

# Certified Cost Engineer Course

2024



# Certified Cost Engineer (CCE) Course

There is a growing demand for highly qualified Cost Engineers. Companies acknowledge the need for good estimating, planning and cost control capabilities for the preparation and execution of their capital projects. The Cost Engineer is at the pivot point between technical project requirements and the financial framework in a company. In that role, the Cost Engineer is essential for effective projects and supports the project manager to deliver projects within schedule and budget. In more general terms, Cost Engineers acquire ever more important roles in the control of entire company operations.





# DACE – International Training Course

Dutch Association of Cost Engineers (DACE) is founded to share and promote Cost Engineering knowledge. DACE is a non-profit organization supported by industry. DACE organises courses, network activities, price booklets and labour norms, see [www.dace.nl](http://www.dace.nl)

For many years DACE has organized the Certified Cost Engineer (CCE) Course, which facilitates the increase in the number of cost engineers in the Dutch-speaking region. As the course is recognized to be very valuable by companies also working outside the Netherlands, the need for an international accessible course was identified. To fulfil this industrial requirement, DACE developed an international version of the CCE course by upgrading and renewing existing course materials in the English language. DACE proudly presents the international version of this successful course.

## Course objectives

The Course is aimed at the application of Cost Engineering in complex design and build projects. Process Industry (petrochemical, food and beverages), Construction and Infrastructure course material will be discussed. Parallels will be drawn, for application of methodologies in other industries such as Machine and Manufacturing, Power Generation & Transport, and Utilities. Therefore, the course will be very instructive for a broad range of engineers and technical oriented financial professionals, that are working in many different areas related to project costs. To assure that Cost Engineering is applied at the best level, Cost Engineers should be educated in the fields of estimating, cost control, scheduling and risk management and must be able to integrate all these project controls.

A Certified Cost Engineer demonstrates, that he or she is trained in the knowledge and skills that meet the DACE and ICEC (International Cost Engineering Council) Cost Engineering requirements.

## Study load

The CCE course will take just over a year to complete. There will be a balanced blend of online learning, face-to-face teaching, practical applications and examinations.

Total study load of the course will be 600-800 hours, including the online learning, self-study, assignments and a case study. To complete the course, you will write a paper.

*'The Certified Cost Engineer Course will develop your professional skills'*





## Target audience

All course participants are expected to be already working in the field of Cost Engineering, with sufficient relevant education and experience, namely:

- Higher education level (BSc Engineering)<sup>1</sup>
- At least 2-5 years of relevant working experience

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<sup>1</sup> Dutch potential course members: HBO engineering or MBO engineering with at least 5 years of relevant working experience

And have:

- Writing, reading and conversation skills in English
- Awareness/understanding of Capex projects in relevant industry (Process Industry or Civil/Infrastructure preferably)
- Practical experience and basic understanding of statistics

All applicants will be screened on intake criteria before admission. The screening team may request additional information to judge whether applicants have sufficient technical knowledge to participate successfully in the course.

## Location and timing of Face-to-Face blocks

There will be six face-to-face blocks of three days each, organized in central locations in the Netherlands. Some of these blocks will be hosted by member companies of DACE. The lecture times during these blocks will be from Tuesday through Thursday, from 08:00 – 17:30. The face-to-face blocks will be scheduled as per below scheme outside summer and Christmas holidays<sup>2</sup>, and in between facilitated e-learning will be available.

<b>Start</b>	<i>September 2024</i>	<i>E-learning</i>
<b>Block 1</b>	September	Introduction
<b>Block 2</b>	December	Conceptual
<b>Block 3</b>	March	Preparation
<b>Block 4</b>	May	Execution
<b>Block 5</b>	September	Project Completion
<b>Block 6</b>	November	Evaluation
<b>Final</b>	<i>January/February</i>	<i>Completion of Paper</i>



## Partners and Teachers

DACE is working with the following renowned partners to develop the course content and facilitate the main education domains of the course.

<b>Project Management</b>	Prof. Dr. Hans Bakker (Delft University of Technology)
<b>Estimating</b>	Cost Engineering Consultancy
<b>Scheduling</b>	Marcel Pieters (MPPL)
<b>Cost Management and Controls</b>	Turner & Townsend

The teacher population will be completed by experienced members of the DACE network, who are able to provide lectures with in-depth knowledge of many cost engineering topics.

## More info and Registration

For more detailed information on the course, and for registration, please consult [www.dace.nl](http://www.dace.nl)

## Quality

The course will be organized by DACE with support of specialized partners. The curriculum has been acknowledged and certified by the International Cost Engineering Council (ICEC). All teachers are professionally active in the field of Cost Engineering.

