MODEL CURRICULUM FOR
PHARMACY TECHNICIAN EDUCATION AND TRAINING PROGRAMS

FOURTH EDITION

American Society of Health-System Pharmacists®
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ACKNOWLEDGEMENTS

INTRODUCTION TO THE THIRD EDITION

Model Curriculum for Pharmacy Technician Education and Training (Model Curriculum) provides detail on how to meet the goals defined in the *ASHP Accreditation Standard for Pharmacy Technician Education and Training Programs*. It includes objectives and instructional objectives for each of the goals, as well as examples of learning activities for each portion of the program, including the didactic, simulated (lab), and experiential program components as described in the overview below. The *Model Curriculum* is intended to help new programs that are just starting up, as well as current programs who are reviewing their curriculum.

The new *Model Curriculum* may be used in an interactive manner as a template to which programs can add notes and additional activities to the different columns that describe the different program components. Simply use a different font and/or color to add your own activities to describe how your program is teaching the goals. The template can be used as evidence during an accreditation survey.

This edition of the *Model Curriculum* reflects changes to the *ASHP Accreditation Standard for Pharmacy Technician Education and Training Programs* that was approved by the ASHP Board of Directors in April 2013. The new set of goals took into consideration the most recent task analysis by the Pharmacy Technician Certification Board and other current trends. The new Standard is intended to be responsive to changes in the pharmacy profession and the evolving role of pharmacy technicians.

Overview

The format of the *Model Curriculum* includes five columns for each goal, described in the chart below. A goal is defined as broad area of capability. While a goal is not necessarily measurable, the objectives associated with each goal provide the specificity and measurability necessary to determine if students have achieved the goal.

Column 1: Objectives	Column 2: Instructional Objectives	Column 3: Sample didactic activities	Column 4: Sample simulation activities	Column 5: Sample experiential activities
Objectives are specific, measurable descriptions of what learners must be able to do to achieve the associated goal.	Instructional objectives further break down necessary learning to achieve the associated objective and, therefore, the goal.	Sample activities for the didactic portion of the program that teach the associated objective.	Sample activities for the simulated (lab) portion of the program that teach the associated objective.	Sample activities for the experiential portion of the program that teach the associated objective.

The *Model Curriculum* goals are categorized into the following areas.

Goal Categories
- Personal/Interpersonal Knowledge and Skills
- Foundational Professional Knowledge and Skills
- Processing and Handling of Medications and Medication Orders
- Sterile and Non-Sterile Compounding
- Procurement, Billing, Reimbursement and Inventory Management
- Patient- and Medication-Safety
- Technology and Informatics
- Regulatory Issues
- Quality Assurance

The goals are listed by category below.

Goals
Personal/Interpersonal Knowledge and Skills
(1)   Demonstrate ethical conduct in all job-related activities.
(2)   Present an image appropriate for the profession of pharmacy in appearance and behavior.
(3)   Communicate clearly when speaking and in writing.
(4)   Demonstrate a respectful attitude when interacting with diverse patient populations.
(5)   Apply self-management skills, including time management, stress management, and adapting to change.
(6)   Apply interpersonal skills, including negotiation skills, conflict resolution, and teamwork.
(7)   Apply critical thinking skills, creativity, and innovation to solve problems.

Foundational Professional Knowledge and Skills
(8)   Demonstrate understanding of healthcare occupations and the health care delivery system.
(9)   Demonstrate understanding of wellness promotion and disease prevention concepts, such as use of health screenings; health practices and environmental factors that impact health; and adverse effects of alcohol, tobacco, and legal and illegal drugs.
(10)   Demonstrate commitment to excellence in the pharmacy profession and to continuing education and training.
(11)   Demonstrate knowledge and skills in areas of science relevant to the pharmacy technician's role, including anatomy/physiology and pharmacology.
(12)   Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of contemporary settings.
(13)   Demonstrate understanding of the pharmacy technician's role in the medication-use process.

(14) Demonstrate understanding of major trends, issues, goals, and initiatives taking place in the pharmacy profession.
(15) Demonstrate understanding of non-traditional roles of pharmacy technicians.
(16) Identify and describe emerging therapies.
(17) Demonstrate understanding of the preparation and process for sterile and non-sterile compounding.

Processing and Handling of Medications and Medication Orders
(18) Assist pharmacists in collecting, organizing, and recording demographic and clinical information for direct patient care and medication-use review.
(19) Receive and screen prescriptions/medication orders for completeness, accuracy, and authenticity.
(20) Assist pharmacists in the identification of patients who desire/require counseling to optimize the use of medications, equipment, and devices.
(21) Prepare non-patient-specific medications for distribution (e.g., batch, stock medications).
(22) Distribute medications in a manner that follows specified procedures.
(23) Practice effective infection control procedures, including preventing transmission of blood borne and airborne diseases.
(24) Assist pharmacists in preparing, storing, and distributing medication products requiring special handling and documentation [(e.g., controlled substances, immunizations, chemotherapy, investigational drugs, drugs with mandated Risk Evaluation and Mitigation Strategies (REMS)].
(25) Assist pharmacists in the monitoring of medication therapy.
(26) Prepare patient-specific medications for distribution.
(27) Maintain pharmacy facilities and equipment, including automated dispensing equipment.
(28) Use material safety data sheets (MSDS) to identify, handle, and safely dispose of hazardous materials.

Sterile and Non-Sterile Compounding
(29) Prepare medications requiring compounding of sterile products.
(30) Prepare medications requiring compounding of non-sterile products.
(31) Prepare medications requiring compounding of chemotherapy/hazardous products.

Procurement, Billing, Reimbursement and Inventory Management
(32) Initiate, verify, and assist in the adjudication of billing for pharmacy services and goods, and collect payment for these services.
(33) Apply accepted procedures in purchasing pharmaceuticals, devices, and supplies.

(34) Apply accepted procedures in inventory control of medications, equipment, and devices.
(35) Explain pharmacy reimbursement plans for covering pharmacy services.

Patient- and Medication-Safety

(36) Apply patient- and medication-safety practices in all aspects of the pharmacy technician's roles.
(37) Verify measurements, preparation, and/or packaging of medications produced by other healthcare professionals (e.g., tech-check-tech).
(38) Explain pharmacists' roles when they are responding to emergency situations and how pharmacy technicians can assist pharmacists by being certified as a Basic Life Support (BLS) Healthcare Provider.
(39) Demonstrate skills required for effective emergency preparedness.
(40) Assist pharmacists in medication reconciliation.
(41) Assist pharmacists in medication therapy management.

Technology and Informatics
(42) Describe the use of current technology in the healthcare environment to ensure the safety and accuracy of medication dispensing.

Regulatory Issues
(43) Compare and contrast the roles of pharmacists and pharmacy technicians in ensuring pharmacy department compliance with professional standards and relevant legal, regulatory, formulary, contractual, and safety requirements.
(44) Maintain confidentiality of patient information.

Quality Assurance
(45) Apply quality assurance practices to pharmaceuticals, durable and non-durable medical equipment, devices, and supplies.
(46) Explain procedures and communication channels to use in the event of a product recall or shortage, a medication error, or identification of another problem.

Model Curriculum for Pharmacy Technician Education and Training Programs

Personal/Interpersonal Knowledge and Skills

Goal 1: Demonstrate ethical conduct in all job-related activities.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	Instructional Objectives (IOs)	Didactic	Simulated (Lab)	Experiential
1.1 Act ethically in all job-related activities.	• (Remembering) Define the term "ethics." • (Understanding) Explain the difference between ethics and laws. • (Understanding) Explain situations that might present ethical questions for technicians.	*Instructor: Cover material described in objectives ("ethics" definition, etc.).* *Sample student activity:* Describe sample ethical situations and ask students to describe and justify ethical responses. *Example:* *Susan works at a small private pharmacy with the owner. An older patient comes in to purchase a small tube of cream which would last them several months. The owner wants you to sell the customer a larger tube (that they won't use and the same cream will expire in two days.) The larger cream is on sale but still more expensive. The owner wants to get rid of the inventory before the expiration date and instructs you to sell the customer the larger tube of cream. What would be ethical to do and what are your options? How do you think you would handle this situation?*	*Sample activities:* Combine ethically challenging situations with other lab activities that require students to apply ethical judgment and decisions.	Students: Demonstrate ethical responses when called for. Preceptors: Ask students describe ethical challenges they encountered and how they responded to them.

Goal 2: Present an image appropriate for the profession of pharmacy in appearance and behavior.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
2.1 (Applying) Apply skills for presenting a professional image in appearance (including dress and hygiene) and behavior.	• (Understanding) Discuss what is appropriate for a technician to wear to work. • (Understanding) Discuss the importance of personal hygiene in technicians work. • (Understanding) Explain typical situations that may challenge self-control in technicians work. • (Understanding) Explain techniques for maintaining self-control in challenging situations. • (Understanding) Differentiate professional and informal communication.	_Instructor: Cover material described in objectives (appropriate attire/hygiene challenging situations, etc.)._ _Sample student activities:_ Show or describe various appearances of technicians and ask if they are acceptable, why or why not and how unacceptable appearances can be improved. Have students describe how they would respond professionally in challenging situations. Give examples of professional and informal communications and ask students which are appropriate. Have them translate informal communications into a professional communication style. _Example:_ _John works with you in the pharmacy. He is easy-going and_	_Sample activities:_ Have students dress the way they would on a job and give constructive feedback as needed. Role-play challenging situations and how to professionally handle them.	Exhibit appropriate dress, hygiene and behavior at the experiential site. Preceptors: Ask students to describe challenging situations they encounter. Have them describe how they handled the situation and discuss ways it might have been handled more effectively, if needed.

		his usual response to most other employees and customers at the counter is "Don't worry about it!" A customer asks for a refill and his response is, "O.K. – don't worry about it!" The lunch schedule is discussed and John is told he will go to lunch at 12:30 pm, his response is "O.K. – don't worry about it!" Are John's responses appropriate? If not, what are more appropriate responses? What is effective and/or ineffective about his responses?		

Goal 3: Communicate clearly when speaking and in writing.

