

# MODEL CURRICULUM FOR PHARMACY TECHNICIAN TRAINING

## TRACKING DOCUMENT

### Goal Statements with Associated Objectives and Instructional Objectives

#### Major Areas of Job Responsibility

- Goal 1: Assist the pharmacist in collecting, organizing, and evaluating information for direct patient care, medication use review, and departmental management.
- OBJ 1.1 (Comprehension) Explain how state laws and regulations determine what activities associated with collection of patient-specific information can be delegated by the pharmacist to technicians. (1,15)
  - OBJ 1.2 (Application) When presented with a specific patient case, collect pertinent patient information for use by the pharmacist from the medical chart, patient profile or medical record with efficiency and accuracy. (15, 34,35,36,37)
    - IO 1.2.1 (Comprehension) Explain the purposes for which pharmacists collect patient-specific information. (15)
    - IO 1.2.2 (Comprehension) Explain the categories of patient-specific information pharmacists use in making direct patient care decisions. (15)
    - IO 1.2.3 (Knowledge) State the definitions of medical terms commonly used in the range of patient care settings. (2,3,4,5,6,7,8,9,10,11,12,13,14,15 }
    - IO 1.2.4 (Knowledge) When given a list of commonly used medical terms, write the accepted abbreviation for each, or when given the abbreviation, write the term. (2,3, 4,5,6,7,8,9,10,11,12,13,14,15)
    - IO 1.2.5 (Application) Use a knowledge of the organization of patient medical charts and records to efficiently locate a specific piece of information. (15)
      - IO 1.2.5.1. (Knowledge) Describe the type of information that is contained in each section of a patient medical chart or record. (15)
    - IO 1.2.6 (Application) Use a knowledge of the organization of patient profiles to locate a specific piece of information. (15)
      - IO 1.2.6.1 (Knowledge) Describe the categories of information kept in patient profiles. (15)

- OBJ 1.3 (Application) Effectively interview patients, their representatives, or their caregivers to collect pertinent patient information for use by the pharmacist. (15,34,35,36,37)
    - IO 1.3.1 (Comprehension) Discuss the framing of questions so that they elicit the desired patient-specific information from the interviewee. (15)
  - OBJ 1.4 (Application) Effectively query other health care professionals to collect pertinent patient information for use by the pharmacist. (15,34,35,36,37)
  - OBJ 1.5 (Application) Follow an established system for organizing collected patient-specific information in a useful electronic or manual format. (15,34,35,36,37)
  - OBJ 1.6 (Evaluation) When collecting patient-specific information for use by the pharmacist, identify situations where the patient requires the attention of the pharmacist. (15,34,35,36,37)
    - IO 1.6.1 (Knowledge) State potential problem situations to which the technician should alert the pharmacist. (15)
    - IO 1.6.2 (Knowledge) State specific types of questions from patients or health care providers to which an answer by the technician would be inappropriate. (15)
  - OBJ 1.7 (Application) Follow an established program to efficiently and accurately collect data for use by the pharmacist in medication use review. (15,34,35,36)
    - IO 1.7.1 (Comprehension) Explain the purpose of a medication use review. (15)
    - IO 1.7.2 (Comprehension) Explain the structure of a medication use review. (15)
  - OBJ 1.8 (Application) Follow an established program to efficiently and accurately collect data for use by the pharmacist in managing pharmacy services. (15,34,35,36,37)
    - IO 1.8.1 (Knowledge) State the types of information the pharmacist might request to assist in managing pharmacy services. (15)
    - IO 1.8.2 (Comprehension) Explain the use of productivity data in contemporary pharmacy practice. (15)
    - IO 1.8.3 (Comprehension) Compare and contrast the functions and applications of several currently used pharmacy productivity measurement systems. (15)
    - IO 1.8.4 (Comprehension) Explain technicians' potential roles in establishing, maintaining, and participating in a pharmacy productivity measurement system. (15)
- Goal 2: Receive and screen prescription/medication orders for completeness and authenticity.
- OBJ 2.1 (Comprehension) Explain how state laws and regulations determine what activities associated with receiving and screening

- prescription/medication orders for completeness and authenticity can be delegated by pharmacists to technicians. (1,18)
- OBJ 2.2 (Application) Exercise skill in the use of first-person and electronic systems to receive prescription/medication orders. (18,34,35,36,37)
- OBJ 2.3 (Analysis) When presented with a prescription/medication order, accurately and efficiently assess for completeness. (18,34,35,36,37)
- IO 2.3.1 (Knowledge) State the components of a complete prescription/medication order including prescription/medication orders for controlled substances. (18)
- IO 2.3.2 (Knowledge) When given an abbreviated instruction for medication use, state the full wording of the instruction. (18)
- OBJ 2.4 (Application) Efficiently secure information to complete a prescription/medication order. (18,34,35,36,37)
- IO 2.4.1 (Comprehension) Explain methods for securing missing pieces of information in a prescription/medication order. (18)
- OBJ 2.5 (Analysis) When presented with a prescription/medication order, accurately and efficiently screen for authenticity. (18,34,35,36,37)
- IO 2.5.1 (Knowledge) State the schedule for controlled substances and commonly used medications that fall into each category. (18)
- IO 2.5.2 (Comprehension) Explain the procedure to verify the validity of a prescriber's DEA number. (18)
- IO 2.5.3 (Comprehension) Explain techniques for detecting forged or altered prescriptions. (18)
- IO 2.5.4 (Comprehension) Explain the importance of alerting the pharmacist if a prescription/medication order appears to be illegitimate. (18)
- OBJ 2.6 (Comprehension) Explain common situations when screening refills and renewals when the technician should notify the pharmacist of potential inappropriateness. (18)
- Goal 3: Prepare medications for distribution.
- OBJ 3.1 (Comprehension) Explain how state laws and regulations determine what activities associated with preparing medications for distribution can be delegated by pharmacists to technicians. (1,19)
- IO 3.1.1 (Comprehension) 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. (19)

