

60

1 9 5 2
2 0 1 2



CESA

Consulting Engineers South Africa

**ANNUAL CONFERENCE
AND EXHIBITION**

Date: 5 & 6 November 2012

Venue: Durban ICC



1 9 5 2
2 0 1 2

School of Consulting Engineering – Certificate in Consulting Engineering

- ONE -

Feedback on CESA's two Certificates in Consulting Engineering Development Programmes

- Business of Consulting Engineering (BCE) and
- Management of Consulting Engineering (MCE)

- TWO –

- Consultative process with industry stakeholders to get the BCE and MCE registered as a qualification with the Quality Council of Trade and Occupation (QCTO)



Quality Council of Trade and Occupation (QCTO)

QCTO is one of the **three Quality Councils** that registers **academic qualifications** on the **National Qualifications Framework**.

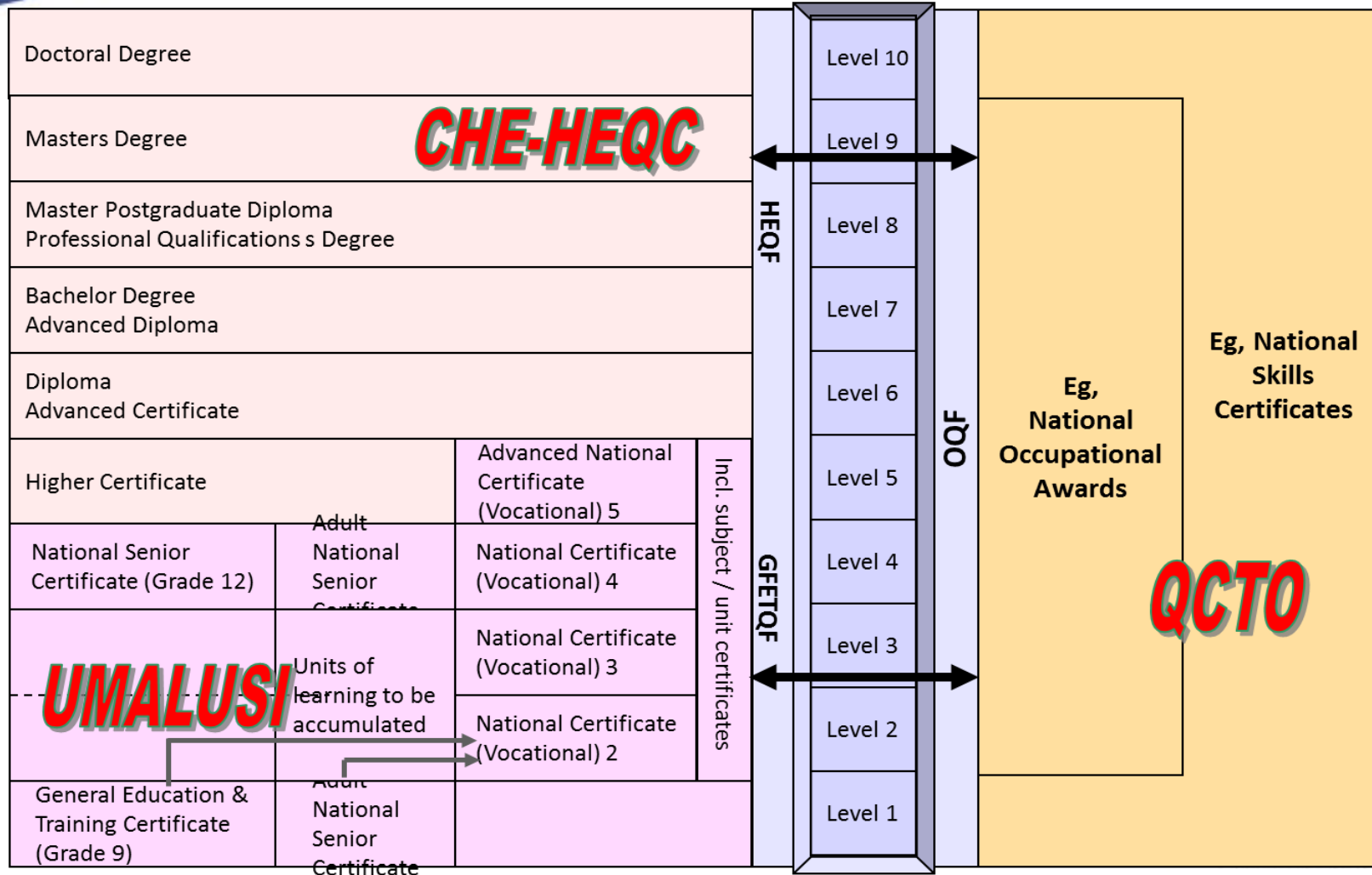
Council of Higher Education (CHE)
Umalusi
QCTO