		Teaching Strategy Examples**Suggestions only. Other options possible at discretion of program*		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
3.1 (Applying) Apply effective verbal and written communication skills.	• (Applying) Pronounce technical terms accurately. • (Applying) Communicate effectively with patients who are non-English speakers or who have other special needs, such as vision or hearing problems, low reading level, difficulty understanding instructions). • (Understanding) Explain ways to assess if a listener understood a verbal or written communication (e.g., repeating back).	*Instructor: Cover material described in objectives (how to pronounce technical terms accurately, etc.)* *Sample student activity:* Instructor correctly and incorrectly pronounces terms. Have students identify when terms are correctly pronounced. If incorrect, ask them to say them correctly. Have student give common verbal and written communications. Have other students and/or instructor give feedback about if they clearly understood them and/or how they could be improved. *Example:* *When individuals don't understand directions being given, there may be a tendency to talk louder, instead of remaining calm and making another, more effective, attempt to explain. Consider role playing this situation where one individual is giving directions and the other person doesn't understand.*	*Sample activities:* Simulate common spoken and written communications.	Preceptor: Give feedback if verbal communications are unclear and how they can be improved. Preceptor: Review selected written communications with students and provide constructive feedback.

3.2 (Applying) Use listening skills effectively.	• (Understanding) Explain non-verbal aspects of listening skills, such as body language. • (Understanding) Explain verbal aspects of listening skills, such as acknowledging and reflecting back.	*Instructor: Cover material described in objectives (body language, etc.)* *Sample student activity:* Instructor role-play a patient giving a common communication. Ask students to respond with effective listening skills (examples: leaning forward, nodding, acknowledging ("uh-huh", "I see", "I understand", repeating back: "Let me see if I understand you correctly…"; empathetic response, such as, "That sounds very difficult.").		Preceptor: Give feedback to students on how well their listening skills come across to patients and team members.
3.3 (Applying) Use effective strategies for communicating with patients who are non-English speakers or who have other special needs, such as vision or hearing problems, low reading level, difficulty understanding instructions).	• (Remembering) Identify types of patients who require special communication strategies (e.g., vision or hearing problems, low reading level, difficulty understanding instructions). • (Understanding) Explain how communication strategies can be adapted when needed.	*Instructor: Cover material described in objectives (special communication strategies, etc.)* *Sample student activity:* Discuss relevant situations and how communication could be adapted to be effective.		Apply skills as needed at the experiential site.

Goal 4: Demonstrate a respectful attitude when interacting with diverse patient populations.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
4.1 Demonstrate a respectful attitude when interacting with diverse patient populations.	• (Understanding) Explain the importance of demonstrating a respectful attitude when interacting with diverse patient populations. • (Understanding) Identify types of diverse populations, such as diversity of culture, religion, race, age, gender, sexual orientation, transgender, disability, economic status. • (Understanding) Describe actions that convey respect or disrespect.	_Instructor: Cover material described in objectives (respectful vs disrespectful actions, etc.)_ _Sample student activity:_ Group discussion about possible challenges with diverse populations and how to respond.		Demonstrate a respectful attitude when interacting with diverse patient populations at the experiential site. Preceptors: Give feedback to students about how well they communicate respect and care verbally and non-verbally to all patients.

Goal 5: Apply self-management skills, including time management, stress management, and adapting to change.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
		Didactic	Simulated (Lab)	Experiential
5.1 (Applying) Apply time and workflow management skills.	• (Understanding) Explain how common technician tasks are typically prioritized and scheduled. • (Understanding) Explain the difference in priority to be given a STAT versus a PRN order.	*Instructor: Cover material described in objectives (STAT vs PRN, prioritizing tasks, etc.)* *Sample student activity:* Give a fictional but typical list of tasks to be completed in a specified amount of time and ask students to prioritize and schedule the list. Discuss how well the priorities were selected and how realistic the schedule is.	*Sample activity:* Ask students to perform tasks in a predetermined amount of time.	Preceptors: Ask students to discuss issues of scheduling and prioritizing as needed.
5.2 (Applying) Apply stress management skills.	• (Understanding) Identify common sources of stress in a pharmacy technician's job. • (Understanding) Describe stress management techniques that can be used in a pharmacy technician's job when needed.	*Instructor: Cover material described in objectives (sources of stress, ways to manage stress, etc.)* *Sample student activities:* Invite a panel of experienced pharmacy technicians to come and discuss sources of stress on their job, how they deal with it and answer questions from students. Describe stressful scenarios and ask students to discuss effective ways to deal with		Preceptors: Have students describe stressful situations they encounter at the experiential site, how they dealt with them and discuss other strategies that could also be applied.

Objective	Instructional Objectives (IOs)	Didactic	Simulated (Lab)	Experiential
		them.		
5.3 (Applying) Apply change management skills.	• (Understanding) Explain why dealing with change is an important skill for pharmacy technicians. • (Understanding) Explain principles of change management.	*Instructor: Cover material described in instructional objectives (principles of change management, etc.)*		Apply change management skills as needed at the experiential site.

Goal 6: Apply interpersonal skills, including negotiation skills, conflict resolution, and teamwork.

		Teaching Strategy Examples**Suggestions only. Other options possible at discretion of program*		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
6.1 (Applying) Apply effective interpersonal and teamwork skills in work with healthcare teams.	• (Understanding) Identify and describe interpersonal skills needed to work effectively with health care teams.	*Instructor: Cover material described in objectives (interpersonal and teamwork skills)* *Sample student activities:* Have a class discussion about the characteristics of effective working relationships. Have students give examples of working relationships that have worked well or not and what made them that way. Give students scenarios describing types of interactions that occur in the work of the pharmacy technician. Ask them what interpersonal skills are required to handle them	*Sample activity:* Role-play typical interpersonal situations that may be challenging, such as an uncooperative or disrespectful member of the health care team that the technician must interact with in a professional manner.	Preceptors: Ask students to describe some challenging situations requiring effective interpersonal skills and that they encounter at the experiential site. Discuss how they handled them and other strategies that might have been used.

		effectively and what they would do in those situations.		
6.2 (Applying) Resolve conflicts effectively.	• (Understanding) Explain effective conflict management skills, including negotiation skills.	*Instructor: Cover material described in objectives (conflict resolution, negotiation skills).* *Sample student activity:* Describe sample conflict situations and ask students to discuss how they would handle them to resolve the conflict. *Example:* *Susan takes an hour for lunch each day at the busiest time of the day. This puts a burden on you and it is making you more angry each day. Your co-worker, Anne, confronted Susan and the verbal exchange was heated, loud and uncomfortable. Now Susan and Anne are not speaking to each other and the situation is preventing work form being accomplished. How can you resolve this conflict in a more effective manner than Anne did?*	*Sample activity:* Role-play conflict situations that may occur in a technician's job.	Handle conflicts effectively at the experiential site.

Goal 7: Apply critical thinking skills, creativity, and innovation to solve problems.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	**Simulated (Lab)**	**Experiential**
7.1 Apply critical thinking skills to solve problems common in pharmacy technician's work.	• (Understanding) Explain the kinds of problems that can occur in technicians' work. • (Understanding) Explain how critical thinking skills can be used to solve problems.	_Instructor: Cover material described in objectives (types of problems, critical thinking skills.)_ _Sample student activities:_ Describe typical problems that may come up in a pharmacy technician's job. Ask students to discuss how critical thinking skills can be applied to solve the problems.	_Sample activity:_ Present a simulated problem requiring the student to apply critical thinking skills to solve**.** _Example:_ _Your department is under a very tight deadline to complete a project. Your supervisor has asked that the project be completed by the end of the week. You have several employees who have asked for the next few days off who have been working on the project. How could you apply critical thinking skills to handle this situation? Discuss possible options._	Preceptors: Ask students to discuss how critical thinking skills were applied to problems encountered at the experiential site.
7.2 Apply creativity and innovation to solve problems common frequently in pharmacy technician's work.	• (Understanding) Describe how creativity can be used to solve problems. • (Understanding) Describe how innovation can be used to solve problems.	_Instructor: Cover material described in objectives (creativity and innovation)._ _Sample student activities:_ Discuss how creativity and innovation can be applied to	_Sample activity:_ Present a simulated problem and ask students to use creativity and innovative thinking to solve the problem**.**	Preceptors: Ask students to discuss how creativity and innovation were, or could be, applied to problems encountered at the experiential site.

		solve problems pharmacy technicians may encounter during their jobs, using examples.	*Example:* *You have a staff of five technicians. On the day of the flu clinic when one technician was to manage the forms, a large drug order has come in that must be unpacked and placed on the shelves before the regional managers and CEO of the company arrive. In addition, the pharmacy is busier than normal that morning. How could you apply creativity and innovation to ensure all activities are covered? Discuss possible options.*	

Foundational Professional Knowledge and Skills

Goal 8: Demonstrate understanding of healthcare occupations and the health care delivery system.

		Teaching Strategy Examples**Suggestions only. Other options possible at discretion of program*		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
8.1 (Understanding) Describe how different healthcare occupations interact in the health care delivery system.	• (Understanding) Identify and describe healthcare occupations. • (Understanding) Explain how patient care is delivered in the health care system.	*Instructor: Cover material described in objectives (healthcare occupations, health care delivery system)*		

Goal 9: Demonstrate understanding of wellness promotion and disease prevention concepts, such as use of health screenings; health practices and environmental factors that impact health; and adverse effects of alcohol, tobacco, and legal and illegal drugs.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
9.1 (Understanding) Explain the importance and methods of wellness promotion and disease prevention practices, such as use of health screenings; health practices and environmental factors that impact health; and adverse effects of alcohol, tobacco, and legal and illegal drugs.		_Instructor: Cover material described in objectives (wellness promotion practices, etc.)_		When possible, have students participate in wellness promotion programs available in the pharmacy.

Goal 10: Demonstrate commitment to excellence in the pharmacy profession and to continuing education and training.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
10.1: (Applying) Demonstrate commitment to excellence in the pharmacy profession and to continuing education and training.	• (Understanding) Explain the importance and benefits of technicians staying current with advances in pharmacy practice. • (Understanding) Discuss resources and practices for staying current (e.g., journals, newsletters, educational conferences, membership in professional organizations).	_Instructor: Cover material described in objectives (resources for staying current, etc.)_ _Sample student activity:_ Ask students to discuss ways they plan to continue their learning after completing the pharmacy technician training program. Ask them to share		Preceptors and other pharmacists and technicians at the experiential site: Share with students their activities that demonstrate their commitment to excellence in the pharmacy profession and

	• (Understanding) Define technician certification (vs licensure and registration), its benefits and the process for attaining.	any past or current experiences with any activities discussed in the content covered.		continuing education and training. Ask students to discuss which seem most appropriate for them and which they are most interested in pursuing.

