Regulations for Graduation in the Sustainable Process Engineering group (SPE)

October 2018

The "Regulations for Graduation" apply for all students that are going to work in the laboratories of SPE (viz. CRE, SIR, and SFM students). These regulations are available at the secretariat and can be downloaded from the group’s website. The contents of these regulations should be known before your work is started.

Where applicable these regulations shall also apply to personnel, Ph.D. students, postdoc's, and (guest) students (see also Appendix 1).

1. Information about graduation projects

1.1 Every Ph.D. student or postdoc who likes to have a graduation project carried out, should prepare a project description (max. 1 A4) in consultation with the supervisor (professor and/or UHD). Duration of a graduation project is 9 months.

1.2 The Ph.D. student or postdoc him/herself is responsible for putting the project description on the website and information panels in the corridor near the Secretariat (STW 1.35) (contact: Secretary SPE).

1.3 It is also recommended to put the project description on other information panels around the faculty.

1.4 Potential graduate students will be able to seek information on possible graduate projects with Ph.D. students, postdoc's, and graduation supervisors.

2. Assessment of graduate project and time schedule

2.1 As soon as a student has shown his/her willingness to graduate with SPE, the Ph.D. student or postdoc will inform the graduation supervisor.

2.2 Before the decision is made that the student will carry out the project with a specific Ph.D. student or postdoc, the student has to make an appointment with the graduation supervisor and/or supervisor to introduce him/herself. The final choice for coach and subject will be made in consultation with the graduation supervisor.

2.3 The graduate student him/herself is responsible for the request for permission to start the graduation project from the Faculty Exams Committee (Students Administration ST, Helix, STW 2.39, e-mail: Onderwijsadministratie.st@tue.nl ), therefore the student should contact the Students Administration ST well in advance. Signed permission of the Faculty Exams Committee to start the graduation project must be obtained 14 days before the designated start of the project. The student should show proof of this permission at the start of his graduate project to his coach. The supervisor should monitor that this is fulfilled.

2.4 In consultation with the Ph.D. student or postdoc, and graduation supervisor the graduate student will prepare the description of his graduate project.

2.5 In consultation with the Ph.D. student or postdoc the graduate student will prepare the time schedule for his project on a week-to-week basis. All activities to be carried out should feature in this planning, viz. examinations, lectures, holidays, etc. The planning should be based on the regulatory graduation period. The planning should also contain the expected dates of the intermediate check/presentation and the preliminary date of the final graduation colloquium (see also section 3 and 4).

2.6 As soon as the project description and time schedule of the project are finalized a meeting should be held between the graduate student, Ph.D. or post-doc, coach and graduation supervisor to definitely assess the project description and time schedule. This meeting generally coincides with a regular Ph.D./post-doc progress meeting with the graduation supervisor.

2.7 The Ph.D. or post-doc should take care of the introduction of the graduate student to the group at the start of his graduation period (viz. scientific and supporting staff, secretariat). The graduate student
should leave his address details and biopic with the secretariat at least two weeks before he/she starts to enable administrative and user account procedures in time.

2.8 The graduation student is supposed to be aware of the Safety regulations within the Group. For information and a security instruction you should contact Carlo Buijs, STW 1.39, tel. 2592. Please read/study the regulations and follow these rules! Through monthly safety rounds the general laboratory practice is monitored.

3. Intermediate check

3.1 In the midst of the net graduation period the intermediate check will be held. For this intermediate check the graduate student should prepare an oral presentation of 20 minutes using a PowerPoint-file. The presentation is to be given during the weekly SPE Lunch meetings (coordinator Lunch meetings Dr.ir. John van der Schaaf). After the presentation a hard and digital copy of the presentation should be submitted to the supervisor(s).

3.2 The graduate student should himself take care of planning the dates and times in the different calendars (including the SPE calendar of Lunch meetings) in concert with the Ph.D./post-doc, coach. The Ph.D./post-doc should monitor this action.

3.3 The oral presentation should at least contain:
  - brief description of the targets of the project
  - short overview of the starting points of the project
  - overview of the progress and most important results
  - inventory of possible problems
  - planning of the work until the graduation session

4. Monthly progress meetings

4.1 The graduate student will have several progress meetings with his graduation supervisor; duration 30 minutes.

4.2 For these meetings the graduate student should prepare a short PowerPoint presentation (on disc or memory stick) using max. 5 slides.

5. Project monitoring

The progress of the work, problems, results, etc. during the graduation period should be regularly discussed with the direct coach.

