

CME MASTER GUIDE

To give you a head start!



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INTRODUCTION

Goal of this guide.

With the help of this guide we, the CME-Dispuut, want to help you get started on your journey as an CME student. By providing some practical information, a lot will become clear about the possibilities within your masters study.

Enjoy reading this CME Master Guide and we will see you around!

Kind regards,

The 10th CME Board

Christian, Dominique, Misiu, Ynze and Annemieke

INTRODUCTION

Curriculum

Quartile 1			Quartile 2			Quartile 3			Quartile 4		
Code	Course	ECTS	Code	Course	ECTS	Code	Course	ECTS	Code	Course	ECTS
AR8002	Legal and governance	7	SPM8002	Process management	7	SPM8000	Project management	7	CME1200	Collaborative design and engineering	7
CME2300	Financial engineering	4	CIE4130	Probabilistic design	4				CME2200	Dynamic control	4
			CME1210-14	Infrastructure Asset Management	7				WM0312CT	Philosophy, technology assessment and ethics	4
			EPA1433	Intercultural relations and project management	5				CIE4030	Methodology for scientific research	3
WM0212TU-eng	CT: Technical writing/ Strategisch schrijven	2/3							CTB2410	TBM: Waterbouwkunde	5
WI1708TH1	BK: Analyse 1	3							WI2031TH	BK: Kansrekening en statistiek	3
WI1807TH	BK: Lineaire Algebra	3									
<u>*ALL MSC COURSES AT THE TU DELFT OR ABROAD ARE POTENTIAL CME ELECTIVES. ALL ELECTIVES OUGHT TO BE APPROVED BY THE EXAMINATION COMMITTEE BEFORE YOU START THE COURSE. THE COURSES BELOW ARE EXAMPLES THAT HAVE BEEN APPROVED IN THE PAST. OTHER ELECTIVES FROM TU DELFT CAN BE FOUND ON STUDIEGIDS.TUDEFT.NL.</u>											
CME2100	Internship	10	Only one of these courses is allowed as an elective course, they are not restricted to a certain quartile.								
CIE4061	Multidisciplinary project	10									
CIE5050-09	Additional Graduation Work	10									
CIE4120	Information Systems for the Construction Industry	4	IN4086-14	Data Visualization	6	IN4152	3D Computer Graphics and Animation	5	CIE4480	Integral System Design	4
WI4138	Decision Theory/Expert Judgement	6				CIE3380	Infrastructure Management	4			
						WI4050	Uncertainty and Sensitivity Analysis	6			
AR0097	Environmental Sustainability in the Built Environment	4	CIE4760	Assessment of Transport Infrastructure Systems	6						
CIE5981	Forms of Collaboration in Civil Engineering	4	SPM9537	Integrated Plant Management	5	CME5000	Procurement of Large Infrastructural Projects	4			
			EPA1144	Actor and Strategy Models	5						
AR0880	Real Estate Valuation	7	CIE4760	Assessment of Transport Infrastructure and Systems	6	CME5000	Procurement of Large Infrastructural Projects	4			
SPM9715	Intermediate Economics	5	WI3421	Risk Management	3						
SPM9716	Cost-Benefit-Analysis: Theory and Applications	4									
Any course you would like to add**			Any course you would like to add**			Any course you would like to add**			Any course you would like to add**		
CME2000	Graduation Thesis	32									
CME2001	Thesis Preparation	4									