Goal 11: Demonstrate understanding and skills in areas of science relevant to the pharmacy technician's role, including anatomy/physiology and pharmacology.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
11.1 (Remembering) State the definitions of medical terms commonly used in the range of patient care settings.	• (Remembering) State definitions of commonly used medical terms. • (Remembering) Identify the correct medical term for given abbreviations.	*Instructor: Cover material described in objectives (define medical terms).* Ask students to complete a matching activity during which they match medical terms with their definition. Ask students to complete a matching activity during which they match medical terms with their abbreviations. Give students a list of commonly used medical terms and ask them to write the accepted abbreviation for each.		

		Give students a list of commonly used medical abbreviations and ask them to write the medical term they stand for.		
11.2 (Understanding) Explain the use and side effects of prescription and non-prescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) used to treat common disease states, including those that affect the following body systems: 1. cardiovascular 2. respiratory 3. gastrointestinal 4. renal 5. nervous 6. endocrine 7. reproductive 8. immune 9. skeletal 10. eyes, ears, nose and throat	For each body system listed in Objective 11.2: • (Understanding) Describe basic anatomy and physiology • (Understanding) Therapeutic effects of prescription and nonprescription medications and alternative therapies used to treat diseases • (Understanding) Adverse effects • (Understanding) Brand and generic names of medications commonly used to treat conditions that typically affect the system and their usual dosage forms, route(s) of administration and doses.	*Instructor: Cover material described in objectives for each body system (anatomy, etc.)* *Sample student activities:* Have students match medications with the body system they are usually used to treat. For each body system, have students match typically used medications with their appropriate dosage forms, routes of administration and doses.		

11. dermatologic 12. hematologic 13. muscular				
11.3 (Understanding) Explain the role of the FDA in regulating herbal products and dietary supplements.		*Instructor: Cover material described in objectives (relevant regulations, etc.)*		Preceptor: Explain the role of the FDA in how they handle herbal products and dietary supplements in their pharmacy.

Goal 12: Perform mathematical calculations essential to the duties of pharmacy technicians in a variety of contemporary settings.

		Teaching Strategy Examples**Suggestions only. Other options possible at discretion of program*		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
12.1 (Applying) Perform mathematical calculations frequently needed in pharmacy technicians' work.	• (Understanding) Explain the use of Roman and Arabic numerals, fractions, decimals and apothecary symbols • (Applying): Demonstrate how to convert weights and measures, and direct ration and proportion. • (Applying) Demonstrate how to reduce and enlarge formulas • (Applying) Demonstrate how to solve problems involving specific gravity, percent strength, weight-in-volume, weight-in-weight and volume-in-volume • (Applying) Demonstrate how to perform ratio strength	*Instructor: Cover material described in objectives (types of calculations, when used, how to perform, practice)* *Sample student activities:* Perform each type of calculation in relevant assignments and assessments.	*Sample activity:* Perform each type of calculation in situations that simulate tasks that occur as a part of typical pharmacy technician jobs. *Examples:* *Ask students to calculate the total amount of a suspension if the patient must take 10 ml every 8 hours for 7 days, followed by 10 ml every 12 hours for 5 days, followed by 5 ml every 12 hours for 2 days.* *Ask students to calculate the total number of tablets*	Perform calculations as needed during duties at the experiential site.

	calculations for pharmaceutical preparations		*needed if the patient is to take two tablets every 4 hours for 15 days, followed by two tablets every 6 hours for 10 days, followed by one tablet every 12 hours for another 10 days and then one tablet for 3 days.*	
	• (Applying) Demonstrate how to perform dilution and concentration calculations, including using the alligation method			
	• (Applying) Demonstrate use of milliequivalents			
	• (Applying) Accurately determine the correct volume to be added to compounded products requiring overfill.			
	• (Understanding) Identify and explain the types of situations in which the various types of calculations will be necessary.			

Goal 13: Demonstrate understanding of the pharmacy technician's role in the medication-use process.

		Teaching Strategy Examples*		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
13.1 (Understanding) Explain the pharmacy technician's role in the medication-use process.	• (Understanding) Explain how the medication-use process differs in different patient-care settings. • (Understanding) Discuss the role of the technician in the medication use process.	*Instructor: Cover material described in objectives (technician role, etc.)*		

Goal 14: Demonstrate understanding of major trends, issues, goals, and initiatives taking place in the pharmacy profession.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
14.1 (Understanding) Identify and describe major trends, issues, goals, and initiatives taking place in the pharmacy profession.	• (Understanding) Describe the PPMI initiative and its impact on the pharmacy profession. • (Understanding) Describe other major trends, issues, goals and initiatives taking place in the pharmacy profession.	_Instructor: Cover material described in objectives (initiatives, trends)_		Preceptors: Discuss with students what initiatives, trends, etc. are impacting the experiential site and how they are impacting it.

Goal 15: Demonstrate understanding of non-traditional roles of pharmacy technicians.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
15.1 (Understanding) Identify and explain non-traditional roles of pharmacy technicians.		_Instructor: Cover material described in objective (non-traditional roles)_		

Goal 16: Identify and describe emerging therapies.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
16.1 (Understanding) Identify and describe emerging therapies.		_Instructor: Cover material described in objectives (identification and description of emerging therapies)_		

Goal 17: Demonstrate understanding of the preparation and process for sterile and non-sterile compounding.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	Instructional Objectives (IOs)	Didactic	Simulated (Lab)	Experiential
17.1 (Understanding) Demonstrate understanding of the preparation and process for sterile and non-sterile compounding.		*Instructor: Cover material described in objectives (preparation and process for sterile and non-sterile compounding)*		

Processing and Handling of Medications and Medication Orders

Goal 18: Assist pharmacists in collecting, organizing, and recording demographic and clinical information for direct patient care and medication-use review.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	Instructional Objectives (IOs)	Didactic	Simulated (Lab)	Experiential
18.1 (Applying) Act in accordance with state laws and regulations regarding collection of patient specific information.	• (Understanding) Explain how state laws and regulations determine what activities regarding collection of patient specific information can be delegated to technicians.	*Instructor: Cover material described in objectives (relevant state laws, etc.)*		Act in accordance with relevant laws at the experiential site.
18.2 (Applying) Collect needed patient information from the medical chart, patient profile or medical record when needed.	• (Understanding) Explain the purposes for collecting patient-specific information by pharmacists. • (Understanding) Explain the	*Instructor: Cover material described in objectives (pertinent patient information, etc.)*	*Sample activity:* Have students collect appropriate information in given cases.	Collect patient information appropriately as needed at the experiential site.

	organization of patient medical charts or records and patient profiles. • (Applying) Locate needed information in patient medical charts, records and patient profiles.			
18.3 (Applying) Effectively interview patients, their representatives, or their caregivers to obtain needed patient information.		*Instructor: Cover material described in objectives (effective interviewing)* *Sample student activities:* Role-play interview with patient, their representatives, or their caregivers. (can be done in didactic or simulated portion of program)*	*Sample activity:* Role-play interview with patient, their representatives, or their caregivers. (can be done in didactic or simulated portion of program)*	Conduct interviews as needed at the experiential site.
18.4 (Applying) Obtain required patient information from other members of the health care team when needed.		*Instructor: Cover material described in objectives (types on information that may be needed from health care team and how to obtain it)*	*Sample activity:* In simulations, determine what members of the health care team may have needed information.	Obtain information as needed at the experiential site.
18.5 (Applying) Follow an established system for organizing collected patient-specific information in a useful electronic or manual		*Instructor: Cover material described in objectives (formats for organizing information).*	*Sample activity:* Ask students to organize given patient-specific information into a specified template.	Accurately use the system(s) at the experiential site.

format.				
18.6 (Evaluating) When collecting patient-specific information, identify situations where the patient requires the attention of the pharmacist.		*Instructor: Cover material described in objectives (when patients require pharmacist attention)* *Sample student activity:* Describe scenarios in which patients need or don't need the pharmacists' attention. Ask students to identify those in which the patient needs the pharmacist's attention and explain why.		Identify patients needing pharmacist attention as needed at the experiential site.
18.7 (Applying) Appropriately collect data for the pharmacist's use in a medication use review.	• (Understanding) Explain the purpose of a medication use review. • (Understanding) Explain the structure of a medication use review.	*Instructor: Cover material described in objectives (how to collect data for a medication use review, etc.)*		Collect data as requested at the experiential site.
18.8 (Applying) Appropriately collect data for the pharmacist's use in managing pharmacy services.	• (Remembering) State the types of information the pharmacist might request to assist in managing pharmacy services. • (Understanding) Explain the use of productivity data in contemporary pharmacy practice. • (Understanding) Compare and	*Instructor: Cover material described in objectives (how to collect data for use in managing pharmacy services, etc.)*		Collect data as requested at the experiential site.

	contrast the functions and applications of several currently used pharmacy productivity measurement systems. • (Understanding) Explain technicians' potential roles in establishing, maintaining, and participating in a pharmacy productivity measurement system.			

Goal 19: Receive and screen prescriptions/medication orders for completeness, accuracy, and authenticity.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
19.1 (Applying) Act in accordance with state laws and regulations related to receiving and screening of medication orders.	• (Understanding) Explain how state laws and regulations determine what activities regarding receiving and screening prescription/medication orders for completeness and authenticity can be delegated to technicians.	_Instructor: Cover material described in objective (laws and regulations)_		Comply with state laws and regulations when receiving and screening medication orders during duties at the experiential site.

