

Engineering Design Principles and Considerations

Introduction

This collection of engineering design principles and considerations was first completed on Tuesday, March 6, 2018 and was most recently revised on Wednesday, March 7, 2018.

This document is approximately 206 words long.

I'll add more engineering design principles and considerations to this document as they occur to me.

—Sam Aurelius Milam III, founder and curator
[The Sovereign's Library](#)

One of the primary activities of the engineer is directing the inevitable degradation of energy so that in the process some useful result is obtained.

—*Circuits, Devices, and Systems: A First Course in Electrical Engineering*
by Ralph J. Smith

Principles and Considerations

A machine should never be more complicated than is necessary in order for it to do the job that it's intended to do.

The more complicated a machine is, the more likely it is to fail.

Simplicity of design is a great virtue.

Complex design is a sign of incompetence designers.

Extra high tech “features” will help to sell a machine to technosucker idiots, but they don't make it a better machine.

For settings and adjustments, a knob is easier to use than a keypad.

An analog output is easier to read than a digital output, and is sufficiently accurate in almost every situation.