PHITEM Master 2 WICS PHELMA

Guidelines for the Master's thesis
Master WICS / SEI double degree

The internship assessment is based on three criteria:

- the overall assessment from the company/laboratory supervisor (Appendix 1),
- the assessment of the final report from the academic tutor (Appendix 2)
- the assessment of the oral examination from the jury (Appendix 3).

1 During the internship period

The internship is supervised by the company/laboratory supervisor and the academic tutor of the School.

- **During the company/laboratory internship phase, the student should keep his academic tutor informed of the state of progress with his project (one email per month, at least)**, especially in the event that any problem arises. For example, if the subject is substantially modified, if the anticipated resources are not made available, etc. In such circumstances, the student should contact his academic tutor as quickly as possible, who will brief the Master supervisor and contact the company/laboratory in an effort to find a solution to the problem.
- **If the company/laboratory supervisor requests that the internship should be treated as confidential, please inform the Master supervisors as soon as possible.** In that case, specific procedures will be considered for the internship report and oral examination.
- Before the end of your internship, the Master WICS supervisors will send the overall assessment to your tutor (Appendix 1) who should return it duly completed. For G-INP students, a second evaluation sheet will be also sent by PHELMA administrative staff for the engineering degree evaluation[1]. These forms are essential and mandatory because the oral examination in order that they could be consulted by the members of the jury at the time of deliberation.

[1] Black-colored sentences concern all Master WICS students. Blue-colored sentences only concern UGA students. Red-colored comments only concerns G-INP students.

2 Confidentiality

If the company/laboratory supervisor requests that the internship should be treated as confidential, please contact your academic tutor in advance. In that case, the teachers (academic tutor and president of the jury) shall be bound by professional secrecy. No confidential document is kept at the School. The report and the oral presentation must not be emptied of their scientific content so that the jury judges the internship work at its fair value.

3 The final report

3.1 Sending of the final report

The final report must be **written in English**.
It will be **received at least one week before the oral presentation**. Let us notice that any delay will be mentioned in the defense transcript and sanctioned in the internship mark.
It is mandatory that your **final report should be validated by your company/laboratory supervisor before sending it**.

3.1.1 UGA students

The student should send **an electronic version (pdf file) of this report** to his academic tutor, to the Master supervisor and to the President of the Jury.
In case of confidential internship, a paper version (no electronic version) of the report will be only sent or directly given to the academic tutor. After the oral examination and if the **company/laboratory supervisor cannot attend the defense,** the student will have to give the paper reports back to the company/laboratory.

3.1.2 G-INP students

The student should print and bind the report in two copies and send:

- One copy to the administrative staff of PHELMA (à l'attention de la gestionnaire de la filière au service Relations Entreprises de Phelma). This copy will be given to the Président of the jury.
- One copy directly to your academic tutor (academic tutor may accept pdf, please contact him)

In case of confidential internship, the company/laboratory will have to sign a privacy sheet during the oral examination. After the oral examination and if the **company/laboratory supervisor cannot attend the defense,** the student will have to give the paper reports back to the company/laboratory.

3.2 Content of the report

All reports should include as a minimum:

- **The cover page** with full contact details — (address, telephone number, e-mail, etc.) — making it possible to directly contact the student, the company/laboratory supervisor and the academic tutor**. For double degree students please refer to the section 6 for the cover page.**
- **A table of contents** (numbered pages)

- **Abstract + keywords** (**1 page**)
- **List of acronyms** (**1 page**)
- **An introduction** presenting the subject in its general context and its value or importance **(1 or 2 pages)**.
- **A presentation of the company/laboratory** and of its activities (**2 pages).**
- **State of the Art**: specify the innovation of the research or R&D subject relatively to the literature. Expose the main concepts of the subject, and related references, highlight the bottlenecks. Insist on the novelty of the proposed idea, the way the proposed approach will overcome the identified bottlenecks (**5 pages minimum).**
- **Define precisely the objectives of your work, the identified tasks and the provisional schedule, presented in the form of a Gantt diagram (2 pages).**
- **Theoretical and technical contributions parts:** develop your theoretical and technical contributions by insisting on the **proposed methodology and justifying your choices** to achieve the objectives (around 20-25 pages).
- **Conclusion & prospects** + personal assessment: the conclusion must detail the contributions made by this project, both on a professional and technical level, and from a personal point of view.
- References

All equations should be numbered, all parameters included in the Equations should be identified. All Figures should be with a title and numbered. All equations and Figures should be introduced in the text.

