

## APEA Predictor Exam Blueprint

APEA’s University Predictor Exam predicts the likelihood of success on the AANP or ANCC certification exams and can be utilized as a high-stakes exam to distinguish among students who mastered the content from those who did not.

APEA’s Test Blueprint was created using NONPF competencies and the test blueprints from AANP and ANCC. This exam is based on the following testing domains and knowledge areas. APEA hesitates to be more specific with the diagnoses for fear of divulging the test questions which would compromise the integrity of the questions and the security of the exam. Since many Universities use this as a high stakes exam, we want to avoid this at all costs.

A score of 70% or greater predicts a high likelihood of success on the certification exam and scores less than 70% in any of the knowledge areas or testing domains indicate knowledge deficits in these identified areas. Results from the exam assist students in creating an appropriate study plan for improving knowledge deficits.

### *APEA Testing Domains and Knowledge Areas for Predictor Exams*

Testing Domains	Number of Questions	Percent of Questions
Physical Assessment	30	20%
Pathophysiology	30	20%
Pharmacotherapeutics	30	20%
Planning & Intervention	30	20%
Evaluation	30	20%
Total	150	100%

*There are 18 Knowledge areas represented and questions are randomly chosen from each area to create the 150 question exam. The exam is time limited at 3 hours. Results are available immediately upon the student submitting the final answer.*

#### **A. Explanation of Testing Domains**

##### **Physical Assessment:**

These questions evaluate the student’s ability to obtain **subjective information** from a patient or caregiver when a history is taken. It includes interviewing techniques, obtaining a chief complaint, reviewing past records and identifying risk factors.

The other part of the assessment questions deals with the student’s ability to obtain **objective information** from the patient. This means conducting an assessment and recognizing normal and abnormal findings.

Students are encouraged to review notes from their **Advanced Health Assessment** course.

*Questions could be related to each body system and knowing what signs and symptoms relate to a certain condition or disease. Examples could include questions on where to auscultate for heart and breath or bowel sounds. Questions are related to basic information when performing an assessment of each body system.*

**Diagnosis:**

These questions evaluate the student's ability to order appropriate screening and diagnostic tests as well as to interpret their findings. These questions focus on the student's ability to consider differential diagnoses when trying to distinguish between particular diseases and conditions that share the similar clinical findings. Also included is the ability of the student to assimilate and synthesize assessment findings with or without results of diagnostic tests to arrive at a diagnosis.

**Planning and Intervention:**

These questions evaluate the student's ability to establish an appropriate plan of care as determined by the patient's diagnosis. It includes non-pharmacologic, pharmacologic interventions and relevant patient education (this includes family and other caregivers as appropriate). This domain evaluates ordering, performing additional tests when this is appropriate; making referrals or consulting with other health professionals.

**Evaluation:**

These type questions evaluate the student's ability to determine the effectiveness of the plan of care, identify worsening or improvement in the patient's condition. These questions evaluate the student's ability to make adjustments to the initial plan of care and provide ongoing follow up. Evaluation tasks include (not limited to):

- Assessing patient responses
- Collecting additional data
- Ordering, conducting and interpreting tests
- Adjusting therapies
- Additional education
- Initiating referrals and consultations

**Pharmacotherapeutics:**

These questions evaluate the student's ability to make prescribing choices that involve a specific medication or patient. This includes the ability to choose the best medication for a specific patient taking into consideration drug side effects, efficacy, prescribing constraints due to cost, allergies, drug-drug and drug-disease interactions.

Students are encouraged to review notes from their **Advanced Pharmacology** course.

Students should review:

- Drug classes
- Prescribing: Mechanism of action, brands, and drug classes
- Safety: Adverse and toxic reactions
- Pharmacokinetics (absorption, distribution, metabolism and excretion) and drug-drug interactions
- Precautions, indications and contraindications
- Patient education: Delivery and monitoring
- Evaluation: Efficacy and side effects

*The exam focuses on the mechanisms of action for all major drug classes related to each knowledge area and may ask questions on all the bullet points listed above. For instance: what is a most common side effect of ACEs or calcium channel blockers? Questions are based on basic pharmacotherapeutic principles and student's ability to prescribe the appropriate medication for the management of the patient's condition/disease process.*

**Pathophysiology:**

These questions evaluate the student's knowledge of developmental physiology, pathogenesis, manifestations, and etiology of altered physical and psychological health or disease conditions. From this knowledge the student should be able to relate clinical manifestations to certain diseases or conditions, provide a description of the disease or condition, and state the etiology, and incidence. An understanding of pathophysiology is important to assist in creating a differential list and arrive at a proper diagnosis. Questions could also include diagnostic studies that need to be performed to aid in the diagnosis or detection of disease, injury or any other medical condition and includes interpretation of lab results.

