

MISSION VALLEY REGIONAL OCCUPATION PROGRAM
Pharmacy Technician
Course Outline

1. Course Title:

Pharmacy Technician

2. CTE Career Sector and Pathway:

Health Science and Medical Technology; Patient Care (pathway 198)

3. CALPADS Number:

7922

4. Job Titles:

DOT Codes

O*NET Codes

Entry Level

Pharmacy Clerk	31-9095.00	
----------------	------------	--

Technical Level

Pharmacy Technician	29-2052.00	074.382-010
---------------------	------------	-------------

Professional Level

Pharmacist	29-1051.00	074.161-010
------------	------------	-------------

5. Course Length:

This year-long course meets 2 hours each day and is associated with ten credits each semester.

6. Course Description:

The competency-based course prepares students for entry-level pharmacy technician positions in either hospital or retail pharmacies. The course consists of classroom instruction, laboratory training, and practical work (externship). Medical and pharmaceutical terminology will be introduced. Students will become competent in basic anatomy related to the pharmacology of medications, as well as understand pharmaceutical calculations. This class provides students with the knowledge required to pass the national certification exam offered by the Pharmacy Technician Certification Board.

Integrated throughout the course are Career Preparation Standards, which include Workplace Basic Skills and Behaviors, Career Technical Skills, and Job Employment Skills.

7. Hours:

Students receive up to 240 hours of classroom instruction and up to 120 hours in a community classroom site. Total hours are 360.

8. Prerequisites:

Basic Math (pre-algebra) skills and some understanding of Biology. Students are required to become CPR certified on their own before the beginning of the last quarter (Adult students only). They also need to show proof of passing a physical, TB and Hepatitis B test when required. COVID vaccinations and other vaccines may be required by internship sites.

9. Articulation: This course is not articulated.

10. Academic Credit: 20 units of High School credit

11. UC/CSU Eligibility: This course meets the UC/CSU A-G “g” requirement.

12. Instructional Materials

Online Textbooks Bundle:

ISBN: 9798765787533

Mission Valley ROP: Cirrus 2.0 for Pharmacy Practice for Technicians 7E, Calculations 7E, and Labs 4E

Visit: <https://www.paradigmeducation.com/mission-valley-rop>

13. Abbreviations

CC = Community Classroom (unpaid, on-the-job, training experience at business sites)

CVE= Cooperative Vocational Education (paid, on-the-job, training experience at business sites)

Course Outline: Upon successful completion of this course, students will be able to demonstrate the following skills necessary for entry-level employment.

Unit	Content Area Skills	Hours
Integrated Throughout the course	<p><u>Workplace Basic Skills & Behaviors</u> (Necessary skills for any occupation – MVROP SLO #1) Learner Outcomes:</p> <ul style="list-style-type: none"> A. Apply skills learned in class. B. Analyze information and make decisions. C. Communicate verbally and in writing. D. Work independently and as a team member in a diverse workplace. E. Punctual F. Work reliably, responsibly, and ethically. 	Integrated Throughout the course

Unit	Content Area Skills	Hours
Integrated throughout the course	<p><u>Career Technical Skills</u> (Occupational competencies – MVROP SLO #2) Learner Outcomes</p> <ul style="list-style-type: none"> A. Use appropriate technology. B. Understand and practice occupational safety standards. C. Demonstrate an awareness of how a business or industry functions. D. Work on customer service skills. 	Integrated throughout the course
MANDATORY FOR ALL ROP COURSES	<p><u>Job Employment Skills</u> (Occupational competencies – MVROP SLO #3) Learner Outcomes:</p> <ul style="list-style-type: none"> A. Develop a plan to achieve career goals. <ul style="list-style-type: none"> a. Create a Career Portfolio <ul style="list-style-type: none"> i. Cover letter ii. Application iii. Resume iv. Thank you letter B. Use effective job search strategies. C. Demonstrate an awareness of the importance of lifelong learning. D. Improve confidence in making presentations E. Understand how to handle issues and problems at work F. Be able to multitask 	30
Unit	Content Area Skills (Occupational competencies – MVROP SLO #2)	Hours
1	<p><u>Medications</u> Learner Outcomes:</p> <ul style="list-style-type: none"> A. Common Sound-Alike Drug Names B. High-alert/risk medication C. The Actions and Uses of Drugs D. Introduction to Biopharmaceutics E. Therapeutic equivalence F. Common and life-threatening drug interactions and contraindications G. Preventing and Managing Medication Errors: The Technician's Role H. Nonprescription Medications I. The Pharmacy Formulary System J. The Prescription, Terminology, and Medical Abbreviations 	40