6. End of graduation period, colloquium, and examination

6.1 In concert with the graduation supervisor the final graduation date will be planned (see also 2.5). The student should prepare a careful planning. Although it is possible to withdraw max. 10 days before the graduation date, careless planning can lead to postponement of the graduation date (and consequently possible extra university fees).

6.2 The written graduation report: Instructions for the report can be found in Appendix 4. The student should remember that at least one discussion/correction round will be necessary before the report can become final.

6.3 Graduation Colloquium: At least one month in advance the student should arrange date, time and location of the graduation colloquium in concert with his coach and the secretariat. The colloquium will consist of an oral presentation of 25 minutes + discussion, total time max. 45 minutes. The presentation should be attended by all members of the graduation committee.

6.4 Examination: The coach will arrange date, time and location of the examination. Preferably this session will be held consecutively with the graduation colloquium. When a student is "externally graduating on a confidential subject" the colloquium and examination sessions will be held privately.
6.5 At least one week before the planned graduation the student should present a pdf copy of his draft graduation report to the members of the graduation commission.

6.6 The graduation commission, to be established by the graduation supervisor, should consist of:
- the graduation supervisor as chairman
- the coach
- at least one other staff member of the capacity group (UD, UHD or HGL)
- at least one member of another capacity group (UD, UHD or HGL)
- optional: an external expert from outside the faculty.

6.7 The judgement of the committee will be noted on the form "Beoordeling Afstudeerproject" (Certificate graduation project). This form will be supplied to the graduation supervisor by the Students Administration ST. The student should inform the secretariat in time of the graduation date and committee members to arrange a lecture room. After the session the student him/herself is responsible for submitting the completed form to the Students Administration ST, with a copy to the secretary.

6.8 All gathered documentation on the project, as well as the lab journal(s), disc and CD's, should be handed to the direct coach. All media should be accompanied with a contents list. The coach is responsible for storage.

6.9 A pdf-file of the final graduation report (max. 10 MB) should be submitted to the Students Administration ST (E-mail: Onderwijsadministratie.st@tue.nl), to all committee members and to the secretariat. If necessary max 4 copies of the graduation report can be printed in official ST cover.

6.10 The student is responsible him/herself for timely registration with the department's student administration for the desired graduation session (minimum 5 weeks in advance of the monthly session of the Exam Committee ST!).
Appendix 1: Day-to-day work at the Laboratory

Opening hours
- Generally the lab is open from 08.00-18.00 hrs.
- Only in exceptional cases a student can obtain an "evening pass". This can only be issued (via the Secretariat) after permission of the direct coach, the graduation supervisor and the Managing Director ST. Outside regular office hours on evenings and weekends only paperwork may be carried out. Working in the laboratory is only permitted with permission and in the presence of the direct coach.

Use of laboratories and equipment
- The direct coach will arrange the working desk, lab and computer facilities in concert with the specific room supervisor and the secretary.
- The direct coach also arranges the admission to equipment, auxiliaries and tools.
- To move inventory prior permission should be granted by the room supervisors.
- Permission is necessary from the direct coach to have equipment run overnight. The coach is responsible for the necessary forms.

Security, order and tidiness
- The basis for security is order and tidiness. Daily cleaning of the desk and laboratory is necessary. Insecure situations and mess should be reported to the room supervisor and/or coach.
- Use of security spectacles and a lab coat in the laboratory are obligatory.
- When daily work is ended special attention should be paid to switching of the means (viz. electricity, gas and water). Please pay attention to the users manuals for GC- and HPLC-equipment, pH-meters and electrodes, etc.
- At the start of the graduation period the student will receive an e-mail invitation from the Security coordinator (Mr. Carlo Buijs, tel. 2592, STW 1.39) for the obligatory security instruction. The student will receive a copy (English) of the security regulations. For specific questions regarding security the Security coordinator should be contacted.

The lab journal
- The laboratory journal should be kept in a solid, bound book, available from the Secretariat. Everybody carrying out experiments should keep such a book, marked with his/her name. All experiments and observations should be noted in a tidy, chronological way and dated. The coach will monitor this daily obligation. For further information see appendix 3.

Literature
- Special attention should be paid to the literature gathered for the research. The coach will inform the graduate student of the necessary details of his research. In concert with the coach a literature survey can be carried out either in the TU/e libraries or through computerized systems. Check the information available in the group first.

Colloquia
- Apart from the obligatory graduate and other lectures, graduate students should also contribute to the regular SPE lunch meetings (information through the coordinator Dr.ir. John van der Schaaf). All scientific staff and graduate students are supposed to attend these lunch meetings and graduate lectures.

