

Capstone Design: Project Completion

Revision 0.0, 17 Jan 2012

Project Completion, and the mark associated with this component of evaluation, refers to the degree to which your project meets the requirements derived in the paper-based design phase of the project. Due to the varied nature and field of work of the projects encountered, evaluation is necessarily vague. However, the assessment method will aim to allocate approximately 50%, for instance, to a project that is half complete.

Metrics

The degree of completion is measured against the goals (perhaps expressed via requirements specifications) at the conclusion of the paper-based design phase of the project. In particular, the goals as set forward in the *Revised Design Report* (or implied at the time of its submission in the case of a non-comprehensive submission at that time) form the end-point against which completion is assessed. This said, however, there are certain objectives that are considered *implied*, as discussed next.

Implied Metrics

There are potentially a great number of project objectives that were not explicitly stated. The source of these objectives could arise due to broad expectations of groups via the course, or expectations of a client that were not explicitly communicated (we aim to limit the latter by encouraging you to have frequent, open communication with your client). Examples of course-based implied metrics are:

integration – all projects are expected to be pulled together into a useful end-product

PCB-level prototyping – hardware projects are to be implemented at the PCB level

Hopefully the need for the former (integration) is apparent – by way of this metric, it is not possible for a group to demonstrate individual subsystems only and receive full project completion marks. The latter, PCB-level prototyping, applies to projects with a hardware aspect: by way of inclusion of this, the use of breadboards or other prototyping methods is discouraged.

Project Deadline

Your project needs to be documented by the time of the submission of the Final Report, and therefore serves as your project completion date. Assessment of completion, however, occurs throughout the term as described in a section, below.

Scope Changes: Engineering Change Orders

It is possible that you may discover through prototyping and testing that your project may fail to meet the objectives you set in the paper-based design phase of development. If this is the case, and the discovery is truly unexpected, then discuss the situation with your project advisor. You will likely be asked to issue an Engineering Change Order (ECO) (sometimes referred to as an Engineering Change Notice (ECN)) to describe the situation, how it developed, and how you propose to accommodate the situation. Please see the course web page for a ECO template.

The purpose of generating a document like this is to keep everyone involved in the project informed about changes. Your advisor will consider the changes you propose, and the reason for them prior to approving scope changes. This consideration will typically involve consultation with the project client. If an ECO is approved, the modified scope becomes the target against which project completion is assessed.

Submission/Assessment

There is no single submission expected from your group with respect to assessment of project completion. Rather, assessment is based upon demonstrations that your group provides to the instruction team, via written reports, your final presentation/demonstration etc. You are encouraged to demonstrate working parts of your project to the instruction team throughout the term.

In addition to these demonstrations, your client will be consulted with respect to their view on the state of the project at the deadline described, above. Their feedback will be taken into account when a numerical assessment is allocated to a group (or individual, as described below).

Toward the end of the course, the instruction team will collectively determine the mark attributed to project completion. The varied nature of the projects makes it necessary to collaboratively derive the marks. As a result of the collective derivation of evidence-based mark allocation, no correction of the Project Completion mark is made.

For your info, the following sample breakdown was used in prior years for embedded-system type projects: 20% allocated to degree of project implementation on a PCB, 50% allocated to the degree of integration, and 30% allocated to functionality of particular subsystems.

Provision for Individual Evaluation

In exceptional circumstances, the instruction team may choose to evaluate Project Completion on an individual- (rather than group-) basis. This situation will be exercised when completion of the project has been hindered by lack of contribution from an individual (or, perhaps, multiple individuals) in the group. In this case, the evaluation will be based not on the criteria outlined above, but rather upon an inspection of what the individual was responsible for, and what the individual actually completed.

Evaluation Rubric

The following rubric will be completed by the evaluator during assessment. The evaluator of these reports is typically the your group's assigned GTA.

Criteria	Level				
	N/A Score:	Limited 0	Adequate 1	Proficient 2	Excellent 3
Grammar and Presentation					Document is exceptionally well-written and professionally presented.
Development Progress					Progress made toward the project objectives is above-and-beyond, potentially evaluated with respect to the project schedule.
Conciseness/Audience					Document is written in a fashion that allows a busy supervisor (with general knowledge of the project) to gain insight into the individual's activities. Page limit is adhered-to, and content is highly relevant.
Accuracy					The information provided in the document regarding activities taken in project development is known to be accurate. Verification through demonstrations, etc., may be requested.
Summary					
Score	Max			Percentage	
[]	/	[]	=	[]	%

Comments: