Engineering Council of South Africa (ECSA)

An Overview

CAPEC - CESA

13 December 2013

ECSA

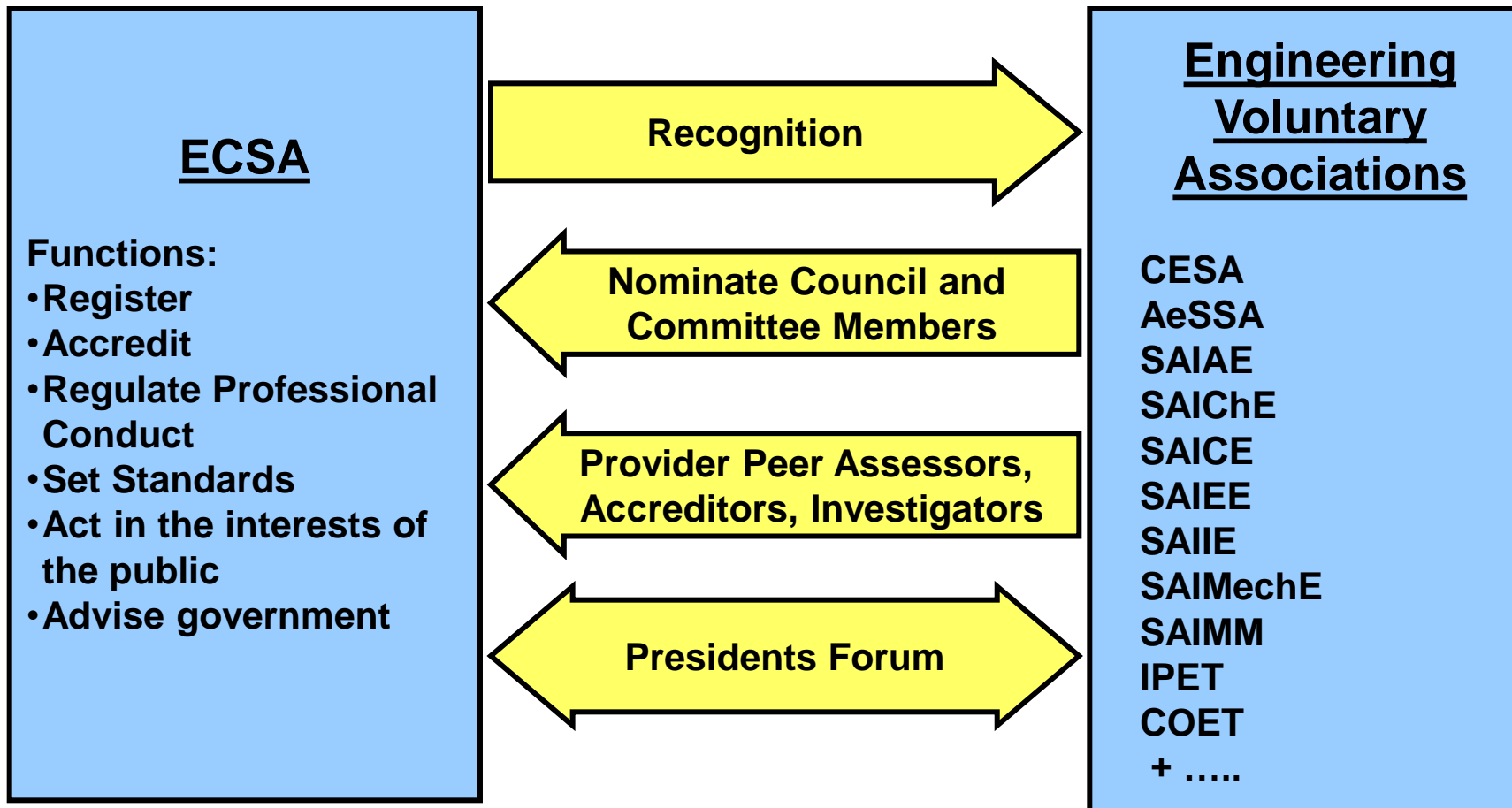# Structure of the Engineering Profession

- ECSA: A statutory body created by Acts of 1968, 1990, 2000
- Regulates the practice of engineering in South Africa through
    - Registration
    - Accreditation of engineering education programmes
    - Regulating Professional Conduct
    - Setting standards for education and registration
- Act in the interest of public health and safety in engineering for the benefit of the public
- ECSA partners with the engineering voluntary associations