Termination of the research work
- At the termination of the research work the student should clean/clear his desk.
- Obsolete equipment and office materials should be disposed of or stored in a justified manner.
- All gathered documentation, as well as the lab journal and additional experimental documentation, including computer discs and CD’s should be handed over to the direct coach. The contents of computer discs and CD’s should be documented in the lab journal. The coach is responsible for well-organized storage. In case a group computer was used, it should be fully cleared for future use.
- The graduate student should return any key(s) and passes in his possession to the Reception desk ST immediately at the termination of his research work.

Appendix 2: Instructions for the use of the Lab Journal
The lab journal forms the basis for scientific reporting. Everybody carrying out experimental work should keep a lab journal marked in his name. Lab journals are available at the Secretariat.

All research work, observations and experiments carried out should be documented chronologically. This should be done in such a way that anybody will be able to reproduce the experiments in a later stage.

The title page should carry the names of the user and the direct coach, whether it concerns a graduation project or a practical stage, the date of start and termination of the research work, the title of the project and the name of the group, viz. Lab. Chemical Reactor Engineering.

When necessary references should be given in the lab journal to literature copies, recorder printouts, computer discs/CD-Rom’s, chromatograms, mass spectra, etc., that should therefore be well-documented with codes, dates and/or numbers. The journal should contain a listing of all disc-names and files, as well as the contents and purpose of the files. Also changes in files should be noted.

In view of possible future patent rights the lab journal should adhere to the following regulations:

- it should be a solid, bound book
- the book should carry the name of the owner and his direct coach
- the pages should be numbered consecutively
- notations should be chronologically written with ink from start to end
- the book should have a List of Contents at the beginning of the book
- Every page must be dated and signed by the user
- Empty pages should be crossed out
- Changes/corrections in the text should be made by crossing out the old line and writing new text above. The person responsible for these changes must mark them with the date and his/her initials in the margin.

At the termination of the research work the lab journal should be handed over to the direct coach. The coach is responsible for a well-stored archive of lab journals.
Appendix 3: Basic lay-out for the Intermediate report

Title project:
(subtitle)

Name student (student number)

Supervisors:
AiO:
Staff:
Date:

MAXIMUM THREE (3) PAGES!

Scope
Max 2 sentences: “The goal of this graduation project is: ……..”

Summary
Describe your work and results till now in max. 10 lines (viz. one paragraph).

Outlook
- To do 1
- To do 2

Contents
1. Introduction: Describe the equipment, how and why you carried out actions. What is the use. Has it been done before.
2. Objective & Targets: What are you going to do; which specific subject are you handling.
3. Experimental: How do you carry out your experiments.
4. Results & discussion: Only describe the relevant results (briefly). 1-2 pictures, if necessary. Legends should clearly describe the conclusion.
5. Bottlenecks: Any bottlenecks you foresee? And if yes, how will you handle them.
6. Outlook: In a table, per task, with timeline.
7. References.
Appendix, if necessary.

MAXIMUM THREE (3) PAGES!

Appendix 4: Instructions for the graduation report

1. Layout
1.1 The graduation report should be prepared in pdf in the English language.
1.2 The report should be written on A-4 paper using an 11 points font. To avoid long white spaces per line hyphenation may be used. Avoid abbreviations.
1.3 Page numbering: Arabic, ascending, placed in the center of the footer.
1.4 Lay-out: Title page, summary, list of contents, introduction, literature overview, results and discussion of the experiments carried out, as well as observations and calculations, conclusions and recommendations, list of symbols, references.
1.5 In the reference list the titles of the manuscripts referred to should be included. Listing of references in accordance with the lay out of "Chemical Engineering Science".
1.6 The report should be prepared for two-sided printing in black/white, so make sure your figures are interpretable. Chapters to start on the odd (= right) pages. If necessary blank pages should be inserted.
1.7 Detailed information on equipment, extended tables, background information, etc. should be documented in an appendix.

1.8 The total report should preferably **not exceed 40 pages of text**, excluding title page, summary, list of contents, list of symbols, references and appendices.

2. Reproduction

2.1 The Students Administration ST, the graduation supervisor, direct coach, the members of the graduation committee and the secretariat should all receive a pdf copy of the final report. In concert with the graduation supervisor paper copies can be ordered for external relations. The secretary will then send the file, accompanied by a Repro-voucher to the external printer company. Reproduction generally takes 4-5 days.