Essential Skills for STEM Professionals

Inquiry-Based Problem Solving

STEM professionals are disciplined in their inquiry, and questions are always anchored on mathematical and scientific principles. Their solid backgr\ound in STEM disciplines enables them to critically and creatively approach problems and to find solutions that are technologically sound.

Analytical Reasoning

Given a set of information, STEM professionals are trained to discern and identify patterns, be it quantitative or qualitative data. In looking for patterns STEM professionals are able to establish relationships and generate input to the ongoing inquiry.

Scientific Computing

The STEM professional has a set of tools, techniques, and theories that are used to generate mathematical models to solve problems in science and engineering. STEM professionals know how to do simulations using numbers.

General Skills

Communication

Communication is a crucial skill in collaboration. To be able to convey ideas clearly, STEM professionals should be proficient in both verbal and written communication. Part of a STEM career is doing presentations to both large and small audiences, thus, the STEM professional should be confident in presenting concepts and ideas, and in answering inquiries scientifically. In this regard, having an undergraduate or an [online bachelor's degree in communication](#) is an advantage.

Proactive

The STEM professional is proactive in offering solutions to problems. In dealing with difficult situations, the STEM professional knows how to dissect a situation and address each factor that contributes to the problem. This proactive approach enables the STEM professional to think of innovative solutions.

Leadership

Trained to conduct disciplined research, the STEM professional should be able to lead a team. STEM-related projects require significant motivation and the STEM professional as a group leader should be able to motivate the team.

See more here: https://research.com/careers/stem-careers#3