

MULTIDISCIPLINARY PROJECT

CIE4061-09 -09

PROJECT MANUAL

STUDY ABROAD

Department of Education and Student Affairs
International Office of Civil Engineering and Geo Sciences

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PREFACE

The Multidisciplinary Project, course code CIE4061-09 is an MSc elective at the Faculty of Civil Engineering and Geo Sciences. The Multidisciplinary Project offers the possibility to perform a project abroad, with four to six students from different educational tracks. The duration of a project is ten weeks full-time, excluding the preparatory work, writing of the report and formalities. The reward for the MSc project (graded a 6.0 or higher) is 10 ECTS.

By working together with students from different disciplines, complex problems presented by companies can be fully addressed and solved just like in corporate situations, where employees are often asked to work together with a variety of disciplines to solve problems.

This manual will give you further explanation on the Multidisciplinary Project and shows the steps required to complete it successfully. If you have any additional questions, please e-mail internationaloffice-citg@tudelft.nl or visit room CEG 2.73 (International Office of Civil Engineering and Geo Sciences) during the opening hours (Mo – Fri between 12.30 – 13.30 hrs.).

All required documents or links to information can be found on the Brightspace page CIE4061-09 -09. If anything is outdated, please inform us in order to renew the information stated.

We wish you all the best with your project,

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1 INTRODUCTION

For all information and questions regarding the Multidisciplinary Project, the International Office CEG is there to help you out. The opening hours (for questions < 3 minutes) of our desk are: Monday – Friday 12.30 – 13.30 hrs.

Outside these opening hours, or for more complex questions, please send an e-mail to Internationaloffice-citg@tudelft.nl or to y.delasheras@tudelft.nl

Any changes in opening hours or other notable information will be published in [CE News](#) and at the blue board next to the entrance of CEG room 2.73.

THE PROJECT

The Multidisciplinary Project is performed in a group of four to six students and will focus on a MSc programme related problem for a client (in general a company or institution). You will learn to deal with different parties such as your client, its project stakeholders and your fellow team members. Aspects of the project include:

- Problem definition
- Cooperation
- Research and / or design
- Formulation of perspectives and interests of stakeholders
- Technical drawings and calculations
- Critical evaluations
- Oral presentations

You and your group are expected to work together and relatively independent from the university. You are, however, expected to update your supervisors, both within the project and at the TU Delft (your supervisor and the International Office CEG), regularly on your progress. Almost all groups have gone abroad for their Multidisciplinary Project, however, this is not a requirement as there are also sufficient projects available in The Netherlands.

GOALS

The Multidisciplinary Project is very broad, and many goals can be derived. Some of them are mentioned below to give you a small overview on what is expected.

- Learning to translate an unclear request from a client into a clear and solvable problem
- Learning to solve civil engineering problems in a multidisciplinary context
- Application of knowledge and skills acquired during previous study years
- Application of design skills acquired during the bachelor programme
- Application of discipline-specific knowledge acquired during the start of the master programme
- Learning to work with a multidisciplinary approach
- Learning to present, report and defend your project
- Learning to evaluate the interdisciplinary working process

RELATION WITH IRP-DELFT

IRP-Delft (International Research Projects, <http://www.irpdelft.nl>) is a Delft student initiative supported by the TU Delft Board to stimulate students to perform a company driven research project in a selected part of the world. Every year another target area is selected.

The objectives of IRP Delft are similar, but not identical to the Multidisciplinary Project. In certain cases it is possible to register the IRP work under the CIE4061-09 code, and to obtain credits for this work. However, this is only possible if:

- at least 2 (or more) of the project members study Civil Engineering;
- at least 1 member of the assessment committee is a CE teacher;
- the IRP work matches completely with the objectives and requirements of the Multidisciplinary Project. So the work has to be clearly multidisciplinary. It has to be a study/design carried out from the beginning to the end (so including an initial analysis of the problems of the client, development of alternatives, evaluation, etc.). In general one can say that it will be difficult to bring a market research into the terms of the Multidisciplinary Project.

If you want to include IRP work under the CIE4061-09 code it is essential to communicate this in an early stage with your mentors and to verify that you fulfil all CIE4061-09 requirements.

