The Need.

What do today's and tomorrow's entry-level ITS professionals need to know, and what abilities should they be armed with?

Abilities

Critical Thinking.

Creative Problem Solving.

Traditional problem solving methods / approaches taught in STEM programs may not always yield the optimal solution. ITS professionals would benefit from a diverse background / experiences to draw from when problem solving. This may involve experiences outside the traditional STEM curriculum.

Clear, Concise, and Effective Communication.

Not just clear wording, but communicating the right content to the right audiences using the right mechanisms. (For example, you wouldn't tell a decision-maker about the technical details; you'd tell them about the benefits of the system).

Knowledge

Emerging Technologies.

What are they, how do they work, how can they enhance an existing system, how does someone obtain them, and how does someone integrate them into an existing system.

Established terminology.

Established frameworks, processes, & approaches for the design, operation, & maintenance of ITS systems.

About them, what they contain, how to apply them, and any specialized knowledge required to use them. [Examples: SEP (USDOT); Con-Op Standard (IEEE)]

Standards.