Students are encouraged to review their notes from their **Advanced Pathophysiology** course.

**B. Explanation of Knowledge Areas**

*Knowledge Areas include Primary Care Diagnoses related to each body system across the age continuum. Since the exam is computer generated, we are unable to assign a specific number of questions related to each diagnosis*

- Cardiovascular
- Dermatology
- Ear, Nose, and Throat
- Endocrine
- Gastroenterology
- Health Promotion
- Hematology
- Men's Health
- Neurology
- Orthopedics
- Pediatrics
- Pregnancy
- Professional Issues
- Psychiatry
- Respiratory
- Sexually Transmitted Infections
- Urology
- Women's Health

**Students are encouraged to review diseases or conditions in each knowledge area while focusing on:**

- Pathophysiology: description, etiology, and incidence
- Risk factors including history
- Assessment findings
- Diagnosis: including differentials; an understanding of pathophysiology is important to arrive at a proper diagnosis
- Diagnostic studies: includes any kind of medical test performed to aid in the diagnosis or detection of disease, injury or any other medical condition.

- Management: Non-Pharm, Pharm and patient education and prevention
- Evaluation: Follow-up, complications, expected course, consultation and referral

The table below indicates examples of diagnoses in each knowledge area related to questions asked on the Predictor exams. Note that this is a wide range of categories and the computer randomly generates questions from this database to create an unique exam for each student.

- When viewing the cohort scores, referring to this blueprint would give Faculty an indication of cohort weak areas or knowledge deficits. Any knowledge area or testing domain with scores < 70% on the cohort's results page would indicate a gap in knowledge for that area and Faculty should review these deficits from cohort to cohort to determine if there are content gaps in the program and if so, it is recommended that adjustments be made to improve knowledge levels in those identified categories.
- Any knowledge area or testing domain with scores < 70% on an individual student's results page would indicate a gap in knowledge for that area and students should be encouraged to create a study plan to improve their knowledge level in those identified categories.

Knowledge Areas	Diagnoses
Cardiovascular	Acute Rheumatic Fever Cholesterol Screen-Children & Adults Chronic Arterial Insufficiency Coarctation Of Aorta Congenital Heart Disease/Defects Coronary arterial blockage Dental procedures and MVP Diabetic With PAD Down's and CV Comorbidities EKG and Hypokalemia Heart Failure S/S Heart Sounds Hypertension Guidelines-JNC9 Isolated Systolic Hypertension Murmurs: Location, Symptoms, Diastolic vs Systolic murmurs, and Grading Retinopathy and Hypertension Secondary Hypertension Risk Uncontrolled Hypertension Varicose Veins
Cardiovascular	<i>All The Drug Classes Related To CV Disorders: need to know side effects, use of this class increases a patient's risk of developing what, and indications. Which ones to combine and when they are contraindicated in combination. And:</i> <ul style="list-style-type: none"> <li>• Anticoagulation Therapy: Types, Dietary Precautions, &amp; Drug Levels</li> <li>• Chronic Atrial Fib-Coumadin Effects</li> <li>• Diabetic W/Dyslipidemia Treatment</li> </ul>

	<ul style="list-style-type: none"> <li>• Digitoxin Levels &amp; Atrial Fib</li> <li>• Drug Class Related To Elevated Lipids</li> <li>• Heart Failure First Line Treatment</li> <li>• Hypertension Treatment: All Populations &amp; W/Comorbidities</li> <li>• Hypertension Treatment: Based On Lab Values &amp; EKG Results</li> <li>• Increased Risk For Rhabdomyolysis</li> </ul>
Dermatology	<p>Animal bite wounds  Burn Injuries  Childhood Diseases and Associated Rashes  Contact Derm  Diabetes &amp; Cellulitis  Diaper &amp; Atopic Dermatitis  Differences In Skin Lesions  Furuncle  Herpes Zoster  Human Bite Wounds  Impetigo  Lyme Disease  Molluscum Contagiosum  Mongolian spots  Psoriasis  Ringworm  Scabies  Seborrheic Dermatitis  Sinusitis Comorbities  Skin Cancer: Melanoma &amp; Basal Cell  Tinea: Corporis, capitis, &amp; pedis  Tzanck test</p>
Derm	<p><i>Drug classes related to Derm and:</i></p> <ul style="list-style-type: none"> <li>• Immunizations: Adults and children</li> <li>• Topical ointments, creams, lotions</li> </ul>
ENDO	<p>Adrenal Insufficiency  Grave's Disease  Hyperinsulinemia and insulin resistance  Hyperlipidemia  Hyperthyroidism  Hypogonadism  Hypothyroidism  Interpretation of lab values  Myxedema  Obesity  Pituitary Disease  Prolactinoma  Thyroid Disease  Thyroid Nodules  Type 1 Diabetes</p>