ECSA

Engineering Voluntary Associations

Serve the interests of their members, promote their disciplines

- Consulting Engineers South Africa (CESA)
- Aeronautical Society of SA (AeSSA)
- SA Institute of Agricultural Engineers (SAIAE)
- SA Institution of Chemical Engineers (SAIChE)
- SA Institution of Civil Engineering (SAICE)
- SA Institute of Electrical Engineers (SAIEE)
- SA Institute for Industrial Engineers (SAIIE)
- SA Institution of Mechanical Engineering (SAIMechE)
- SA Institute of Mining and Metallurgy (SAIMM)
- Institute of Professional Engineering Technologists (IPET)
- Chamber of Engineering Technology (COET)
- + ….. others

E C S A

Relationships in the Profession

ECSA

Functions:
- **Register**
- **Accredit**
- **Regulate Professional Conduct**
- **Set Standards**
- **Act in the interests of the public**
- **Advise government**

Recognition →

← **Nominate Council and Committee Members**

← **Provider Peer Assessors, Accreditors, Investigators**

↔ **Presidents Forum**

Engineering Voluntary Associations

CESA
AeSSA
SAIAE
SAIChE
SAICE
SAIEE
SAIIE
SAIMechE
SAIMM
IPET
COET
+ .....

Categories of Registration

Professionals

- Professional Engineers
- Professional Engineering Technologists
- Professional Engineering Technicians
- Professional Certificated Engineer

Specified Categories

- Lift Inspector
- Lifting Machinery Inspector
- Medical Equipment Maintainer

ECSA

ECSA's Education Functions

- Accreditation of qualifications
  - Engineering qualifications:
    - BEng-type: 8 universities offering 51 programmes
  - Technology Qualifications:
    - BTech: 10 providers offering 95 programmes
    - National Diploma: 11 providers offering 103 programmes

- Evaluation of qualifications

- Policy advice on engineering education

ECSA

Professional Registration Requirements

For registration as a professional in a category, the applicant must

(a) satisfy the relevant educational outcomes determined by council

(b) demonstrate competence as measured against standards determined by the council

Note: (a) is equivalent to the candidate requirements.

After graduation, at least 3 years (usually more) of training and experience required for registration

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PROCEDURE TO REGISTER WITH ECSA

Step 1:"Candidate" Registration in order to have qualifications evaluated.

o All applicants with non-accredited and non South African qualifications have to apply for "Qualification Evaluation" which is done by ECSA's Qualification Examinations Committee(QEC).

Candidate Engineer	BSc(Eng)/BEng
Candidate Eng Techno	BTech
Candidate Cert Eng	Cert of Competency
Candidate Eng Techni	National Diploma from UOT

Register of Engineering Professionals By Race

Category	Total	Race			
		M/F Indian	M/F- African	M/F- Coloured	M/F- White
Professional Engineer	16 182	876	1336	160	13810
Professional Engineering Technologist	4704	406	949	180	3169
Professional Certificated Engineer	1073	39	57	11	966
Professional Engineering Technician	3116	229	1724	138	1025
TOTAL @ 31 October 2013	25 075	1 550	4 066	489	18970

Register of Candidate Categories By Race

Category	Total	Race			
		M/F-Indian	M/F-African	M/F-Coloured	M/F-White
Candidate Engineer	7 387	1 092	2 206	175	3914
Candidate Engineering Technologist	3 094	267	2 101	115	611
Candidate Certificated Engineer	287	24	120	13	130
Candidate Engineering Technician	5 457	312	4 395	136	614
TOTAL @ 31 October 2013	*16 225*	*1695*	*8 822*	*439*	*5269*

THANK YOU!