19.2 (Applying) Assess prescription/medication orders for completeness and authenticity when receiving orders via paper or electronic systems.	• (Remembering) State the components of a complete prescription/medication order including prescription/medication orders for controlled substances. • (Remembering) When given an abbreviated instruction for medication use, state the full wording of the instruction. • (Remembering) State the schedule for controlled substances and commonly used medications that fall into each category. • (Understanding) Explain the procedure to verify the validity of a prescriber's DEA number. • (Understanding) Explain techniques for detecting forged or altered prescriptions. • (Understanding) Explain the importance of alerting the pharmacist if a prescription/medication order appears to be illegitimate.	*Instructor: Cover material described in objectives (how to assess for completeness and authenticity, etc.)* *Sample student activity*: Give students prescriptions and medication orders, some of which contain errors in completeness or authenticity. Ask them to determine if they are complete and/or authentic.	*Sample activities:* Simulate receiving prescriptions/medication orders. Simulate assessing for completeness and authenticity.	Use paper and electronic systems to receive prescription/medication orders at the experiential site. Assess prescriptions/medication orders for completeness and authenticity at the experiential site.
19.3 (Applying) Efficiently	• (Understanding) Explain	*Instructor: Cover material*	Sample activity:	Obtain information to

obtain information to complete a prescription/medication order.	methods for obtaining missing pieces of information in a prescription/medication order.	*described in objectives (how to obtain information)* *Sample student activity*: Give students incomplete medication orders and ask how they would obtain the missing information. (can be done in didactic or simulated portion of program)	Give students incomplete medication orders and ask how they would obtain the missing information. *(can be done in didactic or simulated portion of program)*	complete a prescription/medication order as needed at the experiential site.
19.4 (Analyzing) Identify situations when screening refills and renewals when the technician should notify the pharmacist of potential inappropriateness.	• (Understanding) Explain common situations when screening refills and renewals when the technician should notify the pharmacist of potential inappropriateness.	*Instructor: Cover material described in objectives (how to identify possibly inappropriate refills and renewals)* *Sample student activity:* Give students sample refill or renewals and ask if they should notify the pharmacist of potential inappropriateness and why.	*Sample activity:* Include refill and renewal orders that are inappropriate during simulated activities. Students should correctly identify these.	Identify refills and renewals for which they should notify the pharmacist of potential inappropriateness at the experiential site.

Goal 20: Assist pharmacists in the identification of patients who desire/require counseling to optimize the use of medications, equipment, and devices.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
20.1 (Applying) Act in accordance with state laws and regulations regarding patient counseling.	• (Remembering) Describe the legal obligations for patient counseling, including documentation, as specified in OBRA 90 and in state laws and regulations.	*Instructor: Cover material described in objectives (laws and regulations, etc.)*		Act in accordance with relevant state laws at the experiential site.

	• (Understanding) Explain how state laws and regulations determine what activities regarding patient counseling can be delegated to technicians.			
20.2 (Applying) Use effective communication skills to determine if a patient or caregiver would like pharmacist counseling on the use of medications.	• (Understanding) Explain the importance of counseling patients in the use of medications. • (Understanding) Explain how to question patients to determine if they would like pharmacist counseling.	*Instructor: Cover material described in objectives (importance of counseling, etc.)*		Determine if patients would like pharmacist counseling at the experiential site.

Goal 21: Prepare non-patient-specific medications for distribution (e.g., batch, stock medications).

	Teaching Strategy Examples**Suggestions only. Other options possible at discretion of program*		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
21.1 (Applying) Act in accordance with state laws and regulations regarding preparing medications for distribution.	• (Understanding) Explain how state laws and regulations determine what activities regarding preparing medications for distribution can be delegated to technicians. • (Understanding) Explain why it is important to notify the pharmacist when a non-formulary medication has been ordered.	*Instructor: Cover material described in objectives (state laws, etc.)*		Act in accordance with relevant state laws at the experiential site.

	• (Understanding) Explain one's own state laws governing pharmacist review of medications prior to distribution.			
21.2 (Applying) Follow established laws and protocols to select the appropriate product.	• (Understanding) Explain federal and state laws governing the substitution of medication products. • (Understanding) Explain the purpose and use of a formulary (e.g., state, health system, buying group). • (Understanding) Explain the influence that the formulary and/or policies of third party payers have on the selection of products. • (Understanding) Explain the function of an NDC number.	*Instructor: Cover material described in objectives (purpose and use of a formulary, etc.)*	*Sample activity:* Practice appropriate selection of products in the simulated setting.	Act in accordance with relevant state laws at the experiential site.
21.3 (Applying) Appropriately obtain prescribed medications or devices from inventory.	• (Understanding) Explain typical storage arrangements for medications and devices. • (Understanding) Explain the importance of the way medications and devices are typically arranged.	*Instructor: Cover material described in objectives (typical storage arrangements)* *Sample student activity:* Describe a hypothetical technician obtaining a medication from inventory, who makes a mistake while doing so.	*Sample activity:* Use appropriate processes to obtain prescribed medications or devices from inventory in a simulated setting.	Use appropriate processes to obtain prescribed medications or devices from inventory at the experiential site.

		Ask students what the mistake is and what should be done instead.		
21.4 (Applying) Follow safety policies and procedures in the preparation of all medications.	• (Understanding) Explain the importance of following safety policies and procedures when preparing medications. • (Remembering) Describe standard safety policies and procedures for preparing medications.	*Instructor: Cover material described in objectives (safety policies and procedures, etc.).* *Sample student activity*: Describe a hypothetical technician preparing a medication, who makes a mistake in safety procedures while doing so. Ask students what the mistake is and what should be done instead. Ask the potential impact of the mistake and who it may impact (e.g., self, co-workers, patients)	*Sample activity:* Follow safety procedures during simulated activities.	Follow the experiential site's safety policies and procedures when preparing medications.
21.5 (Applying) Package the product in the appropriate type and size of container using a manual or automated system.	• (Understanding) Explain the need for packaging products in the appropriate type and size of container. • (Remembering) Describe the various sizes and types of containers for the packaging of pharmaceuticals in different pharmacy settings. • (Remembering) Describe options for the packaging of products for children and patients who are the physically challenged or aged.	*Instructor: Cover material described in objectives (product packaging options, etc.)* *Sample student activity*: Describe a hypothetical technician packaging a product, who makes a mistake while doing so. Ask students what the mistake is and what should be done instead.	*Sample activity:* Appropriately package products in a simulated setting.	Appropriately package products at the experiential site.

	• (Complex overt response) Skillfully operate automated packaging equipment.			
21.6 (Applying) Follow an established procedure to generate accurate and complete product labels.	• (Understanding) Explain the importance of accurate labeling of pharmaceuticals. • (Remembering) Describe the information in a complete product label.	*Instructor: Cover material described in objectives (information needed on label)* *Sample student activity*: Describe a hypothetical technician labeling a product, who makes a mistake while doing so. Ask students what the mistake is and what should be done instead.	*Sample activity:* Appropriately generate labels in a simulated setting.	Appropriately generate labels at the experiential site.
21.7 (Applying) Affix the appropriate primary and auxiliary labels to containers.	• (Remembering) State categories of medications which require auxiliary labels and what those labels are. • (Understanding) Explain the importance of placing labels so that all information on all labels is visible.	*Instructor: Cover material described in objectives (categories of medications requiring auxiliary labels)* *Sample student activity*: Have students observe classmates or the instructor placing auxiliary labels on a product. Ask students critique what they observe and identify any mistakes and how to correct them.	*Sample activity:* Appropriately affix auxiliary labels in a simulated setting.	Appropriately affix auxiliary labels at the experiential site.
21.8 (Applying) Follow established policies and procedures for recording	• (Understanding) Discuss the importance of documenting preparation of bulk, unit dose,	*Instructor: Cover material described in objectives (recording procedures, etc.)*	*Sample activity:* Properly record	Properly record preparations at the experiential site.

preparation of bulk, unit dose, and special doses of medications for immediate or anticipated future use.	and special doses of medications immediate or anticipated future use. • (Remembering) Describe categories of information to be recorded at the time of preparation of bulk, unit dose, and special doses of medications prepared for immediate or anticipated future use.	*Sample student activity*: Describe a hypothetical technician recording preparations of different types, who makes mistakes while doing so. Ask students what the mistake is and what should be done instead.	preparations in a simulated setting.	
21.9 (Applying) Follow established policies and procedures for recording the preparation of controlled substances.	• (Remembering) State the meaning of the term "controlled substance." • (Remembering) State legal obligations regarding recording the preparation of controlled substances.	*Instructor: Cover material described in objectives (relevant policies and procedures, etc.)* *Sample student activity*: Describe a hypothetical technician recording the preparation of a controlled substance, who makes a mistake while doing so. Ask students what the mistake is and what should be done instead.	*Sample activity:* Properly record preparations of controlled substances in a simulated setting.	Properly record preparations of controlled substances at the experiential site.
21.10 (Applying) Follow the manufacturer's recommendation and/or the pharmacy's guidelines for storage of medications prior to distribution.	• (Understanding) Explain the importance of proper storage of medications. • (Understanding) Explain the storage requirements for different medication products.	*Instructor: Cover material described in objectives (relevant recommendations and guidelines, etc.)* *Sample student activity*: Describe a hypothetical technician storing a medication, who makes a mistake while	*Sample activity:* Properly store medications in a simulated setting.	Properly store medications at the experiential site.

		doing so. Ask students what the mistake is and what should be done instead.		

Goal 22: Distribute medications in a manner that follows specified procedures.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	**Simulated (Lab)**	**Experiential**
22.1 (Applying) Efficiently deliver the correct medication, equipment, device, or supplies to the correct patient or their representative.	• (Understanding) Explain the importance of getting the right medication, equipment, device, or supplies to the patient or their representative. • (Remembering) Describe the various systems used to distribute medications.	_Instructor: Cover material described in objectives (systems for distributing medications, etc.)_ _Sample student activity:_ Discuss how distribution systems vary based on the type of medication, including controlled substances.	_Sample activity:_ Simulate distribution, including documentation, of a variety of medications, including use of automated distribution systems (or mock-ups of automated distribution systems).	Distribute medications as needed at the experiential site.
22.2 (Applying) Follow established policies and procedures to record the distribution of prescription medications.		_Instructor: Cover material described in objectives (relevant policies and procedures, etc.)_	_Sample activity:_ Simulate recording the distribution of prescription medications.	Appropriately record the distribution of prescription of medications at the experiential site.
22.3 (Applying) Follow established policies and procedures to record the distribution of controlled substances.	• (Complex overt response) Skillfully operate automated distribution systems. • (Remembering) Describe standard policies and procedures	_Instructor: Cover material described in objectives (relevant policies and procedures, etc.)_	_Sample activity:_ Simulate recording the distribution of controlled substances.	Record the distribution of controlled substances at the experiential site.

Objective		Didactic		Experiential
				for recording the distribution of controlled substances.		
22.4 (Evaluating) Monitor medication use to assure it is consistent with the prescription/medication order for the patient.		*Instructor: Cover material described in objectives (how to monitor for proper use).*		Monitor medication use to assure it is consistent with the prescription/medication order for the patient as needed at the experiential site.

