Handout
The handout consists of a series of questions to answer based on this lecture’s content and subsequent lectures in the MHD Renal Block

- Name the major anatomic components of the urinary tract
- List major functions of the kidney
- List 3 categories of renal dysfunction with respect to chronicity.
- Define:
  - Oliguria
  - Polyuria
  - Anuria
- Define Azotemia
- Define Uremia
- Define “glomerular hematuria”
- Define “microscopic hematuria”
- Define “nephrolithiasis” and its classic clinical presentation
- What is meant by the term “dysmorphic RBCs”?
- What does the presence of dysmorphic RBCs in the urine imply?
- Define pyuria
• What is a “urine cast”?

• Which is more commonly seen in patients with advanced CKD?
  o Hyperkalemia or hypokalemia? Why?
  o Hyperphosphatemia or hypophosphatemia? Why?
  o Hypocalcemia or hypercalcemia? Why
  o Metabolic acidosis or metabolic alkalosis? Why?

• Why do patients with chronic kidney disease develop anemia?

• When prescribing medications to a patient with chronic kidney disease or ESRD, what steps should a physician take to prevent drug toxicity?

• List the 4 general categories of “intrinsic renal disease”

• Define “glomerulonephritis”

• Define “nephrotic syndrome” (in subsequent lectures you will learn about specific disorders that result in the nephrotic syndrome)

• Define “nephritic syndrome” (in subsequent lectures you will learn about specific disorders that result in the nephritic syndrome)

• Define “pre-renal” renal dysfunction.

• Describe the term “acute tubular necrosis”
• What is implied by the term “post renal”?

• List 3 different means by which glomerular filtration rate can be calculated.

• A patient is asked to collect his/her urine for 24 hours to determine the GFR. What 3 parameters must be measured to calculate the GFR?

• When determining GFR via the Cockcroft-Gault formula, what parameters must be known?

• How does determination of the fractional excretion of sodium help one determine the etiology of acute kidney injury?

• The FeNa is <1% - what is a potential cause of renal injury?

• The FeNa is >2% - what is the potential cause of renal injury?

• When does one use the Fractional Excretion of Urea in lieu of the Fractional Excretion of Sodium?

• Define “hyaline cast”. In what conditions are hyaline casts seen?

• Muddy brown casts are characteristically seen in which type of renal injury?

• What does the presence of “fatty casts” imply?

• What does the presence of white blood cell casts imply?