Renal physiology
After studying this lecture, you should be able to . .

1. List the main functions of the kidneys.
2. Describe the different regions of the nephron tubules and the location of the tubules in the kidney.
3. Describe the structural and functional relationships between the nephron tubules and their associated blood vessels.
4. Describe the composition of glomerular ultrafiltrate and explain how it is produced.
5. Mention the forces that act on the glomerular membrane.
General Organization of the Kidneys and Urinary Tract
Renal Blood Vessels
Urinary excretion rate = Filtration rate - Reabsorption rate + Secretion rate.
The forces that act on the glomerular membrane:

Net filtration pressure (10 mm Hg) = Glomerular hydrostatic pressure (60 mm Hg) - Bowman's capsule pressure (18 mm Hg) - Glomerular oncotic pressure (32 mm Hg)
Thank you