Goal 23: Practice effective infection control procedures, including preventing transmission of blood borne and airborne diseases.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	Instructional Objectives (IOs)	Didactic	Simulated (Lab)	Experiential
23.1 (Applying) Follow policies and procedures for infection control (e.g., protective clothing, hand-washing).	• (Understanding) Explain the need for sanitation management in the pharmacy setting. • (Remembering) Define "infection control". • (Understanding) Explain OSHA regulations regarding pharmacy practice, including regulations for blood-borne pathogens. • (Understanding) Explain state regulations regarding infection control. • (Understanding) Explain institutional policies and procedures regarding infection control.	*Instructor: Cover material described in objectives (infection control definition, OSHA and state regulations, etc.)* *Sample student activity:* Give descriptions of infection control situations, some using appropriate procedures and others not. Ask the students to differentiate if proper procedures are being used or not and how to correct the situations in which they are not.	*Sample activity:* Simulate appropriate use of protective clothing and other infection control methods.	Follow policies and procedures for infection control at the experiential site.

Goal 24: Assist pharmacists in preparing, storing, and distributing medication products requiring special handling and documentation [(e.g., controlled substances, immunizations, chemotherapy, investigational drugs, drugs with mandated Risk Evaluation and Mitigation Strategies (REMS)].

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
24.1 (Understanding) Explain special procedures pharmacy technicians will be responsible for regarding preparing, storing and distributing controlled substances.		_Instructor: Cover material described in objectives (e.g., procedure for preparing, storing and distributing controlled substances, etc.)_		
24.2 (Applying) Act in accordance with state laws and regulations regarding the technician's role in immunizations.	• (Understanding) Explain how state laws and regulations determine what activities regarding immunizations can be delegated to technicians.	_Instructor: Cover material described in objectives (relevant state laws, etc.)_		Act in accordance with state laws and regulations regarding the technician's role in immunizations at the experiential site.
24.3 (Applying) Apply special procedures technicians will be responsible for regarding preparing, storing and distributing controlled substances and chemotherapy agents.		_Instructor: Cover material described in objectives (relevant special procedures)_ _Sample student activity:_ Ask students to identify errors in scenarios involving special procedures for controlled substances and chemotherapy agents.	_Sample activity:_ Practice special procedures in a simulated setting.	Follow relevant special procedures at the experiential site.
24.4 (Applying) Apply special procedures pharmacy technicians will		_Instructor: Cover material described in objectives (relevant special procedures)_	_Sample activity:_ Practice special	Follow relevant special procedures regarding investigational drug at the

			procedures regarding investigational drugs in a simulated setting.	experiential site, if needed.
be responsible for regarding preparing, storing and distributing investigational drugs		*Sample student activity:* Ask students to identify errors in scenarios involving special procedures for investigational drugs.		
24.5 (Applying) Apply special handling procedures for drugs with mandated Risk Evaluation and Mitigation Strategies (REMS)].	• (Remembering) Define Risk Evaluation and Mitigation Strategies (REMS) and its importance.	*Instructor: Cover material described in objectives (special handling procedures).*	*Sample activity:* Practice special procedures in a simulated setting.	Follow special handling procedures for drugs with mandated Risk Evaluation and Mitigation Strategies (REMS) at the experiential site.
24.6 (Applying) Follow the established protocol for the preparation, storage and recording of an investigational medication product.		*Instructor: Cover material described in objectives (relevant special procedures)* *Sample student activity:* Ask students to identify errors in scenarios involving protocols for investigational drugs.	*Sample activity:* Practice protocols for investigational drugs in a simulated setting.	Follow the established protocol for the preparation, storage and recording of investigational medication products at the experiential site.

Goal 25: Assist pharmacists in the monitoring of medication therapy.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
25.1 (Applying) Act in accordance with state laws and regulations regarding technician's role in monitoring of medication therapy.	• (Understanding) Explain how state laws and regulations determine what activities regarding monitoring of medication therapy can be delegated to technicians.	_Instructor: Cover material described in objectives (e.g., relevant state laws, monitoring procedures)_	_Sample activity:_ Practice relevant monitoring procedures.	Act in accordance with relevant laws and regulations when assisting in monitoring procedures at the experiential site.
25.2 (Understanding) Explain the purpose of monitoring a patient's medication therapy.		_Instructor: Cover material described in instructional objectives (purpose of monitoring, etc.)_		
25.3 (Complex Overt Response) Demonstrate skill in monitoring selected procedures (e.g., finger-stick blood draw for glucose monitoring and cholesterol screening, blood pressure, pulse).	• (Remembering) Describe the equipment and supplies used to perform selected procedures and their limitations. • (Understanding) Explain the reasons for the steps in the selected procedures.	_Instructor: Cover material described in instructional objectives (equipment, supplies, reasons for procedures, etc.)_ _Sample student activity:_ Have students match monitoring procedures with information gained from the procedure and/or what condition or disease usually calls for the procedure.	_Sample activity:_ Simulate monitoring selected procedures.	Monitor procedures as needed at the experiential site.

Goal 26: Prepare patient-specific medications for distribution.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
26.1 (Applying) Act in accordance with state laws and regulations regarding technician's role in preparing medications for distribution.	• (Understanding) Explain how state laws and regulations determine what activities regarding preparing medications for distribution can be delegated to technicians. • (Understanding) Explain why it is important for the technician to notify the pharmacist when screening of the prescription/medication order reveals a non-formulary medication has been ordered. • (Understanding) Explain one's own state laws governing pharmacist review of medications prior to distribution.	_Instructor: Cover material described in objectives (state laws and regulations)_		Follow relevant state laws and regulations at the experiential site.
26.2 (Applying) Accurately create a new, or enter data into an existing, patient profile according to an established procedure.	• (Applying) Accurately use the following systems for inputting prescription/medication order information: metric, avoirdupois, household and apothecary systems.	_Instructor: Cover material described in objectives (systems for inputting prescription/medication order information)._	_Sample activity:_ Practice using each system in the simulated setting.	Accurately create a new, or enter data into an existing, patient profile using the established procedures of the experiential site.
26.3 (Applying) Accurately count or measure finished dosage forms as specified	• (Applying) Accurately use the following systems to count and measure: metric, avoirdupois,	_Instructor: Cover material described in objectives (counting, measuring, etc.)_	_Sample activity:_ Practice counting,	Count, weigh and measure finished dosage forms at the experiential site.

by the prescription/medication order.	household system (e.g. teaspoon, tablespoon) and apothecary. • (Complex Overt Response) Accurately operate common pharmaceutical measurement and weighing devices. • (Applying) Accurately convert from one measurement system to another as needed.		weighing and measuring finished dosage forms in the simulated setting.	
26.4 (Applying) Follow protocol to assemble appropriate patient information materials.	• (Remembering) Describe pharmacist obligations for counseling as required in OBRA '90. • (Understanding) Explain the importance of including written patient information at the time of dispensing. • (Remembering) Describe the types of written information that are typically included with dispensed products.	*Instructor: Cover material described in objectives (patient information materials).* *Sample student activity*: Have students match different types of dispensed products with written information that would need to go with it.	*Sample activity:* Have students include appropriate written materials with simulated dispensed products in the lab setting.	Follow the experiential site's protocols to assemble appropriate patient information materials.

Goal 27: Maintain pharmacy facilities and equipment, including automated dispensing equipment.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
27.1 (Applying) Follow policies and procedures for sanitation management and hazardous waste handling (e.g., needles).	• (Understanding) Explain the need for sanitation management in the pharmacy. • (Remembering) Define "hazardous waste". • (Understanding) Explain state regulations regarding handling hazardous waste. • (Understanding) Explain institutional policies and procedures regarding hazardous waste management. • (Understanding) Explain the reasons for the procedures for cleaning a laminar flow biological safety cabinet.	_Instructor: Cover material described in objectives (policies and procedures for sanitation management, etc.)._ _Sample student activity_: Give descriptions of sanitation management and hazardous waste handling, some using appropriate procedures and others not. Ask the students to differentiate if proper procedures are being used or not and how to correct the situations in which they are not.	_Sample activity:_ Practice procedures for maintaining pharmacy facilities and equipment, such as automated dispensing equipment, laminar flow biological safety cabinets and equipment requiring calibration.	Follow policies and procedures for sanitation management and hazardous waste handling at the experiential site.
27.2 (Applying) Apply appropriate techniques to clean laminar flow biological safety cabinets.		_Instructor: Cover material described in objectives (appropriate techniques for cleaning laminar flow biological safety cabinets)._	_Sample activity:_ Simulate cleaning laminar flow biological safety cabinets using appropriate techniques.	Clean laminar flow biological safety cabinets at the experiential site using appropriate technique.
27.3 (Applying) Maintain a clean and neat work environment.	• (Understanding) Explain the importance of maintaining a clean and neat work	_Instructor: Cover material described in objectives (importance of maintaining a_		Maintain a clean and neat work environment at the experiential site.

	environment.	*clean and neat work environment).*		
27.4 (Applying) Accurately calibrate weighing or counting devices, fluid compounders, or syringe pumps.	• (Remembering) Describe the equipment and pharmacy devices common to pharmacy practice. • (Remembering) Describe the term "calibration" as it refers to the equipment commonly used in pharmacy practice. • (Applying) Accurately calibrate syringe pumps and devices for weighing, counting and compounding. • (Understanding) Explain the role of electronic devices in the delivery of direct patient care. • (Understanding) Explain how to update and maintain information systems for prices updates and report generation.	*Instructor: Cover material described in objectives (how to calibrate).*	*Sample activities:* Practice calibrating weighing and counting devices, fluid compounders and syringe pumps in a simulated setting.	Accurately calibrate weighing or counting devices, fluid compounders, or syringe pumps at the experiential site.
27.5 (Applying) Follow manufacturers' guidelines in troubleshooting, maintaining, and repairing electronic devices used in preparing and dispensing medications.		*Instructor: Cover material described in objectives (sample guidelines for trouble shooting, maintain and repairing electronics relevant devices).*	*Sample activity:* Practice or simulate practice of appropriately troubleshooting, maintaining and/or repairing selected devices.	Follow manufacturers' guidelines in troubleshooting, maintaining, and repairing electronic devices used in preparing and dispensing medications.

