



# Regional Occupational Program

## Pharmacy Technician 2026-2027

### COURSE DESCRIPTION

This course prepares students for entry-level pharmacy technician training and pharmacy support roles by developing foundational knowledge and skills in pharmacology, pharmaceutical calculations, measurement techniques, pharmaceutical abbreviations, medical and pharmacy terminology, drug classifications, unit-dose packaging, medication preparation and distribution concepts, inventory control, legal and ethical responsibilities, clerical procedures, and customer service. Students learn about pharmacy technician responsibilities, pharmacy operations, medication safety, prescription-processing procedures, sterile and non-sterile compounding concepts, insurance procedures, and professional communication within pharmacist-supervised practice. Students also develop skills related to confidentiality, HIPAA requirements, infection control, inventory management, technology use, and mathematical reasoning in pharmacy settings. Upon successful completion of the course, students will have foundational preparation related to California pharmacy technician licensure pathways and national certification exam content; however, eligibility for licensure or certification is determined by the California State Board of Pharmacy and/or the applicable national certification organization. Instruction may include classroom, laboratory, and work-based or clinical learning experiences in pharmacy-related settings when available and appropriate.

#### Course Information

Course Length: 2 Years  
 Prerequisite: Keyboarding/Basic Math Skills  
 Pharmacy Clerk Recommended  
 Course Level: Capstone  
 UC: No  
 Articulated: No  
 Industry Cert.: No  
 Industry Sector: Health Science and Medical  
 Technology  
 Pathway: Patient Care  
 CALPADS: 7922

#### O\*Net SOC Codes

29-2052 Pharmacy Technicians  
 53-7065 Stockers and Order Fillers

#### Legend

CTE - PS CTE Pathway Standards  
 CRP Career Ready Practices  
 CTE - AS CTE Anchor Standards  
 CCSS Common Core State Standards  
 ISTE International Society for Technology in  
 Education

*Includes updates from 25/26 Health Science and Medical Technology Advisory  
[Advisory Minutes](#)*

## Pharmacy Technician

### Course Orientation

- a. Discuss objectives for this course, including competencies, teacher expectations, classroom policies, and procedures.
- b. Identify and discuss the acquisition of transferable skills (communication, collaboration, creativity, and critical thinking) and their importance to being college and career ready and for future personal and professional success.
- c. Review objectives, competencies, and course syllabus.
- d. Discuss student and teacher expectations, including behavior, class rules, appropriate dress, pre-course knowledge, and grading policies, including enrollment and attendance requirements and procedures, and classroom/school safety and disaster procedures.
- e. Discuss next steps in course sequence related to the career pathway, the need for reinforcement of basic skills, transferrable skills, and postsecondary and career options.
- f. Discuss the Big Six: Career Ready Essentials and the Standards for Career Ready Practice as they relate to this course, all aspects of the industry sector, and being college and career ready.

### Big Six: Career Ready Essentials

1. Effective Communication	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ol style="list-style-type: none"> <li>a. <b>Demonstrate effective verbal communication and conflict resolution skills.</b></li> <li>b. <b>Use the writing process to develop written communication with the appropriate tone, organization, and format for the identified audience.</b></li> <li>c. Explain the effect of interpersonal skills on one's ability to communicate effectively and develop relationships.</li> <li>d. Describe the impact of ineffective communication on business relationships.</li> <li>e. Analyze the impact of vocabulary, body language, and tone on verbal communication.</li> <li>f. Demonstrate active listening skills.</li> <li>g. Accurately interpret industry-specific written communication.</li> <li>h. Model responsible and effective use of various communication technologies.</li> <li>i. Identify valid and reliable digital reference and resource materials.</li> <li>j. Gather information from multiple digital sources to compare and contrast, synthesize, and summarize.</li> <li>k. Identify and use appropriate communication and collaboration technologies.</li> <li>l. Utilize technology to problem solve, accomplish tasks, and to produce or publish products.</li> </ol>		<u>1</u> <u>2</u> <u>11</u>	<u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u> <u>8</u> <u>9</u> <u>10</u> <u>11</u>	<u>LS</u> <u>9-10</u> <u>11-12.6</u>  <u>SLS</u> <u>11-12.2</u> <u>9-10</u> <u>11-12.1</u> <u>11-12.1d</u>  <u>WS</u> <u>11-12.7</u> <u>11-12.6</u>	<u>1b,c</u> <u>2c</u> <u>3b,c</u> <u>5c</u> <u>6b,c,d</u>
2. Collaboration, Creativity, and Critical Thinking	CTE - PS	CRP	CTE - AS	CCSS	ISTE
<ol style="list-style-type: none"> <li>a. <b>Demonstrate critical thinking skills for a variety of purposes and in different settings.</b></li> <li>b. <b>Collaborate to reach consensus on an identical objective through the sharing of knowledge, tasks, and learning.</b></li> <li>c. Discuss the importance of the critical thinking process to real-world applications.</li> </ol>		<u>2</u> <u>4</u> <u>5</u> <u>7</u> <u>9</u>	<u>2</u> <u>3</u> <u>4</u> <u>5</u> <u>7</u>	<u>LS</u> <u>9-10</u> <u>11-12.6</u>  <u>SLS</u>	<u>1c</u> <u>3c,d</u> <u>4a-d</u> <u>5c,d</u> <u>6c</u>

