This module encompasses the study of the renal and male reproductive systems. Normal anatomy, physiology and histology as well as congenital malformations, and pathophysiology of these systems will be introduced. There will be appropriate emphasis on the clinical, chemical, pathologic, and radiographic presentations of disease. Principles of therapeutics of common conditions will be introduced. Teaching methods include small group case conferences that will model data analysis and clinical reasoning in a discussion oriented format with faculty. Team and problem based learning seminars will provide emphasis on the application of physiologic principles.

### Module Pedagogy
- Lecture: 37 hours (Including case of the week material)
- Team Based Learning: 18 hours
- Self-Study and on-line cases: 8 hours
- Histopathology Lab: 2 hours
- Case-Based Group Discussion: 8 hours

### Module Goals
1. Develop a clinical understanding of the anatomy, physiology and pathophysiology of the urinary and male reproductive systems:
2. Develop a systematic clinical approach to the diagnosis of:
   - Volume, mineral and acid-base derangements
   - Acute and chronic kidney injuries and their associated conditions
   - Hematuria, urinary infection, and urinary incontinence
3. Consider the principles of therapeutics in management of:
   - Volume, mineral and acid-base derangements
   - Acute and chronic kidney injuries

### Weekly Themes
- **Week 1:** Urinary and Male Reproductive Systems
- **Week 2:** Glomerular Physiology and Pathology
- **Week 3:** Renal Tubular Physiology and Pathology
- **Week 4:** Acute and Chronic Kidney Injury

### Case-Based Synthesis Topics
- **Week 1:** Reflux Nephropathy/Pediatric Kidney Disease
- **Week 2:** Diabetic Nephropathy
- **Week 3:** The Barter’s Syndrome
- **Week 4:** Acute on Chronic Kidney Disease

### Major Competencies
1.7 Consider and discuss cultural, economic, religious and psychosocial factors in managing acute and chronic kidney injuries.
2.1, 2.2, 2.3, 2.4, 2.5 Demonstrate knowledge of normal structure and function, epidemiology, pathophysiology, pharmacotherapeutic and clinical manifestations of common renal conditions and diseases.
3.4 Interpret basic laboratory diagnostic tests (i.e. blood gases, urinalysis and serum chemistries).
3.6 Apply physiologic principles in the context of clinical data to recognize and diagnose common disorders of volume and biochemical homeostasis.