Civil Engineering

Structural Eng. with Architecture

Progression options beyond Stage 3

Chartered Engineer

Why become a Chartered Engineer?

- Achieve the badge of excellence for your profession
- Establish a seal of approval by your peers for your knowledge and competence
- Become more employable
- Be responsible for your work
- Give yourself the competitive advantage through international recognition
- Be respected as a professional
- View the Chartered Engineer Regulations

"A Chartered Engineer has status across the globe"

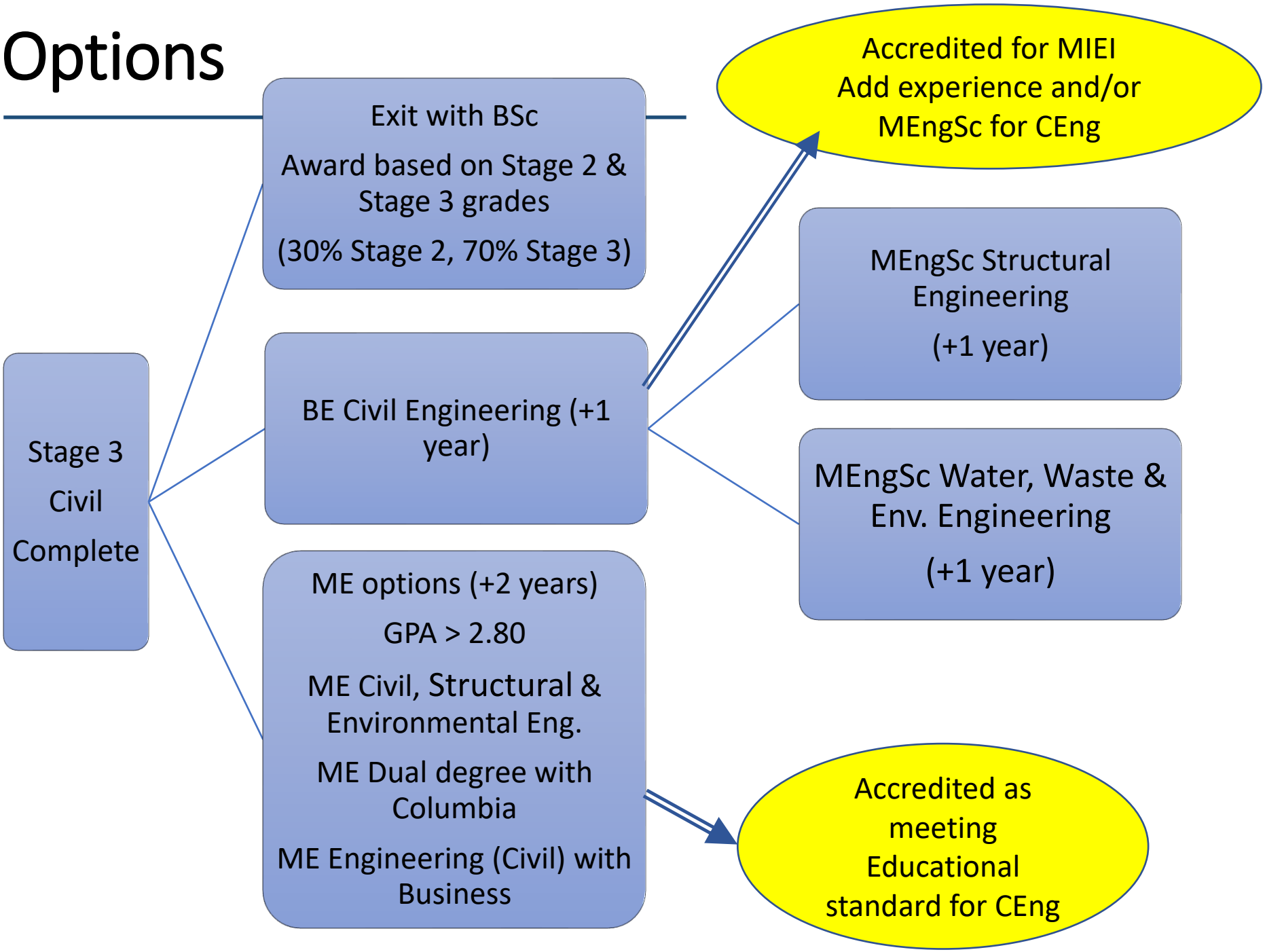
ENGINEERS IRELAND

The Washington Accord

Through the Washington Accord, all accredited engineering degree programmes, which we have accredited as satisfying the academic requirements for the Chartered Engineer title, are recognised by professional bodies in other signatory countries as equivalent to their own accredited engineering degree programmes.

