HIPAA
 - iv. Optional reading
 1. Koborsi-Tadros pg 108 (pgs 106, 109 in 2nd Ed.)
 2. Food and Drug Administration. FDA's Role in Drug Recalls.
<https://www.fda.gov/drugs/drug-recalls/fdas-role-drug-recalls>
 - f. Module completion requirements (1 hour)
 - i. Federal Requirements Final Exam
4. Module 3: Patient Safety and Quality Assurance (21 hours)
 - a. Chapter 1: High-Alert and Look-Alike Sound-Alike Medications (4 hours)
 - i. Objectives:
 1. Define high-alert medication according to the Institute for Safe Medication Practices
 2. Identify high-alert medications that are used in the acute care and community settings

3. Understand the concept of look-alike sound-alike medications, and appropriate safeguards to reduce the risk of confusing medications due to their appearance or pronunciation
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (11 questions)
 - iii. Required reading
 1. Institute for Safe Medication Practices. High-Alert Medications in Community/Ambulatory Settings.
<https://www.ismp.org/recommendations/high-alert-medications-community-ambulatory-list>
 2. Institute for Safe Medication Practices. High-Alert Medications in Acute Care Settings.
<https://www.ismp.org/recommendations/high-alert-medications-acute-list>
 3. Institute for Safe Medication Practices. Look-Alike Drug Names with Recommended Tall Man Letters.
<https://www.ismp.org/recommendations/tall-man-letters-list>
 - iv. Optional reading
 1. Koborsi-Tadros pgs 124-126 (same in 2nd Ed.)
 - b. Chapter 2: Medication Error Prevention (4 hours)
 - i. Objectives:
 1. Define medication error, adverse drug event, preventable adverse drug event, and potential adverse drug event
 2. Describe the steps in the medication use process and potential errors that may occur during those steps
 3. Identify mitigation strategies to prevent or reduce the risk of medication errors
 4. Define and describe processes related to quality assurance and continuous quality improvement, and the data sources used to facilitate these processes
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (16 questions)
 - iii. Required reading
 1. Emily Jerry Foundation: Emily's Story. Available at:
<https://emilyjerryfoundation.org/emilys-story/>
 2. Complete Review for the Pharmacy Technician, 4th ed. Chapter 7: Pharmacy Quality Assurance and Medication Safety
 - iv. Optional reading
 1. Koborsi-Tadros pgs 115-121, 127-128, 260-266 (pgs 115-121, 127-128, 264-265 in 2nd Ed.)
 - c. Chapter 3: Event Reporting Procedures (4 hours)
 - i. Objectives:
 1. Understand the rationale for medication event reporting
 2. Describe root cause analysis as a method for event evaluation
 3. Identify platforms for adverse drug event and medication error reporting
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (10 questions)

- iii. Optional reading
 - 1. Koborsi-Tadros pgs 120-121, 124, 128-129 (pgs 122, 128-129 in 2nd Ed.)
 - d. Chapter 4: Role of the Pharmacy Technician and Ensuring Optimal Patient Communication (4 hours)
 - i. Objectives:
 - 1. Differentiate between the role of the pharmacy technician and the pharmacist
 - 2. Identify tasks and questions that can and can not be addressed by a pharmacy technician
 - 3. Review essential verbal and non-verbal communication skills
 - 4. Discuss effects of patient-specific factors on drug and non-drug therapy, such as cultural beliefs, disabilities, language barriers, and socioeconomic status
 - ii. Required material
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency Assessment (10 questions)
 - iii. Required reading
 - 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 6: Role of the Pharmacy Technician and Ensuring Optimal Patient Communication
 - 2. Complete Review for the Pharmacy Technician, 4th ed. Chapter 9: Patient Care Services and the Pharmacy Technician.
 - 3. ACCP White Paper: Cultural Competence in Health Care and Its Implications for Pharmacy. Available at:
<https://accpjournals.onlinelibrary.wiley.com/doi/pdfdirect/10.1592/phco.27.7.1062>
 - iv. Optional reading
 - 1. Koborsi-Tadros pgs 122-123 (same in 2nd Ed.)
 - e. Chapter 5: Hygiene and Cleaning Standards (4 hours)
 - i. Objectives:
 - 1. Describe personal hygiene requirements in the pharmacy pertinent to nonsterile compounding
 - 2. Describe personal protective equipment requirements for nonsterile compounding
 - 3. Describe environment and equipment cleaning requirements pertinent to nonsterile compounding
 - ii. Required material:
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency Assessment (8 questions)
 - iii. Optional reading:
 - 1. Koborsi-Tadros pgs 129-130 (same in 2nd Ed.)
 - f. Module completion requirements (1 hour)
 - i. Patient Safety and Assurance Final Exam
 - g. Recommended additional study
 - i. Koborsi-Tadros pgs 130-132 (same in 2nd Ed.)
5. Module 4: Order Entry and Processing (22 hours)
- a. Chapter 1: Nonsterile Compounding (4 hours)
 - i. Objectives:

