

COURSE OUTLINE

Course: PHARMACY TECHNICIAN
CBEDS Title: THERAPEUTIC SERVICES

Total Course Hours: 265
CBEDS # 4260

Course Description: This course gives the student basic skills and understanding of the profession to perform as an entry level pharmacy technician aide in many practice settings. State Board of Pharmacy requires theory of a minimum 265 hours which include: knowledge of practice settings, standards and ethics, laws and regulations. Knowledge and ability to calculate common dosages, employ metric and apothecary systems. Knowledge and understanding of the identification of drugs, drug dosages, routes, forms and storage requirements. Knowledge of and ability to perform record keeping, techniques relating to manufacturing, packaging and labeling of drug products.

Industry Sector / Pathways Aligned

Health-Science and Medical Technology Sector – Support Services (D) and Therapeutic Services (E)

Class Occupational Competencies

- 3 **1 ORIENTATION**
 - a. Demonstrates knowledge of course outline
 - b. Demonstrates awareness of course objectives and competencies
 - c. Displays ability to relate trainee total pharmacy technician program

- 3 **2 SAFETY/SECURITY (6.0)**
 - a. Describes customer/employee accident procedures (6.1)
 - b. Demonstrates and practices safety regulations (bending, lifting, etc.) (6.4)
 - c. Demonstrates knowledge of classroom procedures and drills (earthquake, fire, emergency)
 - d. Discuss dangerous person(s) on campus procedure

- 12 **3 LEGAL CONSIDERATIONS (8.0 all)**
 - a. Demonstrates ethical responsibility and understanding of consequences of trainee and employee violation of security procedures
 - b. Understands loss prevention/shrinkage (internal theft, inventory loss) D3.3
 - c. Understands Federal Drug Laws 8.1
 - d. Understands State of California Pharmacy Law 8.1
 - e. Understands Food and Drug Administration policies 8.1
 - f. Understands Omnibus Reconciliation Act of 1990 8.1

- 6 **4 ETHICS (8.0 all)**
 - a. Demonstrates knowledge of Codes of Ethics & Standards of Practice 8.3
 - b. Demonstrates knowledge of Codes of Ethics for Pharmacists & Pharmacy Technicians 8.3
 - c. Demonstrates ethical problem solving and critical thinking 8.2

- 3 **5 LEADERSHIP SKILLS 9.0**
 - a. Demonstrates appropriate professional behavior via initiative, creativity, self control, interest/enthusiasm 9.4
 - b. Demonstrates leadership skills independently, making appropriate decisions, working well with others and taking constructive criticism appropriately 9.4, 9.5

- 3 **6 INTRODUCTION TO HEALTH CARE D1.0**
 - a. Identifies forms of health insurance in the United States
 - b. Identifies major health care systems
 - c. Knowledge of major health care changes-impacts for Pharmacy Technicians D1.6, 8.1