Goal 28: Use material safety data sheets (MSDS) to identify, handle, and safely dispose of hazardous materials.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*		
		Didactic	Simulated (Lab)	Experiential
28.1 (Applying) Accurately follow instructions on material safety data sheets.	• (Understanding) Define and explain the purpose and importance of material safety data sheets (MSDS). • (Understanding) Describe examples of instructions on a material safety data sheet.	*Instructor: Cover material described in objectives (MSDS, etc.)*	*Sample activity:* Simulate following instructions on a material safety data sheet.	Accurately follow instructions on material safety data sheets at the experiential site.

Sterile and Non-Sterile Compounding

Goal 29: Prepare medications requiring compounding of sterile products.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples* *Suggestions only. Other options possible at discretion of program*		
		Didactic	Simulated (Lab)	Experiential
29.1 (Understanding) Define and explain key elements of USP 797.		*Instructor: Cover material described in objectives (USP 797).*		
29.2 (Applying) Collect the correct ingredients for sterile products requiring compounding.	• (Remembering) Define the term "compounding". • (Understanding) Explain why some medications require compounding. • (Remembering) Define the terms	*Instructor: Cover material described in objectives (procedures for maintaining sterility while collecting materials for compounding, etc.)*	*Sample activity:* Collect ingredients in the simulated setting.	Collect the correct ingredients for sterile products requiring compounding at the experiential site.

	"sterile" and "non-sterile" in pharmacy. • (Understanding) Explain why some medications must be sterile. • (Applying) Demonstrate the proper procedure for maintaining the sterility of materials being collected for compounding a sterile product.			
29.3 (Applying) Accurately determine the correct amounts of ingredients for a compounded product.	• (Applying) Correctly solve mathematical problems using Roman numerals, Arabic numerals, fractions, apothecary symbols, and decimals. • (Applying) Correctly solve mathematical problems involving conversion of weights and measures and direct ratio and proportion. • (Applying) Correctly solve mathematical problems involving reducing and enlarging formulas. • (Applying) Correctly solve mathematical problems involving specific gravity, percent strength, weight-in-volume, weight-in-weight, and volume-in-volume.	*Instructor: Cover material described in objectives (methods for determining amounts).* *Sample student activities:* Solve each type of problem listed in the instructional objectives.	*Sample activity:* Determine the correct amounts of ingredients for a compounded product in the simulated setting.	Determine the correct amounts of ingredients for compounded products at the experiential site.

	• (Applying) Correctly solve mathematical problems involving ratio strength calculations for pharmaceutical preparations. • (Applying) Correctly solve mathematical problems involving dilution and concentration. • (Applying) Correctly solve mathematical problems involving dilution and concentration using the alligation method. • (Applying) Correctly solve mathematical problems involving milliequivalents. • (Applying) Solve for the correct volume to be added for compounded products that require an overfill.			
29.4 (Complex Overt Response) Compound sterile products using appropriate techniques, equipment and devices.	• (Remembering) State one's state regulations regarding technician compounding of sterile products. • (Understanding) Explain the reason for each step of aseptic technique. • (Understanding) Explain therapeutic, pharmaceutical, and	*Instructor: Cover material described in objectives (sterile compounding techniques).* *Sample student activities:* • Present enactments or descriptions of sterile compounding and ask students to identify errors and how they	*Sample activities:* Practice sterile compounding technique in the simulated setting.	Compound sterile products using appropriate techniques, equipment and devices at the experiential site.

		chemical incompatibility.	should be corrected.		
		• (Understanding) Explain how the effects of incompatibilities can be overcome when compounding sterile products.	• Show videos that demonstrate correct technique.		
		• (Understanding) Explain the uses of horizontal and vertical laminar flow hoods.			
		• (Complex Overt Response) Demonstrate the proper use of equipment and devices used in compounding sterile products.			

Goal 30: Prepare medications requiring compounding of non-sterile products.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
30.1 (Complex Overt Response) Compound non-sterile products using appropriate technique.	• (Remembering) State one's state regulations regarding technician compounding of non-sterile products. • (Understanding) Explain the reasons for the steps of non-sterile technique. • (Understanding) Explain how the effects of incompatibilities can be overcome when compounding non sterile products.	_Instructor: Cover material described in objectives (relevant state regulations, non-sterile technique, etc.)._	_Sample activity:_ Practice compounding non-sterile products in the simulated setting.	Compound non-sterile products using appropriate technique at the experiential site.

Goal 31: Prepare medications requiring compounding of chemotherapy/hazardous products.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	Instructional Objectives (IOs)	Didactic	Simulated (Lab)	Experiential
31.1 (Complex Overt Response) Compound cytotoxic and other hazardous medication products using appropriate technique.	• (Remembering) State one's state regulations regarding technician compounding of cytotoxic and other hazardous medication products. • (Understanding) Explain risks involved in the preparation and handling of cytotoxic and other hazardous medication products. • (Understanding) Explain the reasons for the steps in cytotoxic or other hazardous medication product preparation technique.	_Instructor: Cover material described in objectives (relevant state regulations, risks, steps in preparation, etc.)._	_Sample activity_: Practice compounding cytotoxic and other hazardous medication products in the simulated setting.	Practice compounding cytotoxic and other hazardous medication products at the experiential site.
31.2 (Applying) Follow safety policies and procedures when disposing of hazardous and non-hazardous wastes.	• (Remembering) Describe standard safety policies and procedures when disposing of hazardous and non-hazardous wastes.	_Instructor: Cover material described in objectives (relevant safety policies and procedures)._	_Sample activity_: Practice following safety policies and procedures during simulations of disposing of hazardous and non-hazardous wastes.	Follow safety policies and procedures when disposing of hazardous and non-hazardous wastes at the experiential site.
31.3(Applying) Follow policies and procedures for sanitation management,	• (Understanding) Explain the need for sanitation management in the pharmacy setting.	_Instructor: Cover material described in objectives (relevant policies and procedures)._	_Sample activity_: Simulate handling of	Follow the experiential site's policies and procedures for sanitation management,

			hazardous waste.	hazardous waste handling and infection control.
hazardous waste handling (e.g., needles), and infection control (e.g., protective clothing).	• (Remembering) Define "hazardous waste". • (Remembering) Define "infection control". • (Understanding) Explain OSHA regulations regarding pharmacy practice, including regulations for blood-borne pathogens. • (Understanding) Explain state regulations regarding the handling of hazardous waste and infection control. • (Understanding) Explain institutional policies and procedures regarding hazardous waste management and infection control.			
31.4 (Complex Overt Response) Demonstrate skill in cleaning up a cytotoxic or other hazardous medication product spill using the accepted procedure.	• (Understanding) Explain processes for cleaning up a cytotoxic or other hazardous medication product spill.	*Instructor: Cover material described in objectives (how to clean up a hazardous spill)*	*Sample activity:* Clean up a cytotoxic or other hazardous medication product spill using the accepted procedure in a simulated setting.	Clean up a cytotoxic or other hazardous medication product spill using the accepted procedure if needed at the experiential site.

Procurement, Billing, Reimbursement and Inventory Management

Goal 32: Initiate, verify, and assist in the adjudication of billing for pharmacy services and goods, and collect payment for these services.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
		Didactic	Simulated (Lab)	Experiential
32.1 (Applying) Effectively obtain needed information from the customer/patient, including method of payment for a prescription/medication order and patient-specific information.	• (Remembering) Describe the possible methods of payment for a prescription/medication order and associated services.	*Instructor: Cover material described in objectives (obtaining needed information)*	*Sample activity:* Role-play scenarios in which the student must obtain method of payment and/or patient-specific information.	Obtain needed information from the customer/patient at the experiential site.
32.2 (Analyzing) Verify and accurately input third party coverage for a prescription/medication order.	• (Understanding) Describe how to verify third party coverage.	*Instructor: Cover material described in objectives (verifying third party coverage, etc.)*	*Sample activity:* Simulate actions needed to verify and accurately input third party coverage for a prescription/medication order.	Verify and accurately input third party coverage for a prescription/medication order at the experiential site.
32.3 (Applying) When a claim is rejected, identify the reason.	• (Understanding) Describe ways to determine reasons for a rejected claim.	*Instructor: Cover material described in objectives (rejected claims)*		Identify reasons for rejected claims at the experiential site.
32.4 (Applying) Appropriately communicate third party	• (Understanding) Explain ways to communicate third party payer responses that are sensitive to	*Instructor: Cover material described in objectives (communication of third party*	*Sample activity:* Role-play scenarios in	Communicate third party payment coverage information and further action

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payment coverage information and further action to be taken to customers/patients.	customer/patient concerns and are clearly understood. • (Applying) Use effective communication techniques for diffusing strong emotional reactions to third party payment response.	*payment coverage information, etc.).*	which the student must communicate third party payment coverage information.	to be taken to customers/patients as needed at the experiential site.
32.5 (Applying) Accurately complete third party claims forms.		*Instructor: Cover material described in objectives (third party claim forms)* *Sample student activity*: Practice completing sample third party claims forms.		Accurately complete third party claims forms at the experiential site.
32.6 (Applying) Accurately record the receipt of payment for pharmaceutical goods and services.	• (Application) Accurately assess a prescription transmission adjudication for appropriate payment. • (Application) Using cost analysis methods, verify that the submitted medication has been paid for by the third party insurance. • (Application) When a judgment decision is required, alert the pharmacist to determine proper prescription adjudication.	*Instructor: Cover material described in instructional objectives (recording receipt of payment)* *Sample student activity*: Practice recording receipt of payments.		Accurately record the receipt of payment for pharmaceutical goods and services at the experiential site.
32.7 (Complex Overt	• (Understanding) Explain	*Instructor: Cover material*	*Sample activity:*	Effectively use the cash

Response) Demonstrate skill in the operation of a cash register.	different types of payment (e.g., debit, credit, cash, certificates, coupons) and how each is entered in the cash register. • (Complex Overt Response) Exercise skill in replacing cash register tapes and ribbons. • (Understanding) Explain how to void transactions on the cash register. • (Understanding) Explain the concept of departmental codes and how they are entered in the cash register.	*described in instructional objectives (how to perform tasks on the cash register)*	Operate or simulate operation of a cash register in a simulated setting.	register at the experiential site.
32.8 (Applying) Accurately make change.		*Instructor: Cover material described in objectives (how to make change).* *Sample student activity*: Describe scenarios in which change must be given and have student calculate the amount.	*Sample activity:* Accurately make change during simulated transactions.	Accurately make change at the experiential site.
32.9 (Applying) Determine items which are taxable.	• (Remembering) Describe the concepts of taxable and nontaxable. • (Remembering) Describe the legal obligation to tax required items.	*Instructor: Cover material described in objectives (distinguishing taxable from nontaxable items)* *Sample student activity*: Have students identify items in	Accurately determine which items are taxable during simulated transactions.	Accurately determine which items are taxable at the experiential site.

