Competency	Knowledge
Subdomain	Fundamental Knowledge and Clinical Reasoning
Learning Objective	1. Applies core scientific knowledge * acquired and integrated at the molecular, cellular, organ-system, individual, and population levels to diagnose and treat disease 2. Engages in clinical reasoning based on an understanding of the patient, pathophysiology, application of sound scientific principles, and fundamental knowledge to solve problems

Year I	Mid	- Explains normal biology from the molecular to the individual (1) - Understands the approach to solving simple clinical cases, integrating core scientific knowledge* (1, 2)
	End	- Uses understanding of disease mechanisms *and patient specific data** to address simple clinical cases (1, 2) - Explains how the principles of scientific discovery can be applied to basic clinical problems (2)
Year II	Mid	- Lists types of common cognitive errors in medical decision-making (2) - Applies core scientific knowledge * to interpretation of core clinical problems), addressing the pathophysiology and etiology (1, 2)
	End	- Applies knowledge of the principles of scientific discovery to interpretation of basic clinical problems (2) - Integrates understanding of core scientific knowledge*, patient specific data **, and population-based factors to solve simple clinical cases and make decisions for patient care (1, 2)
Year III	Mid	- Integrates core scientific knowledge* to gather and accurately interpret patient data and manage clinical problems (1,2) - Recognizes common cognitive errors in patient care[†] (2)
	End	- Applies core scientific knowledge* to problem solving in a dynamic clinical environment[†] and addressing core clinical problems for each major specialty) (1, 2) - Monitors and avoids common cognitive errors) (2)
Year IV	Mid	- Utilizes principles of scientific discovery to analyze and solve complex clinical problems (2)
	End	- Integrates understanding of core scientific knowledge*, patient specific data**, and population-based factors to solve complex clinical problems (1, 2)