Design Process

An engineering design quick reference | Example handout

A repeatable way to solve hard problems

01 Define the problem

Identify stakeholders, purpose, operational context, constraints and success measures. Write requirements so they can actually be verified.

02 Generate and compare concepts

Explore more than one feasible approach. Document assumptions. Compare alternatives with traceable criteria rather than personal preference.

03 Analyze and prototype

Choose appropriate theory and tools. Maintain units, estimate uncertainty, and test assumptions before trusting detailed numerical output.

04 Verify against requirements

Use calculations, experiments, inspections or simulations as appropriate. Record both passing and failing outcomes.

05 Communicate and iterate

Show design rationale, evidence, limitations, safety concerns, and actionable next steps in a clear engineering record.

This document is a generic starter example, not an assigned textbook, course-specific requirement, or grading rubric.