Website   : www.ecsa.co.za

Email   : engineer@ecsa.co.za
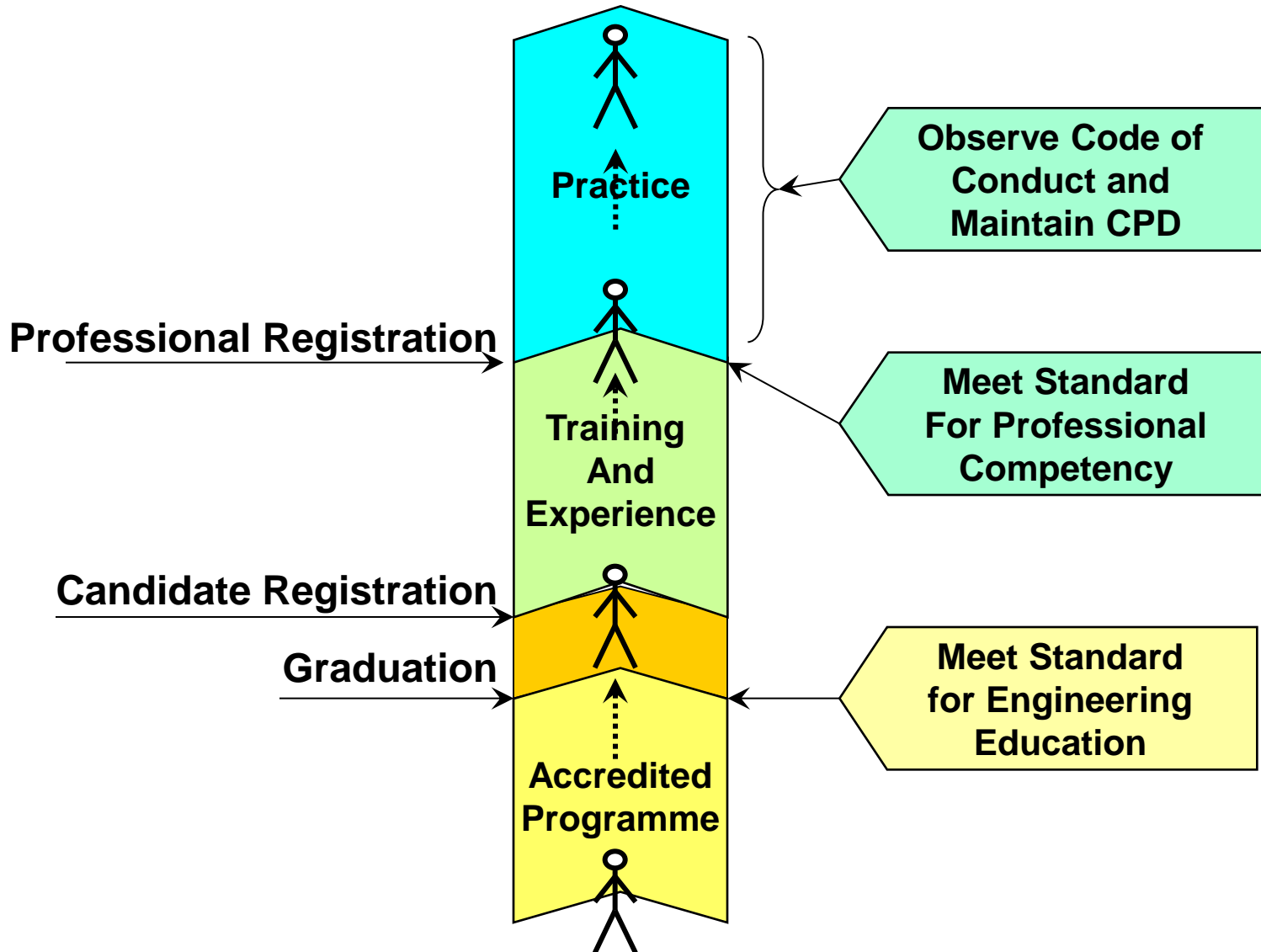
Tel No : (011) 607 9500

Offices : Waterview Corner,

Building 2 Ernest

Oppenheimer Avenue,

Bruma

Professional Development Model

Practice

Observe Code of Conduct and Maintain CPD

Professional Registration

Training And Experience

Meet Standard For Professional Competency

Candidate Registration

Graduation

Meet Standard for Engineering Education

Accredited Programme

ECSA

Renewal of Registration Through CPD

- Engineering Profession Act, 2000 requires Renewal of Registration.

- Renewal of registration is linked to continuing professional development (CPD) over five year cycles.

  - 5 Credits per annum (25 over 5 year cycle) needed for renewal of registration.

  - CPD Credits awarded for

    - Developmental Activities (1credit required per year)

    - Work-based Activities

    - Individual Activities

ECSA

Educational Accords

International educational agreements provide for:

- Mutual recognition
- Benchmarking

of programmes providing the educational foundation for practice in each category

Washington Accord	Professional Engineer
Sydney Accord	Professional Engineering Technologist
Dublin Accord	Professional Engineering Technician