**General Principles:**

* Biology of cells: apoptosis, cell cycle
* Acute inflammation, mediator systems
* Pharmacodynamics/ pharmacokinetics
* Bacteria: structure, replication, genetics
* Antibacterial agents

**Immune system:**

* Structure, production & function
* Immunodeficiency
* Hypersensitivity reactions, transplantation

**Blood and Lymphoreticular System**

* Neoplasms
* Anemia
* Coagulation disorders

**Behavior health**

* Anxiety disorder, mood disorder
* Substance use disorder

**Nervous System**

* Organ structure & function
* Infectious, immunologic, inflammatory disorders
* Neurologic pain syndromes
* Neuromuscular disorders
* Traumatic & mechanical disorders

**Skin and subcutaneous tissue**

* Neoplasms
* Adverse effects of drugs on skin

**Musculoskelatal System**

* Biology of bones, joints, tendons
* Infectious, inflammatory, immunologic disorders
* Degenerative and metabolic disorders

**Cardiovascular System**

* Chambers, valves, heart sounds, conduction
* Dysrhythmias
* Ischemic Heart Disease
* Hypertension/ hypotension
* Congenital disorders

**Respiratory System**

* Infectious, immunologic, inflammatory disorders
* Obstructive airway disease
* Respiratory failure
* Adverse effects of drugs

**Gastrointestinal system:**

* Organ structure and function
* GI hormones
* GI bleeding
* Liver & biliary system

**Renal and Urinary System**

* Glomerular filtration and hemodynamics
* Renal mechanisms & acid-base balance
* Infectious disorders
* Dysuria, hematuria, oliguria, proteinuria
* Adverse effects of drugs

**Pregnancy, childbirth, puerperium**

* Prenatal risk assessment/prevention
* Obstetric complications
* Labor & delivery
* Adverse effects of drugs

**Female reproductive system & breast**

* Ovulation, menstrual cycle, puberty
* Neoplasms
* Breast disorders: infectious, inflammatory
* Menopause

**Male reproductive System**

* Prostate: structure & function
* Benign prostatic hypertrophy
* Adverse effects of drugs

**Endocrine System**

* Hypothalamus
* Adrenal gland
* Diabetes mellitus

**Mulitsystem Processes and Disorders**

* Nutrition
* Signs, symptoms ill-defined: abdominal pain, chest pain, cough, syncope, edema, fever, fatigue, pruritus
* Toxins & environmental extremes

**Biostatistics, Epidemiology, Pop. Health**

* Incidence/ prevalence
* Measures of health status
* Study design, types, and selection
* Causation, chance, bias, validity

**Social sciences**

* Medical ethics & jurisprudence
* Medical decision-making capacity
* Palliative care
* Quality improvement
* Patient safety
* Health care policy and economics