Unit	Content Area Skills	Hours
	K. Extemporaneous Compounding	
2	<p><u>Federal Requirements</u> Learner Outcomes:</p> <ul style="list-style-type: none"> A. State requirements for licensure, registration, and/or certification of pharmacy technicians B. The Joint Commission standards and OSHA requirements for employer staff training C. State requirements regarding the roles and responsibilities of pharmacists, pharmacy technicians, and other pharmacy employees D. The Joint Commission standards for recordkeeping of received, repackaged, batch prepared, recalled, and returned products and supplies E. State requirements regarding facilities, equipment, and supply F. Regulatory Standards in Pharmacy Practice 	20
3	<p><u>Patient Safety and Quality Assurance</u> Learner Outcomes:</p> <ul style="list-style-type: none"> A. Administration of Medications B. Infection Control and Prevention in the Pharmacy C. Effects of patient-specific factors on drug and nondrug therapy D. Equipment calibration techniques and documentation requirements E. Error prevention strategies F. Products used in packaging and repackaging G. Measures of productivity, efficiency, and customer satisfaction H. Issues that require pharmacist intervention I. Information sources used to obtain data in a quality improvement process J. Event reporting procedures K. Quality assurance practices for medication and inventory control systems L. Types of prescription errors M. Requirements and strategies for addressing errors in practice adverse drug reaction reporting 	40

Unit	Content Area Skills	Hours
	N. Hygiene and cleaning standards	
4	<p><u>Order Entry and Processing</u> Learner Outcomes:</p> <ul style="list-style-type: none"> A. Parenteral Compounding B. Pharmaceutical Calculations C. Procedure to stage prescriptions for final verification D. Procedures and environmental controls to prepare non-sterile hazardous medications E. Information to be obtained from patient/patient representatives and/or health care providers F. Documentation and record-keeping G. Equipment/supplies required for drug administration H. Factors that determine prioritization of prescription/medication order processing 	40
5	<p><u>Inventory Management</u> Learner Outcomes:</p> <ul style="list-style-type: none"> A. Procedures to address improperly stored inventory B. Automated equipment inventory management C. Formulary or approved/preferred product list D. Suitable alternatives for ordering E. Medication quality control system requirements clinic and nursing floor stock, crash carts F. Procedures for ordering medications and supplies G. Inventory control practices and record keeping 	20
6	<p><u>Administrative and Management</u> Learner Outcomes:</p> <ul style="list-style-type: none"> A. Administrative duties and procedures for pharmacies B. Preventative maintenance scheduling for automated equipment C. Purpose and proper use of pharmacy reports D. Process for handling and destroying 	10
7	<p><u>Externship</u> Learner Outcomes</p>	120
	Total Hours	360

15. Instructional Strategies

- Lecture
- Group discussion
- Reading assignments
- Multimedia
- Hands-on lab practice
- Demonstration
- Teamwork
- Simulation
- Written reports
- Comparative analysis
- Use of industry partners
- Guest speakers
- Field Trips
- Presentations and Projects

16. License Competency List:

Students who meet these listed class requirements may apply to the State Board of Pharmacy

1. Overall grade level of C for both semesters
2. Minimum student mastery level for each proficiency
3. Demonstrate occupational specific and general workplace skills
4. Complete 120 hours of externship

17. Course Competencies

Externship Experience

- 120 hours of hands-on educational experience at a pharmacy

Pharmacy Intro

- Historical Developments in Pharmacy and Health Care
- Organizational Structure and Function of the Hospital
- Types of Pharmacy Settings
- Organizations in Pharmacy

Medications

- Common Sound-Alike Drug Names
- The Actions and Uses of Drugs
- Common and life-threatening drug interactions and contraindications
- Preventing and Managing Medication Errors: The Technician's Role
- Nonprescription Medications
- The Pharmacy Formulary System
- The Prescription, Terminology, and Medical Abbreviations

Federal Requirements

- State requirements for licensure, registration, and/or certification of pharmacy technicians

- State requirements regarding the roles and responsibilities of pharmacists, pharmacy technicians, and other pharmacy employees
- State requirements regarding facilities, equipment, and supply
- Regulatory Standards in Pharmacy Practice

Patient Safety and Quality Assurance

- Administration of Medications
- Infection Control and Prevention in the Pharmacy
- Error prevention strategies
- Products used in packaging and repackaging
- Issues that require pharmacist intervention
- Event reporting procedures
- Quality assurance practices for medication and inventory control systems
- Types of prescription errors
- Hygiene and cleaning standards

Order Entry and Processing

- Parenteral Compounding
- Pharmaceutical Calculations
- Procedure to stage prescriptions for final verification
- Information to be obtained from patient/patient representatives and/or health care providers
- Documentation and record-keeping
- Equipment/supplies required for drug administration
- Factors that determine prioritization of prescription/medication order processing

Inventory Management

- Procedures to address improperly stored inventory
- Automated equipment inventory management
- Formulary or approved/preferred product list
- Suitable alternatives for ordering
- Medication quality control system requirements clinic and nursing floor stock, crash carts,
- Procedures for ordering medications and supplies
- Inventory control practices and record keeping

Administrative and Management

- Administrative duties and procedures for pharmacies
- Preventative maintenance scheduling for automated equipment
- Purpose and proper use of pharmacy reports
- Process for handling and destroying

Aseptic Technique

- Garbing according to USP Chapter <797> Standards
- Aseptic Hand Washing
- Hood Cleaning
- Preparing Large-Volume Parenteral Solutions
- Preparing small-volume parenteral solutions
- Preparing Sterile Powdered Drug Vials

