**Dear committee members,**

I would like to give you some practical information about the procedure for the defence.

**Candidate:** Deeptanshu Dwivedi

**Thesis title:** Control and operation of dividing-wall columns with vapor split manipulation.

**Date of the defence:** Friday 18. January 2013.

**Committee members:**

**1st opponent:** Eva Sørensen, University College London

**2nd opponent:** Anton Kiss, Akzo Nobel, Netherlands

**Internal member:** Magne Hillestad, NTNU

**Supervisor:** Sigurd Skogestad

**Administrator of committee:** Magne Hillestad

**No later than 5 weeks before the defence, Early December**

* Each of the 1st and 2nd opponents should prepare a 1-2 pages written statement on the thesis. *This evaluation should end with a final conclusion whether the thesis is found worthy to be defended or not!*
* The 1st opponent should state something about the level of the thesis compared to a typical doctoral thesis in their own country.
* The internal member writes a joint or united evaluation statement on the basis of the separate evaluations obtained from each of the external opponents. *This united evaluation should also end with a final conclusion whether the thesis is found worthy to be defended or not!* The final version should be agreed upon by all the members of the committee (by email).
* Suggest titles for the trail lecture.

**5 weeks before the defence:**

The committee as a whole must formally decide whether the thesis is “worth defending”, and decide on a title for the given lecture.

2 weeks before the defence:

The candidate gets the title of his trail lecture.

**At the day of defence**

About 9:30 : The committee meets at my office.

10.15 – 11.00 : Open lecture by candidate on the trail lecture subject.

11.00 - : The committee meets to evaluate the given lecture.

12.00 : Lunch for the committee.

13.15 – 1600 : Thesis defence (open).

* The candidate first presents an overview of the thesis (about 30-45 minutes).
* Then the 1st opponent normally takes the floor to give his/her general assessment of the work
* Place the work in a broader perspective.
* Point out the major contributions.
* Compare the scientific level of the thesis with Ph.D. degrees in his country.
* Other evaluations.

* After this introduction, the 1st opponent asks the candidate more specific questions about the work and the candidate is given the opportunity to comment/reply in a kind of dialogue.
* We may then have a short break (about 5 minutes).
* Then the 2nd opponent presents his/her general impressions and asks some general (or specific) questions. Normally the 2nd opponent comes from the industry and the industrial importance of this work should be stated.
* Then the internal committee member may in some cases give his general impressions and ask questions, but this is not required.

- Finally, the audience is allowed to ask questions (usually nobody ask questions).

The committee then meets to evaluate and write a final report on the performance of the defence (evaluation of the thesis is already finished). The committee must sign a particular copy of the thesis itself.

**Some relevant issues:**

The evaluation of the given lecture (i.e., which should be outside the subject area of the thesis)

1. Selection of material (scope)
2. Structure/order of presentation
3. Understanding
4. The presentation itself including the use of visual aids.

**The evaluation of the defence:**

1. Brief description of contents/scope
2. Contributions
3. Possible strong points and weaknesses
4. Comments on performance during defence

As mentioned earlier, the international members of the committee are asked to evaluate the thesis compared to a doctoral thesis in their own country.

**Payment:** 1st and 2nd opponents get paid a standard amount of about NOK 10 000.

**Travel and hotel reimbursement:**

All travel expenses will be refunded by our Department.

**Please, contact me if you have any other questions.**