<ul style="list-style-type: none"> <li>d. Evaluate the impact of creative thinking on problem solving and innovation in real-world applications.</li> <li>e. Compile work that demonstrates the process used to (elaborate, refine, analyze) evaluate original ideas and maximize creative efforts.</li> <li>f. Apply divergent and convergent thinking to the development of an original idea or solution.</li> <li>g. Examine real-world limits to adopting ideas.</li> <li>h. Demonstrate creative thinking (preparation, insight, evaluation, elaboration, and communication) to create a new idea or concept.</li> <li>i. Assume shared responsibility for collaborative work, and value the individual contributions made by each team member.</li> <li>j. Evaluate evidence, arguments, claims, and beliefs to identify connections.</li> <li>k. Identify bias, prejudice, propaganda, self-deception, distortion, and misinformation.</li> <li>l. Produce intellectual, informational, or material products that serve an authentic purpose.</li> <li>m. Work effectively and respectfully with those from diverse backgrounds or cultures.</li> <li>n. Demonstrate respect, trust, commitment, and the ability to compromise in collaborative projects.</li> </ul>		<u>10</u> <u>11</u>	<u>8</u> <u>9</u> <u>11</u>	<u>9-10</u> <u>11-12.1</u> <u>11-12.1d</u> <u>11-12.2</u>  <u>WS</u> <u>11-12.7</u> <u>11-12.6</u>	<u>7b,c,d</u>
<b>3. Leaders and Teams: Roles and Responsibilities</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<ul style="list-style-type: none"> <li>a. <b>Determine the individual and team members' roles and responsibilities.</b></li> <li>b. <b>Demonstrate leadership skills and qualities (i.e., reliability, negotiation skills, initiative, positive reinforcement, recognition of others' efforts, problem-solving skills, conflict resolution, and delegation).</b></li> <li>c. Explain the importance of technical, social, and communication skills to team success.</li> <li>d. Compare and contrast leadership styles and their effectiveness in various situations.</li> <li>e. Organize and delegate responsibilities in a team setting to encourage ideas, perspectives, and contributions from all team members.</li> <li>f. Develop a strong sense of team identity by brainstorming solutions, volunteering, assisting others, practicing respect and courtesy, and taking initiative.</li> <li>g. Examine situations in which a follower becomes the leader.</li> <li>h. Describe twenty-first-century skills required across all occupations.</li> <li>i. Identify and discuss the characteristics of a successful team (i.e., leadership, cooperation, and effective decision-making).</li> <li>j. Leverage social and cultural differences to increase innovation and quality of work.</li> </ul>		<u>7</u> <u>8</u> <u>9</u>	<u>3</u> <u>7</u> <u>8</u> <u>9</u> <u>11</u>	<u>SLS</u> <u>11-12.2</u> <u>9-10</u> <u>11-12.1</u> <u>11-12.1d</u>  <u>WS</u> <u>11-12.6</u>	<u>7a,c</u>
<b>4. Legal, Ethical, and Environmental Considerations</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<ul style="list-style-type: none"> <li>a. <b>Demonstrate industry-specific ethical and legal practices.</b></li> <li>b. <b>Identify eco-friendly industry-specific practices and resources.</b></li> <li>c. Identify local, state, and federal regulatory agencies, entities, laws, and regulations.</li> </ul>		<u>5</u> <u>7</u> <u>8</u>	<u>3</u> <u>5</u> <u>7</u>	<u>WS</u> <u>11-12.6</u> <u>11-12.7</u>	<u>2a,b</u> <u>3a,b</u> <u>5c</u>