- 12 **7 PHARMACEUTICAL CARE**
- Defines pharmaceutical care
 - Recognizes main elements of pharmaceutical care model
 - Knowledge of consequences of drug-related problems
 - Knowledge of barriers to implementing pharmaceutical care
- 24 **8 MEDICATIONS (E2.2)**
- Knowledge of what a drug is
 - Describes the difference between generic and brand names
 - Describes difference between side effects and toxicities
 - Defines synergism
 - Understands risk-to-benefit ratio
 - Understands therapeutic equivalence
- 6 **9 CURRENT & FUTURE ROLES OF PHARMACY TECHNICIANS (3.0)**
- Understands general skills of Pharmacy Technician
 - Understands general functions of Pharmacy Technician
 - Identifies future skills and functions of Pharmacy Technicians
- 15 **10 OPERATIONAL SKILLS**
- Knowledge of medical and pharmacy terminology, symbols and abbreviations
 - Defines routes of administration
 - Understands types of pharmaceutical dosage forms
 - Knowledge of chemical compounds and symbols
- 42 **11 PHARMACY CALCULATIONS (1.1 Math: 1.1,1.3)**
- Knowledge of basic arithmetic
 - Demonstrates ratio and proportion 1.1, 1.3
 - Describes dosages calculation formulas 1.1, 1.3
 - Describes the apothecary system
 - Describes the avoirdupois system
 - Describes the metric system
 - Explains extemporaneous compounding calculations
 - Explains intravenous and sterile product compounding calculations
 - Explains commercial and business pharmacy calculations
- 27 **12 DRUG CHEMISTRY 1.2 Science (Applications 9-12)**
- Describes absorption, distribution, metabolism and excretion 1.a
 - Describes adverse effects and toxicities 1.b
 - Knowledge of drug interactions
 - Describes drug risk-to-benefit ratio
 - Knowledge of pharmacokinetics
 - Knowledge of pharmacodynamics
- 30 **13 PHARMACOLOGY 1.2 Science (7th Applications – 1 – 5) and 9th – 12th Applications 1 -10)**
- Knowledge of and describes gastrointestinal tract function
 - Knowledge of and describes cardiac system (5.b)
 - Knowledge of and describes endocrine disorders
 - Knowledge of and describes respiratory function
 - Knowledge of and describes nervous system disorders (9.b, 9.c, 9.d)
 - Knowledge of and describes blood disorders
 - Knowledge of and describes poisonings
 - Knowledge of and describes affective disorders
 - Knowledge of and describes pain and inflammation
 - Knowledge of and describes infections (10.d)
 - Knowledge of and describes cancer
 - Knowledge of and describes HIV/AIDS 10.e

- 15 **14 COMPUTER APPLICATIONS (11.0)**
- Describes technicians roles with computers
 - Demonstrates pharmacy applications
 - Describes future applications of computer in pharmacy
 - Demonstrates basic computer program use and functions
- 10 **5 QUALITY IMPROVEMENT (8.0 all)**
- Knowledge of drug use evaluation and Pharmacy Technicians
 - Knowledge of adverse drug reactions (ADR) and classification
 - Knowledge of utilization of Pharmacy Technicians in ADR
 - Knowledge of Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
 - Knowledge of Institute for Safe Medication Practices, Inc.
- 30 **16 ASEPTIC TECHNIQUE & STERILE PRODUCTS (D2.0)**
- Describes parenteral products and routes of administration
 - Describes sterilization and pyrogens
 - Demonstrates aseptic technique language
 - Describes clean room equipment, organization and supplies
 - Knowledge of and practice standardized aseptic techniques
- 5 **17 POLICIES AND PROCEDURES**
- Defines policies and procedures and importance
 - Knowledge of contents and use of policy and procedure manual
- 12 **18 OPERATIONS & MEDICATION CONTROL (11.0)**
- Describes pharmacy formulary
 - Demonstrates technician utilization in the medication process
 - Demonstrates technician utilization in purchasing process
 - Demonstrates utilization in inventory management
 - Demonstrates technician utilization in controlled substances
 - Demonstrates utilization in storage, packaging, manufacturing and compounding medications and techniques

Student Outcomes (11.0)

- Demonstrates Occupational Specific, Communication and Critical Thinking Skills 2.0
- Demonstrates Responsible Work Ethics 8.0
- Demonstrates Career/Employment Literacy 3.0
- Demonstrates Effective Use of Technology 4.0

Additional Course Information

Certificate is issued with competencies obtained to all students who complete the course

TOTAL HOURS Class and OJT 265.00

***Standards reinforced throughout lessons: through text and research assignments – and associated classroom presentations:**

Reading Applications (Grades 11-12) 2.3 Verify and Clarify Facts... and 1.2 Apply knowledge of roots and affixes... concerning meaning of scientific technology

Reading Comprehension (Grades 9-10) 2.1 Analyze the structure and format of functional workplace documents... and 2.3 Generate relevant questions about readings on issues that can be researched.

Writing Strategies and Applications (Grades 9-10), 1.5 and 2.3 – synthesizing multiple sources of information and writing expository compositions, analytical essays, research reports.