- IO 3.1.2 (Comprehension) Explain one's own state laws governing pharmacist review of medications prior to distribution. (19)
- OBJ 3.2 (Application) Accurately create a new patient profile or enter data into an existing profile according to an established manual procedure or electronic procedure. (19,34,35,36,37)
  - IO 3.2.1 (Application) Accurately use the metric system for inputting prescription/medication order information. (19)
  - IO 3.2.2 (Application) Accurately use the avoirdupois system for inputting prescription/medication order information. (19)
  - IO 3.2.3 (Application) Accurately use the household system for inputting prescription/medication order information. (19)
  - IO 3.2.4 (Application) Accurately use the apothecary system for inputting prescription/medication order information. (19)
- OBJ 3.3 (Application) Follow established laws and protocols to select the appropriate product. (19,34,35,36,37)
  - IO 3.3.1 (Comprehension) Explain federal and state laws governing the substitution of medication products. (19)
  - IO 3.3.2 (Comprehension) Explain the purpose and use of a formulary (e.g., state, health system, buying group). (19)
  - IO 3.3.3 (Comprehension) Explain the influence that the formulary and/or policies of third party payers have on the selection of products. (19)
  - IO 3.3.4 (Comprehension) Explain the function of an NDC number. (19)
- OBJ 3.4 (Application) Use a knowledge of a site's storage system to efficiently secure the prescribed medications or devices from inventory. (19,34,35,36,37)
  - IO 3.4.1 (Comprehension) Explain the principles that guide the design of safe and efficient pharmacy storage equipment and arrangements for the storage of medications and devices. (19)
  - IO 3.4.2 (Comprehension) Explain typical storage arrangements for medications and devices. (19)
- OBJ 3.5 (Application) Accurately count or measure finished dosage forms as specified by the prescription/medication order. (19,34,35,36,37)
  - IO 3.5.1 (Application) Accurately use the metric system to count and measure. (19)
  - IO 3.5.2 (Application) Accurately use the avoirdupois system to count and measure. (19)
  - IO 3.5.3 (Application) Accurately use the household system (e.g. teaspoon, tablespoon) to count and measure. (19)
  - IO 3.5.4 (Application) Accurately use the apothecary system to count and measure. (19)
  - IO 3.5.5 (Complex Overt Response) Demonstrate skill in the operation of common pharmaceutical measurement and weighing devices. (19)

- IO 3.5.6 (Application) Accurately convert among the measurement systems, depending upon the desired endpoint. (19)
- OBJ 3.6 (Application) Collect the correct ingredients for sterile or non sterile products that require compounding. (20,21,34,35,36,37)
  - IO 3.6.1 (Knowledge) Define the term "compounding". (20)
  - IO 3.6.2 (Comprehension) Explain why certain medications must be compounded. (20)
  - IO 3.6.3 (Knowledge) Define the terms "sterile" and "non sterile" as applied to pharmacy. (21)
  - IO 3.6.4 (Comprehension) Explain why certain medications must be sterile. (21)
  - IO 3.6.5 (Application) Demonstrate the proper procedure for maintaining the sterility of materials being collected for compounding a sterile product. (21)
- OBJ 3.7 (Application) Accurately determine the correct amounts of ingredients for a compounded product. (20,34,35,36)
  - IO 3.7.1 (Application) Given mathematical problems using Roman numerals, Arabic numerals, fractions, apothecary symbols, and decimals, perform the mathematical steps to solve for the correct answer. (20)
  - IO 3.7.2 (Application) Given mathematical problems involving conversion of weights and measures and direct ratio and proportion, perform the mathematical steps to solve for the correct answer. (20)
  - IO 3.7.3 (Application) Given mathematical problems involving reducing and enlarging formulas, perform the mathematical steps to solve for the correct answer. (20)
  - IO 3.7.4 (Application) Given mathematical problems involving specific gravity, percent strength, weight-in-volume, weight-in-weight, and volume-in-volume, perform the mathematical steps to solve for the correct answer. (20)
  - IO 3.7.5 (Application) Given mathematical problems involving ratio strength calculations for pharmaceutical preparations, perform the mathematical steps to solve for the correct answer. (20)
  - IO 3.7.6 (Application) Given mathematical problems involving dilution and concentration, perform the mathematical steps to solve for the correct answer. (20)
  - IO 3.7.7 (Application) Given mathematical problems involving dilution and concentration, perform the mathematical steps to solve for the correct answer using the alligation method. (20)
  - IO 3.7.8 (Application) Given mathematical problems involving milliequivalents, perform the mathematical steps to solve for the correct answer. (20)

- IO 3.7.9 (Application) Given mathematical problems involving compounded products that require an overfill, perform the mathematical steps to solve for the correct volume to be added. (20)
- OBJ 3.8 (Complex Overt Response) Compound sterile products using appropriate techniques, equipment and devices. (21,34,35,36)
  - IO 3.8.1 (Knowledge) State one's state regulations regarding technician compounding of sterile products. (21)
  - IO 3.8.2 (Comprehension) Explain the logic of each of the steps of sterile technique. (21)
  - IO 3.8.3 (Comprehension) Explain therapeutic, pharmaceutical, and chemical incompatibility. (21)
  - IO 3.8.4 (Comprehension) Explain how the effects of incompatibilities can be overcome when compounding sterile products. (21)
  - IO 3.8.5 (Complex Overt Response) Demonstrate the proper use of equipment and devices used in compounding sterile products. (21)
    - IO 3.8.5.1 (Comprehension) Explain the uses of horizontal and vertical laminar flow hoods. (21)
- OBJ 3.9 (Complex Overt Response) Compound non sterile products using appropriate technique. (20,34,35,36,37)
  - IO 3.9.1 (Knowledge) State one's state regulations regarding technician compounding of non sterile products. (20)
  - IO 3.9.2 (Comprehension) Explain the logic of each of the steps of non sterile technique. (20)
  - IO 3.9.3 (Comprehension) Explain how the effects of incompatibilities can be overcome when compounding non sterile products. (20)
- OBJ 3.10 (Complex Overt Response) Compound cytotoxic and other hazardous medication products using appropriate technique. (22,34,35,36,37)
  - IO 3.10.1 (Knowledge) State one's state regulations regarding technician compounding of cytotoxic and other hazardous medication products. (22)
  - IO 3.10.2 (Comprehension) Explain risks involved in the preparation and handling of cytotoxic and other hazardous medication products. (22)
  - IO 3.10.3 (Comprehension) Explain the logic of each of the steps in cytotoxic or other hazardous medication product preparation technique. (22)
- OBJ 3.11 (Application) Follow safety policies and procedures in the preparation of all medications. (19,20,22,34,35,36,37)
  - IO 3.11.1 (Comprehension) Explain the importance of following safety policies and procedures in the preparation of all

