

Pharmacy Science | 1 Year Program: Scope & Sequence

Semester 1

PT101 - Pharmacy Technician I (89 days)

District Pre-Assessment

Unit Name: (1) History & Foundations of Pharmacy (5 Days)

- History and future of pharmacy
- Abbreviations
- Roles and responsibility
- Requirements for licensure and certification
- CTSO Integration (Leadership Skills): CTSO Kick-off, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-D; 2.A-C; 4.A-F; 6.B; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.4,5; ELA.11-12.SL.1; ELA.11-12.L.4; HS.L1U3.23
- Work-Based Learning: Guest Speaker
- Technical Standard: 1.5, 2.11, 10.2

Unit Name: (2) Pharmacy Law (5 Days)

- Pharmacy law: state & federal
- Controlled substances policies and procedures
- CTSO Integration (Leadership Skills): Officer Elections, Parliamentary Procedure HOSA Competition, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-D; 3.D; 4.A-F; 6.B; 8.A-B,D-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.4,5; ELA.11-12.SL.1, ELA.11-12.L.4
- Work-Based Learning: Virtual field trip
- Technical Standard: 1.4, 2.3-5, 2.8-2.10, 2.12, 10.1

Unit Name: (3) Medical Terminology (14 Days)

- Pharmacy terminology
- Building and interpreting medical terms
- CTSO Integration (Leadership Skills): Officers meeting (POW), Officer Training, Medical Terminology HOSA Competition, Health Career Display HOSA competition
- Professional Skills: 1.A-D; 2.A-C; 4.A-F; 6.B; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.4,5; ELA.11-12.SL.1, ELA.11-12.L.4
- Work-Based Learning: Virtual field trip
- Technical Standard: 1.8

Unit Name: (4) Dosage Forms (5 Days)

- Forms of medication
- Routes of administration
- Stability and storage of medications
- CTSO Integration (Leadership Skills): Monthly Officer Meeting/ Monthly Chapter Meeting, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-D; 2.A-C; 4.A-F; 6.B; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.4,5; ELA.11-12.SL.1; ELA.11-12.L.4
- Work-Based Learning: Guest Speaker
- Technical Standard: 5.1, 5.6

Unit Name: (5) Dosage Calculations (9 Days)

- Measurement systems
- Dosage calculations
- Calculating doctor orders
- CTSO Integration (Leadership Skills): Medical Math HOSA Competition, Leadership HOSA Rally
- Professional Skills: 1.C-D; 3.A,C,D; 4.A-F; 5.A; 8.A-I; 9.A-C
- Academic Standards: CAM.5.NF.B.3,6,7; CAM.5.MD.A.1; CAM.6.RP.A.3; CAM.6.EE.A.2; CAM.7.EE.B.3; CAM.7.RP.A.3; CAM.A-CED.A.1
- Work-Based Learning: Mentorship
- Technical Standard: 3.1-4

Unit Name: (6) Introduction to Pharmacology (4 Days)

- Pharmacokinetics
- Pharmacodynamics
- Drug interactions
- CTSO Integration (Leadership Skills): Pharmacology HOSA Competition, Pharmacy Science HOSA Competition, Advisory Council Meeting
- Professional Skills: 1.A-D; 2.A-C; 3.A-D; 4.A-F; 6.B; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.4,5; ELA.11-12.SL.1; HS.L1U1.20
- Work-Based Learning: Guest Speaker
- Technical Standard: 1.6, 1.7, 4.1 - 4.3, 4.7 - 4.10, 6.2, 6.3, 10.6

Unit Name: (7) Pharmacology: Integumentary System & Special Senses (8 Days)

- Basic anatomy and physiology
- Brand/generic drug names, indications, and common side effects
- Diseases and treatments
- CTSO Integration (Leadership Skills): Monthly Officer Meeting/ Monthly Chapter Meeting, Pharmacology HOSA Competition, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.D-E; 6.A-C; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.2-10; ELA.11-12.SL.1-6; ELA.11-12.L.4,6
- Work-Based Learning: Field Trip (GCU)
- Technical Standard: 1.1-3, 1.8, 4.2 - 4.6, 4.8

Unit Name: (8) Pharmacology: Respiratory System (5 Days)