As with all CIE4061-09 projects, the assessment of your work is done by your TU Delft mentors (there should be a mentor from each department of the participating students in your group). These mentors will take into consideration the assessment by your host, but to what degree they will do this is upon their own discretion.

2 STARTING A MULTIDISCIPLINARY PROJECT

This chapter guides you in a series of steps through the process of starting a Multidisciplinary Project. Please read these steps carefully and fulfil all requirements.

ENROLMENT

To participate in the Multidisciplinary Project, the group has to be registered at the International Office of Civil Engineering and Geo Sciences (for the registration form, see Brightspace). This can be done by e-mail and is obligatory .

When your group is not yet complete (less than four students) or you don't have any group members yet, please mention this in the e-mail, as we might be able to help you with finding a group.

If there are questions on planning your project, general information and on forming a group, please contact the International Office of Civil Engineering and Geo Sciences. More information about the Multidisciplinary Project can also be found on Brightspace.

PREREQUISITE REQUIREMENTS

You are required to have a Bachelor's degree before you start your project. This holds that you are able to register before you have your Bachelor, but you need it by the time the project starts.

If you cannot show us the degree beforehand, we cannot register your mark obtained. It is at your own risk that you start organizing a project before you have your Bachelor's degree.

PROJECT GROUP

The Multidisciplinary Project is performed with four to six students of at least two different MSc tracks, as it has to be multidisciplinary. Be aware of the fact that students with the same MSc track but different specializations are, in most cases, not considered as multidisciplinary.

FINDING A SUBJECT

You may find it challenging to find a project. For help you can go to the master coordinators from the different departments. They often know of available projects that might interest you. To give you an idea of the projects that have been done you can have a look at some old reports on Brightspace. You also may suggest a project yourself. It is relevant that for each project a "client" can be defined. The obligations of the client are to provide:

- a working location on site;
- access to relevant background data;
- support for finding living accommodation;
- support in obtaining visa and permits.

The size of the project should be as such that you will be able to complete the project in the given 8 week period.

Also a project should be broad and integrated; it is not an in-depth study. Usually the problem of the client is ill-defined, so step 1 is to make a good description of the problem.

In practice this means often that the project has to be done with a lot of handbook engineering and not with advanced modelling techniques.

You may also find old reports in the [TU Delft repository](#).

HOW DO I FIND A SUPERVISOR AND GRADING PROFESSOR?

For every project you need a supervisor, a lecturer, researcher or professor of the TU Delft who will guide you and grade your project at the end. As we have some contacts within many departments, we might be able to help you if you can't find a supervisor. Each group needs at least one supervisor, who helps throughout the whole process and at least one other professor who takes responsibility for the grading of the project.

Your supervisor (teacher or professor) has the right to terminate the Multidisciplinary Project at any time if he or she feels that the project is of insufficient level or that the group is lacking in knowledge to be able to finish the project successfully.

BEFORE YOU LEAVE

Before leaving on project, each group is required to have made a general schedule or plan of action together with their supervisor, which contains their tasks in the project, a timeline and the finances that are related to the project (funds, but also expected expenses).

The International Office CEG and your supervisor should be in possession of a copy of this plan before you leave.

REGISTRATION FOR OSIRIS "ABROAD"

Since 2011 each student is required to register their stay abroad in OSIRIS so that the university can keep track of where students are and can take relevant measures, in cooperation with the Ministry of Foreign Affairs and the insurance company, if necessary. You are automatically covered by the TU Delft insurance once you have registered on OSIRIS. For more information you can go to Brightspace or the [TU abroad site](#).

This module in Osiris is compulsory for every TU Delft student going abroad for study means (courses, minor, project, thesis, study tour, etcetera). Please fill out all boxes. TU Delft offers you a free insurance after the registration is finished.

We recommend you to visit a Safe Travel Training Session. The data are announced in the [CE-News](#). You can also find them on the blue board outside room 2.73.

