**DESIGN THINKING SKILLS**

*TeachEngineering.org*

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**FORMULATING PROBLEMS**

Engineers take time to observe, infer and apply their breadth and depth of knowledge to thoughtfully frame a problem within the limits of available time, money, and resources.

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**SEEKING SOLUTIONS**

Engineers incorporate their personal experiences and intellect with empathy and understanding for all stakeholders to develop human-centered products or services.

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**THRIVING IN UNCERTAINTY**

The unknowns and limitations of a problem, especially wicked problems, offer engineers opportunities to be creative in developing innovative and practical solutions.

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**COLLABORATING CONSTANTLY**

Engineering team members bring their own perspective and collective expertise together to scope problems and negotiate desirable, feasible and viable solutions to problems.

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**PROTOTYPING IDEAS**

After generating ideas and gathering information about a problem, the rapid and rough creation of models and sketches (prototypes) inspire engineers to visualize options and inform possible solutions.

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**ITERATING OPTIONS**

Engineers test many versions of their prototypes as they develop, implement, and evaluate possible solutions - which over time improves their understanding of the problem.

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**REFLECTING FREQUENTLY**

Assessing and talking through iteration cycle outcomes allows engineers to simultaneously and repeatedly define and refine both their understanding of the problem and ideas for solutions.