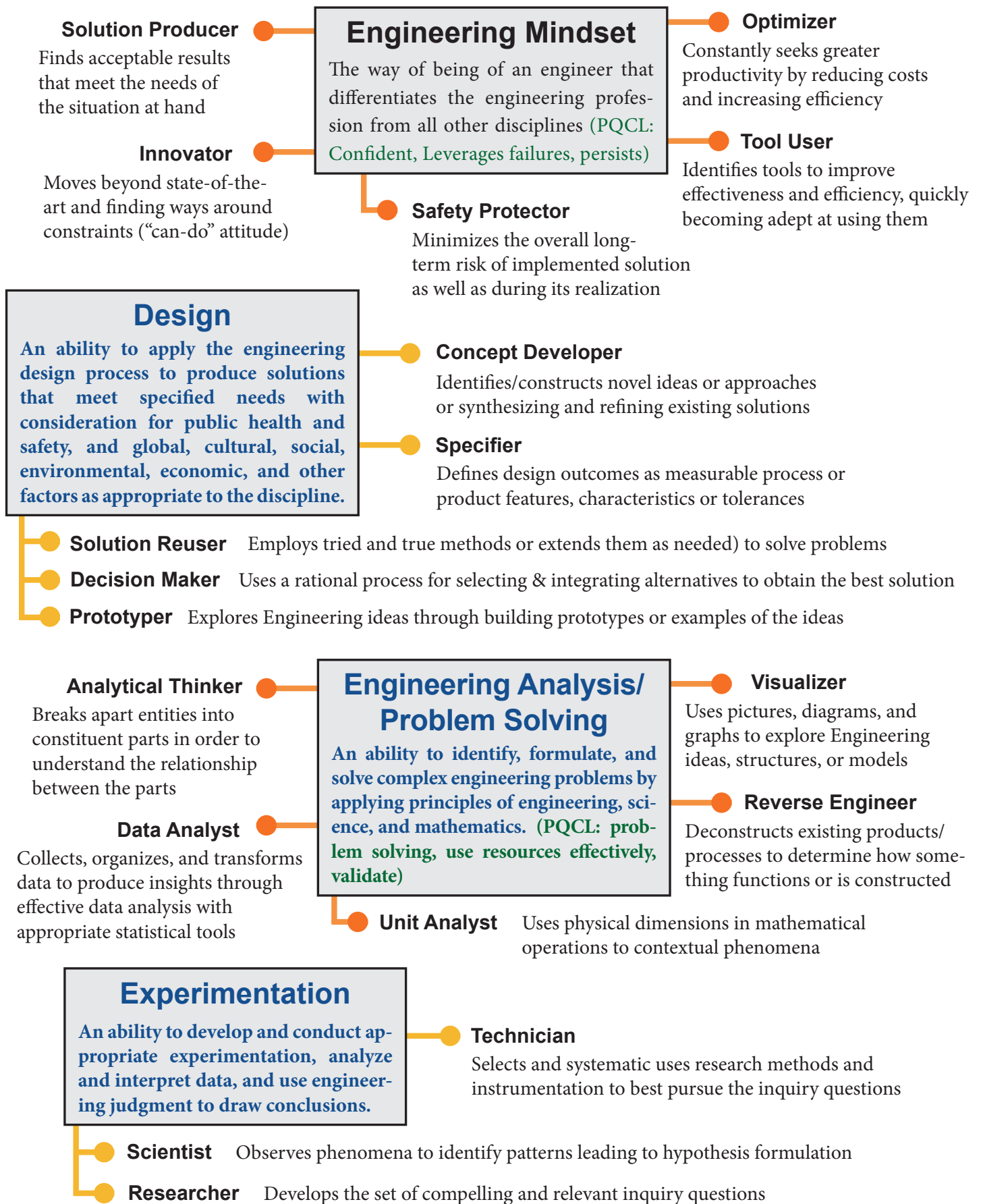


Special Characteristics of a Successful **ENGINEERING** Student

● ABET Student Learning Outcomes

● Profile of a Quality Collegiate Learner Characteristics



Engineering Professionalism

An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts. (PQCL: committed to success, manage frustrations, plans, work hard)

Client Advocate

Identifies and addresses the needs of the client, deferring own interest in lieu of client interests

Quality Specialist

Constantly assessing process and products to find ways for improvement in current and/or next iteration

Ethical Reasoner

Understands professional code of conduct and acts on its underlying values with societal norms

Documenter

Documents information, results, processes, and reflections for future use by different stakeholders

Project Leader

Steps up to organize teams that move projects/initiatives forward

Process Engineering

An ability to see details of how processes are used to produce products/results, correct errors, eliminate waste in order to ensure consistent quality.

Algorithmic Thinker

Represents processes in a step by step manner along with appropriate logic statements

Debugger

Identifies and corrects root causes of unexpected results and undesirable outcomes

Operations Manager

Monitors implementation activities to elevate process quality and eliminate waste

Product Tester

Validates solutions to ensure that quality meets target specifications

Mathematical Modeler

Develops coherent models that quantitatively describe real-world phenomena based on governing equations

Systems Modeling

An ability to synthesize a situation, environment or problem area by building a systems representation with effective mathematical modeling.

Issue Clarifier

Parses a contextual situation to identify all the significant factors influencing that situation to understand inputs and outputs

Simulator

Varies parameters in system models to discern relative significance of different configurations/inputs

System Thinker

Reduces real world physical/social situations into simplified representations that promote thinking about system behavior

Systems Integrator

Combines and interfaces subcomponents to ensure larger system integrity

Additional ABET Student Learning Outcomes from Profile of a Quality Collegiate Learner

Engineering Learning Performance

An ability to recognize the ongoing need to acquire new knowledge, to choose appropriate learning strategies, and to apply this knowledge. (PQCL: clarifies expectations, master learner, self-assess)

Communicator (from PQCL)

An ability to communicate effectively with a range of audiences.

Team Player (from PQCL)

An ability to function effectively as a member or leader of a team that establishes goals, plans tasks, meets deadlines, and creates a collaborative and inclusive environment.