- medications in order to protect oneself and one's coworkers. (19)
- IO 3.11.2 (Knowledge) Describe standard safety policies and procedures for preparing medications.
- IO 3.11.3 (Complex Overt Response) Demonstrate skill in cleaning up a cytotoxic or other hazardous medication product spill using the accepted procedure. (19,22)
- OBJ 3.12 (Application) Follow safety policies and procedures in the disposal of all hazardous and non hazardous wastes generated during medication preparation. (19,34,35,36,37)
- IO 3.12.1 (Knowledge) Describe standard safety policies and procedures in the disposal of hazardous and non hazardous wastes generated during medication preparation. (19)
- OBJ 3.13 (Application) Package the product in the appropriate type and size of container using a manual process or automated system. (19,34,35,36,37)
- IO 3.13.1 (Comprehension) Explain the need for packaging products in the appropriate type and size of container. (19)
- IO 3.13.2 (Knowledge) Describe the various sizes and types of containers available for the packaging of pharmaceuticals in all pharmacy settings. (19)
- IO 3.13.3 (Knowledge) Describe options for the packaging of products for the physically impaired, aged, and children. (19)
- IO 3.13.4 (Complex overt response) Skillfully operate automated packaging equipment. (19)
- OBJ 3.14 (Application) Follow an established manual procedure or electronic procedure to generate accurate and complete product labels. (19,34,35,36,37)
- IO 3.14.1 (Comprehension) Explain the importance of accurate labeling of pharmaceuticals. (19)
- IO 3.14.2 (Knowledge) Describe the necessary pieces of information in a complete product label. (19)
- OBJ 3.15 (Application) Affix the appropriate primary and auxiliary labels to containers. (19,34,35,36,37)
- IO 3.15.1 (Knowledge) State categories of medications which require auxiliary labels and what those labels are. (19)
- IO 3.15.2 (Comprehension) Explain the importance of placing labels so that all information on all labels is visible. (19)
- OBJ 3.16 (Application) Follow protocol to assemble appropriate patient information materials. (19,36,37)
- IO 3.16.1 (Knowledge) Describe the obligations of the pharmacist for counseling as prescribed in OBRA '90. (19)
- IO 3.16.2 (Comprehension) Explain how the quality of direct patient care can be enhanced by including written patient information at the time of dispensing. (19)

- IO 3.16.3 (Knowledge) Describe the types of written information that typically may be supplied with a dispensed product. (19)
- OBJ 3.17 (Application) Follow established policies and procedures for recording the preparation of bulk, unit dose, and special doses of medications prepared for immediate or in anticipation of future use. (19,34,35,36,37)
  - IO 3.17.1 (Comprehension) Discuss the importance of documenting the preparation of all bulk, unit dose, and special doses of medications prepared for immediate or in anticipation of future use. (19)
  - IO 3.17.2 (Knowledge) Describe the categories of information to be recorded at the time of preparation of all bulk, unit dose, and special doses of medications prepared for immediate or in anticipation of future use. (19)
- OBJ 3.18 (Application) Follow established policies and procedures for recording the preparation of controlled substances. (19,34,35,36,37)
  - IO 3.18.1 (Knowledge) State the meaning of the term "controlled substance". (19)
  - IO 3.18.2 (Knowledge) State obligations prescribed by law in the recording of the preparation of controlled substances.
- OBJ 3.19 (Application) Follow the manufacturer's recommendation and/or the pharmacy's guidelines for storage of all medications prior to distribution. (19,34,35,37)
  - IO 3.19.1 (Comprehension) Explain the importance of proper storage of compounded sterile products, non sterile medication products, and cytotoxic and other hazardous medication products. (19)
  - IO 3.19.12 (Comprehension) Explain the storage requirements of compounded sterile products, non sterile medication products, and cytotoxic and other hazardous medication products. (19)
- Goal 4: Verify the measurements, preparation, and/or packaging of medications produced by other technicians.
  - OBJ 4.1 (Comprehension) Explain how state laws and regulations determine what activities associated with verifying the measurements, preparation, and/or packaging of medications produced by other technicians can be delegated by pharmacists to technicians. (1,19)
  - OBJ 4.2: (Evaluation) Accurately assess the correctness of medications produced by other technicians including measurements, preparation technique, and packaging. (19,34,35,36,37)
    - IO 4.2.1 (Comprehension) Explain federal/local laws and institutional policies/procedures governing under what

- IO 4.2.2                   circumstances technician verification of the work performed by other technicians may be performed. (19)  
(Comprehension) 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. (19)
- IO 4.2.3:                   (Comprehension) Describe a methodical approach for technicians checking other technicians' work. (19)

Goal 5:           Distribute medications.

- OBJ 5.1           (Application) Efficiently deliver the correct medication, equipment, device, or supplies to the correct patient or patient's representative. (23,34,37)
  - IO 5.1.1           (Comprehension) Explain the importance of getting the right medication, equipment, device, or supplies to the patient or patient's representative. (23)
  - IO 5.1.2           (Knowledge) Describe the various systems used to distribute medications. (1,23)
  - IO 5.1.3           (Complex overt response) Skillfully operate automated distribution systems. (23)
- OBJ 5.2           (Application) Follow established policies and procedures to record the distribution of prescription medications. (23,34,35,36,37)
- OBJ 5.3           (Application) Follow established policies and procedures to record the distribution of controlled substances. (23,34,35,36,37)
  - IO 5.3.1           (Knowledge) Describe standard policies and procedures for recording the distribution of controlled substances. (23,35)
- OBJ 5.4           (Evaluation) Monitor utilization of medications to assure that use is congruent with the prescription/medication order for the patient. (23,34,35,36,37)

Goal 6:           Assist the pharmacist in the administration of immunizations.

- OBJ 6.1           (Comprehension) Explain how state laws and regulations determine what activities associated with the administration of immunizations can be delegated by pharmacists to technicians. (1,23)
- OBJ 6.2           (Complex Overt Response) Exercise skill in the administration of selected immunizations. (23,37)

Goal 7:           Assist the pharmacist in the identification of patients who desire/require counseling to optimize the use of medications, equipment, and devices.

- OBJ 7.1           (Comprehension) Explain how state laws and regulations determine what activities associated with patient counseling to optimize the use of medications, equipment, and devices can be delegated by pharmacists to technicians. (1,24)

- IO 7.1.1 (Knowledge) Describe the legal obligations for patient counseling, including documentation, as specified in OBRA 90 and in state laws and regulations. (24)
- OBJ 7.2 (Application) Use effective communication skills to elicit from the patient or caregiver the desire for the pharmacist to provide counseling on the use of medications. (24,36,37)
  - IO 7.2.1 (Comprehension) Explain the importance of counseling patients in the use of medications. (24)
  - IO 7.2.2 (Comprehension) Explain effective questioning strategies for determining the desire for the pharmacist to provide counseling. (24)
  
- Goal 8: Initiate, verify, assist in the adjudication of, and collect payment and/or initiate billing for pharmacy services and goods.
  - OBJ 8.1 (Application) Accurately identify the customer's/patient's method of payment for a prescription/medication order. (26,35,37)
    - IO 8.1.1 (Knowledge) Describe the possible methods of payment for a prescription/medication order and associated services. (26)
  - OBJ 8.2 (Application) When presented with a new customer/patient for whom all required patient-specific information has not been obtained, use an appropriate interview strategy to secure the information. (26,35,36,37)
  - OBJ 8.3 (Analysis) Exercise skill in the use of electronic systems to input third party information and to verify third party coverage for a prescription/medication order. (26,35,37)
    - IO 8.3.1 (Knowledge) Describe the categories of information that are needed to verify third party coverage for a prescription/medication order. (26)
  - OBJ 8.4 (Application) When needed, accurately verify third party coverage for a prescription/medication order by phone. (26,35,37)
  - OBJ 8.5 (Application) When appropriate, use knowledge of 3<sup>rd</sup> party insurance billing procedures to identify the reason for a rejected claim and to convey that information accurately to the pharmacist. (26,35,37)
  - OBJ 8.6 (Synthesis) Formulate an effective strategy that is sensitive to the concerns of the customer/patient for conveying third party payment coverage information and further action to be taken. (26,35,37)
    - IO 8.6.1 (Comprehension) Explain methods for conveying third party payer responses so that they are clearly understood by the customer/patient. (26)
    - IO 8.6.2 (Comprehension) Explain third party payer responses that may cause customer/patient distress. (26)
    - IO 8.6.3 (Application) Use effective communication techniques for diffusing strong emotional reactions to third party payment responses. (26)