MASTER PROJECTS IN HIGH RISK COUNTRIES

If you intend to go to a country listed as Potential High Risk by the Dutch ministry of Foreign Affairs, you need to organize some extra things. For more information on this you should contact the Multidisciplinary Project Coordinator. The Education Director has the final say on whether you can go ahead with your project or not.

Find out if the country you have chosen needs extra attention on:

<http://www.rijksoverheid.nl/onderwerpen/reisadviezen>

CREDITS

The number of credits given to the Multidisciplinary Project (CIE4061-09 -09) is fixed on 10 ECTS. The project should be at least eight (8) full-time weeks long on site or at least 240 hours when it is spread over more weeks. All the time spent on organizing, pre-research and report writing is not included in this time. Note that the organization of such a project takes much more time than is awarded, especially the organization of the project itself (and the aspect of "going abroad").

Important: as of academic year 2018-2019 it is no longer allowed to perform a Multidisciplinary Project and an Internship. You have to choose "one out of two".

3 MULTIDISCIPLINARY PROJECT ABROAD

A project abroad requires extra attention in advance. The most important are stated below.

VISA AND WORK PERMIT

Do not forget that everyone in your group might be needing a visa and/or work permit for the country you are going to. Make sure you have these things organized well before you leave.

INSURANCE

You are responsible for making sure you have adequate travel and health insurance during your time abroad. Check your own insurance to see what they already cover and keep in mind that a simple travel insurance may not be enough coverage if you intend on staying and working abroad for a long time. It may be the case that your employers will have an insurance to cover you while you are working for them so make sure to ask them about that.

As mentioned earlier in this document, TU Delft offers you a free insurance. However, this insurance does not cover everything you might need. In case of more than working on your project at an office (e.g. a foreign company / university), please contact the Safety and Security Department of TU Delft via TU-IV@tudelft.nl

PUBLIC TRANSPORT REIMBURSEMENT (APPLICABLE FOR DUTCH STUDENTS ONLY)

Students who are going abroad can register for reimbursement of their "Studenten OV Chipkaart." Instead of having free public transport in The Netherlands, you receive a certain amount of money from the Dutch government during your stay abroad.

To get a reimbursement every student needs to fill in his or her own application form which can be found on the [DUO website](#). Once an employee at the International Office of Civil Engineering and Geo Sciences has signed your OV form you can send it to the DUO group. This can take several days and the reimbursement can only start at the beginning of the month so make sure you send in your application on time.

VACCINATIONS

TU Delft students are advised to make an appointment at the [SGZ](#) before they go abroad. The SGZ can tell you about the dangers there are in the country you are visiting and also advise you on the vaccinations you will need before you leave. The university reimburses €50,- for each student who gets vaccinated at the SGZ for a study related trip. To get the reimbursement you need to fill in a form (see Brightspace) and have it signed by someone working at the International Office of Civil Engineering and Geo Sciences. Take this form with you when you visit the SGZ.

UPON ARRIVAL

Please let us and your supervisor know you have arrived safely! Also, keep regular contact with us during your stay abroad.

4 PROJECT FINANCES

Be aware of the fact that a project abroad costs you more money than staying in The Netherlands. It is therefore advised that students find funds via companies or via the university.

UNIVERSITY GRANTS

For projects abroad students can apply for university grants. For more information visit the page [funding & scholarships](#) of the TU Delft.

For more information on grant options you can contact the International Office of CEG. You can also contact the Central International Office at Jaffalaan 9A for more information on various grant opportunities. (email grantsoutgoing@tudelft.nl). The three most common funding options are:

STIR

The Executive Board established the International University Cooperation Relations (STIR) scholarship to stimulate student cooperation with foreign universities. To be eligible for this grant you must be going to or working together with a university with which an exchange contract exists at departmental level or at faculty level.

International Internship Fund (also named FIS Fund)

The Executive Board seeks to encourage students to do an internship or project with a foreign company, (educational) institution or organization, with the establishment of the International Internship fund (FIS). The FIS fund offers a small reimbursement of travel expenses to certain TU students.

UfD (Universiteitsfonds)

This fund offers financial support to individual students who decide to do part of their studies at a foreign university with which the TU Delft does not have an exchange agreement. Also, financial support is available for study trips (group trips) organized by students and student organizations.