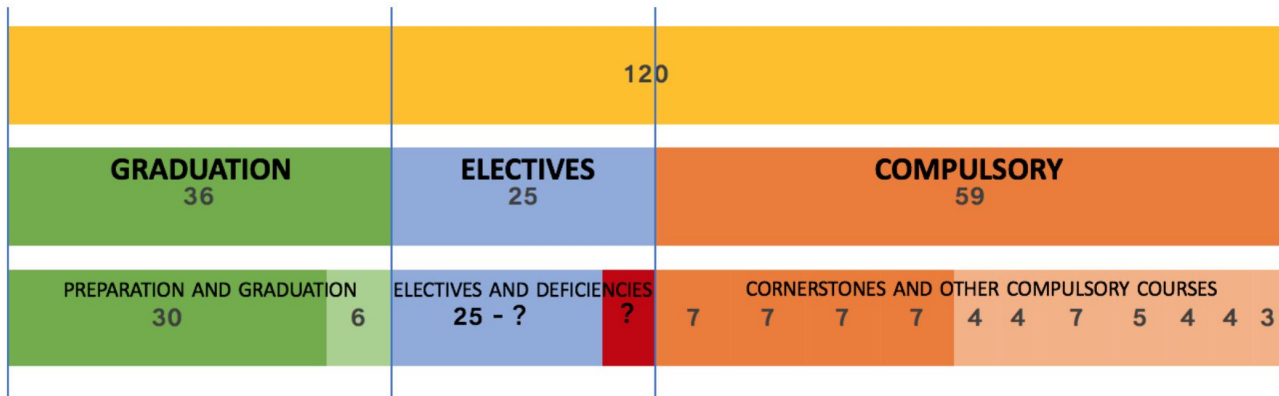
* available in all quarters

** Any course from any university that is related to CME and is not too broad or specific is a possible elective. For approval send an email to the examination committee or Jules Verlaan before the start of the course. The courses above are merely examples of courses that have been approved in the past. For more information about possible TU Delft electives, see studiegids.tudelft.nl

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INTRODUCTION

Curriculum



The cornerstones and compulsory courses combined are good for 59 ECTS. Together with 25 ECTS of electives this part of the curriculum is designed to be passed in 1.5 years. The final two quarters will cover 36 ECTS for graduation.

This makes the total duration of the curriculum 2 years.

INTRODUCTION

Curriculum

Pages 6 - 7

Cornerstones and compulsory courses

Pages 8 - 11

Electives, deficiency program and potential schedules

Page 12

Graduation

Pages 14 -15

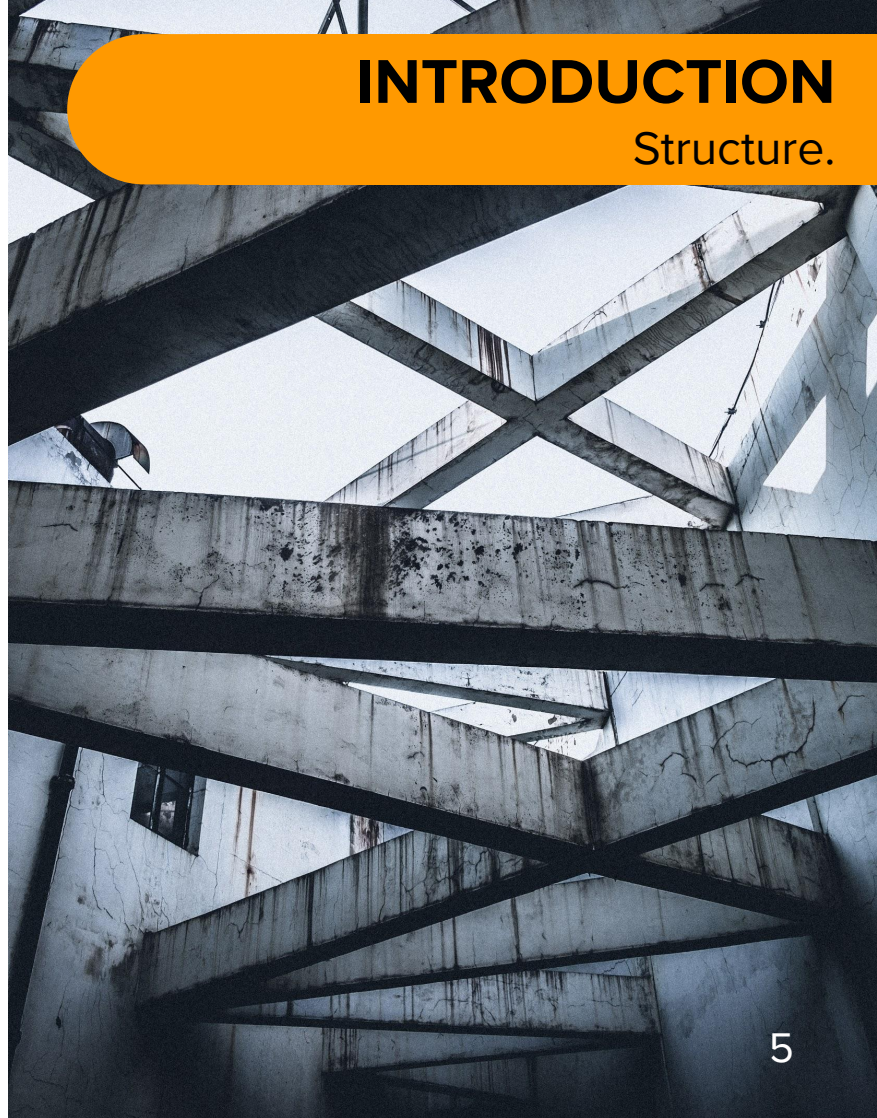


* From now on the background color of pages refers to the colours shown in the curriculum at page beside.