- OBJ 8.7 (Application) Accurately complete third party claims forms. (26,35,37)
- OBJ 8.8 (Application) Accurately record the receipt of payment for pharmaceutical goods and services. (26,35,37)
  - IO 8.8.1 (Application) Accurately assess a prescription transmission adjudication for appropriate payment. (26)
  - IO 8.8.2 (Application) Using cost analysis methods, verify that the submitted medication has been paid for by the third party insurance. (26)
  - IO 8.8.3 (Application) When a judgment decision is required, alert the pharmacist to determine proper prescription adjudication. (26)
- OBJ 8.9 (Complex Overt Response) Demonstrate skill in the operation of a cash register. (26,35,37)
  - IO 8.9.1 (Comprehension) Explain different types of payment (e.g., debit, credit, cash, certificates, coupons) and how each is entered in the cash register. (26)
  - IO 8.9.2 (Complex Overt Response) Exercise skill in replacing cash register tapes and ribbons. (26)
  - IO 8.9.3 (Comprehension) Explain how to void transactions on the cash register. (26)
  - IO 8.9.4 (Comprehension) Explain the concept of departmental codes and how they are entered in the cash register.
- OBJ 8.10 (Application) Accurately make change. (26,35,37)
- OBJ 8.11 (Application) Accurately determine those items which are taxable. (35,37)
  - IO 8.11.1 (Knowledge) Describe the concepts of taxable and nontaxable. (26)
  - IO 8.11.2 (Knowledge) Describe the legal obligation to tax required items. (26)
- OBJ 8.12 (Application) Determine payment due the health system for medication orders. (26,34,35,37)
  - IO 8.12.1 (Knowledge) Describe common pricing and billing systems. (26)
  - IO 8.12.2 (Knowledge) Describe common systems for tracking medication billing to patients. (26)
  
- Goal 9: Purchase pharmaceuticals, devices, and supplies according to an established purchasing program.
  - OBJ 9.1 (Application) Follow an established procedure for purchasing pharmaceuticals, devices, and supplies. (16,34,35,36,37)
    - IO 9.1.1 (Knowledge) Describe typical procedures for purchasing pharmaceuticals, devices, and supplies. (16)
    - IO 9.1.2 (Knowledge) Describe typical procedures used to expedite emergency orders/prescriptions. (16)

IO 9.1.3 (Knowledge) Describe typical procedures used for the purchase of atypical products (e.g., biologics, interferons, HIV medications, investigational medications, non formulary products.) (16)

Goal 10: Control the inventory of medications, equipment, and devices according to an established plan.

OBJ 10.1 (Knowledge) Describe the various methods of inventory control (e.g., prime vendor, just-in-time). (17)

OBJ 10.2 (Application) Follow established policies and procedures for receiving goods and verifying specifications on the original order. (17,34,35,36,37)

IO 10.2.1 (Knowledge) Describe the general tasks involved in receiving and verifying the order of goods. (17)

IO 10.2.2 (Knowledge) Describe methods for handling back ordered medications. (17)

OBJ 10.3 (Application) Follow established policies and procedures for placing pharmaceuticals, durable medical equipment, devices, and supplies in inventory under proper storage conditions. (17,34,35,36,37)

OBJ 10.4 (Application) Follow established policies and procedures for removing from inventory expired/discontinued pharmaceuticals, durable medical equipment, devices, supplies, or recalled items in these same categories. (17,34,35,36,37)

IO 10.4.1 (Knowledge) Define the terms "expired", "discontinued", and "recalled" as used in pharmacy. (17)

IO 10.4.2 (Knowledge) Describe common reasons for discontinuing or recalling items. (17)

IO 10.4.3 (Comprehension) Explain a standard procedure for inspecting nursing units for expired, discontinued, or recalled medications. (17)

IO 10.4.4 (Comprehension) Explain a standard procedure for reviewing, removing and handling pharmaceuticals, equipment, devices, and supplies that have expired, been recalled, or are otherwise unfit for patient utilization. (17)

IO 10.4.5 (Comprehension) Explain the various levels of recall and the associated responsibilities for each level. (17)

IO 10.4.6 (Comprehension) Explain the importance to cash flow of returning expired or excess inventory goods. (17)

OBJ 10.5 (Application) 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. (17,34,35,36,37)

IO 10.5.1 (Comprehension) Explain the importance of maintaining an inventory system through accurate documentation. (17)

- OBJ 10.6 (Analysis) Identify pharmaceuticals, durable medical equipment, devices, and supplies to be ordered (e.g., "want book"). (17,34,35,36,37)
- IO 10.6.1 (Comprehension) Explain the importance of maintaining an adequate supply of pharmaceuticals, durable medical equipment, devices, and supplies. (17)
- IO 10.6.2 (Comprehension) Explain the problems associated with an excessive supply of pharmaceuticals, durable medical equipment, devices, and supplies. (17)
- IO 10.6.2 (Comprehension) Explain the role that judgement plays in supplementing an automated system for determining the timing and amount of pharmaceuticals, durable medical equipment, devices, and supplies to order. (17)
- OBJ 10.7 (Comprehension) Explain alternative strategies for securing a pharmacy item that is not available. (17)
- IO 10.7.1 (Knowledge) State categories of alternative sources of items not available from the primary vendor at time of need. (17)
- IO 10.7.2 (Comprehension) Explain the importance of evaluating the cost of securing a needed item from an alternative source. (17)
- OBJ 10.8 (Comprehension) Explain acceptable methods for communicating changes in product availability to patients, caregivers, and/or health care professionals. (17)
- OBJ 10.9 (Application) Follow established policies and procedures to deter theft and/or medication diversion. (17,34,35,36,37)
- IO 10.9.1 (Comprehension) Explain the importance of deterring theft and/or medication diversion. (17)
- IO 10.9.2 (Comprehension) Explain the difference between tolerance and physical dependence. (17)
- IO 10.9.2 (Comprehension) Explain the relationship between the prevalence of chemical dependency and medication diversion. (17)
- IO 10.9.3 (Knowledge) Describe common methods for deterring theft and/or medication diversion. (17)
- IO 10.9.4 (Knowledge) Describe methods of reporting theft and/or medication diversion. (17)
- OBJ 10.10 (Application) Follow established policies and procedures to maintain a record of controlled substances received, stored, and removed from inventory. (17,34,35,36,37)
- IO 10.10.1 (Knowledge) State the legal requirements for recording controlled substances received, stored, and removed from inventory. (17)
- IO 10.10.2 (Knowledge) State the procedure for destroying controlled substances. (17)