- Basic anatomy and physiology
- Brand/generic drug names, indications, and common side effects
- Diseases and treatments
- CTSO Integration (Leadership Skills): Fall Leadership Conference, Community service event, Pharmacology HOSA Competition, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.D-E; 6.A-C; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.2-10; ELA.11-12.SL.1-6; ELA.11-12.L.4,6
- Work-Based Learning: Service Learning Project
- Technical Standard: 1.1, 1.2, 1.3, 4.4, 4.5, 4.6

Unit Name: (9) Safety Protocols (6 Days)

- Handling and disposal
- Exposure and prevention
- CTSO Integration (Leadership Skills): Advisory Council Meeting, Health care issues HOSA competition
- Professional Skills: 1.A-D; 2.B; 3.A-E; 4.A-F; 5.A-B; 6.B; 8.A-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4.10; ELA.11-12.W.4,5; ELA.11-12.SL.1; ELA.11-12.L.4
- Work-Based Learning: Simulated Lab Experience
- Technical Standard: 2.1, 2.2, 5.3

Unit Name: (10) Sterile Compounding (13 Days)

- Aseptic Technique
- Intravenous Preparation
- Complex mathematical calculations
- CTSO Integration (Leadership Skills): Regional OLT Monthly Officer Meeting/ Chapter Meeting, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-D, 2.B, 3.A-E, 4.A-F, 5.A-B, 6.B, 8.A-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.4,5; ELA.11-12.SL.1; ELA.11-12.L.4; A1.A-CED.A.4, CAM.5.MD.A.1; CAM.6.RP.A.3
- Work-Based Learning: Simulated Lab Experience
- Technical Standard: 3.4, 5.1 - 5.7, 8.1, 8.3, 8.8, 8.9

Unit Name: (11) Pharmacology: Digestion System & Nutrition (11 Days)

- Basic anatomy and physiology
- Brand/generic drug names, indications, and common side effects
- Diseases and treatments
- CTSO Integration (Leadership Skills):Pharmacology HOSA Competition, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.D-E; 6.A-C; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.2-10; ELA.11-12.SL.1-6; ELA.11-12.L.4,6
- Work-Based Learning: Guest Speaker (Midwestern)
- Technical Standard: 1.1, 1.2, 1.3, 1.8, 4.2 - 4.6, 4.8

Semester Exam**Semester 2**

PT201 - Pharmacy Technician II (93 days)

Unit Name: (12) Community Pharmacy (13 Days)

- Roles and Responsibilities
- Inventory
- Documentation, profile, data entry
- Vaccines and preventive care
- Patient Services and Communications
- Billing and Insurance
- CTSO Integration (Leadership Skills): State OLT, Community Service Event, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.A-E; 6.A-C; 7A-C; 8.A-I; 9A-C
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12;RI.4,10; ELA.11-12.W.4,5; ELA.11-12.SL.1; ELA.11-12.L.4; HS.L1U1.20; CAM.5.MD.A.1; CAM.6.RP.A.3
- Work-Based Learning: Simulated Lab Experience, Field Trip (MOMS)
- Technical Standard: 2.4, 2.6, 2.7, 2.9, 2.10, 6.3, 8.1, 8.2, 8.4 - 8.10, 9.1 - 9.5, 10.5, 10.7, 10.8, 10.9, 11.1 - 11.5, 12.1, 12.2

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Unit Name: (13) Pharmacology: Cardiovascular/Urinary Systems

(9 Days)

- Basic anatomy and physiology
- Brand/generic drug names, indications, and common side effects
- Diseases and treatments
- CTSO Integration (Leadership Skills): Monthly Officer Meeting/ Monthly Chapter Meeting, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.D-E; 6.A-C; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.2-10; ELA.11-12.SL.1-6; ELA.11-12.L.4,6
- Work-Based Learning: Simulated Lab Experience
- Technical Standard: 1.1, 1.2, 1.3, 1.8, 4.2 - 4.6, 4.8

Unit Name: (14) Emergency Preparedness (4 Days)

- CPR/AED and First Aid
- Certification: CPR |AED, American Heart Association
- CTSO Integration (Leadership Skills): Region 2 Conference, CPR/First aid HOSA Competition
- Professional Skills: 1.A-C, 3.A-E, 4.A-F, 5.A-E, 8.A-I
- Academic Standards: 11-12. RL.4,7,9, RI. 4 10, W. 4,5, SL. 1, L. 4
- Work-Based Learning: Simulated Lab Experience
- Technical Standard: 7.1 - 7.4