1. Identify equipment commonly used in the compounding of nonsterile products
 2. Understand basic terminology used in the course of compounding nonsterile products
 3. Review, at a high level, commonly compounded dosage forms in the pharmacy setting
 4. Understand guidance from USP General Chapter <795> regarding nonsterile compounds
 5. Define simple, moderate, and complex compounding
- ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (13 questions)
 - iii. Required reading
 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 12: Nonsterile and Bulk Compounding
 - iv. Optional reading
 1. Koborsi-Tadros pgs 133-142 (same in 2nd Ed.)
- b. Chapter 2: Interpreting and Processing a Prescription Order (4 hours)
- i. Objectives:
 1. Identify the common and required elements of a prescription or medication order
 2. Understand commonly used abbreviations used in prescription or medication orders
 3. Describe the process of fulfilling a prescription in the community pharmacy setting
 4. Describe the process of fulfilling a medication order in the institutional setting
 5. Identify medical equipment and devices used for drug product administration
 - ii. Required material
 1. Lecture video, study reference, and flash cards
 2. Competency Assessment (10 questions)
 - iii. Required reading
 1. Complete Review for the Pharmacy Technician, 4th ed. Chapter 10: Processing Prescriptions and Medication Orders.
 2. The Pharmacy Technician's Pocket Drug Reference, 12th Edition, Appendix C: Common Abbreviations Used in Prescriptions and Medication Orders
 - iv. Optional reading
 1. Koborsi-Tadros pgs 142-146, 147, 243-257 (pgs 142-146, 147, 243-262 in 2nd Ed.)
- c. Chapter 3: Math Foundation (4 hours)
- i. Objectives:
 1. Describe the correct order of operations in solving math equations
 2. Review the metric system for measuring weight, volume, and length
 3. Convert non-metric units of measure to metric units
 4. Describe conversions of temperature and time
 5. Review math concepts involving fractions, decimals, percentages, ratios, and proportions