Objective	Instructional Objectives (IOs)	Didactic	Simulated (Lab)	Experiential
			a given list as taxable or nontaxable.		
32.10 (Applying) Determine payment due the health system for medication orders.	• (Remembering) Describe common pricing and billing systems. • (Remembering) Describe common systems for tracking medication billing to patients.	*Instructor: Cover material described in objectives (pricing, billing and tracking systems)*	Accurately determine payment due the health system during simulated transactions.	Determine payment due the health system for medication orders when needed at the experiential site.

Goal 33: Apply accepted procedures in purchasing pharmaceuticals, devices, and supplies.

		Teaching Strategy Examples**Suggestions only. Other options possible at discretion of program*		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
33.1 (Applying) Follow an established procedure for purchasing pharmaceuticals, devices, and supplies.	• (Remembering) Describe typical procedures for purchasing pharmaceuticals, devices, and supplies. • (Remembering) Describe typical procedures used to expedite emergency orders/prescriptions. • (Remembering) Describe typical procedures used for the purchase of atypical products (e.g., biologics, interferons, HIV medications, investigational medications, non-formulary products.)	*Instructor: Cover material described in objectives (purchasing procedures)*		Follow the experiential site's procedures for purchasing pharmaceuticals, devices, and supplies.

Goal 34: Apply accepted procedures in inventory control of medications, equipment, and devices.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
34.1 (Applying) Apply accepted procedures of inventory control (e.g., prime vendor, just-in-time).	• (Remembering) Describe the various methods of inventory control (e.g., prime vendor, just-in-time).	_Instructor: Cover material described in objectives (methods of inventory control, etc.)_ _Sample student activity:_ Give descriptions of a hypothetical technician handling inventory, sometimes using appropriate procedures and other times not. Ask the students to differentiate if proper procedures are being used or not and how to correct the situations in which they are not. _Example:_ Scenario: Lisa receives a shipment of OxyContin for the pharmacy, which she previously ordered. She verifies that it is complete and intact before putting it into storage. What is a potential problem with this scenario? (Answer: A different person should order and receive a controlled substance.)	_Sample activity:_ Simulate inventory control procedures.	Apply accepted procedures in inventory control at the experiential site.
34.2 (Applying) Follow	• (Remembering) Describe the	_Instructor: Cover material_		Follow the experiential site's

established policies and procedures verifying specifications on the original order when receiving inventory.	general tasks involved in receiving and verifying the order of inventory. • (Remembering) Describe methods for handling back ordered medications.	*described in objectives (ways to verify specifications, etc.).*		policies and procedures verifying specifications on original orders when receiving inventory.
34.3 (Applying) Follow established policies and procedures for placing pharmaceuticals, durable medical equipment, devices, and supplies in inventory under proper storage conditions.		*Instructor: Cover material described in objectives (putting inventory in storage).*	*Sample activity:* Provide simulated materials for students to practice properly placing into storage.	
34.4 (Applying) Follow established policies and procedures for removing from inventory expired/discontinued pharmaceuticals, durable medical equipment, devices, supplies, or recalled items in these same categories.	• (Remembering) Define the terms "expired", "discontinued", and "recalled" as used in pharmacy. • (Remembering) Describe common reasons for discontinuing or recalling items. • (Understanding) Explain a standard procedure for inspecting nursing units for expired, discontinued, or recalled medications. • (Understanding) Explain a standard procedure for reviewing, removing and	*Instructor: Cover material described in objectives (definition of terms, etc.)*	*Sample activity:* Provide simulated materials for students to review and identify which need to be removed. Have them give the reason and follow proper documentation procedures.	Follow established policies and procedures for removing from inventory as needed at the experiential site.

	handling pharmaceuticals, equipment, devices, and supplies that have expired, been recalled, or are otherwise unfit for patient utilization. • (Understanding) Explain the various levels of recall and the associated responsibilities for each level. • (Understanding) Explain the importance to cash flow of returning expired or excess inventory goods.			
34.5 (Applying) Follow established policies and procedures for documenting repackaging or the removal from inventory of expired/discontinued pharmaceuticals, durable medical equipment, devices, supplies, or recalled items in these same categories.	• (Understanding) Explain the importance of maintaining an inventory system through accurate documentation.	*Instructor: Cover material described in objectives (documentation importance and procedures when repackaging or removing inventory, etc.)*	*Sample activity:* Provide simulated materials for students to repackage or remove as appropriate and complete needed documentation.	Follow established policies and procedures for documenting repackaging or the removal from inventory at the experiential site.
34.6 (Analyzing) Identify pharmaceuticals, durable medical equipment, devices, and supplies to be ordered.	• (Understanding) Explain the importance of maintaining an adequate supply of pharmaceuticals, durable medical equipment, devices, and	*Instructor: Cover material described in objectives (items to be ordered, etc.)*	*Sample activity:* Provide simulated materials for students to review to	

			determine what needs to be ordered.	
	• (Understanding) Explain the problems associated with an excessive supply of pharmaceuticals, durable medical equipment, devices, and supplies. • (Understanding) Explain the role that judgment plays in supplementing an automated system for determining the timing and amount of pharmaceuticals, durable medical equipment, devices, and supplies to order.			
34.7 (Understanding) Explain alternative ways of obtaining a pharmacy item that is not available.	• (Remembering) State categories of alternative sources of items not available from the primary vendor at time of need. • (Understanding) Explain the importance of evaluating the cost of obtaining a needed item from an alternative source.	*Instructor: Cover material described in objectives (alternate sources, etc.)* *Sample student activity:* Have students discuss scenarios in which a needed pharmacy item is not available and what they would do.		
34.8 (Understanding) Explain methods for communicating changes in product availability to patients, caregivers, and/or health care professionals.		*Instructor: Cover material described in objectives (product availability communication methods, etc.)* *Sample student activity:*		

		Have students describe actions they would take if specified product availability were interrupted.		
34.9 (Applying) Follow established policies and procedures for prevention of theft and/or medication diversion.	• (Understanding) Explain the difference between tolerance and physical dependence. • (Remembering) Describe common methods for preventing theft and/or medication diversion. • (Remembering) Describe methods of reporting theft and/or medication diversion.	*Instructor: Cover material described in objectives (policies and procedures to deter theft, etc.)*		Follow the experiential site's policies and procedures to deter theft and/or medication diversion.
34.10 (Applying) Follow established policies and procedures to maintain a record of controlled substances received, stored, and removed from inventory.	• (Remembering) State the legal requirements for recording controlled substances received, stored, and removed from inventory. • (Remembering) State procedures for destroying controlled substances.	*Instructor: Cover material described in instructional objectives (policies and procedures for recording controlled substances, etc.)*	*Sample activity:* Have students simulate recording of controlled substances received, stored, and removed from inventory.	Follow the experiential site's policies and procedures to maintain a record of controlled substances received, stored, and removed from inventory.

Goal 35: Explain pharmacy reimbursement plans for covering pharmacy services.

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	**Simulated (Lab)**	**Experiential**
35.1 (Understanding) Explain pharmacy reimbursement plans for covering pharmacy services.		_Instructor: Cover material described in objective (pharmacy reimbursement plans)._		

Patient- and Medication-Safety

Goal 36: Apply patient- and medication-safety practices in all aspects of the pharmacy technician's roles.

Objective	Instructional Objectives (IOs)	Teaching Strategy Example*_Suggestions only. Other options possible at discretion of program_		
		Didactic	**Simulated (Lab)**	**Experiential**
36.1 (Understanding) Describe common factors of an effective pharmacy department approach to preventing medication errors.	• (Understanding) Explain ways pharmacy technicians can help prevent medication errors. • (Understanding) Explain the role of multiple checks in avoiding medication errors. • (Understanding) Explain age-related medication errors that may be detected by technicians. • (Remembering) Define the term "high alert."	_Instructor: Cover material described in objectives (technician tasks to prevent medication errors, types of medication errors)._	_Sample activity:_ Flag "high alert" medications in the mock lab.	Preceptors: Explain the experiential site's approach to preventing medication errors.

36.2 (Understanding) Explain the programs currently in place for reporting medication errors on a global and institutional level.	• (Understanding) Identify role and limitations of the FDA MedWatch program in error reporting. • (Understanding) Explain the role of ISMP in preventing medication errors. • (Understanding) Identify role and limitations of the ISMP Medication Errors Reporting Program (MERP). • (Understanding) Explain how calculations, use of zeros and decimals, abbreviations, illegible handwriting, missing information, drug product characteristics, preparation, labeling, work environment , and personnel impact medication errors. • (Remembering) Define the term "failure mode and effects analysis" (FMEA). • (Understanding) Identify situations where patient counseling may prevent medication errors.	*Instructor: Cover material described in objectives (programs for reporting medication errors).*		
36.3 (Understanding) Explain the technician's role in preventing and	• (Remembering) Identify the term "root cause analysis."	*Instructor: Cover material described in objectives (technician's role).*		

detecting medication errors.	• (Remembering) Identify five steps of root cause analysis.			
36.4 (Analyzing) When a clinically significant adverse medication event (ADE) is identified, participate in determining the presence of any similar potential ADE's.		*Instructor: Cover material described in objective (how to determine the presence of similar ADE's).*		If a clinically significant adverse medication event (ADE) is identified at the experiential site, participate in determining the presence of any similar potential ADE's, if possible.
36.5 (Analyzing) When a clinically significant ADE is identified, participate in formulating a strategy for preventing its reoccurrence.	• (Understanding) From a pharmacy department perspective, explain the role that automation and information technology play in preventing medication errors. • (Understanding) From a pharmacy department perspective, explain the potential for contribution to the occurrence of medication errors by the use of automation and information technology. • (Analyzing) Identify trends of medication errors in hypothetical cases. • (Understanding) Explain the importance of sharing trends of medication errors with staff.	*Instructor: Cover material described in objectives (role of automation in medication errors).*		If a clinically significant ADE is identified at the experiential site, participate in formulating a strategy for preventing its reoccurrence, if possible.

Goal 37: Verify measurements, preparation, and/or packaging of medications produced by other healthcare professionals (e.g., tech-check-tech).