This report should not exceed 40 pages. It may have additional appendices. **The language used is definitely English.**

The report should demonstrate the student's systematic approach and his ability to analyse the solutions studied and to justify the choices made based on a bibliographical and technical study.
The student will have to present a critical analysis of the chosen solutions and their implementation, their limitations, and their ongoing development and the envisaged prospects.

4 The oral examination

The oral examinations are held during the second fortnight of June, the first week of July or the last week of August, except in exceptional cases.
Be aware that for PHELMA students, this oral examination allows validating the internship for both engineering and Master degrees.

The jury is comprised of the **company/laboratory supervisor**, the **academic tutor**, and is chaired by a **chairman**.
The oral examinations are organized in one hour slots. The student's presentation lasts **25 minutes (not more)**, followed by 10 minutes of questions from the jury, and finally the discussions.

You can bring your own laptop computer for this presentation. If you need a laptop, please inform your academic tutor in advance, when you will send him your final report.

Language used for the oral presentation, slides will be English and the questions/answers will be in English or French.

If the company/laboratory supervisor is exceptionally unable to attend the oral presentation, (chiefly in the event of a project being carried out abroad) he should send back the **assessment sheet** for the day of the oral presentation to the academic tutor (cc to the jury chairman).

For the defence, make oral repetitions (ideally with your internship supervisor) before the defence day (rule-of-thumb is 1 slide per minute). You may change the content of the presentation compared with the report content, which is usually appreciated by the jury, to highlight your technical contribution and refer to the report sections eventually for the details concerning a few technical details. Do not forget to indicate your slide number.
Take a paper version of the report (last version, the same you have sent to the jury member) with you in case a jury member ask a question on the report.

Make sure before the defence that your company/laboratory supervisor has sent the assessment sheet to the academic tutor (cc president of the jury chairman).

5 Common mistakes/difficulties related to the report

Mistake 1: you provide general information on the global project you are involved but not enough information on the particular task you have to do in this global project.

To avoid this mistake, you have to present a clear explanation of the context and what was your mission, what were the expectations from your work. The purpose is not really to quantify your work related to the initial objectives, but it is a way for you to provide evidence that you understood your role in the global project, and to demonstrate a critical approach on the way you carried out your mission.

Difficulty: you do not know what is the level of technical details you have to provide in the report/defence.

Do remember that these report and defence are for **a technical evaluation, so it is necessary to provide enough details about the technical content**. The risk to go too deeply in the technical resolution of the problems you encountered, is being unable to respect the time duration of the defence (30 minutes) or the report length limitation (**40 pages)**. For the report you should use appendices to provide more details on your technical contribution, referring to these appendices in the core of the report (otherwise appendices will not be considered!).

Other typical mistakes related to the form of the report

List of acronyms (or Glossary) is usually missing. It is important to include it (beginning of the report after the table of contents) in order not to loose the jury under an avalanche of acronyms. The first time an acronym is included in the text, it should be defined and should appear in the list of acronyms.

Gantt diagram is missing. It is necessary to include it so that the jury can have an overview of the organization of your work. It may be interesting to comment on the initial Gantt diagram (defined for the preliminary report) and the final one to comment about the difficulties you encountered and what you extract as an experience from this.

Figures should be with a number and should be cited in the report core. Otherwise, the reader may not pay attention to them if there is any reference in the text!

Conclusion is a summary of the whole report, making a brief summary of the initial internship objectives and solution/logical approach you have provided, what is the future work to do on this project. It should finish with a paragraph on your personal assessments.

6 Complementary guidelines for Grenoble INP Double degree students

Documents à rendre :

- **Le rapport de stage de fin d'études Phelma**
- **La fiche de stage ou fiche-archive recto-verso**

6.1 Rapport de stage rédigé en anglais (obligatoire pour la validation conjointe du Master)

En plus des consignes indiquées à la section 3, le rapport doit contenir :

- une page de couverture selon le modèle à télécharger sur le lien « consignes à télécharger » à l'adresse http://pfe3a.phelma.grenoble-inp.fr/espace_etudiants.html
  Sur cette première page figurent :
  - 1. Identité de l'étudiant,
  - 2. Filière,
  - 3. Année universitaire,
  - 4. Titre du stage et période
  - 5. Logo, nom et adresse postale de l'entreprise/laboratoire
  - 6. Prénom, nom du maître de stage et son adresse email.
  - 7. Prénom et nom du tuteur Ecole
- **2 résumés au dos du rapport d'une demi-page chacun : en français et en anglais**.