QCTO is responsible for qualification in respect of
Trades, Occupations and Professions

60

1952
2012

NQF



QCTO requirements to register as a qualification

1. Include evidence of consultation with a recognized professional body in identifying this need
2. Indicate how the qualification will provide benefits to society and the economy

60

1952
2012

Certificates in Consulting Engineering (CCE)



BUSINESS OF
CONSULTING ENGINEERING
DEVELOPMENT PROGRAMME
and

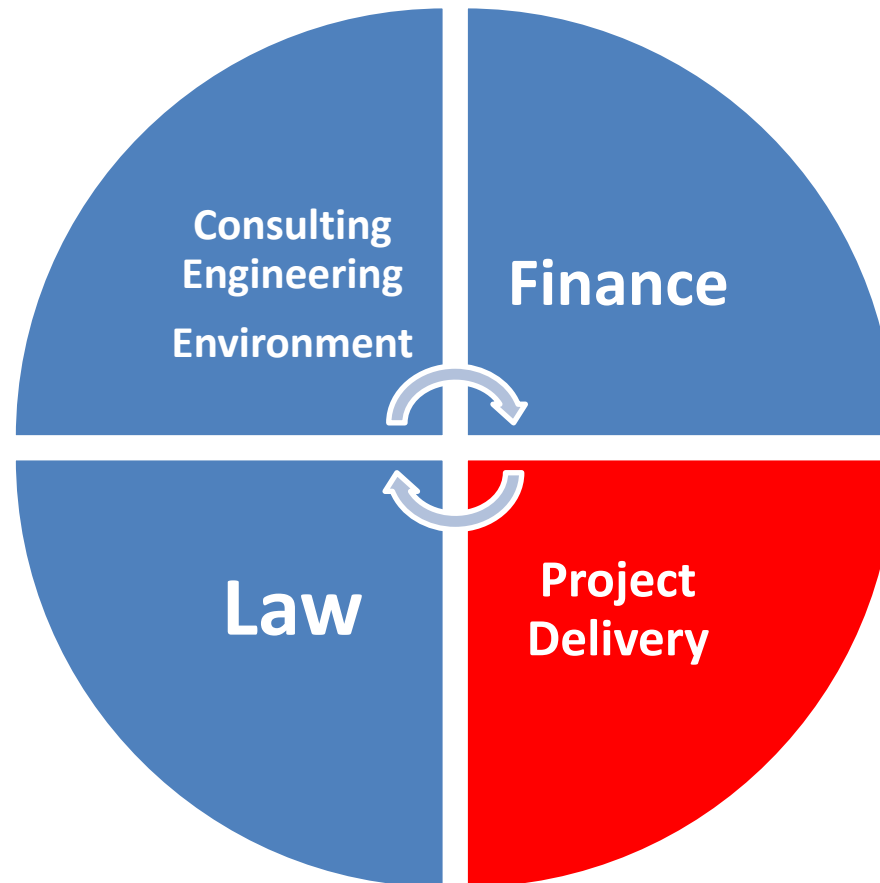
MANAGEMENT OF
CONSULTING ENGINEERING
DEVELOPMENT PROGRAMME

Equipping future leaders in the business of Consulting Engineering

60

1952
2012

Business of Consulting Engineering (BCE)



Consulting Engineering Environment

- Consulting engineering industry overview
- Structure of consulting engineering firms
- ECSA, CESA, FIDIC, CIDB and the learned institutions
- Codes of conduct
- Introduction to economics, markets, and supply and demand
- Communication, report writings negotiation, problem solving, conflict management relationship management, team work, liaison and coordination personal relations, networking, negotiating and report writing
- Quality and risk management
- Business integrity, morals and ethics.
- Principles of sustainability

Finance

Introduction to Accounting:

- Basic accounting principles and practice
- Accounting rules and definitions
- The accounting process
- Income statement: income, gross profit, net profit/loss.
- Balance sheet: assets, liabilities and owners equity.
- Cash vs profit, cash flow management, working capital management.
- Key ratios: profitability, liquidity, efficiency, solvency.