- Minimum education standard is accredited Masters degree or equivalent
- **All our ME programmes are accredited by Engineers Ireland.**
  - Automatically meet this criterion and recognized by other countries.
- Other routes also possible: see www.engineersireland.ie
  - BE + experience including some research
  - BE + experience + unaccredited Masters (e.g., MEngSc)
  - Usually take a little longer

Options


Stage 3
Civil
Complete
Exit with BSc
Award based on Stage 2 & Stage 3 grades
(30% Stage 2, 70% Stage 3)
BE Civil Engineering (+1 year)
ME options (+2 years)
GPA > 2.80
ME Civil, Structural & Environmental Eng.
ME Dual degree with Columbia
ME Engineering (Civil) with Business
Accredited for MIEI
Add experience and/or
MEngSc for CEng
MEngSc Structural Engineering
(+1 year)
MEngSc Water, Waste & Env. Engineering
(+1 year)
Accredited as meeting Educational standard for CEng

BE Civil Engineering

MIEI
Add experience and/or MEngSc for CEng

- 2 semesters
- Autumn: 5 core modules
- Spring: 3 core modules + 2 option

CREDIT SUMMARY	
Module	**Credits**
Core	50
Option	10
Elective	0
Total	**60**

Stage 4 Core Modules

CVEN40690	Civil Engineering Systems	Autumn	5
CVEN40720	Geotechnics 3	Autumn	5
CVEN40760	Case Studies	Autumn	10
CVEN40780	Design of Structures 2	Autumn	5
CVEN40830	Applied Hydrology	Autumn	5
CVEN40190	Engineering Report	Spring	10
CVEN40710	Highway Engineering	Spring	5
MEEN40430	Professional Engineering (Management)	Spring	5

Stage 4 Options - A)2OF:
Students must select 2 Spring Trimester Option Modules from the following list.

CVEN40050	Design of Structures 3	Spring	5
CVEN40060	Transport Modelling	Spring	5
CVEN40070	Water & Wastewater Treatment Processes	Spring	5
CVEN40080	Hydraulic Engineering Design	Spring	5
CVEN40120	Bridge Engineering	Spring	5
CVEN40210	Geotechnics 4	Spring	5

ME Civil, Struct. & Env. Engineering

A 2-Year, 2-Stage 120-Credit Masters Programme.

– 30 credits per Trimester in EACH YEAR/STAGE.

Stage 1: Autumn – six core modules.

Module		Trimester	Credits
Stage 1 Core Modules			
CVEN30110	Introduction to Transportation and Traffic Engineering	Autumn	5
CVEN40390	Innovation Leadership	Autumn	5
CVEN40690	Civil Engineering Systems	Autumn	5
CVEN40720	Geotechnics 3	Autumn	5
CVEN40780	Design of Structures 2	Autumn	5
CVEN40830	Applied Hydrology	Autumn	5

ME Civil, Struct. & Env. Engineering

Stage 1: Spring

ALL STUDENTS should initially register to CVEN40730 Professional Work Experience.

CVEN40730	Professional Work Experience	2 Trimester duration (Spr-Sum)	30

Stage 1 Options - D) Min 0 of:
STAGE 1 SPRING ALTERNATIVE OPTIONS: Students, who are unsuccessful in securing a Professional Work Placement must select CVEN40500 (Design Project) along with 4 (3 if BSEN40110) is selected) of the following OPTION MODULES in the Spring Trimester to earn a total of 30 credits.