Please read all the conditions mentioned on the TU Delft website well, as you are the person to take the initiative and are responsible for handing in all required documents!

5 DEPARTURE

BEFORE DEPARTURE

Before you leave please check if all steps from below are met.

- 1 Form a group of four (4) to six (6) students: not less, not more.
- 2 Your group must be multidisciplinary: at least two (2) different MSc tracks.
- 3 Register your group at the International Office CEG (see Brightspace for the form).
- 4 Have a (grading) supervisor at TU Delft **and** on location.
- 5 Email your plan of action (including a budgetary plan) to internationaloffice-ceg@tudelft.nl
- 6 Apply for grants and or funds before you leave.
- 7 Arrange your OV reimbursement before you leave.
- 8 Have you vaccinations on time (see Brightspace for the form).
- 9 Check your insurance(s).
- 10 Get your visa and or work permit.
- 11 Find accommodation.
- 12 Visit a Safe Travel Training Session.
- 13 Register your trip on OSIRIS.**
- 14 Keep us informed via e-mail.**
- 15 Regularly check the status of your stay when you reside in a potential high risk country.

6 AFTER YOUR TRIP

REPORT AND SUMMARY

Most groups have not completed everything before they return to The Netherlands. Usually they still need to do a little work on the project and on the report. Make sure you have some time planned in to finish these tasks after your return. Once the report is finished, hand it in to be graded by your supervisors.

After completing everything you are also expected to (1) upload your final report in the TU Delft Repository (see below) and to hand in (2) a summary (see Brightspace – documents for the format) and (3) a final budget overview at the International Office of CEG (by mail).

THE REPORT

You will write your report for the project client. You don't have to write a separate report for the university. Thus, the report needs to be written in such a form that it is understandable and useful for your client. It should also have sufficient background information and clear referencing so that the client can use the report for further developments in his project. It is important that you state that the report is written by students for their master programme of TU Delft and is not a consultancy report.

After completion of the project your report has to be placed in the TU Delft repository. This has to be done by sending a pdf of the report to repository-lib@tudelft.nl. In the attached mail you should mention:

Title	: The title of your report
Author	: Your names
Faculty	: Civil engineering and geosciences
Project	: Your project number (MPxxx)
Date	: The date of your report
Abstract	: An abstract of not more than 600 words; the abstract should not contain symbols, figures, equations, etc. Only plain text
Subject	: Some 5 keywords
Publisher	: TU Delft, department Hydraulic Engineering (or another department; mention the department of the main mentor)
Access restriction	: "None" or "Campus Only" [In principle use "none". Only use "campus only" when your client has explicitly asked for not distributing the report to third parties]
Coordinates	: The location of your project in decimal degrees. Note the negative sign, if needed. For example New York is (40.7; -73.7)
Source	: Master project report
Rights	: Authors

In case the client requires confidentiality, discuss this with your supervisor. Also there might be other arguments from your supervisor leading to the decision not to upload the report.

Your mark will only be entered into Osiris if all requirements are met.

GRADING

You are expected to hand in your report to your TU Delft supervisor and also to the supervisor you had at the client you worked for. They will both have a say in your final grade. After handing in the report you can make an appointment with your supervisor at TU Delft for a final presentation of your project. During the presentation you talk about your report but also about the whole process you went through as a group. This presentation is meant for the university only, so not for the company you worked for. All group members have to be present during the presentation.

The assessment form can be found on Brightspace, CIE4061-09 -09, Forms.
The grade is based on the following aspects:

- Written and oral reporting
- The group process
- The quality of your final design
- Integration and multidisciplinary aspects.

After the presentation students will receive a grade and this grade will be communicated to the course coordinator who will then enter your grades into OSIRIS. If you have to finalise procedures for any grants you may still be receiving, please contact the Central International Office, Jaffalaan.

Apart from the presentation at the University students will also often have presentations for sponsors and for clients.

Even though only eight weeks are set for the whole project it often requires more time. Especially when you return home there are often things that still need to be done. Therefore it is advisable to have finished the report before you leave the host country. Make sure you keep this in consideration when making plans for the following quarter.