Tips for Academic Success

The Forgetting Curve

Have you been telling yourself that you need to study harder? Instead, maybe you need to study smarter with short daily review sessions.

The Importance of Reinforcement

Hermann Ebbinghaus developed, “The Forgetting Curve” in 1885 during his research on memory. This curve demonstrates how our brain retains or rejects the information we take in over time.

Ebbinghaus’ learning curve can be used to demonstrate how students integrate and eliminate information. The curve uses a one-hour lecture to demonstrate how the brain integrates and eliminates learned material over the course of a month. Before a lecture begins, you generally have zero learned information to store, creating your baseline. By the end of the class, you have 100% of the information you picked up during that time. At this moment, the curve hits its highest point. If you fail to review the information by the second day you are sending a signal to your brain that the information is unimportant resulting in the loss of 50-80% of that information.

By spending just 10 minutes a day reviewing your class notes or textbook, you can raise the curve and your knowledge back to 100%. If you repeat this on a daily basis for a week it will only take your brain 5 minutes to retrieve and reactivate the same material. By day 30, it will only take 2-4 minutes to recall the information fully!

The Formula

\[ R = e^{-\frac{t}{s}} \]

- \( R \) = memory retention
- \( e \) = exponential rate of decay
- \( s \) = strength of memory
- \( t \) = time

Typical Forgetting Curve for Newly Learned Information

[A little time. can make a big difference.]

Common Myths

“I don’t have time.”

Without the short daily reviews, You will need 40-50 minutes of re-learning each hour of material. Ten minutes each day will actually save you time.

“Cramming works for me!”

Cramming rarely results in the information being placed in long term memory. Although you may have the information for the immediate exam, you may not retain it for your comprehensive final or future course work.