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Engineering Council of South Africa Presents: Road to Registration

Wednesday, 31st May 2023 | Information Webinar

Presented By

Mr. Jones Moloisane
Pr Tech Eng and ECSA Council Member

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Introduction - Presenter

Mr. Jones Moloisane

Pr Tech Eng and ECSA Council Member

- Jones Moloisane holds three Master's degrees, two in Civil Engineering and one in Business Administration. Jones is currently a Section Head, Lecturer, Academic and Industry Consultant in the Department of Civil Engineering at the Tshwane University of Technology, South Africa, since March 2005. He is also a Director at Delta Built Environment Consultants (Pty) Ltd for ten years and the former Chairman of the Board of Directors at Virtual Consulting Engineers (Pty) Ltd, a position he held for six years.
- Jones has served on various ECSA structures, including serving as a Council Member in the Fourth Term, 2012 – 2016 (in which he was the Chairman of the International Affairs Committee and the Deputy Chairman of the Central Registration Committee) and currently in the Sixth Term, 2022 – 2024 where he holds positions of Deputy Chair of the Education Committee, Member of the Investigating Committee as well as Member of the Research, Policy and Standards Committee. Jones has been involved in the accreditation of engineering education in South Africa since October 2006 and has served in various roles, including Team Member, Team Leader, Deputy Visit Leader, and Visit Leader on various Accreditation Visits conducted by the Engineering Council of South Africa to date.

ROAD TO REGISTRATION (Candidacy & Professional)

ENGINEERING COUNCIL OF SOUTH AFRICA 2023

SRM_TEM_009 Rev 0

05-10-2020

ECSA
ENGINEERING COUNCIL OF SOUTH AFRICA

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REGULATORY CONTEXT

Section 22: Constitution of the Republic of South Africa *(the supreme law of the country)* refers that:

> "Every citizen has the right to choose their trade, occupation or profession freely. The practice of a trade, occupation or profession may be regulated by law."

- South Africa *chose to regulate* the profession
- This *gave rise* to the Engineering Profession Act, 2000 (EPA) (Act No. 46 of 2000)
- EPA provided *for the establishment* of a juristic person to be known as the Engineering Council of South Africa (ECSA)
- Registration is *a tool* by which ECSA regulates the profession

BUILT ENVIRONMENT LANDSCAPE

DPW & I - Department of Public Works & Infrastructure
CBE - Council for the Built Environment
SACAP - South African Council for the Architectural Profession
SACLAP - South African Council for the Landscape Architectural Profession
ECSA - Engineering Council of South Africa
SACPVP - South African Council for the Property Valuers
SACPCMP - South African Council for Project and Construction Management Professions
SACQSP - South African Council for the Quantity Surveying Profession

REGULATION OF THE ENGINEERING PROFESSION

Governance

Department of Public Works & Infrastructure (DPW & I) Ministry	• Executive Authority
Council for the Built Environment (CBE)	• Accounting Authority that coordinates six (6) Councils for the Built Environment Professions
*ECSA Council	• Accounting Authority
ECSA CEO	• Accounting Officer

*ECSA is a statutory body established in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000), and derives its *mandate and responsibilities* from the Act.

HOW ECSA REGULATES THE ENGINEERING PROFESSION

Registration in the value chain

REF:
Engineering Profession Act, 2000 (Act No. 46 of 2000) (EPA),
ECSA Website & Annual Report 2019/20

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HOW ECSA REGULATES THE ENGINEERING PROFESSION (Cont'd)

Categories of Registration

Categories of registration

18. (1) The categories in which a person may register in the engineering profession are—

(a) professional, which is divided into—
- (i) Professional Engineer;
- (ii) Professional Engineering Technologist;
- (iii) Professional Certificated Engineer; or
- (iv) Professional Engineering Technician; or

(b) candidate, which is divided into—
- (i) Candidate Engineer;
- (ii) Candidate Engineering Technologist;
- (iii) Candidate Certificated Engineer; or
- (iv) Candidate Engineering Technician; or

(c) specified categories prescribed by the council.

(2) A person may not practise in any of the categories contemplated in subsection (1), unless he or she is registered in that category.