Project Financial Administration

- Estimating, bills of quantity, and budgeting
- Principles of inflation and escalation
- Principles of life cycle costing and amortization.
- Principles of capital budgeting, present value, discounted future values.
- Contract financial administration.

Managing Project Income and Costs

- Fees: fixed (lump sum) vs time based vs percentage of cost of works.
- Project income: percentage complete, work in progress, invoicing, VAT, accounts receivable, debtor days.
- Project costing: timesheets, salary multiplier, expenses, reimbursables
- Project profitability.
- KPI's (turnover per person, profit per person, utilisation rate.)

LAW

Introduction to South African Law:

- Roman Dutch Law and the South African legal system
- Law of delict, law of contract.
- Legal structure of business enterprises, sole trader, partnership, private company, public listed company.
- Procurement legislation.
- BEE legislation.
- Public vs private sector procurement and the CIDB Standard for Uniformity in Construction
- Occupational Health and Safety Act and Regulations.

Procurement of Professional Services and the Professional Services Agreement:

- Client/Consultant professional services agreement
- Joint venture agreement
- Sub-Consultancy agreement
-

Conditions of Contract for Construction

- Forms of contract: GCC, JBCC, FIDIC, NEC
- The role of 'the Engineer'

Project Delivery

- Introduction to the concept of project management
- The project cycle
- ECSA and PROCSA Guideline Scope of Services and the duties of the consulting engineer
- ISO 9001 and Quality Management, project planning, control and resource management
- Risk management and risk assessments
- ISO 9001 and Quality Management
- Project inception and registration
- Liaison, communications, and meetings
- Programming
- Time Management
- Client/consultant activities
- External and site factors
- Financial (cost estimating, control and reporting)
- Health and safety
- Design (drawings, calculations, specification, schedules and coordination)
- Contractual and procurement
- Contract administration
- Completion and close-out
- Operation and maintenance
- Project review and client feedback procedures.

60

1952
2012

Management in Consulting Engineering (MCE)



Business Administration and Management

- Leadership
- The global business environment
- Strategic planning
- Marketing a consulting engineering firm
- Operations and purchasing management
- Client Relations
- Advertising
- Business plan, organizational and functional structures
- Change management
- Succession planning
- Quality, risk, and integrity management systems and planning
- Resource planning and management
- Entrepreneurship and small business management
- Communications and negotiation
- BBEEE and the Construction Charter
- Corporate governance

Advanced Finance

- Financial management
- The firms books of account
- E-systems of accounting
- Management accounting
- Financial planning, forecasting and sourcing
- Company accounts and sourcing capital
- Cash flow management
- Debtor and creditor control
- Financial analysis, ratio and sensitivity analysis, quality of earnings analysis
- Budgeting
- Working capital management, retained income, dividends and profit
- Income tax and value added tax
- Company valuation methods, price earnings and market to book ratios, asset value approach, discounted cash flow method
- Financial modelling: projection of financial statements, advantages and disadvantages of modelling
- Risk financing and insurance.

Resources and People

- Labour laws and statutory requirements
- Human resource administration: salaries, performance reviews, salary review, bonuses and fringe benefits
- Training and development
- Mentorships
- Labour relations management
- Recruitment
- Organizational structure and job descriptions
- Change management
- Organizational dynamics
- Procurement
- Financial administration
- Infrastructure

Advanced Project Delivery

- Advanced contract law
- Professional agreements and contracts
- Forms of contract
- Contractual/legal aspects of project delivery
- Dispute resolution
- Claims preparation and defence
- Evaluation of delays, disruption and extension of time
- Health and safety
- Procurement legislation and the CIDB
- Sustainability
- Global contracting



1952
2012

Business of Consulting Engineering STRUCTURE & SCHEDULES

Three
trimesters

One week
block (Contact
Sessions)

Monday
to
Friday

CESA in
Bryanston

Time between
modules is ± 13
weeks

Two Assignment
per week

Portfolio of
Evidence

Final exam
November



1 9 5 2
2 0 1 2

Benefits:

- Accelerate the ability of your young professionals to add value to your company
- Industry specific and developed by an Educational Specialist and four senior experts from Consulting Engineers firms
- Developing business proficiency and competencies
- Becoming a holistic professional, in the field of consulting engineering

Business of Consulting Engineering

☐ Graduate Engineers & Technologists

- ✓ With a minimum of two years experience in consulting engineering firm

☐ Non-technical staff - Accountants, HR or Marketing personnel

- ✓ With appropriate qualifications
- ✓ A minimum on three experience in a consulting engineering firm

☐ Technical staff

- ✓ At least five years experience in a consulting engineering firm
or
- ✓ Similar environment
 - provided that this is suitably motivated by their employer.

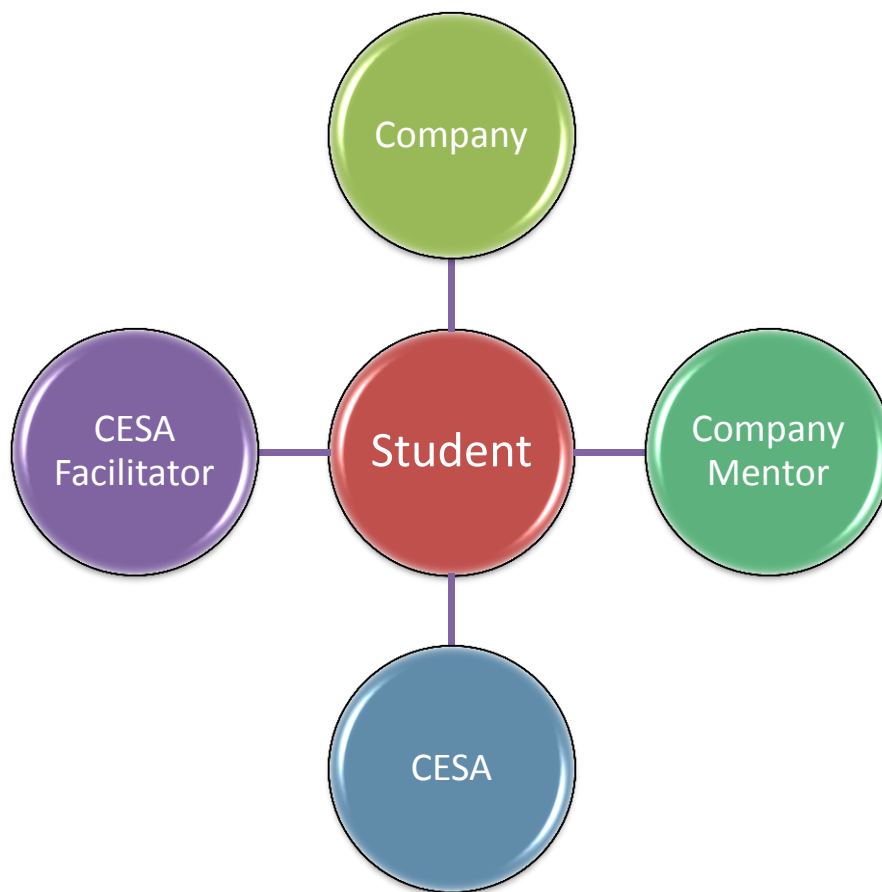
Management in Consulting Engineering

- ☐ **Registered Professional Engineers and Technologists**
 - ✓ With 5+ years of engineering experience.
- ☐ **Non-Technical staff - Accountants, HR or Marketing personnel**
 - ✓ With appropriate qualifications and the minimum 5 years experience in a consulting environment.