<ul style="list-style-type: none"> <li>d. Identify discrimination based on race, nationality, religion, gender, age, disability, or sexual orientation.</li> <li>e. Summarize the ethical and legal implications of workplace discrimination and harassment.</li> <li>f. Explain the concept of corporate citizenship.</li> <li>g. Examine an employer's role in protecting the health and welfare of employees, the community, and the environment.</li> <li>h. Analyze current environmental laws and regulations and their impact on industry.</li> <li>i. Compare and contrast both society's and industry's impact on the environment.</li> </ul>		<u>12</u>	<u>8</u> <u>9</u> <u>11</u>	<u>SLS</u> <u>9-10</u> <u>11-12.1</u> <u>11-12.1d</u> <u>11-12.2</u>	<u>6c</u>
<b>5. Personal Growth and Career Planning</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<ul style="list-style-type: none"> <li>a. <b>Demonstrate continued personal development and growth.</b></li> <li>b. <b>Develop and manage a personal growth and career plan.</b></li> <li>c. Explain the relationship between sound financial habits and financial security.</li> <li>d. Create and manage a personal financial plan.</li> <li>e. Demonstrate initiative in achieving personal and professional goals.</li> <li>f. Apply time management strategies to meet deadlines.</li> <li>g. Demonstrate a growth mindset through flexibility and a positive attitude.</li> <li>h. Select and demonstrate appropriate job-search and retention techniques.</li> <li>i. Demonstrate strategies to prepare for employment.</li> <li>j. Demonstrate interpersonal skills appropriate for the workplace.</li> <li>k. Elaborate on the importance of perseverance to personal and professional success.</li> <li>l. Discover personal career interests, aptitudes, and skills.</li> </ul>		<u>1</u> <u>2</u> <u>3</u> <u>4</u> <u>6</u>	<u>2</u> <u>3</u> <u>4</u> <u>7</u> <u>8</u> <u>11</u>	<u>LS</u> <u>9-10</u> <u>11-12.6</u>  <u>SLS</u> <u>9-10</u> <u>11-12.1</u> <u>11-12.1d</u> <u>11-12.2</u>  <u>WS</u> <u>11-12.6</u>	<u>1a</u> <u>3a,c</u> <u>4d</u> <u>6a,d</u> <u>7b</u>
<b>6. Workplace Safety and Personal Wellness</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<ul style="list-style-type: none"> <li>a. <b>Demonstrate proper industry-specific safe work practices to prevent injury or illness.</b></li> <li>b. <b>Assess the potential impact of goal setting on personal and professional success.</b></li> <li>c. Describe the role of security and emergency procedures in workplace safety.</li> <li>d. Describe the effect of preventative measures on emergencies in the workplace.</li> <li>e. Identify and describe the causes, prevention, and treatment of common accidents.</li> <li>f. Identify local, state, and federal agencies that regulate workplace safety.</li> <li>g. Explain the role of the California Occupational Safety and Health Administration (Cal-OSHA) and the Environmental Protection Agency (EPA).</li> <li>h. Discuss the basics of system operations.</li> <li>i. Demonstrate the proper use of personal protective equipment (PPE).</li> <li>j. Explain the purpose of and accurately interpret a Safety Data Sheet (SDS).</li> <li>k. Identify hazardous materials and chemicals.</li> <li>l. Demonstrate proper procedures to respond to work-related accidents and injuries.</li> <li>m. Describe how ergonomics, housekeeping, and maintenance are related to accidents and injuries.</li> </ul>		<u>2</u> <u>5</u> <u>6</u> <u>8</u> <u>12</u>	<u>2</u> <u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>10</u> <u>11</u>	<u>LS</u> <u>9-10</u> <u>11-12.6</u>  <u>WS</u> <u>11-12.7</u> <u>11-12.6</u>  <u>SLS</u> <u>9-10</u> <u>11-12.1</u> <u>11-12.1d</u>	<u>1a,d</u> <u>2a,d</u> <u>5b</u>

n. Demonstrate cyber ethics, cyber safety, and cybersecurity.					
o. Assess the potential impact of preventative physical and mental health measures on workplace safety.					

### Pharmacy Technician Units of Instruction

<b>7. Introduction to Pharmacy Technician</b>	CTE - PS	CRP	CTE - AS	CCSS	ISTE												
<p><b>a. Explain the role of pharmacy technicians in the practice of pharmaceutical care.</b></p> <p><b>b. Identify the characteristics that make the practice of the pharmacy technician a profession.</b></p> <p>c. Describe the historical evolution of the profession of pharmacy.</p> <p>d. List the duties of a pharmacy technician.</p> <p>e. Identify general content areas evaluated on national pharmacy technician certification examinations.</p> <p>f. Explain why continuing education is important for the pharmacy technician.</p> <p>g. Name five professional organizations related to the field of pharmacy.</p> <p>h. Identify employment opportunities for pharmacy technicians.</p>	<a href="#">B12.2</a>	<u><a href="#">1</a></u> <u><a href="#">2</a></u> <u><a href="#">3</a></u> <u><a href="#">5</a></u> <u><a href="#">11</a></u>	<u><a href="#">1</a></u> <u><a href="#">2</a></u> <u><a href="#">3</a></u> <u><a href="#">5</a></u> <u><a href="#">11</a></u>	<u><a href="#">LS</a></u> <u><a href="#">9-10</a></u> <u><a href="#">11-12.6</a></u>  <u><a href="#">SLS</a></u> <u><a href="#">11-12.2</a></u>  <u><a href="#">WS</a></u> <u><a href="#">11-12.7</a></u>													
<b>8. Pharmacology for Technicians</b>	CTE - PS	CRP	CTE - AS	CCSS	ISTE												
<p><b>a. Explain why the study of pharmacology is necessary for pharmacy technicians.</b></p> <p>b. Define the term pharmacology.</p> <p>c. Describe the components of pharmacokinetics, including absorption, distribution, metabolism, and excretion.</p> <p>d. Explain interactions such as drug-disease, drug-drug, drug-dietary supplement, drug-OTC, and drug-nutrient interactions.</p> <p>e. Identify factors that influence the effects of medications.</p> <p>f. Describe the drug approval process.</p> <p>g. Describe commonly dispensed dosage forms.</p> <p>h. Compare and contrast routes of drug administration.</p> <p>i. Identify common therapeutic drug categories associated with the following body systems.</p> <table style="margin-left: 20px; width: 100%; border: none;"> <tr> <td>Nervous</td> <td>Cardiovascular</td> </tr> <tr> <td>Endocrine</td> <td>Respiratory</td> </tr> <tr> <td>Musculoskeletal</td> <td>Gastrointestinal</td> </tr> <tr> <td>Renal</td> <td>Reproductive</td> </tr> <tr> <td>Immune</td> <td>Eyes, Ears, Throat</td> </tr> <tr> <td>Dermatological</td> <td>Hematological</td> </tr> </table>	Nervous	Cardiovascular	Endocrine	Respiratory	Musculoskeletal	Gastrointestinal	Renal	Reproductive	Immune	Eyes, Ears, Throat	Dermatological	Hematological	<a href="#">B2.1</a>	<u><a href="#">1</a></u> <u><a href="#">2</a></u> <u><a href="#">5</a></u> <u><a href="#">6</a></u> <u><a href="#">11</a></u>	<u><a href="#">1</a></u> <u><a href="#">2</a></u> <u><a href="#">5</a></u> <u><a href="#">6</a></u> <u><a href="#">11</a></u>	<u><a href="#">LS</a></u> <u><a href="#">9-10</a></u> <u><a href="#">11-12.6</a></u>  <u><a href="#">RSTS</a></u> <u><a href="#">9-10</a></u> <u><a href="#">11-12.4</a></u>  <u><a href="#">WS</a></u> <u><a href="#">11-12.7</a></u>	
Nervous	Cardiovascular																
Endocrine	Respiratory																
Musculoskeletal	Gastrointestinal																
Renal	Reproductive																
Immune	Eyes, Ears, Throat																
Dermatological	Hematological																
<b>9. Pharmaceutical and Medical Terminology</b>	CTE - PS	CRP	CTE - AS	CCSS	ISTE												
<p><b>a. Describe the origin of medical language.</b></p> <p><b>b. Explain why pharmacy technicians must know medical terminology.</b></p>	<a href="#">B5.0</a> <a href="#">B5.2</a>	<u><a href="#">1</a></u> <u><a href="#">2</a></u>	<u><a href="#">1</a></u> <u><a href="#">2</a></u>	<u><a href="#">LS</a></u> <u><a href="#">9-10</a></u>													

