



Characteristics of an Optimal Course

In order to understand and support a project, faculty members should be aware of the general characteristics of an “optimal” course. Different courses may differ in their details, but any course that has been designed with the following characteristics in mind can be expected to achieve better and more efficient learning than a course that does not have many of these characteristics. The following are based on “course optimization guidelines version 9”.

NOTE that footnotes expand on aspects where appropriate.

1. *Learning goals*¹ are clearly articulated, both for the whole course and for each section (module) of the course.
2. Learning goals encompass all *learning domains*².
3. Learning goals are driven by needs of students, employers & professions, the University, Faculty, and Department, and relevant subsequent graduate programs.
4. Things students do are specified in terms of the performances or behaviors that will indicate how well students have achieved the goals³.
5. Regular “*formative assessments*”⁴ provide timely feedback about progress to both students and instructors.
6. A variety of “*evaluative assessments*”⁴ are used which are carefully aligned with course goals.
7. In order to support *scaffolding*⁵ and *knowledge construction*⁶, learning and teaching both make use of frameworks based upon key concepts and skills.
8. Necessary prior knowledge is assessed, and opportunities are provided to help students catch up.
9. Learning activities are designed to promote *long term retention*⁷, effective *transfer*⁸ and all *skill levels*⁹.
10. There is flexibility for responding to formative assessment outcomes.
11. Available resources are used imaginatively yet cost effectively.
12. Pedagogy is based upon peer-reviewed research or local evidence, not intuition.
13. Best practices are sustainable; i.e. both transfer to new instructors and reflective practice are supported.

Note: Another excellent basis for judging the degree to which an evidence-based education improvement model has been implemented is given in the Colorado University SEI Advisory Board’s one-page document “*Suggested indicators for full implementation*”.

¹ *Learning Goals* should define broad competencies; ie what students will know, understand, and be able to do. There should be both course-level and module or lesson-level goals.

² There are many ways of describing “*learning domains*”, but they usually include basic knowledge, cognitive and physical skills, attitudes, and the ability to reflect & think about the thinking (ie metacognitive skills). Another “list” of learning domains is cognitive, psychomotor and affective (eg. “head, hands, heart”).

³ Task or deliverable descriptions should include detailed criteria (ie *rubrics*) describing different levels of performance. The criteria make clear how students will be evaluated, and ensure regular feedback to students about their progress. Some outcomes may not be directly “examinable”, but provision of feedback is an equally important purpose.

⁴ “Assessments” are instruments or activities which measure a student’s ability to demonstrate outcomes. *Formative assessments* provide feedback to students and/or instructors about how learning is progressing, and *evaluative assessments* help determine grades.

⁵ “*Scaffolding*” means developing structure for learning the discipline.

⁶ “*Knowledge construction*” refers to the fact that students build all new knowledge and skills on top of prior capabilities.

⁷ “*Long term*” in this case means beyond the end of the course (eg beyond the exam).

⁸ “*Transfer*” means application of knowledge into situations not directly experienced during the course.

⁹ “*Skill levels*” can be thought about using *Bloom’s Taxonomy* (Bloom, 1956). Levels range from basic recall and comprehension, through application and analysis, to synthesis and evaluation.