60

1952
2012

Stakeholders in the programme







- [Control Panel](#)
- [Student Guideline](#)
- [Reading Library](#)
- [Resource Centre](#)
- [Recommended Reading](#)
- [Templates](#)
- [Assignments](#)
- [Convenors, Facilitators & Subject Experts](#)
- [Messages](#)
- [Feedback](#)
- [Your Details](#)
- [Evaluation](#)
- [Photo Gallery](#)
- [Change Password](#)
- [Logout](#)

New Messages

• 2012-08-19: Correction, M3, A07 CIDB Procurement Practices due on Monday 20th

Control Panel

You are enrolled for the following programme:

Business of Consulting Engineering (BCE)

First Contact Session	12-16 March 2012	Change dates
Second Contact Session	4-8 June 2012	Change dates
Third Contact Session	3-7 Sept 2012	Change dates

You are studying the following modules:

Consulting Engineering Environment	12-14 March 2012	Module Information Reading Library Send Message
Project Delivery	15-16 March 2012 4-5 June 2012 3-4 Sept 2012	Module Information Reading Library Send Message
Law	6-8 June 2012	Module Information Reading Library Send Message
Finance	5-7 Sept 2012	Module Information Reading Library Send Message



[<< Return to Control Panel](#)

Introduction

Rules and Regulations

Resources and Support

The Learning Programme

Introduction

Welcome and Objectives



This learning programme is a personal and professional development programme aimed mainly at young engineers that work in consulting engineering companies or in organisations where the principles of project delivery related to the built environment are well established.

[Read more](#)

Rules and Regulations



Ground rules have been set for the programme to provide students with a framework within which to conduct their personal and professional learning. These are written under this section with a Declaration to be signed that they have been read and understood.

[Read more](#)

Resources and Support



A wide range of resources are in place to provide students with adequate support mechanisms throughout the programme. These include Subject Experts, Facilitators, Module Convenors, CESA staff and a Resource Library. How to access them is described in this section.

[Read more](#)

Learning Programme



The programme is structured into 4 Modules. This section provides an explanation of: The objectives of each module; The assignments for each module; The Assessment process; The Support process; A Case Study, The Heritage Project, that is applied in Modules 2, 3 and 4

[Read more](#)



[<< Return to Control Panel](#)

Introduction

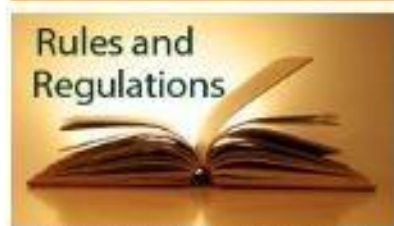
Rules and Regulations

Resources and Support

The Learning Programme

Rules and Regulations

Code of conduct



Any person who registers as a student on this programme will be subject to this Code of Conduct

[Read more](#)

Declaration of understanding



Agreement of the parties

[Read more](#)

Grievance procedures



A student has the right to disagree with an assessment outcome, opinion, or judgement, and to express any dissatisfaction

[Read more](#)

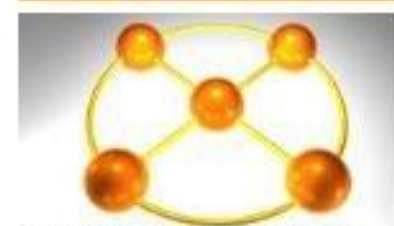
Health and safety rules



CESA has a moral and legal obligation to safeguard and protect its students, staff and visitors against injury as well as risks to health and safety.

[Read more](#)

Tripartite agreement



This Tripartite Agreement binds the Student, his/her Employer and CESA in a relationship for the duration that the Student takes to complete the full programme.

[Read more](#)



[<< Return to Control Panel](#)

[Introduction](#)

[Rules and Regulations](#)

[Resources and Support](#)

[The Learning Programme](#)

Resources and Support

Facilitators



At the start of the programme each student will be assigned a Facilitator

[Read more](#)

Reading library



Assignments and activities to be completed throughout the Learning Programme are supported by relevant reading and learning resource materials

[Read more](#)

CESAnet



The CESAnet is an interactive Student Interface that manages the BCE Learning Programme for the Student and the Facilitator

[Read more](#)

Assignments and Activities



Assignments and Activities for each Module are made available on the CESAnet

[Read more](#)

Glossary



[Read more](#)

[<< Return to Control Panel](#)[Introduction](#)[Rules and Regulations](#)[Resources and Support](#)[The Learning Programme](#)

The Learning Programme

Timetable



The Timetable outlines the Contact Sessions scheduled over a 7 month period

[Read more](#)

Learning Rollout



Your Learning journey starts with reading the material you have received from CESA and attending the 1st contact session, where you will receive a full overview

[Read more](#)

Contact sessions



The 3 scheduled Contact Sessions are delivered over 5 days each.