- Goal 11: Assist the pharmacist in monitoring the practice site and/or service area for compliance with federal, state, and local laws, regulations, and professional standards.
- OBJ 11.1 (Application) Follow established policies and procedures for monitoring the practice site and/or service area for compliance with federal, state, and local laws; regulations; and professional standards. (19,34,35,36,37)
    - IO 11.1.1 (Knowledge) Describe the concepts of laws, regulations, and professional standards. (19)
    - IO 11.1.2 (Comprehension) Explain the importance of the pharmacy's compliance with federal, state, and local laws; regulations; and professional standards. (19)
    - IO 11.1.3 (Comprehension) Explain the effect on pharmacy practice of laws, regulations and professional standards in the state in which the technician training program operates. (19,20,21,22)
- Goal 12: Maintain pharmacy equipment and facilities.
- OBJ 12.1 (Application) Follow policies and procedures for sanitation management, hazardous waste handling (e.g., needles), and infection control (e.g., protective clothing). (28,34,35,36,37)
    - IO 12.1.1 (Comprehension) Explain the need for sanitation management in the pharmacy setting. (28)
    - IO 12.1.2 (Knowledge) Define "hazardous waste". (28)
    - IO 12.1.3 (Knowledge) Define "infection control". (28)
    - IO 12.1.4 (Comprehension) Explain OSHA regulations as they pertain to pharmacy practice, including regulations for blood-borne pathogens. (28)
    - IO 12.1.5 (Comprehension) Explain state regulations as they pertain to the handling of hazardous waste and infection control. (28)
    - IO 12.1.6 (Comprehension) Explain institutional policies and procedures as they apply to hazardous waste management and infection control. (28)
  - OBJ 12.2 (Application) Clean laminar flow biological safety cabinets using approved technique. (28,34,35,36)
    - IO 12.2.1 (Comprehension) Explain the logic of each step in the proper procedure for cleaning a laminar flow biological safety cabinet. (28)
  - OBJ 12.3 (Application) Maintain a clean and neat work environment. (28,34,35,36,37)
  - OBJ 12.4 (Application) Given a weighing or counting device, fluid compounder, or syringe pump used at a specific site, accurately calibrate the device, compounder or pump. (28,34,35,36,37)
    - IO 12.4.1 (Knowledge) Describe the equipment and pharmacy devices common to pharmacy practice. (28)

- IO 12.4.2 (Knowledge) Describe the term "calibration" as it refers to the equipment commonly used in pharmacy practice. (28)
- IO 12.4.3 (Application) Given a particular type of weighing device, accurately calibrate the device. (28)
- IO 12.4.4 (Application) Given a particular counting device, accurately calibrate the device. (28)
- IO 12.4.5 (Application) Given a particular type of compounder, accurately calibrate the compounder. (28)
- IO 12.4.6 (Application) Given a particular type of pump, accurately calibrate the pump. (28)
- OBJ 12.5 (Application) Follow manufacturers' guidelines in troubleshooting, maintaining, and repairing electronic devices used by the pharmacy in the preparation and dispensing of medications. (28,34,35,36,37)
- IO 12.5.1 (Comprehension) Explain the role of electronic devices in the delivery of direct patient care. (28)
- IO 12.5.2 (Comprehension) Explain how to update and maintain information systems for prices updates and report generation. (28)

Goal 13: Assist the pharmacist in preparing, storing, and distributing investigational drug products.

- OBJ 13.1 (Comprehension) Explain how the practice setting is used to contribute to the development of new drug products. (29)
- IO 13.1.1 (Knowledge) Define the term "investigational drug product". (29)
- OBJ 13.2 (Application) Follow the established protocol for recording the preparation of an investigational drug product. (29,34,35,36,37)
- IO 13.2.1 (Knowledge) Describe obligations prescribed by law in the recording of the preparation of investigational drugs. (29)
- OBJ 13.3 (Application) Follow the established protocol for storage of investigational drug products. (29,34,35,36,37)
- OBJ 13.4 (Application) Follow the established protocol to record the distribution of investigational medication products. (34,35,36,37)
- IO 13.4.1 (Knowledge) Describe standard policies and procedures for recording the distribution of investigational drug products. (29)

Goal 14: Assist the pharmacist in the monitoring of medication therapy.

- OBJ 14.1 (Comprehension) Explain how state laws and regulations determine what activities associated with monitoring of medication therapy can be delegated by pharmacists to technicians. (1,27)
- OBJ 14.2 (Comprehension) Explain the purpose of monitoring a patient's medication therapy. (27)
- OBJ 14.3 (Complex Overt Response) Demonstrate skill in monitoring procedures selected by the program for training (e.g., finger-stick

blood draw for glucose monitoring and cholesterol screening, blood pressure, pulse). (27,34,36,37)

IO 14.3.1 (Knowledge) Describe the equipment and supplies used to perform the selected procedure as well as the limitations of such equipment. (27)

IO 14.3.2 (Comprehension) Explain the logic behind each step in the selected procedure (27)

Goal 15: Participate in the pharmacy department's process for preventing medication misadventures.

OBJ 15.1: (Comprehension) Explain the characteristics of an effective pharmacy department approach to preventing medication misadventures. (25)

IO 15.1.1 (Comprehension) Explain the integral contribution required of the pharmacy technician in a practice setting that is effective in preventing medication misadventures (25)

IO 15.1.2 (Knowledge) List daily tasks of the technician that require special attention to accuracy and double checking to assure that medication misadventures do not occur. (25)

IO 15.1.2.1 (Comprehension) Explain the role of multiple checks in avoiding medication misadventures. (25)

IO 15.1.2.2 (Comprehension) Explain age-related medication errors that may be detected by technicians. (25)

IO 15.1.4 (Comprehension) From a pharmacy department perspective, explain the role that automation and information technology play in preventing medication misadventures. (25)

IO 15.1.5 (Comprehension) From a pharmacy department perspective, explain the potential for contribution to the occurrence of medication misadventures by the use of automation and information technology. (25)

OBJ 15.2 (Comprehension) Explain the programs currently in place for reporting medication misadventures on a global and institutional level. (25)

OBJ 15.3: (Analysis) When a clinically significant adverse medication event (ADE) is identified, participate in determining the presence of any similar potential ADE's. (25,34,35,36,37)

OBJ 15.4: (Analysis) When a clinically significant ADE is identified, participate in formulating a strategy for preventing its reoccurrence. (25,34,35,36,37)

