

Pharmacy Technician Certification Board Preparation

Orientation

- 1 Students will demonstrate knowledge of basic pharmacy terms and definitions regarding certification, licensure and registration** 0711.1

- 2 Students will differentiate certification, licensure and registration.** 0711.2

- 3 Students will determine certification requirements for the pharmacy technician.** 0711.3

- 4 Students will recognize the origin and goal of the Pharmacy Technician Certification Board (PTCB).** 0711.4

- 5 Students will examine the role of the PTCB.** 0711.5

- 6 Students will distinguish professional organizations related to the field of pharmacy.** 0711.6

- 7 Students will characterize the functions and responsibilities of the pharmacy technician.** 0711.7

- 8 Students will classify the three areas in which skills will be measured on the Pharmacy Technician Certification Exam.** 0711.8

- 9 Students will determine the requirements and process needed to maintain certification.** 0711.9

Federal Laws

- 10 Students will demonstrate knowledge of legislation that affects the pharmacy industry.** 0711.10

- 11 Students will examine laws and legislation affecting the pharmacy industry.** 0711.11

- 12 Students will recognize the importance of the Controlled Substance Act of 1970 as it relates to the manufacturing, distribution and dispensing of controlled substances based on abuse potential.** 0711.12

13 Students will differentiate filing procedures, maintaining records according to State and Federal Laws and drug substitution requirements. 0711.13

14 Students will evaluate the mission of the Drug Enforcement Administration. 0711.14

15 Students will determine the process by which a doctor obtains a DEA Number. 0711.15

16 Students will establish the purpose of a prescriber DEA Number. 0711.16

17 Students will illustrate the process to determine the validity of a DEA Number. 0711.17

18 Students will distinguish the storage requirements for Schedule II Drugs. 0711.18

19 Students will investigate the four phases of Investigational Drugs. 0711.19

Medication Review

20 Students will demonstrate knowledge of drug classifications, medication dosage form and administration of medications. 0711.20

21 Students will demonstrate basic terms and abbreviations used in the pharmacy. 0711.21

22 Students will differentiate chemical, generic and trade names of drugs. 0711.22

23 Students will compare dosage forms of drugs. 0711.23

24 Students will investigate methods of administering medications. 0711.24

Drug Classification

25 Students will demonstrate knowledge of mechanisms of drug actions within the body systems. 0711.25

26 Students will examine the basic structure and functions of the nervous system. 0711.26

27 Students will report uses, mechanism of action, side effects, and examples of the following drug classifications for: • CNS drugs: • sedative hypnotics. • skeletal muscle relaxants. • anticonvulsants. • narcotic analgesics. • antipsychotics. • antidepressants. • anti-anxiety agents. • CNS stimulants. • Anti-Parkinson's agents. • sympathomimetic agents. • sympatholytic agents. • parasympathomimetics agents. • parasympatholytic agents. • neuromuscular blocking agents. 0711.27

28 Students will chart the location of the major endocrine glands and their hormone secretion. 0711.28

29 Students will differentiate between local and systemic hormones. 0711.29

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- 30** Students will differentiate histamine and prostaglandins. 0711.30
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- 31** Students will report uses, mechanism of action, side effects, and examples of the following systemic hormones: --androgens. -estrogens. -progestins. -corticosteroids. -insulin. -oral hypoglycemics. -oxytocics. -thyroid hormones. -anti-thyroid hormones 0711.31
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- 32** Students will examine the basic structure and functions of the cardiovascular system. 0711.32
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- 33** Students will determine the meaning of arrhythmia and angina. 0711.33
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- 34** Students will report uses, mechanism of action, side effects, and examples of the following drug classifications for cardiovascular drugs: -cardiac glycosides. -antiarrhythmics. -antianginals. -vasodilators. -calcium channel blockers. -angiotensin-converting enzyme (ACE) inhibitors. -angiotensin II inhibitors. -beta-adrenergic blockers. -alpha-adrenergic blockers. -antilipidemic agents. 0711.34
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- 35** Students will examine the basic structure and functions of the renal system. 0711.35
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- 36** Students will determine the uses and mechanism of action of diuretics. 0711.36
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- 37** Students will report uses, mechanism of action, side effects, and examples of types of diuretics: -thiazides. -loop. -potassium sparing. -combination. -osmotics. 0711.37
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- 38** Students will characterize gout. 0711.38
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- 39** Students will report uses, mechanism of action, and side effects of gout agents:
o Allopurinol. o Probenecid. o Colchicine. 0711.39
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- 40** Students will compare electrolytes. 0711.40
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- 41** Students will examine the uses, side effects, and examples of electrolytes. 0711.41
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- 42** Students will compare bacteriostatic and bacteriocidal. 0711.42
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- 43** Students will report uses, mechanism of action, and side effects of anti-infectives: -antibacterial. -urinary anti-infectives. -antibiotics. -Penicillins. -Cephalosporins. -quinolones. -macrolides. -Tetracyclines. -aminoglycosides. -antifungals. -antiparasitic agents. -antihelminthics. -amebicides. -antitubercular agents. -antiviral agents. 0711.43
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- 44** Students will characterize cancer. 0711.44
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- 45** Students will characterize Leucovorin. 0711.45