Students, who are unsuccessful in securing a Professional Work Placement must select CVEN40500 (Design of Structure 3)

CVEN40050	Design of Structures 3	Spring	5

Along with OPTION MODULES in the Spring Trimester to earn a total of 30 credits.

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ME Civil, Struct. & Env. Engineering

Stage 2

Stage 2 Core Modules			
CVEN40750	Engineering Research Project	2 Trimester duration (Aut-Spr)	20
CVEN40760	Case Studies	Autumn	10
STAT40690	Quantitative Methods for Engineers	Autumn	5
CVEN40710	Highway Engineering	Spring	5
MEEN40430	Professional Engineering (Management)	Spring	5

- **Autumn:** Research Project (10) + Case Studies (10) + Quantitative Methods (5) + One Option Module (5)
- **Spring**: Research Project (10) + Highway Engineering (5) + Profession Engineering (5) + One (10) or Two Option Modules (5)

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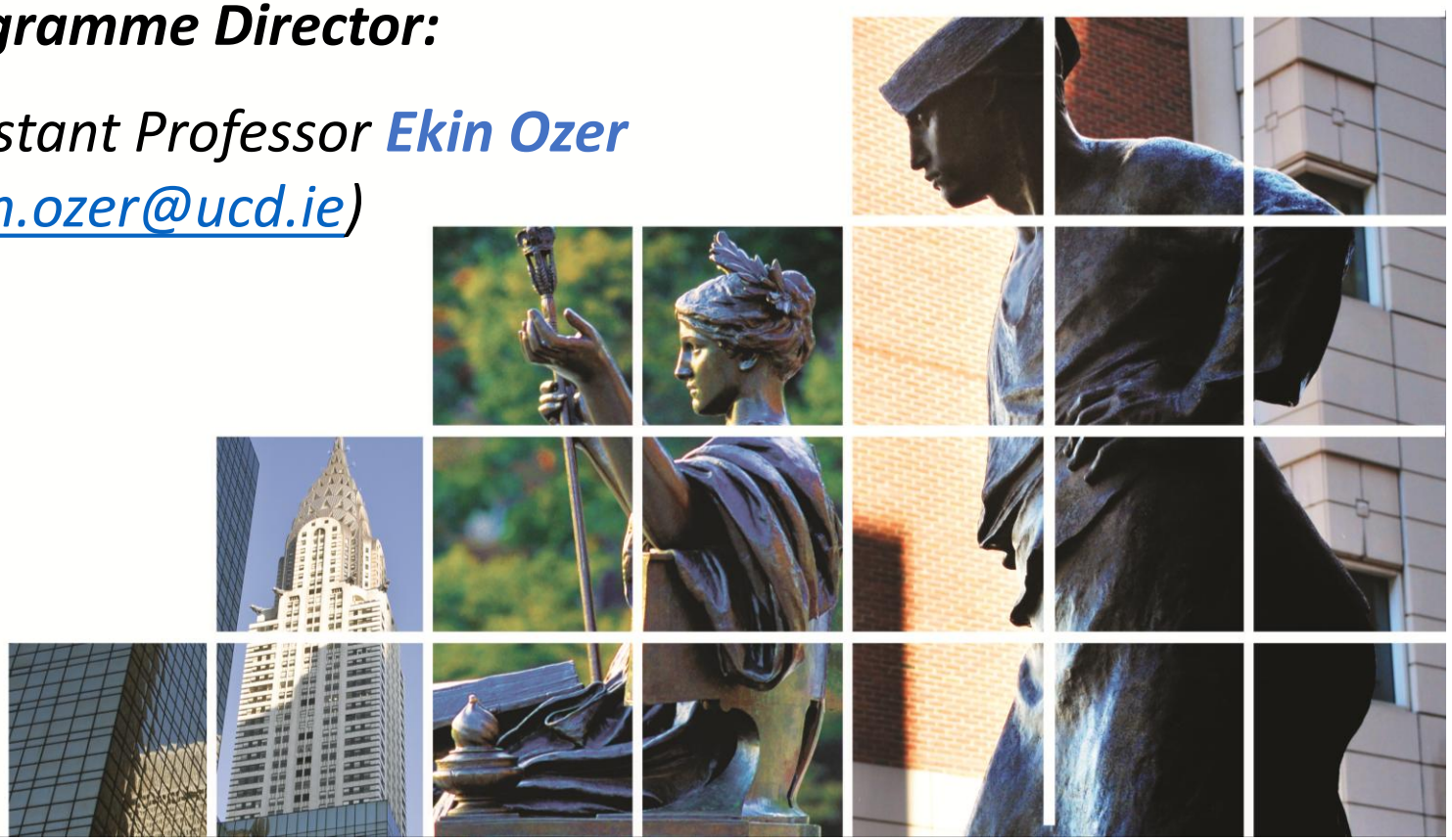
ME Civil Engineering
Dual Degree with Columbia