<ul style="list-style-type: none"> <li>c. Explain the components of a medical term and use basic prefixes, suffixes, and combining forms to build medical terms.</li> <li>d. Give five examples of roots.</li> <li>e. Define general numerical prefixes.</li> <li>f. Explain the rules for forming and spelling medical terms.</li> <li>g. Define basic terms and abbreviations used in pharmacy.</li> <li>h. Identify common abbreviations used in prescriptions.</li> <li>i. Describe common symbols used in medicine.</li> <li>j. Describe general abbreviations used in measurement.</li> </ul>	<a href="#">B5.3</a> <a href="#">B5.4</a> <a href="#">B5.7</a>	<a href="#">5</a> <a href="#">6</a> <a href="#">11</a>	<a href="#">5</a> <a href="#">6</a> <a href="#">11</a>	<a href="#">11-12.6</a>  <a href="#">RSTS</a> <a href="#">9-10</a> <a href="#">11-12.4</a>  <a href="#">WS</a> <a href="#">11-12.7</a>	
<b>10. Drug Identification</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<ul style="list-style-type: none"> <li>a. <b>Identify different drug classes and describe commonly used brand-name and generic medications.</b></li> <li>b. Demonstrate how to identify medications using current print and electronic drug information resources.</li> <li>c. Identify commonly used brand-name and generic medications and indicate the following for each: <ul style="list-style-type: none"> <li>1. Spelling</li> <li>2. Use</li> <li>3. Dosage form/type of medication</li> <li>4. Classification of medication</li> </ul> </li> <li>d. Discuss the different types of storage requirements: <ul style="list-style-type: none"> <li>1. Refrigeration</li> <li>2. Shelf life</li> <li>3. Specialized containers</li> <li>4. Security, safety, and drug classification</li> </ul> </li> </ul>	B5.2	<a href="#">1</a> <a href="#">2</a> <a href="#">5</a> <a href="#">6</a> <a href="#">11</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">5</a> <a href="#">6</a> <a href="#">11</a>	<a href="#">LS</a> <a href="#">9-10</a> <a href="#">11-12.6</a>  <a href="#">RSTS</a> <a href="#">9-10</a> <a href="#">11-12.4</a>  <a href="#">WS</a> <a href="#">11-12.7</a>	
<b>11. Pharmacy Laws and Ethics</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<ul style="list-style-type: none"> <li>a. <b>Describe laws and ethics related to pharmaceutical operations.</b></li> <li>b. List and describe federal drug laws in chronological order.</li> <li>c. List who can prescribe medications/devices.</li> <li>d. Define the functions of the U.S. Food and Drug Administration (FDA) and the Drug Enforcement Administration (DEA).</li> <li>e. Describe the characteristics of tamper-resistant prescriptions used for controlled-substance prescriptions.</li> <li>f. Describe physician DEA verification procedures.</li> <li>g. Discuss the importance of patient confidentiality and the need to abide by HIPAA regulations.</li> </ul>	<a href="#">B6.0</a> <a href="#">B6.6</a> <a href="#">B10.0</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">5</a> <a href="#">6</a> <a href="#">7</a> <a href="#">8</a> <a href="#">11</a> <a href="#">12</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">5</a> <a href="#">6</a> <a href="#">7</a> <a href="#">8</a> <a href="#">11</a>	<a href="#">LS</a> <a href="#">9-10</a> <a href="#">11-12.6</a>  <a href="#">RSTS</a> <a href="#">9-10</a> <a href="#">11-12.4</a>  <a href="#">WS</a> <a href="#">11-12.7</a>	

