Preferably to be completed electronically

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Master’s Thesis Project application form Life Science & Technology**  All students are obligated to fill out this form prior to the start of your Master’s Thesis project. Please go carefully through the *step-by-step guide* for the Master’s Thesis project. You can download the guide from Brightspace: Brightspace.tudelft.nl>catalog>search for ‘Thesis Office’>content>forms>MEP>Step by Step guide MEP | | | | | | | | | | | | | |
| **Personal data** | | | | | | | | | | | | | |
| Last name: | Kandasamy | | First name: | | | | | | Arthike | | | | |
| Student number: | 4520971 | | Telephone number: | | | | | | 0637474144 | | | | |
| E-mail: | Arthike36@gmail.com | |  | | | | | |  | | | | |
| **Assessment Committee1)** | | | | | | | | | | | | | |
| Responsible thesis supervisor: | Mark van Loosdrecht | | Faculty: | | | TNW | | | Section: | | EBT | | |
| 2nd Examiner: |  | | 3rd Examiner: | | | | | |  | | | | |
| Article 25 Composition of the assessment committee for MSc thesis projects  A committee will be composed by or on behalf of the Board of Examiners for the assessment of the MSc thesis project. The committee will consist of at least three members. At least two members belong to academic staff (tenured or tenure track) not limited to TU Delft, Erasmus MC, nor Leiden University or members for the occasion appointed by the Board of Examiners (art 5.2)3. The third member can be a member of academic staff or a researcher with a PhD employed at TU Delft. Together they satisfy the criteria a to d. Committee members that do not meet the criteria, including PhD students, can be added as fourth or fifth member of the committee.  a. One of the members of academic staff is the responsible thesis supervisor, chosen according to the Programme specific appendix to the MSc Teaching and Examination Regulations. In case of two supervisors both are member;  b. One of the members belongs to the teaching staff of the MSc programme, according to art 5.1.a4, and is familiar with the final attainment levels of the programme;  c. One of the members is a full professor or an associate professor with ius promovendi;  d. One of the members of academic staff belongs to a TU Delft5 research group or research entity independent[[1]](#footnote-1) of the responsible thesis supervisor.  If the composition of the assessment committee does not meet the regulations mentioned, the proposal must be submitted to Board of Examiners.  3 A staff member can be appointed up to 5 years after their date of retirement.  4 this excludes postdocs  5 for Nanobiology: TU Delft research group or Erasmus MC research group  6 The examiner referred to in Art 25 is meant to make an independent judgment and so to harmonise the quality of the assessment. Preferably an exchange of reviewers from departments and research groups or research entities takes place.  .  If the full assessment committee is not known at the start of the thesis project, it’s very important to inform the Thesis Office TNW of the definite assessment committee at least one month prior to the date of the defense. | | | | | | | | | | | | | |
| **Details Master’s thesis project** | | | | | | | | | | | | | |
| Research subject: | Heat flow in an Eutectic Freeze Crystallization unit. | | | | | | | | | | | | |
| Code: |  | | | | | | | | | | | | |
| Expected starting date: | 01-10-2022 | | Expected date of completion: | | | | | | | | 01-06-203 | | |
| Short description of the project: The project utilizes computational fluid dynamics (CFD) to assess the role of scrappers as baffles in eutectic freeze crystallization (EFC) systems, particularly focusing on their impact on heat flow within the reactor. | | | | | | | | | | | | | |
| Terms of confidentiality and transfer of intellectual property apply to this project: | | | | | | |  | | Yes2 | |  | No | |
| 2 Please sign the Declaration of confidentiality and transfer of intellectual property (available from the contract management office (CMB) via your responsible supervisor only). | | | | | | | | | | | | | |
| **Signatures** | | Name | | | Date | | | | | Signature | | | |
| Student: | | Arthike Kandasamy | | 11-04-2023 | | | | | |  | | | |
| Responsible thesis supervisor: | | Mark van Loosdrecht | | 28-04-2023 | | | | | |  | | | |
| **Approval to start MEP** | | Name | | | Date | | | | | Signature | | | |
| Specialisation coordinator: | | Dr. Walter M. van Gulik | |  | | | | | |  | | | |
| **List the courses that still need to be done:** | | | | | | | | | | | | | |
| Course title | | | | | | | | Course code | | | | | Credits |
| Green Chemistry and Sustainable Technology | | | | | | | | SET3311 | | | | | 3 |
|  | | | | | | | |  | | | | |  |
| **Please list your 'electives' or 'Scientifc & Social Orientation' here:** | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| Course title | | | | | | | | Course code | | | | | Credits |
| Idea to Start-up - Energy and Sustainability | | | | | | | | TPM 413A | | | | | 5 |
| Electrochemistry | | | | | | | | UL1 | | | | | 6 |
|  | | | | | | | |  | | | | |  |
|  | | | | | | | |  | | | | |  |
|  | | | | | | | |  | | | | |  |
|  | | | | | | | |  | | | | |  |

**GUIDELINES MASTER’S THESIS PROJECT**

**1 Goal MEP**

The MEP is the ‘final test’ of your Master’s programme. You will incorporate all of your knowledge and skills from the previous years, and further improve and integrate them. The learning goals are:

1. Theoretical knowledge & understanding 4. Report
2. Method and scientific approach 5. Presentation & defense
3. Competence in doing research work 6. Competences

A detailed overview of the learning goals are given in the ‘Grading Scheme’ on the Thesis project Blackboard organization.