### Foundation Knowledge and Skills

- Goal 16: Take personal responsibility for assisting the pharmacist in improving direct patient care.
- OBJ 16.1 (Organization) Take the initiative in identifying changes within one's own work processes which would improve the delivery of direct patient care. (34,35,36,37)
    - IO 16.1.1 (Synthesis) Formulate a written statement which describes one's responsibility as a pharmacy technician for improving direct patient care. (30)
- Goal 17: Demonstrate ethical conduct in all job-related activities.
- OBJ 17.1 (Characterization) Act ethically in the conduct of all job-related activities. (34,35,36,37)
    - IO 17.1.1 (Knowledge) Define the term "ethics". (30)
    - IO 17.1.2 (Comprehension) Compare and contrast ethics with laws. (30)
    - IO 17.1.3 (Comprehension) Explain an ethical code which pertains to the work functions of pharmacists. (30)
    - IO 17.1.4 (Comprehension) Explain situations which may present ethical questions for the pharmacy technician. (30)
- Goal 18: Maintain an image appropriate for the profession of pharmacy.
- OBJ 18.1 (Application) Dress in attire that follows the site's dress code. (34,35,36,37)
    - IO 18.1.1 (Comprehension) Discuss attire which is appropriate for wear by the pharmacy technician. (30)
  - OBJ 18.2 (Application) Maintain personal hygiene. (34,35,36,37)
    - IO 18.2.1 (Comprehension) Discuss the importance of maintaining personal hygiene while in the practice environment.
  - OBJ 18.3 (Characterization) Consistently maintain personal self-control and professional decorum. (34,35,36,37)
    - IO 18.3.1 (Comprehension) Explain typical situations that arise in the work of the pharmacy technician that may challenge self-control.
    - IO 18.3.2 (Comprehension) Explain techniques the technician can use to exercise self-control in challenging situations.
    - IO 18.3.3 (Comprehension) Compare the characteristics of professional versus informal communication.
- Goal 19: Resolve conflicts through negotiation.
- OBJ 19.1 (Application) Use effective negotiation skills to resolve conflicts. (30,34,35,36,37)
    - IO 19.1.1 (Comprehension) Explain the principles of negotiation. (30)
- Goal 20: Understand the principles for managing change.

- OBJ 20.1 (Comprehension) Explain why dealing with change is an important skill for the pharmacy technician.
  - OBJ 20.2 (Comprehension) Explain the principles of change management.
- Goal 21: Appreciate the need to adapt direct patient care to meet the needs of diversity.
- OBJ 21.1 (Comprehension) Explain the need to adapt direct patient care for diversity (e.g., culture, religion, race, age, gender, sexual orientation, disability, economic status). (15)
  - OBJ 21.2 (Comprehension) Explain some typical adaptations made in direct patient care plans to accommodate diversity. (15,24)
- Goal 22: Appreciate the benefits of active involvement in local, state, and national technician and other pharmacy organizations.
- OBJ 22.1 (Comprehension) Explain the benefits of membership in the range of local, state, and national pharmacy organizations. (32)
  - OBJ 22.2 (Knowledge) Describe the local, state, and national pharmacy organizations which offer value for the pharmacy technician. (32)
- Goal 23: Appreciate the value of obtaining technician certification.
- OBJ 23.1 (Comprehension) Explain the benefits of obtaining technician certification. (31)
    - IO 23.1.1 (Knowledge) State the differences between certification, licensure, and registration. (31)
  - OBJ 23.2 (Comprehension) Explain the process by which one can become a nationally certified pharmacy technician. (31)
  - OBJ 23.3 (Comprehension) Explain technician certification processes other than the national process and how they may be pursued. (31)
- Goal 24: Understand the importance of and resources for staying current with changes in pharmacy practice.
- OBJ 24.1 (Comprehension) Explain the necessity for technicians to stay current with advances in pharmacy practice.
  - OBJ 24.2 (Comprehension) Discuss resources (e.g., journals, newsletters, educational conferences) for staying current with advances in pharmacy practice (e.g., automation, medication therapy, devices).
- Goal 25: Communicate clearly when speaking or writing.
- OBJ 25.1 (Application) Organize all written or oral communication in a logical manner. (15,16,17,18,19,24,26,34,35,36,37)
    - IO 25.2.1 (Analysis) Accurately identify the primary theme or purpose of one's written or oral communication. (15)
    - IO 25.2.2 (Analysis) Accurately determine that information that will provide credible background to support or justify the primary theme of one's written or oral communication. (15)

- IO 25.2.3 (Application) Properly sequence ideas in written and oral communication. (15)
- OBJ 25.2 (Application) Address all communication on the level appropriate for the audience. (15,16,17,18,24,26,34,35,36,37)
- IO 25.3.1 (Analysis) Accurately determine the depth of communication appropriate to one's audience. (15)
- IO 25.3.2 (Analysis) Accurately determine words and terms that are appropriate to one's audience (e.g., other health care providers, pharmacists, patients, other pharmacy technicians.) (15)
- IO 25.3.3 (Analysis) Accurately determine one's audience's needs. (15)
- IO 25.3.4 (Analysis) Accurately identify the length of communication that is appropriate to the situation. (15)
- IO 25.3.5 (Comprehension) Explain the importance of assessing the listener's understanding of the message conveyed. (15).
- OBJ 25.3 (Application) Use correct grammar, punctuation, spelling, style, and formatting conventions in preparing all written communications. (15,17,18,19,34,35,36,37)
- OBJ 25.4 (Application) Pronounce technical terms correctly. (2,3,4,5,6,7,8,9,10,11,12,13,14,17,34,35,36,37)
- OBJ 25.5 (Application) Use listening skills effectively in performing job functions. (15,24,26,34,35,36,37)
- IO 25.7.1 (Comprehension) Explain the use of body language in listening to others. (15)
- IO 25.7.2 (Comprehension) Explain verbal techniques that can be used to enhance listening to others. (15)
- OBJ 25.6 (Application) Use effective strategies for communicating with patients who are non-English speakers or who are impaired (e.g., blind, deaf, cognitively impaired, illiterate). (15,24,26,34,35,36,37)

Goal 26: Maximize work efficiency through the use of technology.