Consideration for this Virtual Panel is "only" on the applications that are for the following categories:

- **Professional Engineer,**
- **Professional Engineering Technologist, &**
- **Professional Engineering Technician.**

REF: Engineering Profession Act, 2000 (Act No. 46 of 2000) (EPA)

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REGISTRATION REQUIREMENTS
Categories Of Registration

Professional

- Engineer
- Engineering Technologist
- Certificated Engineer
- Engineering Technician

Candidate

- Engineer
- Engineering Technologist
- Certificated Engineer
- Engineering Technician

Specified Category

- Lifting Inspectors
- Lifting Machinery Inspectors
- Registered Medical Equipment Maintainers
- Fire Protection System
- Civil Laboratory Technical Controller
- Enterprise Integration Practitioners
- Engineering Management Practitioner

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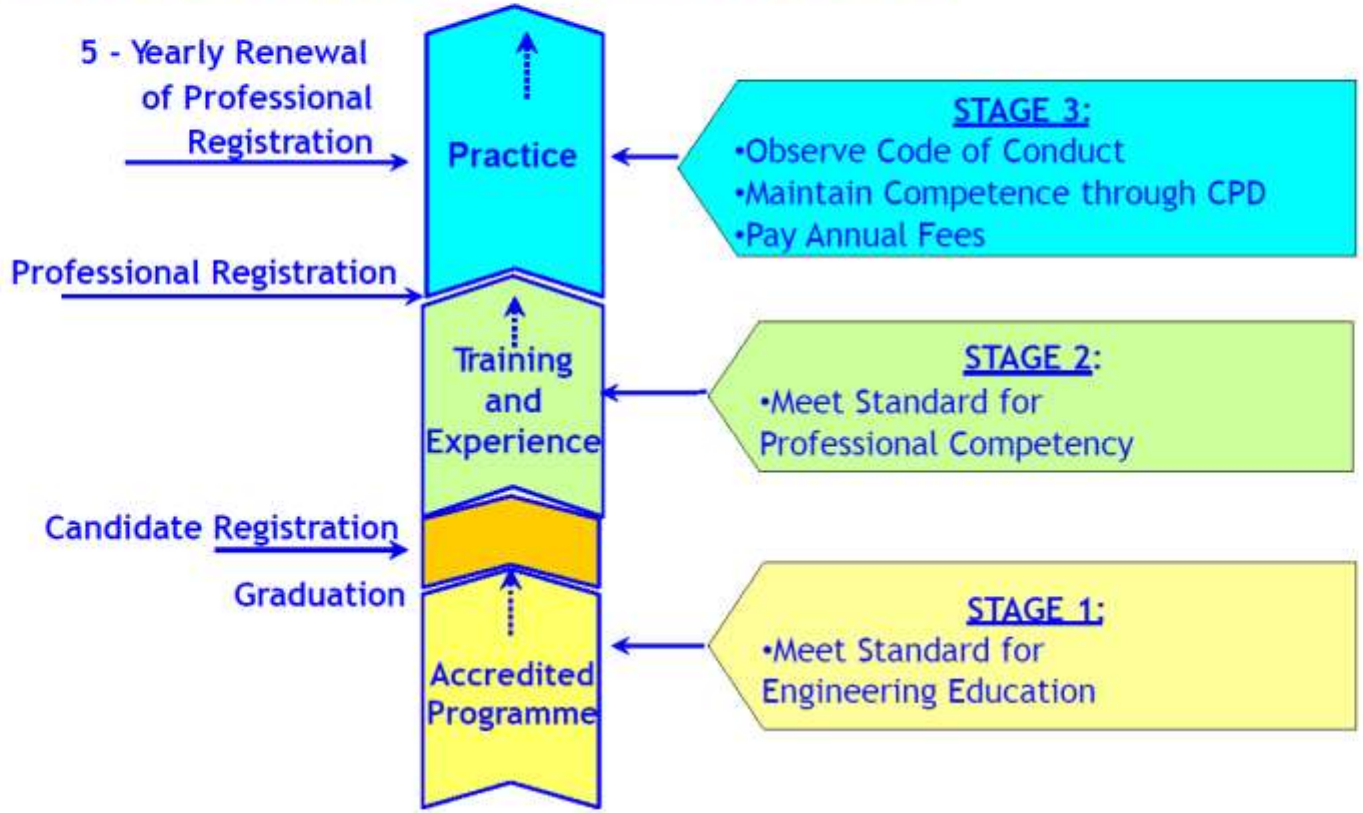
PROFESSIONAL DEVELOPMENT MODEL