Code: T308

COLUMBIA | ENGINEERING
The Fu Foundation School of Engineering and Applied Science

Programme Director:

Assistant Professor ***Ekin Ozer***
(ekin.ozer@ucd.ie)



ME Civil Engineering Dual Degree

Code: T308

Stage 1: 60 ECTS Credits @UCD

- ***Autumn:*** 6 Core Modules (30 ECTS)
- ***Spring/Summer:*** Professional Work Experience (30 ECTS) or Design Project plus Optional Modules (10 + 20 ECTS)

Stage 2: 30 US Credits @Columbia (Equivalent to 60 ECTS)

- Individual Research + Research-Intensive Modules (12 US Credits)
- General Postgraduate Modules (18 US Credits)

COLUMBIA | ENGINEERING
The Fu Foundation School of Engineering and Applied Science

ME Civil Engineering Dual Degree

Code: T308

UCD Requirements:

First-Cycle Honours (2:1) BE in Civil Engineering or equivalent

English Proficiency (IELTS 6.5 general, min 6 per band) or equiv.

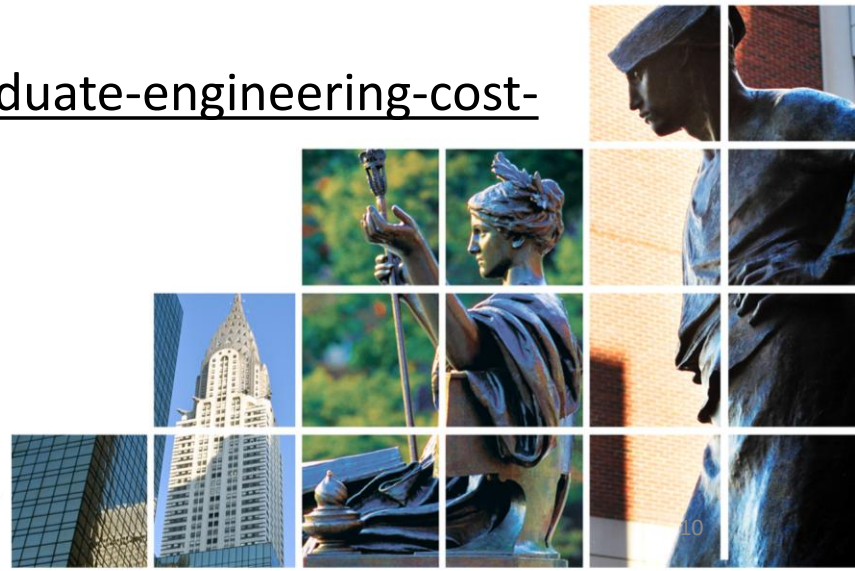
Fees: https://www.ucd.ie/students/fees/index.html

Columbia Requirements:

Min GPA of 3.08 from UCD

GRE is optional for 2025 admission cycle

Fees: https://sfs.columbia.edu/content/graduate-engineering-cost-attendance



COLUMBIA | ENGINEERING
The Fu Foundation School of Engineering and Applied Science

ME Engineering with Business

Course code: T166

Technical modules from within your chosen discipline selected from the range of current engineering masters programmes.

Business and Technology Management modules:

- Entrepreneurship
- Marketing
- Operations Management
- Business Information Systems
- Organisational Behavior
- Supply Chain Design
- Project Management
- Economics
- Production Systems Analysis

Please see online for a full list of modules.

