

Subject: Career Development and Career and Technical Education

Grade: 11

Expectations: 76

Breakouts: 222

(a) Introduction.

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.
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.
3. The Pharmacy II course provides students with the advanced knowledge and skills to explore various careers in the pharmacy field, including pharmacology, pharmacy law, medication errors, inventory pharmacy calculations, compounding, and workflow expectations in a pharmacy setting. Pharmacy II is designed to be the third 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.
4. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
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.

(b) Knowledge and Skills Statements

(1) The student exhibits personal and interpersonal knowledge and skills. The student is expected to:

(A) apply appropriate verbal communication in a clear, concise, and effective manner;

- (i) apply appropriate verbal communication in a clear manner
- (ii) apply appropriate verbal communication in a concise manner
- (iii) apply appropriate verbal communication in a[n] effective manner

(B) apply appropriate non-verbal communication in a clear, respectful, and effective manner;

- (i) apply appropriate non-verbal communication in a clear manner
- (ii) apply appropriate non-verbal communication in a respectful manner
- (iii) apply appropriate non-verbal communication in a[n] effective manner

(C) apply appropriate adaptability skills such as problem solving and creative thinking;

- (i) apply appropriate adaptability skills

(D) create or evaluate a career plan using methods such as identifying educational pathways, developing career goals, and assessing individual aptitudes;

- (i) create or evaluate a career plan using methods

- (i) demonstrate teamwork
 - (F) create an occupation-specific resume; and
 - (i) create an occupation-specific resume
 - (G) identify soft skills desired by employers.
 - (i) identify soft skills desired by employers
- (2) The student communicates effectively with diverse populations. The student is expected to:
- (A) practice a respectful and professional attitude in communications with diverse patient populations, colleagues, and professionals such as written, oral, and electronic communications;
 - (i) practice a respectful attitude in communications with diverse patient populations
 - (ii) practice a respectful attitude in communications with colleagues
 - (iii) practice a respectful attitude in communications with professionals
 - (iv) practice a professional attitude in communications with diverse patient populations
 - (v) practice a professional attitude in communications with colleagues
 - (vi) practice a professional attitude in communications with professionals
 - (B) demonstrate communication techniques that are effective for various populations such as terminally ill, intellectually disabled, visually/hearing impaired, and elderly/pediatric populations; and
 - (i) demonstrate communication techniques that are effective for various populations
 - (C) demonstrate skills for supporting communication between various stakeholders such as serving as a liaison between the nurse and the patient.
 - (i) demonstrate skills for supporting communication between various stakeholders
- (3) The student demonstrates the use of medical terminology and abbreviations in a pharmacy setting. The student is expected to:
- (A) interpret and translate prescription and medication orders according to pharmacy settings such as community and hospital environments;
 - (i) interpret prescription orders according to pharmacy settings
 - (ii) interpret medication orders according to pharmacy settings
 - (iii) translate prescription orders according to pharmacy settings
 - (iv) translate medication orders according to pharmacy settings
 - (B) create pharmacy correspondence such as prescriptions, medication administration records (MARs), and patient order sheets using medical terminology and abbreviations;
 - (i) create pharmacy correspondence using medical terminology
 - (ii) create pharmacy correspondence using medical abbreviations
 - (iii) create patient order sheets using medical terminology
 - (iv) create patient order sheets using medical abbreviations
 - (C) use medical terminology found in various pharmacy settings to communicate appropriately; and

- (i) use medical terminology found in various pharmacy settings to communicate appropriately
- (D) translate sig codes and abbreviations used in the pharmacy to communicate instructions to patients.
 - (i) translate sig codes used in the pharmacy to communicate instructions to patients
 - (ii) translate abbreviations used in the pharmacy to communicate instructions to patients
- (4) The student applies the strictest requirements using the laws of local, state, and federal agencies. The student is expected to:
 - (A) demonstrate the proper handling and disposal of non-hazardous, hazardous, and pharmaceutical substances and waste;
 - (i) demonstrate the proper handling of non-hazardous substances
 - (ii) demonstrate the proper handling of non-hazardous waste
 - (iii) demonstrate the proper the handling of hazardous substances
 - (iv) demonstrate the proper handling of hazardous waste
 - (v) demonstrate the proper handling of pharmaceutical substances
 - (vi) demonstrate the proper handling of pharmaceutical waste
 - (vii) demonstrate the proper disposal of non-hazardous substances
 - (viii) demonstrate the proper disposal of non-hazardous waste
 - (ix) demonstrate the proper disposal of hazardous substances
 - (x) demonstrate the proper disposal of hazardous waste
 - (xi) demonstrate the proper disposal of pharmaceutical substances
 - (xii) demonstrate the proper disposal of pharmaceutical waste
 - (B) apply the requirements for controlled substance prescriptions, including new, refill, and transfer prescriptions;
 - (i) apply the requirements for controlled substance prescriptions, including new prescriptions
 - (ii) apply the requirements for controlled substance prescriptions, including refill prescriptions
 - (iii) apply the requirements for controlled substance prescriptions, including transfer prescriptions
 - (C) apply the requirements for receiving, storing