	Type 2 Diabetes
ENDO	<i>Drug classes related to Endo and</i> <ul style="list-style-type: none"> <li>• Administration of Insulin</li> <li>• Glucocorticoids</li> <li>• Thyroid Diseases: Prescribing, Maintenance, Replacement Therapy, &amp; Evaluation Of Treatment</li> <li>• Type 1 &amp; 2 Diabetes</li> <li>• Side Effects Of Hypoglycemic Agents</li> </ul>
ENT	Blepharitis Cataract Cerumen impaction Chalazion Dacryostenosis Diabetic retinopathy Epiglottitis Glaucoma Hearing loss: all types Herpangina Hordeolum Macular degeneration Meniere’s disease Mononucleosis Ophthalmia Neonatorum Oral Candidiasis Otitis Externa Otitis Media Otitis Media With Effusion Periorbital cellulitis Peritonsillar Abscess Refractive errors Retinal detachment Sinusitis Swimmer’s Ear TMJ Tonsillitis Vertigo Viral & bacterial conjunctivitis Viral & Bacterial Pharyngitis (Beta Hemolytic Strep) Visual acuity
ENT	<i>Drug classes related to ENT</i>
Gastro	Abdominal landmarks Abdominal Mass Abdominal pain: Adults & Children Acute cholecystitis

	<p>Acute Gastroenteritis  Alcohol Abuse and Lab Interpretation  Appendicitis  Celiac Disease  Cirrhosis  Colic  Colonoscopy guidelines  Crohn's disease  Diverticulitis  Elicit different tests related to conditions  Encopresis  Esophageal Atresia  Fatty Liver  GERD  Gout  Hepatitis A, B, &amp; C  Hirschsprung's Disease  Inflammatory bowel disease  Interpretation of lab values for GI conditions  Intussusception  Irritable bowel syndrome  Pinworms (Enterobiasis)  Pyloric Stenosis  Radiology Interpretation  Ulcerative colitis  Umbilical Hernia  Volvulus  Wilm's Tumor</p>
Gastroenterology	Drug classes related to Gastro
Hematology	<p>Altitude Sickness  Anemia Of Chronic Disease  Bleeding disorders  Epstein-Barr  Folate-Folic Acid Deficiency  Hemarthrosis  Hemophilia  HIV  Idiopathic thrombocytopenia purpura  Immunizations  Iron Deficiency Anemia  Kawasaki Disease  Lab interpretation related to HEME disorders  Location of lymph nodes with associated drainage sites</p>

	Lymphadenopathy Mono Normocytic, Normochromic Anemia Pernicious Anemia Petechiae Polycythemia Vera Sickle cell anemia Systemic Lupus Erythematosus (SLE) Thalassemia Vitamin B-12 Deficiency Yellow Fever
Hematology	Drug classes related to HEME
Health Promotion	Successful Interviewing & History Taking Techniques for all ages
Health Promotion	Drug Classes related to Immunizations and Risks To Elderly
Health Promotion	Anticipatory Guidance Child abuse Developmental clinical assessment tools Anticipatory guidance Developmental delays Elder abuse Elderly Flouride Growth and development Guidelines for screenings Healthy People 2020 Immunizations Pregnancy Tanner stages
Men's Health	Abdominal Aneurysm Acute & Chronic Bacterial Prostatitis Benign Prostatic Hypertrophy Elevated PSA Epididymitis Erectile Dysfunction Hernias Interpretation of labs related to Men's Health Low Testosterone Phimosis Premature Ejaculations Prostate & Testicular Cancer Prostate gland Prostatitis Testicular Torsion Varicocele
Men's Health	Drug classes related to Men's Health
Neuro	Alzheimer's Disease



