

Assessment

This lab is assessed in two ways:

- Through a group lab oral.
- Through a peer evaluation which can module marks from the oral.

The purpose of the oral is to assess the group's understanding of core skills related to developing clocked synchronous circuits (such as CPUs), and also of understanding of how to test such circuits using test-benches.

Oral format

Meta: The following might seem very formal, but it is just trying to codify typical oral practise and make the format more explicit. Ultimately it's a pretty normal oral: there will be a sequence of questions about the practical work that you did, and you're assessed on how well the group answers them.

The orals will be held on the Friday of mid-term - the two 3 hour blocks in the timetable are for the orals. All orals are with the module lecturer, and they will all be recorded in order to support moderation across groups.

Each group will have a 20 minute oral slot, of which 12 minutes is dedicated to questions about all the various things discussed in the lab. The overall oral will be structured as:

- 3 minutes : connecting in Teams, getting setup
- 12 minutes : questions and answers
- 5 minutes : feedback and discussion

These questions might include:

- Sketching circuits of given Verilog code
- Identifying syntax errors in Verilog code
- Identifying functional errors in Verilog code
- Diagnosing test-bench failures for simple circuits
- Suggesting debug strategies for more complex circuits
- Explaining and interpreting waveforms
- Suggesting how to structure a test-bench for a given module
- Critiquing test-strategies for CPUs
- Proposing an overall test approach for a complex circuit

The questions will be taken from a pre-determined question-bank, though the questions may be modulated to customise them for each session. This is an oral, so the answering of questions is inherently interactive, and the interviewer may ask clarifying follow-ups, give hints, ask for expansion of certain aspects of the response, etc.

Anyone in the group can answer questions, and it is expected the team will have some mechanism for “dispatching” questions to people, and/or organising the team response. During the oral anyone in the group can use any tool or resource to try to answer the question, including using simulators, compilers, and web searches. However, given the time available and the need to explain your answers, you’ll mostly just need to “know” the answers (which is kind of the point of an oral).

The answer to each question will be assessed as: - Not satisfactory : 0 marks - Partial answer : 0.5 marks - Satisfactory answer : 1 mark - Excellent answer : 1.5 marks

There is a limit of 8 questions or 12 minutes, whichever comes first. The maximum oral mark is 10, with any marks gained beyond 10 ignored. So for example providing satisfactory answers to 8 questions would result in a mark of 80%.

There is no grade curving of the orals, and each team’s mark has no effect on any other team.

Peer evaluation

You are required to complete a peer assessment form by 18:00 on Friday in mid-term, which is intended to reflect how well people worked within and contributed to the group. It is not intended to assess your team-mates knowledge or technical ability, it is more about the way that they work. You’ll only have had limited time interacting with your team-mates over the few weeks preceding the mid-term orals, but this exercise is intended to prepare you for peer evaluation during the group project, and also to identify any particularly weak (or strong) performance that needs to be fixed.

The three categories you’ll be asked to rate each team member *and yourself* on are:

- Time management and self-organisation
- Were they arriving to any group meetings on time?
- Did they do any expected preparation for group meetings?
- If given tasks within the group, did they attempt to complete them on time?
- Communication
- Are they able to explain their ideas and thoughts well?
- Were they active participants in discussions?
- Are they able to ask questions without worrying about losing face?

- Have they stayed in touch?
- Leadership and team-work
- Did they contribute to effective organisation and management with the team?
- Did they take on any support roles, e.g. time-keeping, record-keeping, co-ordination?
- Did they show leadership, and help resolve problems or make difficult decisions?
- Were they supportive of other people?

Note that leadership is not just “telling people what to do” or “ordering people about”, it’s about listening to and supporting the rest of the team.

For each category you’ll be asked to rate team members as:

1. Outstanding
2. Exceeds expectations
3. Meets expectations
4. Below expectations
5. Unacceptably low

Here your expectations should be based on a “typical” 2nd year engineering student, and not so much on your own standards. For example, if you always turn up 10 minutes early to every routine catch-up meeting, then that’s great, but you shouldn’t expect everyone else to do that. Or if you generally complete tasks right at the last minute and then are a bit late to deliver, you should recognise that would fall below typical expectations.

Most people are in the range 2-4, with the average being 3. Use outstanding where appropriate to recognise that someone performs *really* well - you’d typically only expect one or maybe two people per group in that category. Similarly, rating someone as unacceptably low is a very strong signal to send to someone, and should be based on very poor performance.

The peer assessment will be used for two purposes:

- To provide aggregate feedback to each student so they know how they are performing
- To modulate individual marks by *at most* plus or minus 10% on the group oral mark. However, in most cases the swing is likely to be plus or minus 1-2% (based on previous experience with peer feedback).

If you rate someone as either outstanding or unacceptably low, you’ll also need to submit a brief text description of why (a couple of sentences). This is to make sure that strong opinions are supported, and (where possible) to provide feedback about why someone is awesome or what they need to improve on. No

textual comments will be given back to students without being read, and if necessary filtered/re-written to mask who the reviewer was.

The exact method used to modulate marks is not stated in advance, to avoid gaming the system. Please just give honest feedback.

Non-submission of peer review will subtract 5% from the individual oral mark.