Unit Name: (15) Pharmacology: Musculoskeletal System (5 Days)

- Basic anatomy and physiology
- Brand/generic drug names, indications, and common side effects
- Diseases and treatments
- CTSO Integration (Leadership Skills): Monthly Officer Meeting/ Monthly Chapter Meeting, Pharmacology HOSA Competition, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.D-E; 6.A-C; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.2-10; ELA.11-12.SL.1-6; ELA.11-12.L.4,6
- Work-Based Learning: Guest Speaker
- Technical Standard: 1.1, 1.2, 1.3, 1.8, 4.2 - 4.6, 4.8

Unit Name: (16) Hospital Pharmacy (10 Days)

- Administration/structure
- Floor stock
- Automated/manual systems
- Policies and procedures
- CTSO Integration (Leadership Skills):Pharmacy Science HOSA Competition, Advisory Council Meeting
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.A-E; 6.A-C; 7A-C; 8.A-I; 9A-C
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.W.4,5; ELA.11-12.SL.1; ELA.11-12.L.4
- Work-Based Learning: Simulated Lab Experience
- Technical Standard: 8.1, 8.5 - 8.9, 8.11, 9.1 - 9.5, 10.5, 10.7, 10.8, 10.9, 12.1, 12.2

Unit Name: (17) Pharmacology: Nervous System (10 Days)

- Basic anatomy and physiology
- Brand/generic drug names, indications, and common side effects
- Diseases and treatments
- CTSO Integration (Leadership Skills): Monthly Officer Meeting/ Monthly Chapter Meeting; Pharmacology HOSA Competition, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.D-E; 6.A-C; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.2-10; ELA.11-12.SL.1-6; ELA.11-12.L.4,6
- Work-Based Learning: Field trip (Midwestern)
- Technical Standard: 1.1 - 1.3, 1.8, 4.2 - 4.6, 4.8

Certifications:

American Heart Association CPR/AED Certification
Pharmacy Technician Board Certification

Arizona Department of Education (ADE)
Common AZCCR Math Standards (CAMS)
English Language Arts Standards (ELAS)

Unit Name: (18) Extemporaneous Compounding (14 Days)

- Terminology and Equipment
- Non-sterile techniques
- Creams/lotions/lip balms
- CTSO Integration (Leadership Skills): Monthly Officer Meeting/ Monthly Chapter Meeting, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 3.A-E; 4.A-F; 5.A-E; 8.A-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.W.4,5; ELA.11-12.SL.1, ELA.11-12.L.4
- Work-Based Learning: Simulated Lab Experience, Family Day
- Technical Standard: 3.4, 5.1, 5.4 - 5.6, 5.8, 8.1, 8.2, 8.8, 8.9, 8.10, 10.6

ADE Technical Skills Assessment**Unit Name: (19) Pharmacology: Endocrine/Reproductive Systems (14 Days)**

- Basic anatomy and physiology
- Brand/generic drug names, indications, and common side effects
- Diseases and treatments
- CTSO Integration (Leadership Skills): CTSO Award Banquet, Pharmacology HOSA Competition, Pharmacy Science HOSA Competition
- Professional Skills: 1.A-C; 2.A-C; 3.A-E; 4.A-F; 5.D-E; 6.A-C; 8.A-B,D,F-I
- Academic Standards: ELA.11-12.RL.4,7,9; ELA.11-12.RI.4,10; ELA.11-12.W.2-10; ELA.11-12.SL.1-6; ELA.11-12.L.4,6
- Work-Based Learning: Guest Speaker
- Technical Standard: 1.1 - 1.3, 4.4 - 4.6

District Post-Assessment**Unit Name: (20) Professionalism (14 Days)**

- Certifications: American Heart Association CPR/AED certification, Pharmacy Technician Board Certification
- CTSO Integration (Leadership Skills): Job Speaking Skill HOSA competition, HOSA National Conference,
- Professional Skills: 1.A-C; 3.A-E; 4.A-F; 5.A-E; 8.A-I
- Academic Standards: ELA.11-12.RI.2,7,10; ELA.11-12.W.4,5,7; ELA.11-12.SL.4,6
- Work-Based Learning: Resumes, Job Application, Mock Interviews, Simulated Lab Experience (virtual extern)
- Technical Standard: 9.2