

## Design Evaluation: Multi-Criteria Decision Making

Week	Class Activities
1	introduction to Design Evaluation: Multi-Criteria Decision Making
2	simulation, prototyping, intuitional selection, checklists, spider diagrams
3	Multivoting (red dots / green dots), Nominal Group Technique
4	Pair Comparison Method
5	Quantitative Analysis (weighted matrix)
6	Screening Matrix (S. Pugh's method)
7	Scoring Matrix (Ulrich and Eppinger)
8	Conclusion
9	Exam (mid-term)
10	4 steps to Decision Making (David Ullman)
11	AHP (Analytical Hierarchy Process)
12	Product Evaluation for Safety and Reliability
13	Cost / Worth Analysis
14	Benchmarking projects
15	Conclusion
16	assignment
17	Exam (final)

Credits: 3

Prerequisites: ----

Recommended Readings:

- [Buy paperback or full-text ebook fom www.amazon.com](http://www.amazon.com)

Download:

- [Product safety and Reliability \(author: David Ullman\)](#) ; (564 KB)
  - [Four Steps to Concept Evaluation \(author: David Ullman\)](#) ; (1.39 MB)
  - [Concept Selection \(authors: S. Eppinger and K. T. Ulrich\)](#) ; (1.78 MB)
- Only one translated chapter is provided for students.