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- 46** Students will report uses, mechanism of action, and side effects of chemotherapy drugs: -antimetabolites. -alkylating agents. -hormones. -vinca alkaloids. -asparaginase. -antibiotics. 0711.46
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- 47** Students will examine the composition and functions of blood. 0711.47
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- 48** Students will determine the treatment for Iron Deficiency Anemia. 0711.48
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- 49** Students will determine the treatment for Megaloblastic Anemia. 0711.49
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- 50** Students will report uses, mechanism of action, and side effects of agents used in blood disorders: -anticoagulants. -hemostatics. -antithrombotics. -thrombolytics. -hemorrhologic agents. -antianemics. 0711.50
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- 51** Students will characterize vitamins. 0711.51
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- 52** Students will determine examples and uses of fat-soluble vitamins. 0711.52
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- 53** Students will determine examples and uses of water-soluble vitamins. 0711.53
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- 54** Students will distinguish minerals as related to normal body functions. 0711.54
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Aseptic Techniques

- 55** Students will demonstrate knowledge of aseptic techniques 0711.55
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- 56** Students will demonstrate aseptic technique. 0711.56
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- 57** Students will determine the importance of aseptic technique to prevent contamination as it relates to personnel and the environment. 0711.57
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- 58** Students will establish the role of airflow equipment to prevent contamination. 0711.58
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- 59** Students will assess basic equipment for parenteral administration. 0711.59
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- 60** Students will examine methods of administering parenteral medications to include: -intra dermal -subcutaneous -intramuscular -intravenous 0711.60
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- 61** Students will examine composition of common parenteral fluids. 0711.61
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- 62** Students will examine compounding. 0711.62
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- 63** Students will characterize aseptic technique utilized by personnel prior to compounding procedures. 0711.63
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- 64** Students will determine the most common and important equipment for compounding. 0711.64
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- 65** Students will assess specific techniques and procedures utilized to avoid contamination assuring successful sterile product mixing. 0711.65

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- 66** Students will investigate the importance and process of visual inspection of parenteral products. 0711.66
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- 67** Students will examine components of a parenteral product label. 0711.67
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- 68** Students will characterize various solutions used in pharmacy to include: - irrigation -IV Piggy Back -Total Parenteral Nutrition (TPN) 0711.68
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- 69** Students will distinguish preparation, safe handling and administration of antineoplastic agents. 0711.69
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- 70** Students will evaluate use of Class II Biological Safety Cabinets (Vertical Airflow) and personal protective coverings. 0711.70
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- 71** Students will determine precautions necessary in the disposal of all items used in the preparation and administration of antineoplastic drugs. 0711.71
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- 72** Students will assess stability considerations in parenteral products. 0711.72
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- 73** Students will examine filtration in admixture preparation. 0711.73
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- 74** Students will report examples of parenteral product reference materials. 0711.74
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- 75** Students will demonstrate the steps of a typical parenteral admixture order work flow. 0711.75
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Calculations

- 76** Students will demonstrate knowledge of mathematics in pharmacy 0711.76
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- 77** Students will solve conversions using the metric, avirdupois, apothecary and household systems. 0711.77
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- 78** Students will use charts, graphic illustrations and conversion tables to perform mathematical calculations. 0711.78
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- 79** Students will determine the meaning of commonly used abbreviations in prescriptions and medication orders. 0711.79
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- 80** Students will determine abbreviations, symbols or syntax that should be avoided. 0711.80
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- 81** Students will demonstrate the Roman Numeral system of writing numbers. 0711.81
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- 82** Students will apply placement rules when using Roman Numerals. 0711.82
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- 83** Students will apply mathematical computations related to pharmacy procedures. 0711.83

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- 84** Students will apply mathematical principle to conversion equations common to those used in the pharmacy. 0711.84
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- 85** Students will apply rules for decimals when writing drug doses. 0711.8590
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- 86** Students will apply mathematical principles involving temperature, weights and measures used in the pharmacy. 0711.86
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- 87** Students will apply mathematical principles to problems involving dosage calculations and other applied mathematical concepts. 0711.87
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- 88** Students will apply ratios and proportions to enlarge and reduce chemical mixtures used in the pharmacy. 0711.88
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- 89** Students will calculate amounts of drugs, chemical or solvents when enlarging and reducing formulas. 0711.89
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- 90** Students will examine units of measurement for drugs and expressions of quantity and concentration for drugs in drug products. 0711.90
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- 91** Students will differentiate methods for determining quantities of ingredients and concentration of drugs when preparing or dispensing drug products. 0711.91
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- 92** Students will calculate amounts of two solutions of different strengths which must be combined to get a third solution of a specified strength. 0711.92
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- 93** Students will calculate final strength of a diluted or mixed solution when given the original strength(s) and volume(s) and the final volume. 0711.93
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- 94** Students will distinguish methods of expressing doses and dosage regimens. 0711.94
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- 95** Students will calculate the amount of drug product to dispense a days supply from a dosage regime. 0711.95
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- 96** Students will calculate doses for pediatric patients using pediatric dosage information found in reference books. 0711.96
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- 97** Students will apply general rules for calculating an infant's or child's dose of medication when given the age or weight of the patient and the normal adult dose. 0711.97
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- 98** Students will determine the flow rate of an IV solution when given the total volume, total time of administration and the drops delivered per ml by the administration set. 0711.98
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- 99** Students will calculate powder volume and use calculation to reconstitute dry powders for suspension or solution. 0711.99
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- 100** Students will examine pricing methods used in retail pharmacy. 0711.100