	Bell's Palsy Brain Tumor & Cancer Cerebral & Cerebellar Function Cognitive Ability-Elderly CVA Dementia Depression Epilepsy Giant Cell Arteritis Head Injury: Child & Adult Headaches-All Types Interpretation of Lab Results Parkinson's Disease Interpretation of Radiology Results of Questionnaires Seizure Disorders Strokes TIA Trigeminal Neuritis Vertigo
Neurology	Drug classes related to NEURO
Orthopedics	Interpretation of Lab results & Radiology related to Ortho Techniques & Specific Diagnostic Tests Drug classes related to ORTHO
Orthopedics	Bacterial Arthritis Carpel Tunnel Developmental Hip Dysplasia Epicondylitis Fractures Gout Legg-Calve-Perthes Ligament Injuries Low Back Pain Osgood-Schlatter Disease Osteoarthritis Osteomyelitis Osteoporosis Plantar Fascitis Polymyalgia Rheumatica Psoriatic Arthritis Rheumatoid Arthritis Sciatica Scoliosis Strains & Sprains Synovitis Tenosynovitis
Pregnancy	Amniocentesis

	Antepartal & Prenatal care Breast Feeding Common Conditions & Complications During Pregnancy Diabetic & other Screening Recommendations Infertility Hydatidiform Mole Hypertension Interpretation of Lab results & Radiology related to pregnancy Nipple Care Occurrence during each trimester Pregnancy Physiologic & Psychologic Changes Specific Diagnostic Tests
Pregnancy	Medication Use And Contraindications During Pregnancy And Lactation
Professional Issues	Abandonment Breach Of Contract Certification Preparation And Recertification Standards Confidentiality Failure Of Diligence Insurance Reimbursement Guidelines Licensure Guidelines Malpractice Medicare & Medicaid Guidelines For Coverage Advanced Directives Negligence Prescriptive Authority Roles Of NP Standards Of Practice
Psychiatry	Medications used for different Psych conditions
Psychiatry	ADD ADHD Alcohol & Drug Abuse Disorder Anxiety Autism Battered Women Bipolar Disorder Depression Domestic Violence Eating Disorders Elder Abuse Insomnia Nicotine & Alcohol Withdrawal Panic Attacks

Psych	Interpretation Of Lab Results & Radiology Related To Psych/Mental Health Questionnaires used for Mental health issues
Respiratory	Allergic Rhinitis Asthma Bronchiolitis Bronchitis Bronchospasm COPD Croup Cystic Fibrosis Differentials for Cough Emphysema Influenza Interpretation of lab results & radiology related to Respiratory disorders Lung Cancer Pneumocystis Carinii Pneumonia Pneumonia: All Types Respiratory Landmarks Screening Tests for Different Conditions Sinusitis Smoking Spirometry TB Techniques & specific diagnostic tests Respiratory Landmarks
Respiratory	Drug Classes & Drug Levels Related To Respiratory Disorders
STI's	AIDS Bacterial & Candida Vaginitis Chancroid Lesions Chlamydia Genital Warts Gonorrhea Herpes Simplex 1 & 2 HIV including transmission HPV PID Screening & Diagnostic Tests Syphilis Trichomonal Vaginitis Trichomoniasis
STI's	Drug Classes Related to STI's
Urology	Drug Classes Related To Urology
Urology	Acute Glomerulonephritis Cryptorchidism Teaching Cystitis

	<p>Diagnostic Tests  Dialysis  Enuresis  Hydrocele  Interpretation of Lab Results &amp; Radiology Related To Urology  Labial Adhesions  Orchitis  Pyelonephritis  Renal Calculi  Renal Failure  Screening for different Urological Conditions  Urinary Incontinence: All Types  UTI</p>
Women's Health	<p>Interpretation of Lab Results &amp; Radiology related to Women's Health issues  Diagnostic Tests  Screening For Different Conditions</p>
Women's Health	<p>Amenorrhea  Benign Breast Disease  Breast, Uterine, Ovarian, Vulvar And Cervical Cancer  Fibroadenoma  Fibrocystic Breast Disease  Intraductal Papilloma  Menopause  PID  Polycystic Ovarian Disease  Post-Menopausal Conditions  Stress Incontinence</p>
Women's Health	<p><i>Drug Classes Related To Women's Health Issues including:</i></p> <ul style="list-style-type: none"> <li>• Contraceptives: All Types</li> <li>• Hormone Replacement Therapy</li> </ul>