INTRODUCTION

Structure.

The structure of this study guide will be as followed: firstly an introduction about the cornerstones and compulsory courses will be given. Secondly, describing the elective possibilities as a CME student. Thirdly some elaboration will be given in regard to the bridging program and deficiency courses which have to be done by Dutch students. And lastly some information with about the CME Dispuut and its purpose.



CURRICULUM

Cornerstones.

In general the cornerstone courses are time consuming. These courses form the basis of the CME program. By following the cornerstones you will acquire enough knowledge to assess projects from different perspectives. You will learn the basic properties of big international construction projects and factors caused the success or failure of completed projects.

LEGAL & GOVERNANCE

Estimate legal consequences of certain projects and how to govern different interests of stakeholders.

Q1

PROCESS MANAGEMENT

What to do with different stakeholders and interests in a complex project environment, with time and political pressure.

Q2

PROJECT MANAGEMENT

Learn to cope with the iron triangle Time, Cost and Quality alongside Scope. How to manage risks and how to plan your project.

Q3

COLLABORATIVE DESIGN

The definition of a pressure cooker, with tight deadlines a large scope and 25 ambitious students in one group.

Q4

CURRICULUM

Compulsory.

The compulsory courses are courses that give you more in depth knowledge about aspects of large projects. Combined these courses give you insight in economic considerations to start a project and how to cope with risk and maintenance of asset. In terms of social aspects of projects and some courses will give an intercultural approach and ethical considerations. Lastly, the compulsory courses will teach you fit for purpose tools in dynamic and complex projects.

FINANCIAL ENGINEERING

Q1

**PROBABILISTIC DESIGN,
INFRASTRUCTURE ASSET
MANAGEMENT
& INTERCULTURAL RELATIONS
AND PROJECT MANAGEMENT**

Q2

None

Q3

**DYNAMIC CONTROL OF PROJECTS,
PHILOSOPHY, TECHNOLOGY
ASSESSMENT AND ETHICS &
METHODOLOGY OF SCIENTIFIC
RESEARCH**

Q4

CURRICULUM

Electives.

- Electives

- What is an elective?

- In the CME program you can fill 25 ECTS of free space. You can do this by following additional course, doing an internship or a multidisciplinary project.
- You can find pre-selected electives on the curriculum on **PAGE 10 and 11**.
 - These are specialisations that are suggested if you are interested in a certain field of work in the CME domain.
 - NOTE: all the electives are free the choose, so you DO NOT have to follow a specific specialisation, but you can choose your own combination of courses.
 - It is also possible to choose courses besides the pre-selected courses as long as they are in the CME domain.

- How do I manage my electives?

- First of all you need to apply for your electives at the board of examiners: fill in the electives application form! → “CME-4 Application form electives”
- Send an e-mail to Sandra Schuchmann s.c.m.schuchmann@tudelft.nl
- Start planning your electives, courses and graduation as soon a possible by using the schemes on **PAGE 10 and 11**.
- Internship / Multidisciplinary Project
- IDM notation

- **3.4. Schakelprogramma & Defficiency Program**

- For Dutch students only, with a Dutch BSc. Are you an international student? Skip this chapter.
- For all students who have completed a HBO education there is a bridging program to meet the entry requirements of CME.
 - More information can be found : hbo-doorstroom.tudelft.nl
<http://studenten.tudelft.nl/informatie/faculteitspecifiek/ictg/master/hbo-schakelopleidingen/hbo-schakelopleiding-msc-cme/>
<http://studenten.tudelft.nl/informatie/faculteitspecifiek/ictg/master/hbo-schakelopleidingen/for-mulieren-schakelopleidingen-ctaescmetil/>
- For all students who have not studied *Technische Bestuurskunde*, *Bouwkunde* or *Civiele Techniek* there is also a bridging program. For more information send an e-mail to s.c.m.schuchmann@tudelft.nl
- Students who have studied *Technische Bestuurskunde*, *Bouwkunde* or *Civiele Techniek* have to do deficiency courses.

CURRICULUM

Potential schedule.

