Like Driving a Car - Engineering

In engineering, there are blind spots where an SME can forget the path in which they took to get themselves to this point.

As each course build on the prerequisite course the metaphorical end of the light for the instructor student becomes clearer bigger and brighter as students finish their journey.

Yet when teaching advanced courses, the fundamentals becomes assumed for the instructor or forgotten by the student. Also, it is assumed that the prior taught material is absorbed, nurtured and learnt, leading the instructors to race to get the more interesting outcomes forgetting that the basics must be taught/re-taught/reviewed or assumed taught by prior instructors. Hence the blind spot.

Another blind is Coop. Coop is a fantastic tool for young learners to try things out. Yet, there are blind spots in employers too during Coop work terms. To recall, as the instructor begins to teach, some of the fundamentals are assumed to be taught and reinforced during the work term. This leads employers to a blind spot, they assume that the student has been taught and the Coop student can contribute immediately to earning revenue for the employer all the while they get paid a supressed wage for the work bestowed upon them.

One such example of a blind spot in Engineering is building a functional wall that separates the outside environment from the inside environment. To build a wall is quite trivial once you have built 50 of them. But to build your first wall is the toughest.

Component skills

* A basic understanding of material thermal and conductive properties
* Knowledge of what the building code requires as the minimum standards
* Ability to identify the better techniques to match the purpose of the building. For example, a manufacturing facility will have very little natural sun light entering the building while an office building will have as much glass as bricks and mortar.
* Understanding the difference between function and aesthetics
* Understanding the impacts of the climate zone the building will survive in