- OBJ 26.1 (Application) Effectively combine a knowledge of medical information systems to increase efficiency in performing practice responsibilities. (34,35,36,37)
- IO 26.1.1 (Comprehension) Explain how medical information systems are used in pharmacy practice activities. (15)
- IO 26.1.2 (Comprehension) Explain the type of data collected, transmitted and stored by pharmacy information systems. (15)
- IO 26.1.3 (Comprehension) Explain the impact on the quality of decision making facilitated by medical information systems by the validity, reliability, and consistency of data put into the system. (15)

- OBJ 26.2 (Application) Demonstrate proficiency with word processing, spread sheet, and database software. (15,26,27,34,35,36,37)
  - IO 26.2.1 (Comprehension) Explain the characteristics of a typical database used to support the pharmacy functions of the acute care practice environment. (15)
  - IO 26.2.2 (Comprehension) Explain the characteristics of a typical database used to support the pharmacy functions of the non acute care practice environment. (15)
  - OBJ 26.3 (Application) Demonstrate skill in the use of the internet, e-mail services, and computerized medication information databases. (15,18,19,23,26,27,34,36,37)
  - OBJ 26.4 (Comprehension) Explain currently emerging technologies that may impact the practice of pharmacy. (15)
- Goal 27 Efficiently solve problems commonly encountered in one's own work.
- OBJ 27.1 (Application) Demonstrate consistent use of a systematic approach to solving problems encountered in one's work as a technician. (30,34,35,36,37)
  - IO 27.1.1 (Comprehension) Explain the kinds of problems encountered in the work of the technician that benefit from the use of a systematic problem solving approach. (30)
  - IO 27.1.2 (Comprehension) Explain a systematic approach to problem-solving. (30)
  - IO 27.2.3 (Comprehension) Explain the concept of consensus building. (30)
- Goal 28: Display a caring attitude toward patients in all aspects of job responsibilities.
- OBJ 28.1 (Organization) Combine compassion with the delivery of pharmacy services. (34,35,36,37)
  - OBJ 28.2 (Comprehension) Explain the concept of "caring" within the context of the delivery of pharmaceutical care. (15)
  - OBJ 28.3 (Characterization) Display acceptance of an attitude of "caring" by conveying this attitude in all professional transactions with patients and their caregivers. (34,35,36,37)
- Goal 29: Maintain confidentiality of patient and proprietary business information.
- OBJ 29.1 (Application) Observe legal and ethical guidelines for safeguarding the confidentiality of patient information. (34,35,36,37)
  - IO 29.1.1 (Comprehension) Explain situations in which the pharmacy technician must be aware and observant of the confidentiality of patient information. (15)
  - IO 29.1.1 (Comprehension) Explain types of patient information that should and should not be shared with third party payers. (15)
  - IO 29.1.2 (Comprehension) Explain patient confidentiality issues related to data collection, transmission, and storage by

pharmacy information systems and by electronic medical records. (15,35)

OBJ 29.2 (Application) Observe organizational policy for the safeguarding of proprietary business information. (34,36,37)

IO 29.2.1 (Comprehension) Explain the concept of "proprietary business information" and its importance in the conduct of business activities. (15)

Goal 30: Understand direct patient care delivery systems in multiple practice settings.

OBJ 30.1 (Comprehension) Compare and contrast the provision of direct patient care in various patient-care settings. (1)

IO 30.1.1 (Comprehension) Discuss the meaning of the term "direct patient care". (1)

IO 30.1.1 (Comprehension) Explain how direct patient care is delivered in each of the various patient-care settings. (1)

IO 30.1.2 (Comprehension) Discuss the role of the technician in the delivery of direct patient care. (1)

Goal 31: Efficiently manage one's work whether performed alone or as part of a team.

OBJ 31.1 (Application) Use a knowledge of workflow management to effectively schedule the performance of one's job responsibilities. (34,35,36,37)

IO 31.1.1 (Comprehension) Explain the concept of workflow management. (30)

IO 31.1.2 (Comprehension) Explain the role of pharmacy technicians in managing their own work. (30)

IO 31.1.3 (Comprehension) Explain the difference in priority to be given a STAT versus a PRN order. (30)

Goal 32: Function effectively as a member of the health care team.

OBJ 32.1 (Application) Use knowledge of interpersonal skills to effectively manage working relationships. (30,34,35,37)

IO 32.1.1 (Knowledge) Describe the types of interactions with others that occur in the work of the pharmacy technician. (30)

IO 32.1.2 (Comprehension) Explain techniques for working well on health care-related teams. (30)

IO 32.1.3 (Comprehension) Explain the factors that characterize good working relationships with others. (30)

IO 32.1.4 (Comprehension) Explain effective methods for delegating work. (30)

IO 32.1.5 (Comprehension) Explain the characteristics of collaborative interdepartmental work relationships. (30)

IO 32.1.6 (Comprehension) Explain the dynamics of small groups. (30)

- Goal 33: Balance obligations to one's self, relationships, and work in a way that minimizes stress.
- OBJ 33.1 (Synthesis) Devise an effective plan for minimizing stress while attending to personal needs, maintaining relationships, and meeting professional obligations. (30)
    - IO 33.1.1 (Comprehension) Explain various approaches advocated for achieving balance in one's life. (30)
- Goal 34: Understand the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) used to treat common disease states.
- OBJ 34.1 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the cardiovascular system. (6)
    - IO 34.1.1 (Knowledge) Describe the basic anatomy of the cardiovascular system. (6)
    - IO 34.1.2 (Comprehension) Explain the basic physiology of the cardiovascular system. (6)
    - IO 34.1.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the cardiovascular system. (6)
    - IO 34.1.4 (Comprehension) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the cardiovascular system. (6)
    - IO 34.1.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the cardiovascular system. (6)
    - IO 34.1.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the cardiovascular system. (6)
    - IO 34.1.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the cardiovascular system. (6)
    - IO 34.1.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the cardiovascular system. (6)
  - OBJ 34.2 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the respiratory system. (7)

- IO 34.2.1 (Knowledge) Describe the basic anatomy of the respiratory system. (7)
- IO 34.2.2 (Comprehension) Explain the basic physiology of the respiratory system. (7)
- IO 34.2.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the respiratory system. (7)
- IO 34.2.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the respiratory system. (7)
- IO 34.2.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the respiratory system. (7)
- IO 34.2.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the respiratory system. (7)
- IO 34.2.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the respiratory system. (7)
- IO 34.2.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the respiratory system. (7)
- OBJ 34.3 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the gastrointestinal system. (8)
- IO 34.3.1 (Knowledge) Describe the basic anatomy of the gastrointestinal system. (8)
- IO 34.3.2 (Comprehension) Explain the basic physiology of the gastrointestinal system. (8)
- IO 34.3.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the gastrointestinal system. (8)
- IO 34.3.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the gastrointestinal system. (8)
- IO 34.3.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the gastrointestinal system. (8)
- IO 34.3.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the gastrointestinal system. (8)

- IO 34.3.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the gastrointestinal system. (8)
- IO 34.3.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the gastrointestinal system. (8)
- OBJ 34.4 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the renal system. (9)
  - IO 34.4.1 (Knowledge) Describe the basic anatomy of the renal system. (9)
  - IO 34.4.2 (Comprehension) Explain the basic physiology of the renal system. (9)
  - IO 34.4.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the renal system. (9)
  - IO 34.4.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the renal system. (9)
  - IO 34.4.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the renal system. (9)
  - IO 34.4.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the renal system. (9)
  - IO 34.4.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the renal system. (9)
  - IO 34.4.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the renal system. (9)
- OBJ 34.5 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the nervous system. (2)
  - IO 34.5.1 (Knowledge) Describe the basic anatomy of the nervous system. (2)
  - IO 34.5.2 (Comprehension) Explain the basic physiology of the nervous system. (2)
  - IO 34.5.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and