h. Explain the importance of following the health and safety code of conduct.				<a href="#">SLS</a> <a href="#">9-10</a> <a href="#">11-12.1</a> <a href="#">11-12.1d</a>	
<b>12. Pharmaceutical Mathematics</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<p><b>a. Perform common mathematical computations related to pharmacy operations.</b></p> <p>b. Demonstrate basic math skills in the following areas:</p> <ol style="list-style-type: none"> <li>1. Addition</li> <li>2. Subtraction</li> <li>3. Multiplication</li> <li>4. Division</li> <li>5. Fractions, decimals, and percentages</li> </ol> <p>c. Demonstrate mathematical skills required to perform prescription calculations including:</p> <ol style="list-style-type: none"> <li>1. Convert between decimals, percentages, fractions, ratios, and proportions.</li> <li>2. Convert between Fahrenheit and Celsius.</li> <li>3. Calculate sample pediatric dosage problems using provided information and formulas.</li> <li>4. Convert between Roman and Arabic numerals</li> <li>5. Convert standard and international/military time</li> <li>6. Calculate sample amounts to administer according to a given dose.</li> <li>7. Calculate the sample amount needed to fill a prescription or medication order.</li> <li>8. Calculate the days' supply of a medication order</li> </ol>	<a href="#">B3.0</a> <a href="#">B3.1</a> <a href="#">B3.3</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">4</a> <a href="#">5</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">4</a> <a href="#">5</a> <a href="#">11</a>	<a href="#">LS</a> <a href="#">9-10</a> <a href="#">11-12.6</a>  <a href="#">WS</a> <a href="#">11-12.6</a> <a href="#">11-12.7</a>	
<b>13. Pharmacy Inventory Management</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<p><b>a. Describe procedures for routine ordering, stocking, and rotation of medications.</b></p> <p>b. Describe the process for ordering medications, including methods for determining order quantity, packaging type, manufacturer selection, ordering system, and storage location.</p> <p>c. Discuss procedures to maintain and rotate stock, including shelf organization, expiration dates, storage requirements, and security requirements.</p> <p>d. Demonstrate the procedure for documenting shortages and maintaining a distribution ledger.</p> <p>e. Explain the process for inventory control, including expiration review and quantity adjustments.</p> <p>f. Define the steps taken to handle recalled, returned, or expired medications.</p>	<a href="#">B11.0</a> <a href="#">B11.3</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">4</a> <a href="#">5</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">4</a> <a href="#">5</a> <a href="#">11</a>	<a href="#">LS</a> <a href="#">9-10</a> <a href="#">11-12.6</a>  <a href="#">WS</a> <a href="#">11-12.6</a> <a href="#">11-12.7</a>	
<b>14. Medication Safety</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<p><b>a. Identify common medication errors and their causes.</b></p> <p><b>b. Identify strategies pharmacy technicians can use to help reduce medication errors.</b></p> <p>c. List commonly recognized medication rights related to safe medication use.</p>	<a href="#">B4.1</a> <a href="#">B5.6</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">4</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">4</a>	<a href="#">LS</a> <a href="#">9-10</a> <a href="#">11-12.6</a>	