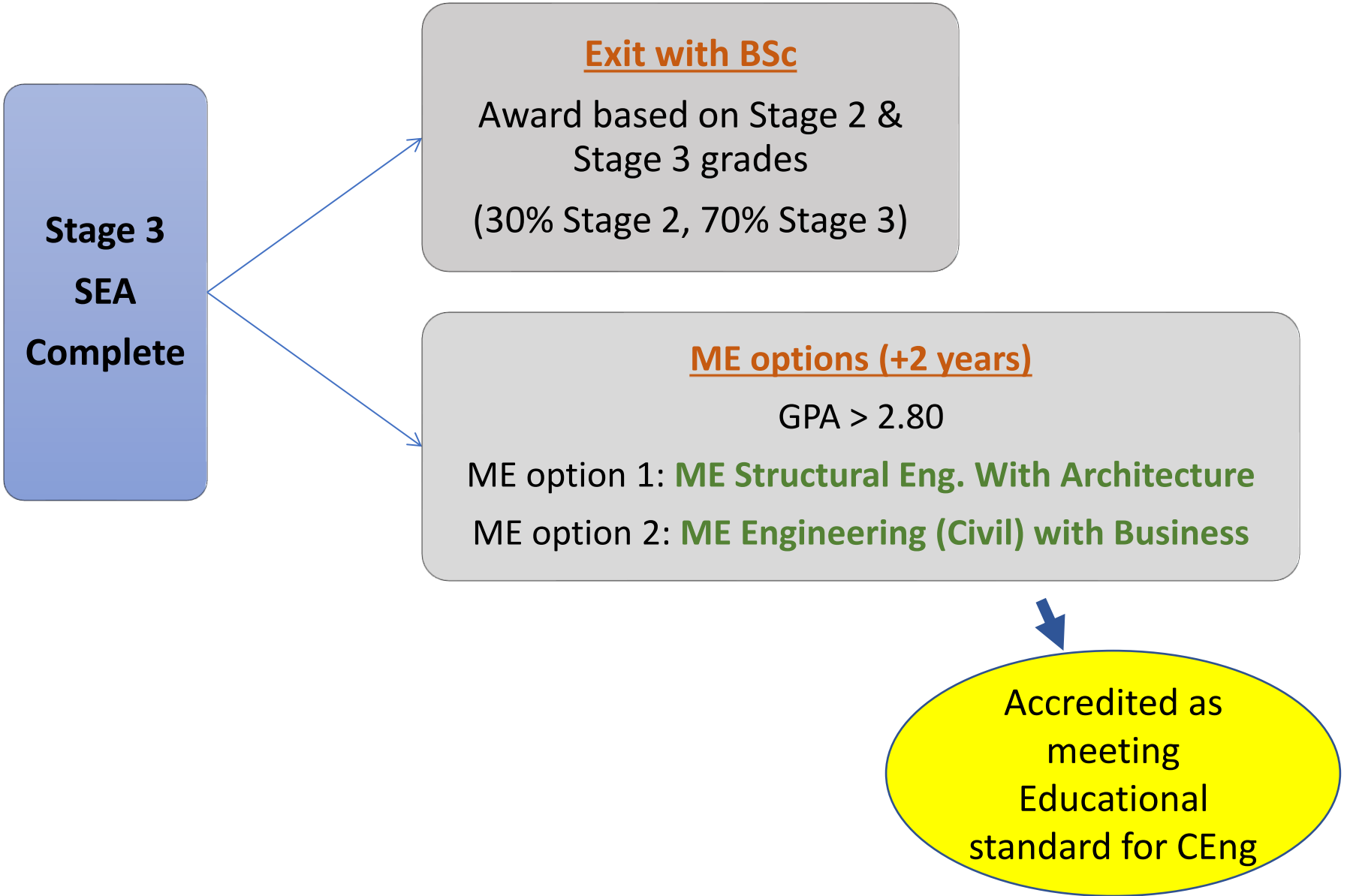
Live Learning:

This programme offers students the opportunity to complete a 6-month work placement, where students' technical and business knowledge can be applied and developed in a dynamic real-world setting. This is then followed by an industry focused research project which combines the academic and practice based learning.