COMMON REQUIREMENTS FOR ALL APPLICANTS

- To attain *registration* in a **Candidate category**, an applicant must demonstrate that he/she:
  - Meets the **educational requirements** for the category.
- The **educational requirements** may be met by:
  - Holding an ECSA-accredited qualification or an acceptable combination of accredited qualification~~(s)~~ prescribed for the category; or
  - Holding a qualification or a combination of qualification~~(s)~~ recognised under an international agreement (i.e. the Educational Accords under the auspices of the International Engineering Alliance (IEA) relevant to the category; or

REF: R-01-POL-PC, R-03-PRO, R-04-P & E-17-PRO

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COMMON REQUIREMENTS FOR ALL APPLICANTS (Cont'd)

- Holding a qualification or a combination of qualifications that have been determined by case-by-case evaluation to satisfy criteria for substantial equivalence to an accredited qualification for the category; or
- present a combination of evidence determined by ECSA for the category that indicates an individual level of educational achievement against criteria demonstrating that it is substantially equivalent to an accredited qualification.

REF: R-01-POL-PC, R-03-PRO, R-04-P & E-17-PRO

COMMON REQUIREMENTS FOR ALL APPLICANTS (Cont'd)

- To attain *registration* in a **Professional category**, an applicant must demonstrate that he/she:
  - Meets the **educational requirements** for the category.
  - Demonstrates **competent performance** against the prescribed standards for registration in the category.

    - It is deemed unlikely that **competency** can be developed in less than three years and demonstrated at the required level, hence as per the provisions of EPA, ECSA had prescribed the period before applying for professional registration as minimum three years (Section 7.3.2 of R-04-P).

ECSA

REGISTRATION REQUIREMENTS

Education and Training Experience

CATEGORY OF PROFESSIONAL REGISTRATION	EDUCATION	TRAINING AND EXPERIENCE
Pr Eng	4 years	3 years
	5 years	3 years
Pr Tech Eng	3 years	4 years
	4 years	3 years
Pr Techni Eng	2 years	4 years
	3 years	3 years
Note: Academic programmes must be accredited, recognised or evaluated as substantial equivalent, with individual assessments where required.		

MEETING EDUCATIONAL REQUIREMENTS (Cont'd)

Alternative Route

Other South African qualifications that are recognised for Registration as a Candidate or Professional Engineering Technician

Before 1971			1971 – 1980			Post 1980		
Name	Years Experience	Responsible Experience	Name	Years Experience	Responsible Experience	Name	Years Experience	Responsible Experience
ATC1/NTC4	8	1	NCT/NND	6	1	N4	8	1
ATC2/NTC5	7.5	1	NHCT	6	1	N5	7.5	1
NTD/NED	6	1	ID	6	1	N6	7	1
NDip Tech	3	1	NDT	3	1	NTD/NNDip	6	1
NHDT (Only Elec & Mech)	3	1	MDipTech	3	1	Adv Cert (Eng) (Benchmark)	4	1
No Tertiary Qualification & N3	10	1	T1 (Cert)	11	8.5	Adv Cert (Eng Prac) (Benchmark)	4	1
			T1 (Dip)	8	1	NDip (Benchmark)	3	1
			T2 (Cert)	7.5	1	Dip Eng (Benchmark)	3	1
			T2 (Dip)	6	1	Dip Eng Tech (Benchmark)	3	1
						HNDip	3	1
						BTech	3	1
						Adv Dip Eng	3	1
						BEng Tech	3	1