**2 Supervision**  
During the project the supervisor and student have joined responsibility to make sure the progress is maintained and the project will be finalized within the following timeframes:

Life Science & Technology 45 ECTS/maximum of 8 months fulltime workload

**3 In case of delay**

If for any reason a delay takes place during the project, the student and/or supervisors will contact the academic counselor at the earliest stage possible.

**4 Conclusion of the project and assessment**

The project will be concluded with a scientifically accountable report and a presentation. The MEP will be assessed by an assessment committee of at least 3 examiners. Please make sure the Thesis Office is notified of your definite assessment committee at least one month prior to the defense date.

The student has to make sure all examiners receive a definitive version of the report at least two weeks before the final presentation. After the end presentation, the examiners will fill out the MEP assessment form according to the ‘grading scheme’ and submit the form at the Thesis Office TNW.

The student submits a digital version of the report at the Thesis Office TNW. Once the Thesis Office TNW has received both documents the grade will be submitted at the student administration for processing. After the project has finished, the student will receive a survey to evaluate the MEP.

**5 Confidentiality**

The student will not share any information publicly (in readings, posters or personal conversations) about the results of the research or research group, or information from meetings, without specific approval of the responsible thesis supervisor. If any additional terms have been made, this should be marked on the application form.

**Guidelines for proper planning of MSc thesis projects Life Science & Technology**

**Plan of approach and a corresponding time planning**

To make your MSc thesis project as effective and efficient as possible, it is wise to start with making a proper plan of approach and a corresponding time planning. The plan is preferably a compact document, say at most 2-4 pages A4. This plan should be written by you - the student - but of course in discussion with your supervisor(s).   
Discuss before what your supervisor(s) expect from you, both in terms of project results and your performance. Criteria are listed in the assessment matrix (see [Brightspace MSc LST 🡪 study info 🡪 MSc thesis project](https://blackboard.tudelft.nl/webapps/blackboard/content/listContentEditable.jsp?content_id=_1537492_1&course_id=_17494_1)).

**The plan should contain at least the following items:**

* Title of the project
* Some background information
* The objective of the project
* The approach to be taken
* Boundary conditions
* Time planning (for example a table or a Gantt chart)

In this planning also other parts of the curriculum to be done should be included (lectures, exams,..), and also other activities that will take time (jobs, vacations, …)

**Do not postpone the formulation of this plan**

Your supervisor(s) should have it within two weeks from the start of the assignment (it is even better when it is handed over before the assignment starts).

**Include proper milestones in your plan**

It is wise to include proper milestones in your plan. This could be project-specific (“after 10 weeks, I want to have carried out a measurement set X”), but it is also wise to include a number of milestones concerning presenting your progress and intermediate results. Take setbacks, such as problems with instruments, delivery times for required materials or a personal dip into account beforehand. Create some buffer time in your time planning for unforeseen circumstances.

An example of such milestones are:

* In the first month, the student gives a 5 min introductory presentation during a group meeting.
* After 30% (10 weeks) of the project a short written report and an informal presentation for your supervisor(s). Anything between 10 and 25 minutes will do.
* After 60% (approx. 20 weeks) a presentation for the research group. This gives the opportunity to sort out results and interpretation. It appears to be extremely useful to be forced to summarise your findings and to get suggestions for further work.
* At 100% thesis and colloquium.

**Use the regular sessions to get feedback!**

Regular sessions together with your supervisor(s) should be held and the progress - or the absence of progress - will be discussed. Send a brief document topics to discuss to your supervisors and other participants in this meeting a day before the meeting. Make sure you have sufficient daily supervision!

**On Youtube there is a useful explanation on how to create a timeline chart.** **Take a look at it:** [**http://www.youtube.com/watch?v=PzEFvOO4C68**](http://www.youtube.com/watch?v=PzEFvOO4C68)

1. 3 A staff member can be appointed up to 5 years after their date of retirement.

   4 this excludes postdocs

   5 for Nanobiology: TU Delft research group or Erasmus MC research group

   6 The examiner referred to in Art 25 is meant to make an independent judgment and so to harmonise the quality of the assessment. Preferably an exchange of reviewers from departments and research groups or research entities takes place. [↑](#footnote-ref-1)