Conjunction with Michael Smurfit Graduate Business School

Accredited as meeting Educational standard for CEng

Structural Eng. With Architecture



ME Structural Engineering with Architecture

Stage 1

Stage 1 Core Modules			
ARCT40030	Realising Built Projects	Autumn	5
CVEN40390	Innovation Leadership	Autumn	5
CVEN40550	Structural Dynamics	Autumn	5
CVEN40610	Advanced Materials	Autumn	5
CVEN40720	Geotechnics 3	Autumn	5
CVEN40780	Design of Structures 2	Autumn	5
CVEN40130	Work Placement	2 Trimester duration (Spr-Sum)	30

ME Structural Engineering with Architecture

Stage 2

Stage 2 Core Modules			
CVEN40750	Engineering Research Project	2 Trimester duration (Aut-Spr)	20
CVEN40760	Case Studies	Autumn	10
CVEN40770	Analysis of Structures 3	Autumn	5
STAT40690	Quantitative Methods for Engineers	Autumn	5
ARCT40870	Agency: Design / Build	Spring	5
CVEN40050	Design of Structures 3	Spring	5
CVEN40120	Bridge Engineering	Spring	5
MEEN40430	Professional Engineering (Management)	Spring	5

MEngSc Structural Engineering

1 calendar year

Trimester 1: Sept – Dec

Core Modules (30 credits)

ARCT40030	Realising Built Projects
CVEN40390	Innovation Leadership
CVEN40550	Structural Dynamics
CVEN40610	Advanced Materials
CVEN40770	Analysis of Structures 3
STAT40690	Quantitative Methods for Engineers

Trimester 2: Jan - May

Optional Modules (30 credits)

ARCT40870	Agency: Design / Build
CVEN40050	Design of Structures 3
CVEN40120	Bridge Engineering
CVEN40210	Geotechnics 4
CVEN40500	Engineering Design Project
MEEN40430	Professional Engineering (Management)
MEEN30130	Energy Systems in Buildings I
MEEN40200	Energy Systems in Buildings II

Trimester 3: May - Aug

Research Project (30 credits)

CVEN40600	Structural Research Project

Entry requirements: An honours undergraduate degree (NFQ Level 8) with minimum 2:1 award or international equivalence in a Civil Engineering or Structural Engineering degree programme

MEngSc Water, Waste & Env. Engineering

- Trimester 1 : Sept – Dec
  - **Core modules**
- Trimester 2 : Jan – May
  - **Optional modules**
- Trimester 3 : May – Aug
  - **Research Project**

1 calendar year

Introduction to Water Resources Engineering 1
Environmental Impact Assessment
Quantitative Methods for Engineers
Water Waste & Environmental Modelling
Research Skills for Engineers

Hydraulic Engineering Design
Water and Wastewater Treatment Processes
Introduction to Water Resources Engineering 2
Waste Management & Life Cycle Assessment
Freshwater Resources Assessment
Advanced Air Pollution
Sustainable and Nature-Based Water Infra.
Civil Engineering Systems
Environmental Engineering
GIS & Remote Sensing

More options….

- Choice required towards end of trimester, Programme Office will be in touch with you.

- BE Civil Engineering
- ME Civil Structural & Environmental Engineering
  - *Assistant Professor **Yuansheng Hu** (yuansheng.hu1@ucd.ie)*
- ME Structural Engineering with Architecture
- MEngSc Structural Engineering
  - *Associate Professor **Arturo Gonzalez** (arturo.gonzalez@ucd.ie)*
- ME Civil Engineering Dual Degree with Columbia
  - *Assistant Professor **Ekin Ozer** (ekin.ozer@ucd.ie)*
- MEngSc Water Waste & Environmental Engineering
  - *Assistant Professor **Md Salauddin** (md.salauddin@ucd.ie)*
- ME Engineering with Business
  - *Assistant Professor **Kevin Roche** (kevin.roche1@ucd.ie)*