REF: ECSA Archives and Qualification Standards

MEETING EDUCATIONAL REQUIREMENTS (Cont'd)
Alternative Route

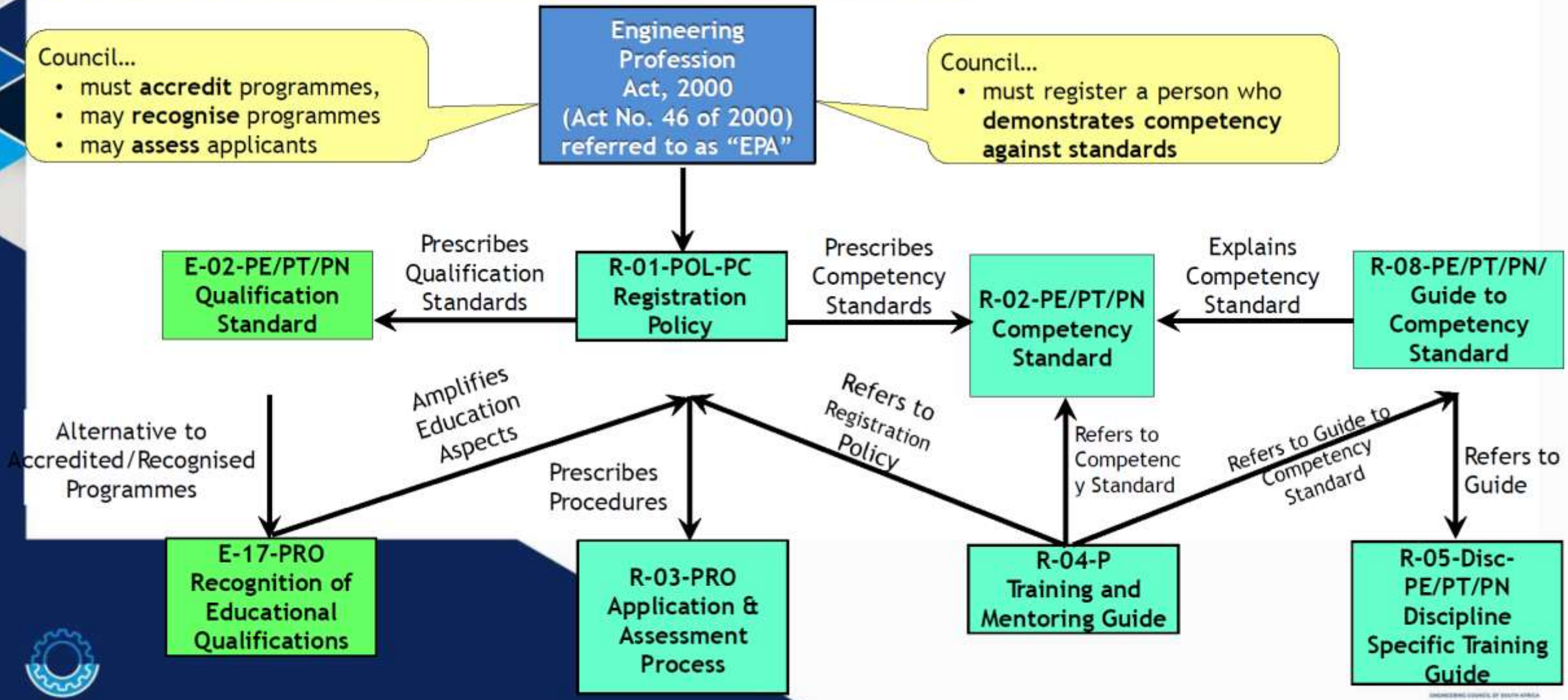
Other South African Qualifications that are recognised for Registration as a Candidate or Professional Engineering Technologist

Before 1971			1971 – 1980			Post 1980		
Name	Years Experience	Responsible Experience	Name	Years Experience	Responsible Experience	Name	Years Experience	Responsible Experience
ATC1/NTC2	14	10	NCT/NND	10	6	N4	14	10
ATC2/NTC5	13	9	NHCT	9	5	N5	13	9
NTD/NED	11	8	ID	11	7	N6	11	8
NDT	6	4	NDT	6	4	NTD	10	7
NHDT (Only Elec & Mech)	5	3	MDipTech	3	1	AdvC ert (Eng)	8	5
No Tertiary Qualification & N3	20	10	T1 (Cert)	14	10	Adv Cert (Eng Prac)	8	5
			T1 (Dip)	13	9	NDip	8	5
			T2 (Cert)	12	8	Dip Eng	8	5
			T2 (Dip)	11	7	Dip Eng Tech	8	5
						HND	6	4
						BTech (Benchmark)	3	1
						Adv Dip Eng (Benchmark)	3	1
						BEng Tech (Benchmark)	3	1

REF: ECSA Archives and Qualification Standards

REGISTRATION REQUIREMENTS

Documents that define the Registration System



REGISTRATION REQUIREMENTS (Cont'd)

Category of Registration, Qualification and Level Descriptor

CATEGORY OF REGISTRATION	QUALIFICATION (BENCHMARK)	LEVEL DESCRIPTOR
Engineer	• BSc(Eng)/BEng/BIng • MEng	Solving **complex** engineering problems and performing *complex* engineering activities
Engineering Technologist	• Adv Dip Eng • BTech (Eng) • BEng Tech	Solving **broadly-defined** engineering problems and performing *broadly-defined* engineering activities
Engineering Technician	• Adv Cert (Eng) • Adv Cert (Eng Prac) • NDip • Dip Eng Tech • Dip Eng	Solving **well-defined** engineering problems and performing *well-defined* engineering activities

REGISTRATION REQUIREMENTS (Cont'd)

Training period

- Minimum of three (3) years post qualification
- It generally takes longer than three (3) years to acquire competencies
- Imperative that training programmes are well developed, managed and implemented by

  employer registered under Commitment & Undertaking
- Spending time on a particular element or training without a qualitative objective will not ensure achievement of the required level of competency for that level

REGISTRATION REQUIREMENTS (Cont'd)

Goal of the training programme

- The goal of the training programme is to allow the candidate to develop his/her competence to the point of being able to demonstrate the outcomes at the required level on a sustained basis and to take responsibility for the work performed.