<ul style="list-style-type: none"> <li>d. Differentiate between the various types of medication errors and the characteristics of each.</li> <li>e. Recall the various causes of medication errors.</li> <li>f. Recognize the critical nature of accurate and complete documentation (e.g., medical allergies, conflicting prescriptions).</li> <li>g. Explain medication errors, reporting, and prevention of medication errors.</li> <li>h. List and describe four automated dispensing systems and explain how they prevent errors.</li> <li>i. Identify various agencies involved in medication safety.</li> <li>j. Discuss Institute for Safe Medication Practices (ISMP) resources and tools available to pharmacies to reduce medication errors.</li> <li>k. Explain the advantages of electronic prescribing and automation in prescription processing.</li> </ul>		<u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>11</u> <u>12</u>	<u>5</u> <u>6</u> <u>7</u> <u>8</u> <u>11</u>	<u>RSTS</u> <u>9-10</u> <u>11-12.4</u>  <u>WS</u> <u>11-12.6</u> <u>11-12.7</u>  <u>SLS</u> <u>9-10</u> <u>11-12.1</u> <u>11-12.1d</u>	
<b>15. Prescription Filling Procedures</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<ul style="list-style-type: none"> <li>a. Interpret prescription information and SIG codes using pharmacy terminology.</li> <li>b. Describe the pharmacist-supervised prescription-filling process in community and institutional pharmacy settings.</li> <li>c. List procedures for receiving prescriptions by phone, fax, walk-in, and e-prescribing, consistent with pharmacy policies and legal requirements.</li> <li>d. Describe the process for interpreting a new prescription and refill information, including: <ul style="list-style-type: none"> <li>1. Identify the correct patient</li> <li>2. Identify the correct medication.</li> <li>3. Identify and translate the SIG and DAW codes</li> <li>4. Convert Roman numerals as needed</li> <li>5. Verify the expiration date and refill numbers</li> </ul> </li> <li>e. Follow all requirements for controlled substances.</li> <li>f. Complete the physician identification: <ul style="list-style-type: none"> <li>1. Verify the DEA number</li> <li>2. Verify the California license number</li> <li>3. Enter prescription into computer</li> </ul> </li> <li>g. Describe prescription-processing procedures in hospital and ambulatory settings and identify general concepts related to IV preparation, including: <ul style="list-style-type: none"> <li>1. Pulling correct medication <ul style="list-style-type: none"> <li>a. Expiration verification</li> <li>b. Brand name</li> <li>c. Generic</li> </ul> </li> <li>2. Apply prescription calculation skills</li> <li>3. Counting and pouring procedures <ul style="list-style-type: none"> <li>a. Handling</li> <li>b. Sanitation</li> </ul> </li> </ul> </li> </ul>	<u>B3.0</u> <u>B3.1</u> <u>B5.0</u> <u>B10.0</u> <u>B10.2</u> <u>B10.4</u> <u>B10.5</u>	<u>1</u> <u>2</u> <u>4</u> <u>5</u> <u>6</u> <u>11</u>	<u>1</u> <u>2</u> <u>4</u> <u>5</u> <u>6</u> <u>11</u>	<u>LS</u> <u>9-10</u> <u>11-12.6</u>  <u>WS</u> <u>11-12.6</u> <u>11-12.7</u> <u>RSTS</u> <u>9-10</u> <u>11-12.4</u>	

<p>4. Labeling</p> <p>5. Containers and storage directions</p> <p>h. Describe the importance of the pharmacist's final check.</p> <p>i. Demonstrate procedures for recording patient information and notifying the pharmacist of reported changes in the following:</p> <ol style="list-style-type: none"> <li>1. Drug allergies</li> <li>2. Drug interactions</li> </ol>					
<p><b>16. Sterile and Non-Sterile Compounding</b></p>	<p><b>CTE - PS</b></p>	<p><b>CRP</b></p>	<p><b>CTE - AS</b></p>	<p><b>CCSS</b></p>	<p><b>ISTE</b></p>
<p>a. <b>Compare and contrast sterile and non-sterile compounding.</b></p> <p>b. Perform sample calculations used in sterile and non-sterile compounding.</p> <p>c. List factors that can affect a drug's stability.</p> <p>d. Differentiate between expiration date and beyond-use date.</p> <p>e. Identify various pharmacy dosage forms, characteristics, and routes of administration.</p> <p>f. Explain non-sterile compounding.</p> <p>g. Identify and explain the uses of equipment in non-sterile compounding.</p> <p>h. Define techniques used in non-sterile compounding.</p> <p>i. List steps used in the preparation of non-sterile compounds according to classroom, safety, and pharmacist-supervised practice guidelines.</p> <p>j. Explain sterile compounding.</p> <p>k. Identify and explain the uses of equipment in sterile compounding.</p> <p>l. List steps used in the preparation of sterile compounds according to classroom, safety, and pharmacist-supervised practice guidelines.</p> <p>m. Describe infection control measures and processes.</p> <p>n. Explain handling and disposal procedures for hazardous waste according to pharmacy policies and regulatory requirements.</p>	<p><a href="#">B10.6</a></p> <p><a href="#">B11.0</a></p> <p><a href="#">B11.1</a></p>	<p><a href="#">1</a></p> <p><a href="#">2</a></p> <p><a href="#">5</a></p> <p><a href="#">6</a></p> <p><a href="#">11</a></p>	<p><a href="#">1</a></p> <p><a href="#">2</a></p> <p><a href="#">5</a></p> <p><a href="#">6</a></p> <p><a href="#">11</a></p>	<p><a href="#">LS</a></p> <p><a href="#">9-10</a></p> <p><a href="#">11-12.6</a></p> <p><a href="#">RSTS</a></p> <p><a href="#">9-10</a></p> <p><a href="#">11-12.4</a></p> <p><a href="#">WS</a></p> <p><a href="#">11-12.7</a></p>	
<p><b>17. Professional Relations</b></p>	<p><b>CTE - PS</b></p>	<p><b>CRP</b></p>	<p><b>CTE - AS</b></p>	<p><b>CCSS</b></p>	<p><b>ISTE</b></p>
<p>a. <b>Demonstrate appropriate communication with customers, prescribers, pharmacists, and pharmacy staff.</b></p> <p>b. Use appropriate communication techniques to gather patient information according to pharmacy procedures.</p> <p>c. Demonstrate professionalism in customer service and telephone transactions.</p> <p>d. Describe the role of the pharmacy technician in assisting with insurance issues, prescription disputes, and pharmacist communication.</p> <p>e. Describe appropriate communication processes for interacting with prescribers and medical office staff when handling prescription changes, potential drug interactions, insurance issues, and patient information according to pharmacy procedures.</p> <p>f. Use professional strategies to respond to patient and customer service challenges.</p>	<p><a href="#">B4.1</a></p> <p><a href="#">B6.0</a></p> <p><a href="#">B6.2</a></p> <p><a href="#">B6.3</a></p> <p><a href="#">B9.2</a></p>	<p><a href="#">1</a></p> <p><a href="#">2</a></p> <p><a href="#">5</a></p> <p><a href="#">7</a></p> <p><a href="#">8</a></p> <p><a href="#">11</a></p>	<p><a href="#">1</a></p> <p><a href="#">2</a></p> <p><a href="#">5</a></p> <p><a href="#">7</a></p> <p><a href="#">8</a></p> <p><a href="#">11</a></p>	<p><a href="#">LS</a></p> <p><a href="#">9-10</a></p> <p><a href="#">11-12.6</a></p> <p><a href="#">WS</a></p> <p><a href="#">11-12.7</a></p> <p><a href="#">RSTS</a></p> <p><a href="#">9-10</a></p> <p><a href="#">11-12.4</a></p> <p><a href="#">SLS</a></p>	

