

# Pharmacy I

## Implementation. **A**

- 1** The provisions of this section shall be implemented by school districts beginning with the 2024- 2025 school year. **A.1**
- 2** School districts shall implement the employability skills student expectations listed in §127.15(d)(1) of this chapter (relating to Career and Technical Education Employability Skills) as an integral part of this course. **A.2**

**General requirements.** This course is recommended for students in Grades 10 and 11. Recommended prerequisites: Introduction to Pharmacy Science or Principles of Health Science and one credit in biology. Students shall be awarded one credit for successful completion of this course. **B**

- b** General requirements. This course is recommended for students in Grades 10 and 11. Recommended prerequisites: Introduction to Pharmacy Science or Principles of Health Science and one credit in biology. Students shall be awarded one credit for successful completion of this course. **B**

## Introduction. **C**

- 1** Career and technical education instruction provides content aligned with challenging academic standards, industry-relevant technical knowledge, and college and career readiness skills for students to further their education and succeed in current and emerging professions. **C.1**
- 2** The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. **C.2**
- 3** The goal of Pharmacy I is for the student to gain a strong foundation in the knowledge and skills needed to pursue a career in the pharmaceutical field (e.g., pharmacy technician, pharmacist). Knowledge includes pharmacology, pharmacy law, medication safety, the dispensing process, and inventory. Pharmacy I is designed to be the second course in a pathway leading to college and career readiness in the healthcare therapeutics professions. The course content aligns with the competencies of pharmacy technician certification examinations. **C.3**

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**4 Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other organizations that foster leadership and career development in the profession such as student chapters of related professional associations. C.4**

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**5 Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples. C.5**

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**Knowledge and skills. D**

**1 The student communicates effectively with diverse populations. The student is expected to: D.1**

- A practice a respectful and professional attitude when interacting with diverse patient populations, colleagues, and professionals; and D.1.A
  - B compare communication techniques that are effective for various population clients such as terminally ill, intellectually disabled, visually/hearing impaired, and elderly/pediatric populations. D.1.B
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**2 The student interprets pharmacy correspondence utilizing medical abbreviations and terminology typically found in the pharmacy setting. The student is expected to: D.2**

- A employ pharmacy terminology and abbreviations in creating and utilizing correspondence in the pharmacy such as prescriptions, medication administration records (MARs), and patient order sheets; D.2.A
  - B compare terminology typically used in the community and institutional pharmacy settings; and D.2.B
  - C translate sig codes and abbreviations used in the pharmacy. D.2.C
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**3 The student distinguishes between the requirements of various federal agencies. The student is expected to: D.3**

- A explain the handling and disposal of non-hazardous, hazardous, and pharmaceutical substances and waste; D.3.A
- B discuss the requirements for controlled substance prescriptions, including new, refill, and transfer prescriptions, according to the Drug Enforcement Administration (DEA) controlled substances schedules; D.3.B
- C describe Food and Drug Administration (FDA) recall requirements based on classification for medications, devices, supplies, and supplements; D.3.C
- D interpret and apply state and federal laws pertaining to processing, handling, and dispensing of medications, including controlled substances; D.3.D
- E interpret state and federal laws and regulations pertaining to pharmacy technicians; and D.3.E
- F explain pharmacy compliance with professional standards and relevant legal, regulatory, formulary, contractual, and safety requirements. D.3.F

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**4 The student recalls drug information. The student is expected to:** D.4

- A identify brand name, generic name, classification, and indication of use for common medications with automaticity; D.4.A
- B discuss common and life-threatening drug interactions and contraindications; D.4.B
- C identify narrow therapeutic index (NTI) medications; and D.4.C
- D access and use references such as United States Pharmacopeia (USP) standards, drug reference books, and clinical information sources as needed to perform job duties. D.4.D

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**5 The student explains the dispensing process. The student is expected to:** D.5

- A identify a prescription or medication order for completeness, including drug strength, dosage form, directions, quantity, and refills, and obtain missing information if needed; D.5.A
- B communicate with patients to obtain information, including demographics, medication history, health conditions, allergies, and insurance, for the patient profile; D.5.B
- C practice assisting pharmacists in collecting, organizing, and recording demographic and clinical information for the Pharmacists' Patient Care Process; D.5.C
- D perform the necessary mathematical calculations required for order entry, including formulas, ratios, concentrations, percent strength, dilutions, proportions, and allegations; D.5.D
- E identify equipment and supplies, including diabetic supplies, spacers, and oral/injectable syringes, required for drug administration based on the package size and unit dose; D.5.E
- F identify and describe the importance of lot numbers, expiration dates, and National Drug Codes (NDC) on drug packaging; D.5.F
- G practice and adhere to effective infection control procedures; D.5.G
- H apply appropriate cleaning standards, including hand washing and cleaning counting trays, countertops, and equipment; and D.5.H
- I explain the state pharmacy boards' roles in the regulation of pharmacy technicians and that differences exist between states in the processing, handling, and dispensing of prescription medications. D.5.I

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**6 The student identifies common medication errors and explains error prevention strategies. The student is expected to:** D.6

- A identify high-alert/risk and look-alike/sound-alike (LASA) medications; D.6.A
- B describe error prevention strategies, including using Tall Man lettering, trailing/leading zeros, and barcodes; separating inventory; and limiting use of error-prone abbreviations; D.6.B
- C describe types of prescription errors, including abnormal doses, early refill, incorrect quantity, incorrect patient, and incorrect drug; D.6.C
- D explain pharmacy professional standards for and the role of the pharmacy technician in the patient care process; D.6.D
- E identify opportunities to assist pharmacists in the identification of patients who desire or require counseling to optimize the use of medications, equipment, and devices; D.6.E
- F discuss the pharmacy technician's role in patient and medication safety practices such as how to calculate dosage of pediatric over-the-counter drugs; D.6.F
- G explain how pharmacy technicians assist pharmacists in responding safely and legally to emergent patient situations; and D.6.G
- H explain basic safety and emergency preparedness procedures applicable to pharmacy services. D.6.H

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**7 The student performs inventory procedures according to federal, state, local, and facility guidelines. The student is expected to:** D.7

- A identify proper storage for medications in regard to temperature, light sensitivity, product demand, fast movers, cost, and restricted access; D.7.A
- B explain the definition and purpose of a formulary or approved/preferred product list; D.7.B
- C describe procedures for inventory control, including removal of expired and recalled drug products, rotating inventory, performing a physical inventory, ordering medications and supplies, monitoring periodic automatic replenishment (PAR) levels, and using just-in-time ordering; D.7.C
- D explain accepted procedures in purchasing pharmaceuticals, devices, and supplies; and D.7.D
- E explain accepted procedures for identifying and disposing of expired medications. D.7.E