(vi) record clinical information accurately for patient continuity of care

(D)

- (i) use knowledge of high alert/risk medications to prevent medication errors
 - (ii) use knowledge of look-alike/sound-alike (LASA) medications to prevent medication errors
- (B) apply knowledge of current error prevention strategies such as using Tall Man lettering, trailing/leading zeros, and barcodes; separating inventory; and limiting use of error-prone abbreviations to prevent medication errors;
- (i) apply knowledge of current error prevention strategies to prevent medication errors
- (C) apply knowledge of various prescription errors such as abnormal dose, early refill, incorrect quantity, incorrect p

- (E) explain the proper procedure for the administration of prescription or medication orders such as ear drops, eye drops, inhalations, parenteral, and enteral;
 - (i) explain the proper procedure for the administration of prescription or medication orders
- (F) demonstrate knowledge of the workflow process for prescriptions and medication orders such as creation of the order, order entry, adjudication, verification, filling, labeling, billing, dispensing, and administration; and
 - (i) demonstrate knowledge of the workflow process for prescriptions orders
 - (ii) demonstrate knowledge of the workflow process for medication orders
- (G) describe the elements of third-party billing for out-patient dispensing, including prescription insurance ID cards, group numbers, BIN numbers, prior authorization, quantity limits, patient co-pays, maximum out-of-pocket costs, and deductibles.
 - (i) describe the elements of third-party billing for out-patient dispensing, including prescription insurance ID cards
 - (ii) describe the elements of third-party billing for out-patient dispensing, including group numbers
 - (iii) ~~describe the elements of third-party billing for out-patient dispensing, including BIN numbers~~

- (iii) apply conversions to systems of measurements, including household, to perform duties in a pharmacy setting
- (C) calculate the flow rate (or rate of administration) for an IV solution using ratios and conversions such as milliliters to drops, weight, or hours to minutes;
 - (i) calculate the flow rate (or rate of administration) for an IV solution using ratios
 - (ii) calculate the flow rate (or rate of administration) for an IV solution using conversions
- (D) calculate days supply for a prescription order given a dose and sig;
 - (i) calculate days supply for a prescription order given a dose
 - (ii) calculate days supply for a prescription order given a sig
- (E) calculate volume or mass of each of the total parenteral nutrition (TPN) components such as lipids, amino acids, dextrose, calcium, and magnesium;
 - (i) calculate volume or mass of each of the total parenteral nutrition (TPN) components
- (F) calculate volume or mass of ingredients needed for compoundin1 (n)-0.8 (e)-4 (e)19.8 (d)-0. 919.1 (s)a8 (m)11.(.)Tjc 0 Tw 1

- (E) describe the recent innovations and advances in pharmacy;
 - (i) describe the recent advances in pharmacy
 - (ii) describe the recent innovations in pharmacy
- (F) identify opportunities for extended learning experiences such as community services, career and technical service organizations (CTSOs), and professional organizations; and
 - (i) identify opportunities for extended learning experiences
- (G)

(iii) analyze National Drug Codes (NDC) on drug packaging for inventory accuracy

(13) The student demonstrates knowledge of safety procedures in a pharmacy setting. The student is expected to:

- (A) apply appropriate hygiene and cleaning standards, including hand washing and cleaning counting trays, countertops, and equipment;
 - (i) apply appropriate hygiene standards, including hand washing
 - (ii) apply appropriate cleaning standards, including cleaning counting trays
 - (iii) apply appropriate cleaning standards, including cleaning countertops
 - (iv) apply appropriate cleaning standards, including cleaning equipment
- (B) perform basic safety and emergency preparedness procedures such as basic life support (BLS) and first aid applicable to pharmacy services;
 - (i) perform basic safety procedures applicable to pharmacy services
 - (ii) perform basic emergency preparedness procedures applicable to pharmacy services
- (C) explain the risks of drug diversion to employees, patients, and the community;
 - (i) explain the risks of drug diversion to employees
 - (ii) explain the risks of drug diversion to patients
 - (iii) explain the risks of drug diversion to the community
- (D) explain the potential solutions to minimize drug diversion such as identifying red flags, controlling inventory, and monitoring the prescription drug monitoring program (PDMP);
 - (i) explain the potential solutions to minimize drug diversion
- (E) explain the types and uses of PPE and the steps for putting on (donning) and removing (doffing) PPE; and
 - (i) explain the types of PPE
 - (ii) explain the uses of PPE
 - (iii) explain the steps for putting on (donning) PPE
 - (iv) explain the steps for removing (doffing) PPE
- (F) explain why collecting and documenting patient allergies are important steps in medication safety.
 - (i) explain why collecting patient allergies [is an] important [step] in medication safety
 - (ii) explain why documenting patient allergies [is an] important [step] in medication safety