[Read more](#)

Learning modules & assignments



A short description of the Module content for information purposes.

[Read more](#)

The Heritage project



The Case Study describes a major project and illustrates the entire project cycle from inception to close-out.

[Read more](#)

Summative Assessment



Principles which are applied to assessment

[Read more](#)



 [Control Panel](#)

 [Student Guideline](#)

 [Reading Library](#)

 [Resource Centre](#)

 [Recommended Reading](#)

 [Templates](#)

 [Assignments](#)

 [Convenors, Facilitators
& Subject Experts](#)

 [Messages](#)

 [Feedback](#)

 [Your Details](#)

 [Evaluation](#)

 [Photo Gallery](#)

 [Change Password](#)

 [Logout](#)

[New Messages](#)

• 2012-08-22:
[Read Now](#)

• 2012-08-20: Changes to
the Assignment schedule
[Read Now](#)

Assignments

[Click here to view a list of all your submitted assignments.](#)

Consulting Engineering Environment

• [Module Information](#)

Assignment	Due Date	Actions
M1.A01: Consulting Engineering Industry and Your Own Company Overview	2012-03-26	View Assignment Information Upload Your Assignment View Feedback
M1.A02: Understand the structure, culture and organisational aspects of a Consulting Engineering Firm	2012-03-26	View Assignment Information Upload Your Assignment View Feedback
M1.A03: The Role of Learned Institutions, Statutory Bodies and Associations in Consulting Engineering	2012-04-02	View Assignment Information Upload Your Assignment View Feedback
M1.A04: Codes of Conduct, Business Integrity, Morals and Ethics	2012-04-02	View Assignment Information Upload Your Assignment View Feedback
M1.A05: Principles of Risk Management and Quality Management, Liability and Negligence	2012-04-10	View Assignment Information Upload Your Assignment View Feedback
M1.A06: Introduction to Economics, Markets, Supply and Demand	2012-04-16	View Assignment Information Upload Your Assignment View Feedback
M1.A07: Apply your Interpersonal Skills: Communication (Class based Activity)		View Assignment Information Upload Your Activity
M1.A08: Business, Technical and Report Writing	2012-05-02	View Assignment Information Upload Your Assignment View Feedback
M1.A09: Apply your Interpersonal Skills: Problem Solving and Decision Making (Activity)		View Assignment Information Upload Your Assignment
M1.A10: Apply your Interpersonal Skills: Team Work	2012-05-02	View Assignment Information Upload Your Assignment View Feedback
M1.A11: Apply your Interpersonal Skills: Negotiation		View Assignment Information Upload Your Activity
M1.A12: Apply your Interpersonal Skills: Stress in the Workplace	2012-05-02	View Assignment Information Upload Your Assignment View Feedback



1 9 5 2
2 0 1 2

Q.1. What's your experience of the BCE and how is it impacting on your world of work

The BCE has widen my horizon on the handling of the project from feasibility stage to close-out stage, taking into account important issues like project quality plan, legal aspects of the project and OHS issues affecting the project to name but a few. BCE has given me a chance to have a bird's eye view in the execution of the project.

Keith Mtshali, Director, Vela VKE Consulting Engineers



1952
2012

Q.2. How do you think this programme will benefit transformation of the industry in the future

The programme allows a platform for young professionals to rapidly gain knowledge and simultaneously be exposed to the management and practice of consulting engineering as a prospective profession. This one year course provides the professional with knowledge and skills that would normally only be obtained through years of experience.

Shahien Ishamil, Director Project Manager, Virtual Consulting Engineers



1 9 5 2
2 0 1 2

Q.3 What do you most enjoy about the programme

The BCE programme is remarkably informative and has provided a platform to interact with individuals from other consultancies as well as trained professionals (“gurus”) from the engineering industry. It has created a platform for networking and relationship building which is also vital in the development of an individual.

Samantha Naidoo, Candidate Civil Engineer, Goba (Pty) Ltd

Q.4. What is most valuable thing you have learnt so far

I have learnt to approach my work from a global perspective taking into account all the other factors that concern my work rather than just concentrating on my own little task of designing for an example.

Mosa Tsoai, Civil Engineer - Bigen Africa



1 9 5 2
2 0 1 2

Q.5. General comments about the Convenors, Facilitators and subject Experts

They have an ocean of information; the experience shared between all of them is immense. They are passionate educators and as result they try to push each and every one of us to become the best.