Background: TPM

	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
YEAR 1	Legal and Governance Financial engineering	7 4 Process Management Probabilistic design	7 4 Project Management Electives	7 4 Collaborative design and engineering Dynamic Control
	Electives	(Intercultural relations and project management)	±4 <i>Methodology for scientific research**</i>	4 Philosophy, technology assessment and ethics
	TOTAL ECTS	11	10	20
				TBM: Waterbouwkunde
YEAR 2	Electives	±14 Thesis Preparation Infrastructure Asset Management Intercultural relations and project management	4 Graduation Thesis	32 Graduation Thesis
	TOTAL ECTS	0	16	16

** Turn in in Q4, but make the papers in Q3

I TPM

BACKGROUND: INTERNATIONAL, OR FOR DUTCH OTHER THEN CV BK OR TPM

	QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4
YEAR 1	Legal and Governance Financial engineering	7 4 Process Management Probabilistic design	7 4 Project Management Electives	7 4 Collaborative design and engineering Dynamic Control
	Electives	(Intercultural relations and project management)	±6 <i>(Methodology for scientific research**)</i>	4 Philosophy, technology assessment and ethics Methodology for scientific research
	TOTAL ECTS	±15	11	18
YEAR 2	Electives	±15 Thesis Preparation Infrastructure Asset Management Intercultural relations and project management	4 Graduation Thesis	32 Graduation Thesis
	TOTAL ECTS	±15	16	16

I INTER-
NATIONAL

CURRICULUM

Potential schedule.

Those schedules can be seen as examples to divide the 120 ECTS in two years.

BK I

BACKGROUND: BK								
YEAR 1	QUARTER 1		QUARTER 2		QUARTER 3		QUARTER 4	
	Legal and Governance	7	Process Management	7	Project Management	7	Collaborative design and engineering	7
	Financial engineering	4	Intercultural relations and project management	5	Electives	±4	Dynamic Control	4
							Philosophy, technology assessment and ethics	4
							Methodology for scientific research	3
	(Analyse 1) Lineaire algebra	(3) 3	(Kansrekening en Statistiek) Analyse 1	(3) 3	Kansrekening en Statistiek	3	(Kansrekening en Statistiek)	(3)
	TOTAL ECTS	14		15		±14		18
YEAR 2	QUARTER 1		QUARTER 2		QUARTER 3		QUARTER 4	
	Electives	±12	Thesis Preparation	4	Graduation Thesis		Graduation Thesis	32
			Infrastructure Asset Management	7				
			Probabilistic design	4				
	TOTAL ECTS	±12		15		16		16

CIVIL I

Background: Civil								
YEAR 1	QUARTER 1		QUARTER 2		QUARTER 3		QUARTER 4	
	Legal and Governance	7	Process Management	7	Project Management	7	Collaborative design and engineering	7
	Financial engineering	4	Probabilistic design	4	Electives	±8	Dynamic Control	4
			(Intercultural relations and project management)	(5)			Philosophy, technology assessment and ethics	4
							Methodology for scientific research	3
	Technical writing	3						
	TOTAL ECTS		14	11 (16)		±15		18
YEAR 2	QUARTER 1		QUARTER 2		QUARTER 3		QUARTER 4	
	Electives	±14	Thesis Preparation	4	Graduation Thesis			32
			Infrastructure Asset Management	7				
			Intercultural relations and project management	5				
	TOTAL ECTS	±14		16		16		16

CURRICULUM

Graduation.



Your graduation preparation and graduation thesis combined will get you the final 36 ECTS to finish your CME program. Follow the lecture of Rob Schoenmaker CME2001 Master Thesis Preparation.

On the brightspace page of the course is explained how to prepare for this lecture. At the office of Sandra you can find the graduation guide which will give you all the practical information you need for your graduation.

CME DISPUUT

About us!

Who are we & What's in it for you?

The CME Dispuut is an association of students for students. One of the main priorities of the Dispuut is to ensure that the quality of education is improved every year. For this we ask your active participation in feedback sessions (with free lunch). We also participate in the board of studies to make sure changes in the curriculum and courses are being reviewed. Besides education during your period studying CME, the CME Dispuut is a direct link to companies. We organize company cases, business tours and lunch lectures to make sure you can orientate yourself as much as possible. Then.. the fun stuff: We organize drinks and social activities to practise your network skills. No not really we just organize them for fun! We would love to see you there to get the most out you time at CME!

FREE COFFEE: At our “HOK” (Room 3.53) the office of the CME Dispuut you can get free coffee and meet your fellow students. Don't hesitate to stop by and chill on our comfortable couches with you freshly drafted coffee.



CME DISPUUT

What we do





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