<ul style="list-style-type: none"> <li>g. Use communication strategies associated with quality customer service.</li> <li>h. Maintain patient, business, and personal confidentiality.</li> <li>i. Demonstrate several strategies for managing stress on the job, at school, and at home.</li> </ul>				<a href="#">9-10</a> <a href="#">11-12.1</a> <a href="#">11-12.1d</a>	
<b>18. Insurance Procedures</b>	<b>CTE - PS</b>	<b>CRP</b>	<b>CTE - AS</b>	<b>CCSS</b>	<b>ISTE</b>
<ul style="list-style-type: none"> <li>a. <b>Complete routine insurance billing procedures.</b></li> <li>b. <b>Discuss procedures for verifying insurance coverage.</b></li> <li>c. List the primary types of insurance companies and describe how they manage drug coverage.</li> <li>d. Explain the process of third-party billing.</li> <li>e. Differentiate between Medicare, Medi-Cal/Medicaid, and Medigap insurance policies.</li> <li>f. Explain point-of-sale billing.</li> <li>g. Differentiate between HMO and PPO health care programs.</li> <li>h. Use sample insurance billing procedures and define the following: <ul style="list-style-type: none"> <li>1. Policies</li> <li>2. Claims</li> <li>3. Disputes</li> <li>4. Formulary review (brand and generic drug names)</li> </ul> </li> </ul>	<a href="#">B6.6</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">5</a> <a href="#">11</a>	<a href="#">1</a> <a href="#">2</a> <a href="#">5</a> <a href="#">11</a>	<a href="#">LS</a> <a href="#">9-10</a> <a href="#">11-12.6</a>  <a href="#">WS</a> <a href="#">11-12.7</a>	

## **Standards Alignment**

The curricula have been aligned with the CTE Model Curriculum Standards released in 2013. Each industry sector was updated to meet the increased rigor and relevancy requirements of the Common Core State Standards. The curriculum also includes the new Standards for Career Ready Practices.

### Standards for Career Ready Practice

1. *Apply appropriate technical skills and academic knowledge.*
2. *Communicate clearly, effectively, and with reason.*
3. *Develop an education and career plan aligned with personal goals.*
4. *Apply technology to enhance productivity.*
5. *Utilize critical thinking to make sense of problems and persevere in solving them.*
6. *Practice personal health and understand financial literacy.*
7. *Act as a responsible citizen in the workplace and the community.*
8. *Model integrity, ethical leadership, and effective management.*
9. *Work productively in teams while integrating cultural and global competence.*
10. *Demonstrate creativity and innovation.*
11. *Employ valid and reliable research strategies.*
12. *Understand the environmental, social, and economic impacts of decisions.*

## CTE Anchor Standards—Common Core English Language Arts Alignment

### *Anchor Standard 1: Academics*

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the industry sector alignment matrix for identification of standards. Note: alignment listed within each sector.

### *Anchor Standard 2: Communications*

Language Standard: Acquire and accurately use general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the (career and college) readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. LS 9-10, 11-12.6

### *Anchor Standard 3: Career Planning and Management*

Speaking and Listening Standard: Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data. SLS 11-12.2

### *Anchor Standard 4: Technology*

Writing Standard: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments and information.