Objective	Instructional Objectives (IOs)	Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
		Didactic	Simulated (Lab)	Experiential
37.1 (Understanding) Explain how state laws and regulations determine what activities regarding verifying the measurements, preparation, and/or packaging of medications produced by other technicians can be delegated to technicians.		_Instructor: Cover material described in objectives (state laws)._ _Sample student activity:_ Have students use the pharmacy law book and other State Board of Pharmacy resources to illustrate how state law regulates the scope of practice for technicians.		
37.2: (Evaluation) Accurately assess the correctness of medications produced by other technicians including measurements, preparation technique, and packaging.	• (Understanding) Explain federal/local laws and institutional policies/procedures governing under what circumstances technician verification of the work performed by other technicians may be performed. • (Understanding) Identify federal/local laws and institutional policies/procedures governing what level of pharmacist verification of technician work must occur before medications are ready for distribution.	_Instructor: Cover material described in objectives (methodical approach to check other's work)._	_Sample activity:_ Have students check each other's work in the lab.	Check colleagues work at the experiential site, if possible.

	• (Understanding) Describe a methodical approach for technicians checking other technicians' work.			

Goal 38: Explain pharmacists' roles when they are responding to emergency situations and how pharmacy technicians can assist pharmacists by being certified as a Basic Life Support (BLS) Healthcare Provider.

		Teaching Strategy Examples* *Suggestions only. Other options possible at discretion of program		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
38.1 (Understanding) Explain technicians' roles when they are responding to emergency situations.		*Instructor: Cover material described in objectives (technicians' roles when responding to emergency situations).*		
38.2 (Application) Achieve certification as a Basic Life Support (BLS) Healthcare Provider.	• (Understanding) Explain how pharmacy technicians can assist pharmacists by being certified as a Basic Life Support (BLS) Healthcare Provider.	*Instructor: Cover material described in objectives (how being BLS certified is helpful).*	*Sample activity:* Simulate collaboratively assisting in emergency situations with other allied health students (EMT/paramedic, nursing, etc.)	Assist in emergency situations if needed at the experiential site.

Goal 39: Demonstrate skills required for effective emergency preparedness.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
39.1 (Applying) Demonstrate skills required for effective emergency preparedness.	• (Understanding) Explain skills required effective emergency preparedness.	_Instructor: Cover material described in objectives (emergency preparedness skills)._	_Sample activity:_ Simulate an emergency preparedness situation in which students practice required skills.	Preceptors: Inform students of emergency preparedness policies and procedures at your site. Students: Demonstrate skills required for effective emergency preparedness if such a situation occurs at the experiential site.

Goal 40: Assist pharmacists in medication reconciliation.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
40.1 (Applying) Apply skills required to assist pharmacists in medication reconciliation.	• (Remembering) Define "medication reconciliation." • (Understanding) Describe benefits of medication reconciliation. • (Understanding) Describe the process of medication reconciliation.	_Instructor: Cover material described in objectives (definition and description of medication reconciliation)._	_Sample activity:_ Simulate medication reconciliation responsibilities technicians may be asked to perform.	Assist with medication reconciliation at the experiential site.

Goal 41: Assist pharmacists in medication therapy management.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
41.1 (Applying) Demonstrate skills needed to assist pharmacists in medication therapy management.	• (Remembering) Define "medication therapy management." • (Understanding) Explain medication therapy management processes. • (Understanding) Explain ways pharmacy technicians may assist pharmacists in medication therapy management.	*Instructor: Cover material described in objectives (technician role in medication therapy management)*	*Sample activity:* Simulate medication therapy tasks in cases in the lab setting.	Assist pharmacists in medication therapy management at the experiential site.

Technology and Informatics

Goal 42: Describe the use of current technology in the healthcare environment to ensure the safety and accuracy of medication dispensing.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
42.1 (Understanding) Describe the use of current technology in the healthcare environment to ensure the safety and accuracy of medication dispensing.	• (Understanding) Explain how medical information systems are used in pharmacy practice activities. • (Understanding) Explain the type of data collected, transmitted and stored by	*Instructor: Cover material described in objectives (medical information systems)*		Preceptors: Explain and demonstrate technology used at the experiential site for ensuring safety and accuracy of medication dispensing.

	pharmacy information systems. • (Understanding) Explain the impact on quality of decision making of valid, reliable, and consistent data entered into medical information systems.			
42.2 (Applying) Demonstrate proficiency with word processing, spread sheets, and databases.	• (Understanding) Explain characteristics of typical databases used in both acute and non-acute care pharmacy practice settings.	*Instructor: Cover material described in objectives (characteristics of databases)*	*Sample activity:* Use word processing, spread sheet, and database software to simulate processes that pharmacy technicians typically use in their jobs.	Use word processing, spread sheet, and database software at the experiential site.
42.3 (Applying) Demonstrate skill in using the internet, e-mail, and electronic medication information databases.		*Instructor: Cover material described in objectives (internet, email use in the pharmacy, etc.)*	*Sample activity:* Use the internet, e-mail, and electronic medication information databases to simulate processes that pharmacy technicians typically use in their jobs.	Use the internet, e-mail, and electronic medication information databases at the experiential site.
42.4 (Understanding) Explain currently emerging technologies that may impact the practice of pharmacy.		*Instructor: Cover material described in objective (emerging technologies)*		

42.5 (Applying) Demonstrate the ability to use technologies frequently used in the pharmacy setting, including bar coding and automated dispensing technology, and unit dose packaging and reporting.	• (Applying) Demonstrate use of bar coding technology. • (Applying) Demonstrate use of automated dispensing technology. • (Applying) Demonstrate use of unit dose packaging and reporting.	*Instructor: Cover material described in objective (how to use bar coding and automated dispensing technology and unit dose packaging and reporting)*	*Sample activity:* Use, or simulate use of, bar coding and automated dispensing technology, and unit dose packaging and reporting in the lab setting.	Use bar coding and automated dispensing technology, and unit dose packaging and reporting in the lab setting as needed at the experiential site.

Regulatory Issues

Goal 43: Compare and contrast the roles of pharmacists and pharmacy technicians in ensuring pharmacy department compliance with professional standards and relevant legal, regulatory, formulary, contractual, and safety requirements.

		Teaching Strategy Examples*Suggestions only. Other options possible at discretion of program		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
43.1 (Understanding) Describe policies and procedures for monitoring the practice site and/or service area for compliance with federal, state, and local laws; regulations; and professional standards.	• (Understanding) Explain the importance and role of federal, state, and local laws; regulations; and professional standards.	*Instructor: Cover material described in objective(s) (laws, regulations, standards)* *Sample student activity:* Have students use electronic resources to identify federal, state, and local laws, regulations and professional standards, such as USP, FDA, DEA, NABP, ASHP, APhA.		Preceptors: Describe policies and procedures in place at the experiential site for monitoring compliance with federal, state, and local laws; regulations; and professional standards.

Goal 44: Maintain confidentiality of patient information.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
44.1 (Applying) Observe legal and ethical guidelines for safeguarding the confidentiality of patient information.	• (Understanding) Explain types of patient information that should and should not be shared with third party payers. • (Understanding) Explain patient confidentiality issues related to data collection, transmission, and storage by pharmacy information systems and electronic medical records.	_Instructor: Cover material described in objective(s) (confidentiality guidelines)_	_Sample activity:_ Simulate patient confidentiality situations.	Observe legal and ethical guidelines for safeguarding the confidentiality of patient information at the experiential site.

Quality Assurance

Goal 45: Apply quality assurance practices to pharmaceuticals, durable and non-durable medical equipment, devices, and supplies.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
45.1 (Applying) Apply quality assurance practices to technician activities, including handling of pharmaceuticals, durable and non-durable medical equipment, devices and supplies.	• (Remembering) Define "quality assurance." • (Understanding) Describe prospective and retrospective approaches to quality assurance. • (Understanding) Describe technician tasks that require	_Instructor: Cover material described in objective(s) (quality assurance definition, etc.)_	_Sample activity:_ Practice quality assurance processes during activities in the simulated setting.	Apply quality assurance practices at the experiential site.

		quality assurance procedures.
		• (Understanding) Describe quality assurance methods related to pharmaceuticals, durable and non-durable medical equipment, devices and supplies.

Goal 46: Explain procedures and communication channels to use in the event of a product recall or shortage, a medication error, or identification of another problem.

		Teaching Strategy Examples*_Suggestions only. Other options possible at discretion of program_		
Objective	**Instructional Objectives (IOs)**	**Didactic**	**Simulated (Lab)**	**Experiential**
46.1 (Applying) Apply appropriate procedures and communication channels to use in the event of a product recall.	• (Remembering) Identify the three classifications of pharmacy recalls. • (Remembering) Identify how products may be withdrawn from the market absent a recall. • (Understanding) Explain procedures and communication channels to use in the event of a product recall.	_Instructor: Cover material described in objective(s) (relevant procedures and communication channels, etc.)_	_Sample activity:_ Simulate a product recall and ask students to respond.	Follow applicable procedures at the experiential site in the event of a product recall.
46.2 (Applying) Apply appropriate procedures and communication channels in the event of a product shortage.	• (Understanding) Explain procedures and communication channels to use in the event of a product shortage.	_Instructor: Cover material described in objectives (procedures during shortage)._	_Sample activity:_ Simulate a product shortage and ask students to respond.	Follow applicable procedures at the experiential site in the event of a product shortage.

46.3 (Applying) Apply appropriate procedures and communication channels in the event of a medication error.	• (Understanding) Explain procedures and communication channels to use in the event of a medication error.	*Instructor: Cover material described in objectives (procedures if medication error).*	*Sample activity:* Simulate a medication error and ask students to respond.	Follow applicable procedures at the experiential site in the event of a medication error.
46.4 (Applying) Apply appropriate procedures and communication channels in the event of other problems that may occur.	• (Remembering) Identify other problems that may occur that a pharmacy technician may help in resolving. • (Understanding) Explain procedures and communication channels to use in the event of other problems that may occur.	*Instructor: Cover material described in objectives (types of other problems that may occur and procedures used).*		Follow applicable procedures at the experiential site in the event of problem other than a recall, shortage or error.

Endorsed by the ASHP Board of Directors September 20, 2013. Endorsed by the ASHP Commission on Credentialing August 18, 2013. Endorsed by the Accreditation Council for Pharmacy Education Board of Directors November 7, 2015.