Nathaniel Seseletsi, Senior Engineer (candidate), UWP Consulting (Pty) Ltd



1 9 5 2
2 0 1 2

Student Evaluation Forms

6.	Would you still recommend this programme to others	Definitely	
		Probably	
		Never	

100% of all students attending the 2012 Business of Consulting Engineering stated that they would **‘Definitely’** recommend this programme.

60

1952
2012

**R40 000.00
(Excl. Vat)**

**MAXIMUM OF 20
LEARNERS
First Come –
First Served**

Includes:

- 3 x Block Week at CESA Training Centre including Refreshments and Lunches
- Lectures by 14 Subject Matter Experts
- Access and Use of CESAnet
- Individual Facilitator Support
- Training Material
- Assessing and Moderating of Assignments, Portfolio of Evidence and Exam
- CPD Points and Certificate

Excludes:

All transport and
Accommodation Costs

Business of Consulting Engineering (BCE) Certificate Programme

Equipping future leaders in the business of Consulting Engineering.



Benefits:

- Accelerate the ability of your young professionals to add value to your company
- Industry specific and developed by senior expert Consulting Engineers
- Developing business proficiency and competencies
- Becoming a holistic professional, in the field of consulting engineering

This development programme consists of three trimesters / block weeks (Monday to Friday), taking place at the CESA Training Centre in Bryanston. In the time between each block week (approximately 12 weeks) students complete 2 assignments each week with a final assessment / exam at the end of the year.

A dedicated Facilitator supports each student throughout the programme.

Students have access to CESAnet - an interactive Student and Facilitator online facility where all reading, reference and resource documents are accessible, assignments are uploaded and results and feedback are provided to the student. CESAnet also facilitates communication with Facilitator as well as classmates.

Entrance Requirements:

- BSc/BTech degree with a minimum of 2 years' experience in a CESA Member firm or
- Technical Diploma with a minimum of 5 years' experience in a CESA Member firm or
- Non-engineering tertiary education with a minimum 3 years' experience in a CESA Member firm Supported by a 'letter of motivation' from applicant's employer

* All applications will be evaluated and approved by CESA Education & Training Committee

Open now for Bookings

***** 100% of all students attending the 2012 Business of Consulting Engineering stated that they would 'Definitely' recommend this programme *****

ONLY 20 PLACES AVAILABLE

For more information and to register go to the School of Consulting Engineering website:
www.cesa.co.za/sce





**CERTIFICATE IN CONSULTING ENGINEERING
CONSULTATIVE QUESTIONNAIRE**

NAME:		SURNAME:	
COMPANY:			

1.	Do you think the Consulting Engineering Industry needs a Business of Consulting Engineering registered qualification	Definitely	Possible	Possibly Not	Definitely Not
	Any Comments:				
2.	Do you think the Consulting Engineering Industry needs a Management of Consulting Engineering registered qualification	Definitely	Possible	Possibly Not	Definitely Not
	Any Comments:				
3.	Do you agree with the following modules for the Business of Consulting Engineering Development Programme: - Consulting Engineering Environment - Project Delivery - Finance - Law	Definitely	Possible	Possibly Not	Definitely Not
	Any Comments:				
4.	Do you agree with the following modules for the Management of Consulting Engineering Development Programme: - Business Administration and Management - Advanced Finance - Resources and People - Advanced Project Delivery	Definitely	Possible	Possibly Not	Definitely Not
	Any Comments:				
5.	Indicate how you think this qualification will provide benefits to society and the economy				
6.	Any suggestions, improvements and/or additions you would like to see to the Business of Consulting Engineering and/or the Management of Consulting Engineering Development Programmes:				

Signed: _____ Date: _____

Thank you for taking the time to complete this questionnaire



THANK YOU

Website: <http://www.cesa.co.za/cce>

School of Consulting Engineering
Consulting Engineers South Africa (CESA)
P O Box 68482, Bryanston 2021, Johannesburg, South Africa
Fulham House, Hampton Park North, 20 Georgian Crescent, Bryanston, Johannesburg,
South Africa
Tel: +27 11 463 2022
Email: brenda@cesa.co.za
Fax: +27 11 463 7383