### *Anchor Standard 5: Problem Solving and Critical Thinking*

Writing Standard: Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem, narrow, or broaden the inquiry when appropriate, and synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. WS 11-12.7

### *Anchor Standard 6: Health and Safety*

Reading Standards for Science and Technical Subjects: Determine the meaning of symbols, keywords, and other domain-specific words and phrases as they are used in a specific scientific or technical context. RSTS 9-10, 11-12.4

### *Anchor Standard 7: Responsibility and Flexibility*

Speaking and Listening Standard: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners, building on others' ideas and expressing their own clearly and persuasively. SLS 9-10, 11-12.1

### *Anchor Standard 8: Ethics and Legal Responsibilities*

Speaking and Listening Standard: Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the work. SLS 11-12.1d

### *Anchor Standard 9: Leadership and Teamwork*

Speaking and Listening Standard: Work with peers to promote civil, democratic discussions and decision making; set clear goals and deadlines; and establish individual roles as needed. SLS 11-12.1b

### *Anchor Standard 10: Technical Knowledge and Skills*

Writing Standard: Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information. WS 11-12.6

### *Anchor Standard 11: Demonstration and Application*

Demonstrate and apply the knowledge and skills contained in the industry-sector anchor standards, pathway standards, and performance indicators in the classroom, laboratory, and workplace settings, and the career technical student organization. Note: no alignment evident for this standard. WS 11-12.6

## CTE Model Curriculum Standards—Industry Sectors and Pathways

### **Health Science and Medical Technology**

#### **B. Patient Care Pathway**

- B2.1 Know basic human body structure and function in relationship to specific care between prevention, diagnosis, pathology, and treatment.*
- B3.0 Know how to apply mathematical computations used in health care delivery system.*
- B3.1 Apply mathematical computations related to health care procedures (metric and household, conversions, and measurements).*
- B3.3 Record time using the 24-hour clock.*
- B4.1 Conduct basic interview to acquire new knowledge (e.g., medical and family histories).*
- B5.0 Know the definition, spelling, pronunciation, and use of appropriate terminology in the health care setting.*
- B5.2 Accurately spell and define occupationally specific terms related to health care.*
- B5.3 Use roots, prefixes, and suffixes to communicate information.*
- B5.4 Use medical abbreviations to communicate information.*
- B5.6 Demonstrate the correct pronunciation of medical terms.*
- B5.7 Practice word building medical terminology skills.*
- B6.0 Communicate procedures and goals to patients using various communication strategies to respond to questions and concerns.*
- B6.2 Use active listening skills (e.g., reflection, restatement, and clarification) and communication techniques to gather information from the patient.*
- B6.3 Formulate appropriate responses to address the patients concerns and questions in a positive manner.*
- B6.6 Maintain written guidelines of the Health Insurance Portability and Accountability Act (HIPAA) in all communications.*
- B9.2 Determine effective health and wellness routines for health care workers (i.e., stress management, hygiene, diet, rest, and drug use).*
- B10.0 Comply with protocols and preventative health practices necessary to maintain a safe and healthy environment for patients, health care workers, coworkers, and self within the health care setting.*
- B10.2 Demonstrate use of facility policies and procedures of infection control while performing patient care.*
- B10.4 Demonstrate the use of appropriate personal protective equipment (PPE).*
- B10.5 Practice proper hand hygiene.*
- B10.6 Use various manual and mechanical decontamination and sterilization techniques and procedures.*
- B11.0 Comply with hazardous waste disposal policies and procedures, including documentation, to ensure that regulated waste is handled, packaged, stored, and disposed of in accordance with federal, state, and local regulations.*
- B11.1 Describe basic emergency procedures used to respond to a hazardous spill.*
- B11.3 Adhere to the health care setting’s waste management program (e.g., recycling and reduction of regulated medical, solid, hazardous, chemical, and radioactive waste materials).*
- B12.2 Describe the various roles and responsibilities of health care workers as team members in an integrated health care delivery system.*

## ISTE Standards for Students

**1. Empowered Learner-** Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

- a) Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them, and reflect on the learning process itself to improve learning outcomes.*
- b) Students build networks and customize their learning environments in ways that support the learning process.*
- c) Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways*
- d) Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.*

**2. Digital Citizen-** Students recognize the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world, and they act and model in ways that are safe, legal, and ethical.

- a) Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.*
- b) Students engage in positive, safe, legal, and ethical behavior when using technology, including social interactions online or when using networked devices.*
- c) Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.*
- d) Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.*

**3. Knowledge Constructor-** Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

- a) Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.*
- b) Students evaluate the accuracy, perspective, credibility, and relevance of information, media, data, or other resources.*
- c) Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.*
- d) Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories, and pursuing answers and solutions.*

**4. Innovative Designer-** Students use a variety of technologies within a design process to identify and solve problems creating new, useful, or imaginative solutions.

- a) Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts, or solving authentic problems.*
- b) Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.*
- c) Students develop, test, and refine prototypes as part of a cyclical design process.*
- d) Students exhibit a tolerance for ambiguity, perseverance, and the capacity to work with open-ended problems.*

**5. Computational Thinker-** Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

- a) Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models, and algorithmic thinking in exploring and finding solutions.*
- b) Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.*

*c) Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.*

*d) Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.*

**6. Creative Communicator-** Students communicate clearly and express themselves creatively for a variety of purposes using platforms, tools, styles, formats, and digital media appropriate for their goals.

*a) Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.*

*b) Students create original works or responsibly repurpose or remix digital resources into new creations.*

*c) Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models, or simulations.*

*d) Students publish or present content that customizes the message and medium for their intended audiences.*

**7. Global Collaborator-** Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

*a) Students use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.*

*b) Students use collaborative technologies to work with others, including peers, experts, or community members, to examine issues and problems from multiple viewpoints.*

*c) Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.*

*d) Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.*