## Certificate

Participants that have successfully completed the course will receive a DACE Certificate, which is also acknowledged by the International Cost Engineering Council (ICEC). After graduation, participants earn the title of “Certified Cost Engineer” (“CCE”), which is valid for five years (and can be extended thereafter). DACE maintains a list of Certified Cost Engineers on their website ([www.dace.nl](http://www.dace.nl)).

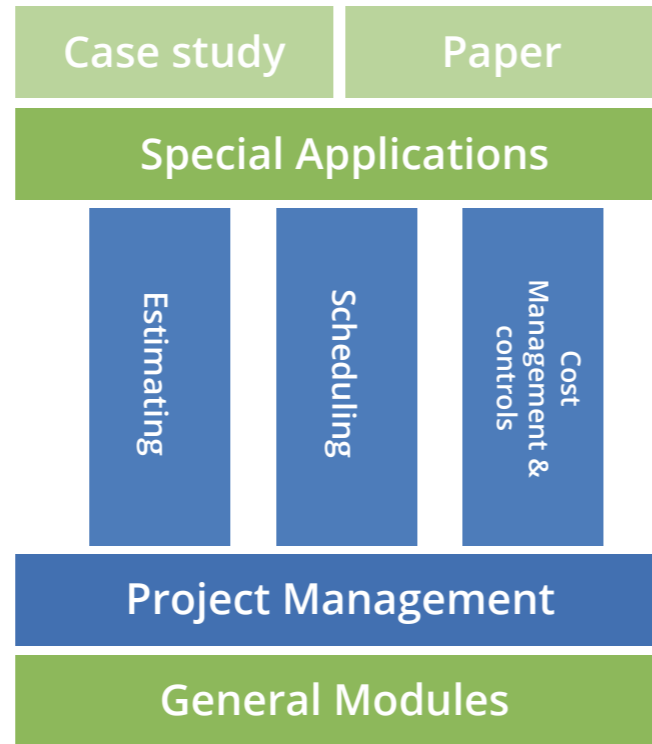
<sup>2</sup> The face-to-face blocks will not be during school holidays in Netherlands (all regions)

# Course content

## Structure of the course

Each main education domain consists of a number of course subjects, supplemented with general course modules. During the program, a case study will be applied which will serve as a common theme in the course. By linking the course content to this case study, the practical application of the acquired knowledge is being assured.

The course is structured around the main pillars Estimating, Scheduling and Cost Control:



## Scheduling

Scheduling Techniques, including Network Planning; Work Breakdown Structure; Resources, Progress and relation with Cost; Advanced Planning & Constraints; Critical Path Analysis; Schedule Risks; Schedule Risks Simulations

## Project Management

Introduction to Project Management, including Project Life-Cycle; Managing the project and its people; Multi-project organizations; Contracting Strategy, Contract Management and Claims; Managing Risks

## Estimating

Methodologies, including Factor Estimating and Quantitative Estimating; Accuracy; Detailed Estimating; Direct & Indirect Costs; Value Engineering; Unit Rates; Allowances; DACE Labour Norms; Productivity; Contingencies; Benchmarking; Estimating Plan & Basis of Estimate; Estimate Validation; Case Studies



## Cost Management & Controls

Cost Baseline, Budget, Value of Work Done (VOWD), Contingency Rundown, Management of Change, Cash Flow; Capitalization & Depreciation, OPEX versus CAPEX; Cost Breakdown Structure; Project Control Plan; Cost Management Code System; Project close out

## General Modules

Project Environment and Project Services Engineer: Introductions, Applied Statistics Strategic Communication & Soft skills

## Special Applications

In a number of parallel sessions, the course participants will be given the opportunity to deepen their knowledge of specific detailed cost engineering subjects, or learn about applications in specific environments.

Subjects include Risk Management, Presentation Skills, Manufacturing Industries, Leadership, Value Engineering and Cost Engineering in an International Market.

## Exams

A blend of formative and summative assessment will be applied throughout the course. Online learning will include tasks to consolidate and enhance learning in the particular module. After each main education domain, there will be a written exam.

## Case study

While working on the Case Study, the various aspects of Estimating, Scheduling and Cost Control will be put in practice, including integration of these control elements in a simulated real-life project situation. There will be three Case Study assignments throughout the course year, and the participants will work in groups to develop the assignment reports and presentations.

## Paper

To successfully complete the course, the participants will individually write a Technical Paper on a professional subject in the field of Cost Engineering. This assignment will 'close the loop', and prove that acquired competences can be applied and communicated clearly.



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cost and value