- 6. Define the Roman Numeral system
- ii. Required material
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency Assessment (28 questions)
- iii. Required reading
 - 1. Complete Math Review for the Pharmacy Technician, 5th Edition, Chapter 1: Back to Basics
 - 2. Complete Math Review for the Pharmacy Technician, 5th Edition, Chapter 2: Systems of Measurement
- iv. Optional reading
 - 1. Koborsi-Tadros pg 267 (same in 2nd Ed.)
- d. Chapter 4: Pharmacy Calculations (5 hours)
 - i. Objectives:
 - 1. Perform common unit conversions used in the course of pharmacy calculations
 - 2. Calculate doses and/or volumes of drugs based on a prescribed dose and/or a given concentration of drug product
 - 3. Perform weight-based drug dose calculations
 - 4. Calculate quantities of drug required to fulfill a prescription or medication order
 - 5. Calculate infusion rates
 - 6. Perform multiple-step calculations from a combination of the above
 - 7. Review the method of alligation
 - ii. Required material
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency Assessment (20 questions)
 - iii. Required reading
 - 1. Complete Review for the Pharmacy Technician, 4th edition, Chapter 2: Pharmacy Calculations
 - iv. Optional reading/viewing
 - 1. Koborsi-Tadros pgs 148-162 (same in 2nd Ed.)
 - 2. Sharma P, Dunham A. Pharmacy Calculations. StatPearls. July 2021. <https://www.ncbi.nlm.nih.gov/books/NBK560924/>
 - 3. Pharmacy Tech Scholar Practice Calculations YouTube Series: https://www.youtube.com/channel/UC3HsWSx9dQ7rL3FFA-Bk_Sg
- e. Chapter 5: Drug Code Identifiers, Expiration Dates, and Returns (4 hours)
 - i. Objectives:
 - 1. Understand drug product labeling information: NDC codes, lot numbers, and expiration dates
 - 2. Identify processes to return drug products that are expired, damaged, dispensable, and/or controlled
 - ii. Required material
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency Assessment (6 questions)
 - iii. Required reading
 - 1. Food and Drug Administration. National Drug Code Database Background Information. <https://www.fda.gov/drugs/development-approval-process-drugs/national-drug-code-database-background-information>

- iv. Optional reading
 - 1. Koborsi-Tadros pgs 146-147 (same in 2nd Ed.)
- f. Module completion requirements (1 hour)
 - i. Order Entry and Processing Final Exam
- g. Recommended additional study
 - i. Koborsi-Tadros pgs 163-166 (same in 2nd Ed.)
- 6. Miscellaneous Items Important to the Pharmacy Technician (12 hours)
 - a. Chapter 1: State Regulations and Law (4 hours)
 - i. Objectives:
 - 1. Understand state requirements for licensure, registration, and/or certification of pharmacy technicians
 - 2. Understand how states regulate the roles of pharmacists, pharmacy technicians, and the practice of pharmacy
 - 3. Understand other state requirements in regards to pharmacy facilities and operations
 - ii. Required material
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency Assessment (10 questions)
 - iii. Required reading
 - 1. Pharmacy practice act, state statutes, and/or administrative code applicable to pharmacy technicians (student specific - for the state in which the student intends to practice)
 - b. Chapter 2: Inventory Management (4 hours)
 - i. Objectives:
 - 1. Understand how to address improperly stored inventory
 - 2. Review the concept of a drug formulary
 - 3. Identify suitable methods for obtaining inventory
 - 4. Identify requirements for quality control of various inventory systems
 - 5. Describe processes for medication and supply ordering
 - 6. Describe the process for performing an inventory
 - 7. Describe inventory control procedures and metrics related to inventory quality and efficiency
 - ii. Required material
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency Assessment (10 questions)
 - iii. Required Reading
 - 1. Complete Review for the Pharmacy Technician, 4th Edition, Chapter 4: Inventory Control and Management
 - c. Chapter 3: Administration and Management (4 hours)
 - i. Objectives:
 - 1. Review administrative duties relevant to the pharmacy technician
 - 2. Discuss pharmacy related reports and their interpretation
 - 3. Identify appropriate processes for the handling and destruction of confidential information
 - 4. Discuss ethics and professionalism in the workplace
 - ii. Required material
 - 1. Lecture video, study reference, and flash cards
 - 2. Competency Assessment (5 questions)
 - iii. Required reading

1. Communication & Management Skills for the Pharmacy Technician,
Chapter 5: Professionalism and Ethics in the Workplace
7. Wrapping Up (no didactic time allotted)
 - i. Required material
 1. Course evaluation and feedback
8. Course completion requirements (2 hours)
 - a. Final Exam (90 questions)
9. Recommended additional study
 - a. Pharmacy Technician Certification Quick-Study Guide, 5th Edition