- **Informations et mise en garde sur le plagiat :**

La lutte contre le plagiat répond à une politique de Grenoble INP. On rappelle que plagier correspond à :

  - reproduire un extrait de texte, sans guillemets et sans citer l'auteur ;
  - s'approprier un texte traduit depuis une langue étrangère ;

- reformuler ou paraphraser un texte (sans en donner la référence).

En cas de plagiat avéré, des sanctions sont prévues par la loi, pouvant aller jusqu'à l'exclusion de l'établissement pour une durée allant jusqu'à cinq ans.

6.2 Fiche de stage ou fiche-archive (rédigée en français ou en anglais)

Elle contient obligatoirement :

- les points 1 à 7, décrits ci-dessus.
- le descriptif du stage initialement validé par votre Correspondant Relations Entreprises
- les moyens et l'encadrement mis à disposition par l'entreprise/laboratoire

Cette fiche de 2 pages maximum doit être enregistrée au format pdf et déposée sur le serveur PHELMA **une semaine avant la date de soutenance.**
Suivez le lien http://pfe3a.phelma.grenoble-inp.fr/espace_etudiants.html
puis cliquer sur le lien « déposer » (voir phase 6)

Vous devez également **la joindre à votre rapport** afin qu'elle soit à disposition des membres du jury.

6.3 Organisation de la soutenance pour les étudiants G-INP en double diplôme

Pour la définition des plannings de soutenance, merci de vous référez au document accessible sur : http://pfe3a.phelma.grenoble-inp.fr/espace_etudiants.html
Vous serez contacté pour le service RE de PHELMA.

Appendix 1 – Overall assessment from the company/laboratory supervisor

Student : **Company supervisor:**	Grade *(to be completed by Master Supervisor)* / 20

	Very difficult	Difficult	Standard	Easy	
Internship difficulty (topic, methods, tools)					
Evaluation criteria	**Exceptional**	**Very good**	**Good**	**Acceptable**	**Weak**
Compliance of constraints (hours, security, …)					
Team Integration					
Volume of work					
Efficiency in the work					
Theoretical/pratical knowledges developed during the internship					
Dynamism/Motivation					
Autonomy/spirit of initiative					
Critical spirit/scientific curiosity					
Written/oral communication					

If the student applied to an employment in your team (consider only one answer):

☐ the candidacy would be rejected.

☐ the candidacy would be considered as the other candidacies.

☐ the candidacy would be considered in priority.

It is obvious that the answer to this question does not constitute any commitment from your company. It is simply, an additional criterion of evaluation of the internship.

Appendix 2 – Assessment of the final report from the academic tutor

Student : …….	Grade / 20

Evaluation criteria	**Exceptional (2)**	**Very good (1.5)**	**Good (1.25)**	**Acceptable (1)**	**Weak (0.5)**
General overview of the document (cover page, table of contents, Formatting and referencing of equations, figures, tables, …)					
Abstract – index terms					
Introduction (with general context and objectives, outline description of the contents)					
State of the art (positioning & innovation relatively to the literature; bottlenecks;…)					
Theoretical / technical contribution	× 2	× 2	× 2	× 2	× 2
Clarity of the methodology					
Conclusion and prospects					
References: appropriate citations and referencing					
Writing quality (and linguistic quality)					

Appendix 3 – Assessment of the oral examination from the jury

Student : …….	Grade / 20

Evaluation criteria	**Exceptional (2)**	**Very good (1.5)**	**Good (1.25)**	**Acceptable (1)**	**Weak (0.5)**
Compliance with time (25 minutes)	*Between 23 and 27 min*		*Between 26 and 34 min*		*<26 or >34 min*
Clarity of the talk					
Relevance of the slides					
Dynamism during the talk					
Introduction of the presentation: context & objectives					
State of the art					
Theoretical and technical knowledges					
Clarity of the methodology					
Conclusion and prospects					
Response to questions					