

Redesigning the EDSGN 100 Introductory Project to Promote World-Class Engineering

The Leonhard Center for the
Enhancement of Engineering Education

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SED TAPP
Design Your Future

Reflection on Big Picture:

It is crucial that students embrace a “big picture” approach to engineering in order to become better global citizens.

Flexibility in the Problem Space:

Problems that are too open can be overwhelming - too narrow, and they may see the project as trivial.

Emphasize Effective Communication:

Requiring written reports, presentations, and graphical representation will expose students to style of technical communication.

Encourage Hands-on Experiences:

Hands on experiences help students develop a deep understanding of complex engineering concepts and gain confidence in their abilities.

ENGINEERING DESIGN

Engage Multiple Disciplines

Design projects are an opportunity for students with different intended disciplines to interact, strengthening their learning experience.

Constrain the Project Space:

Adding constraints to the project can challenge students and encourage more innovative solutions. However, over constraining can dampen effort.

Identify Unique Stakeholders:

Successfully identifying and understanding stakeholders is an important part of the engineering design process.

Explicit Engineering Design Process:

EDSGN 100 introduces students to the engineering design process, and this must be connected to class activities