101 Students will recognize the meaning of terms used in pricing methods. 0711.101

Pharmacy Operations

102 Students will demonstrate knowledge of daily operation of a pharmacy.
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103 Students will differentiate common pharmaceutical terms to include drug names, codes, expiration date formats, dispensing containers and closures. 0711.103

104 Students will determine considerations regarding authority to prescribe. 0711.104

105 Students will assess possible prescribers. 0711.105

106 Students will characterize general processes related to the dispensing and medication distribution in a traditional pharmacy. 0711.106

107 Students will examine the method of transmitting prescriptions to a pharmacy. 0711.107

108 Students will apply required patient confidentiality. 0711.108

109 Students will articulate the required contents of a prescription and medication order. 0711.109

110 Students will select information obtained from patients when receiving refill requests. 0711.110

111 Students will distinguish the process and information needed when calling prescribers for refill authorization. 0711.111

112 Students will demonstrate receiving electronic transmission of prescriptions. 0711.112

113 Students will differentiate patient information necessary for the patient profile. 0711.113

114 Students will relate the process required when entering prescription/medication information in the patient profile. 0711.114

115 Students will validate appropriate product selection (i.e. brand vs. generic). 0711.115

116 Students will assist the pharmacist in preparing and dispensing medications to include:
o measuring and counting
o calculation and verification
o compounding
o weighing
o reconstituting
o aseptic technique/iv admixtures
o controlled substances 0711.116

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- 117** Students will prepare and package prescriptions and medication orders. 0711.117
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- 118** Students will relate information contained on a prescription label. 0711.118
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- 119** Students will report the advantages of the Unit Dose System. 0711.119
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- 120** Students will examine types of Unit Dose Systems. 0711.120
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- 121** Students will demonstrate the five “Rights” of medication. 0711.121
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- 122** Students will demonstrate the three check points utilized during the dispensing of a prescription. 0711.122
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- 123** Students will report the pharmacist’s accountability during dispensing of a prescription. 0711.123
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- 124** Students will articulate possible sources of medication errors. 0711.124
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- 125** Students will predict reporting procedures for medication errors. 0711.125
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- 126** Students will illustrate the use of supplemental patient information. 0711.126
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- 127** Students will examine key concepts and terms used in pharmacy inventory management. 0711.127
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- 128** Students will report ordering and receiving techniques. 0711.128
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- 129** Students will compare methods in managing inventory. 0711.129
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- 130** Students will assess ways prescription are numbered, dated and labeled. 0711.130
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- 131** Students will predict the role of the FDA in medication recall and adverse drug reaction. 0711.131
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- 132** Students will assess theft and drug diversion. 0711.132
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- 133** Students will examine methods of reimbursement and available payment plans. 0711.133
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- 134** Students will determine claims processing procedures using Universal Claim Forms (UCFs), paper claims, on-line claims and electronic adjudication. 0711.134
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- 135** Students will relate the components of drug utilization review. 0711.135
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- 136** Students will examine Reimbursement Formulary. 0711.136

137 Students will determine quantity restriction as it applies to preventing dispensing of unnecessary quantities. 0711.137

138 Students will establish steps for obtaining prior authorization. 0711.138

139 Students will relate the purpose of the signature log. 0711.139

Clinical Internship

140 Students will demonstrate knowledge of requirements for participation in a clinical internship 0711.140

141 Students will demonstrate a working knowledge of internship eligibility requirements. 0711.141

142 Students will comply with required health regulations such as proof of physical examination and immunization status. 0711.142

143 Students will provide proof of personal health insurance. 0711.143

144 Students will wear proper clinical attire. 0711.144

145 Students will maintain mastery or above in attainment of standards in classroom theory and lab. 0711.145

146 Students will report to clinical site on time and ready to work. 0711.146

147 Students will notify clinical site and instructor when absent. 0711.147

148 Students will conform to policies regarding performance of skills and scope of responsibility. 0711.148

149 Students will correctly and safely perform entry-level procedures under supervision of a pharmacist. 0711.149

150 Students will request assistance or clarification as needed. 0711.150

151 Students will maintain professional standards including client confidentiality. 0711.151

152 Students will organize and effectively manage time. 0711.152

153 Students will complete documentation required of clinical internship accurately. 0711.153

154 Students will participate in clinical internship evaluation process. 0711.154