- alternative therapies commonly used to treat diseases of the nervous system. (2)
- IO 34.5.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the nervous system. (2)
- IO 34.5.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the nervous system. (2)
- IO 34.5.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the nervous system. (2)
- IO 34.5.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the nervous system. (2)
- IO 34.5.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the nervous system. (2)
- OBJ 34.6 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the endocrine system. (3)
- IO 34.6.1 (Knowledge) Describe the basic anatomy of the endocrine system. (3)
- IO 34.6.2 (Comprehension) Explain the basic physiology of the endocrine system. (3)
- IO 34.6.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the endocrine system. (3)
- IO 34.6.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the endocrine system. (3)
- IO 34.6.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the endocrine system. (3)
- IO 34.6.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the endocrine system. (3)
- IO 34.6.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the endocrine system. (3)

- IO 34.6.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the endocrine system. (3)
- OBJ 34.7 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the reproductive systems. (10)
- IO 34.7.1 (Knowledge) Describe the basic anatomy of the reproductive systems. (10)
- IO 34.7.2 (Comprehension) Explain the basic physiology of the reproductive systems. (10)
- IO 34.7.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the reproductive systems. (10)
- IO 34.7.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the reproductive systems. (10)
- IO 34.7.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the reproductive systems. (10)
- IO 34.7.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the reproductive systems. (10)
- IO 34.7.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the reproductive systems. (10)
- IO 34.7.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the reproductive systems. (10)
- OBJ 34.8 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the immune system. (11)
- IO 34.8.1 (Knowledge) Describe the basic anatomy of the immune system. (11)
- IO 34.8.2 (Comprehension) Explain the basic physiology of the immune system. (11)
- IO 34.8.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the immune system. (11)

- IO 34.8.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the immune system. (11)
- IO 34.8.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the immune system. (11)
- IO 34.8.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the immune system. (11)
- IO 34.8.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the immune system. (11)
- IO 34.8.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the immune system. (11)
- OBJ 34.9 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases of the skeletal system (bones and joints). (4)
  - IO 34.9.1 (Knowledge) Describe the basic anatomy of the skeletal system (bones and joints). (4)
  - IO 34.9.2 (Comprehension) Explain the basic physiology of the skeletal system (bones and joints). (4)
  - IO 34.9.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the skeletal system (bones and joints). (4)
  - IO 34.9.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the skeletal system (bones and joints). (4)
  - IO 34.9.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the skeletal system (bones and joints). (4)
  - IO 34.9.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the skeletal system (bones and joints). (4)
  - IO 34.9.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the skeletal system (bones and joints.) (4)

- IO 34.9.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the skeletal system. (4)
- OBJ 34.10 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat disorders of the eyes, ears, nose and throat. (12)
- IO 34.10.1 (Knowledge) Describe the basic anatomy of the eyes, ears, nose and throat. (12)
- IO 34.10.2 (Comprehension) Explain the basic physiology of the eyes, ears, nose and throat. (12)
- IO 34.10.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat disorders of the eyes, ears, nose and throat. (12)
- IO 34.10.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the eyes, ears, nose, and throat. (12)
- IO 34.10.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the eyes, ears, nose, and throat. (12)
- IO 34.10.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the eyes, ears, nose, and throat. (12)
- IO 34.10.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the eyes, ears, nose, and throat. (12)
- IO 34.10.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the eyes, ears, nose, and throat. (12)
- OBJ 34.11 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the dermatologic system. (13)
- IO 34.11.1 (Knowledge) Describe the basic anatomy of the dermatologic system. (13)
- IO 34.11.2 (Comprehension) Explain the basic physiology of the dermatologic system. (13)
- IO 34.11.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and

- alternative therapies commonly used to treat diseases of the dermatologic system. (13)
- IO 34.11.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the dermatologic system. (13)
- IO 34.11.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the dermatologic system. (13)
- IO 34.11.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the dermatologic system. (13)
- IO 34.11.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the dermatologic system. (13)
- IO 34.11.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the dermatologic system. (13)
- OBJ 34.12 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly used to treat diseases affecting the hematologic system. (14)
- IO 34.12.1 (Knowledge) Describe the basic anatomy of the hematologic system. (14)
- IO 34.12.2 (Comprehension) Explain the basic physiology of the hematologic system. (14)
- IO 34.12.3 (Comprehension) Explain the therapeutic effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the hematologic system. (14)
- IO 34.12.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the hematologic system. (14)
- IO 34.12.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the hematologic system. (14)
- IO 34.12.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the hematologic system. (14)
- IO 34.12.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the hematologic system. (14)

- IO 34.12.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the hematologic system. (14)
  - OBJ 34.13 (Comprehension) Explain the use and side effects of prescription medications, nonprescription medications, and alternative therapies (e.g., herbal products, dietary supplements, homeopathy, lifestyle modification) commonly to treat diseases of the muscular system. (5)
    - IO 34.13.1 (Knowledge) Describe the basic anatomy of the muscular system. (5)
    - IO 34.13.2 (Comprehension) Explain the basic physiology of the muscular system. (5)
    - IO 34.13.3 (Comprehension) Explain the therapeutic effects of prescription medications, non prescription medications, and alternative therapies commonly used to treat diseases of the muscular system. (5)
    - IO 34.13.4 (Knowledge) Describe the adverse effects of prescription medications, nonprescription medications, and alternative therapies commonly used to treat diseases of the muscular system. (5)
    - IO 34.13.5 (Knowledge) State the brand and generic names of prescription and nonprescription medications commonly used to treat diseases of the muscular system. (5)
    - IO 34.13.6 (Knowledge) State the dosage forms of prescription and nonprescription medications commonly used to treat diseases of the muscular system. (5)
    - IO 34.13.7 (Knowledge) State the route of administration of prescription and nonprescription medications commonly used to treat diseases of the muscular system. (5)
    - IO 34.13.8 (Comprehension) State common doses of prescription and nonprescription medications commonly used to treat diseases of the muscular system. (5)
  - OBJ 34.14 (Comprehension) Explain the role of the FDA in regulating herbal products and dietary supplements. (2)
- Goal 35: Assist the pharmacist in assuring the quality of all pharmaceutical services.
- OBJ 35.1 (Application) Apply the principles of quality assurance to all technician activities. (19,20,21,22,23,34,36,37)
    - IO 35.1.1 (Comprehension) Explain the concept of quality assurance, including prospective and retrospective approaches. (1)
    - IO 35.1.2 (Knowledge) Describe quality assurance methods. (1)
    - IO 35.1.3 (Knowledge) State technician tasks that require quality assurance procedures. (1,19,20,21,22,23)
    - IO 35.1.4 (Comprehension) Explain the technician's role in preventing and detecting medication errors. (1)