Candidate's role

- Candidates should appreciate that the onus rest on him/herself to ensure that the training
  received will culminate in the competency defined in the standards

Supervisor's role

- The supervisor is the person who directs and controls the engineering work of the candidate and who takes responsibility for the work in terms of Section 18(4) of the EPA, 2000 (Act No. 46 of 2000).
- The supervisor is expected, together with the **mentor and candidate,** to plan the training task by task to develop the candidate's competence and to review the achievements of each task.

REGISTRATION REQUIREMENTS (Cont'd)

Performance of functions and Competence

- Professional Engineering Practitioners are able to perform functions because of their:
  - Knowledge,
  - Skills, and
  - Attitudes

- Competence is developed by:
  - Education,
  - Training, and
  - Experience

REGISTRATION REQUIREMENTS (Cont'd)

Development of Professional Competence

- During the post graduate period of training and experience, the applicant/candidate is in employment and works with and under the supervision of qualified Engineering supervisors and professional mentors.

- A professional mentor guides the applicant/candidate's professional development (with assistance of the Engineering supervisor).

- Training process may involve structured activities, including induction and training courses
on specific skills or technologies.

REGISTRATION REQUIREMENTS (Cont'd)

Definition of Competence Outcomes

- **Eleven (11) outcomes** are defined and these are conveniently *grouped* **in five (5) sets.**
- The **stem** of each outcome is the same in the Competency Standards for:
  - Professional Engineer,
  - Professional Engineering Technologist, and
  - Professional Engineering Technician.
- The **Competency Standards** are differentiated by the *insertion of level descriptors* (defined in the Competency Standards) at the locations shown by **[level].**

REGISTRATION REQUIREMENTS (Cont'd)
Classification of Competence Outcomes

Group A – Engineering Problem Solving

Engineers	Engineering Technologists/ Certificated Engineers	Engineering Technicians	Specified Categories
A:1 Define, investigate and analyse *complex* engineering problems	A:1 Define, investigate and analyse *broadly-defined* engineering problems	A:1 Define, investigate and analyse *well-defined* engineering problems	A:1 Define, investigate and analyse *specifically-defined* engineering problems
A:2 Design or develop solutions to *complex* engineering problems	A:2 Design or develop solutions to *broadly-defined* engineering problems	A:2 Design or develop solutions to *well-defined* engineering problems	A:2 Design or develop solutions to *specifically-defined* engineering problems
A:3 Comprehend and apply knowledge: Principles, specialist knowledge, jurisdictional and local knowledge	A:3 Comprehend and apply knowledge: Principles, specialist knowledge, jurisdictional and local knowledge	A:3 Comprehend and apply knowledge: Principles, specialist knowledge, jurisdictional and local knowledge	A:3 Comprehend and apply knowledge: Principles, specialist knowledge, jurisdictional and local knowledge

REGISTRATION REQUIREMENTS (Cont'd)
Classification of Competence Outcomes

Group B – Managing Engineering Activities

Engineers	Engineering Technologists/ Certificated Engineers	Engineering Technicians	Specified Categories
B:4 Manage part or all of one or more *complex* of engineering activities	B:4 Manage part or all of one or more *broadly-defined* of engineering activities	B:4 Manage part or all of one or more *well-defined* of engineering activities	B:4 Manage part or all of one or more *specifically-defined* of engineering activities
B:5 Communicate clearly with others in the course of engineering activities	B:5 Communicate clearly with others in the course of engineering activities	B:5 Communicate clearly with others in the course of engineering activities	B:5 Communicate clearly with others in the course of engineering activities

REGISTRATION REQUIREMENTS (Cont'd)
Classification of Competence Outcomes

Group C – Impacts of Engineering Activities

Engineers	Engineering Technologists/ Certificated Engineers	Engineering Technicians	Specified Categories
C:6 Recognise and addresses the reasonably foreseeable social, cultural and environmental effects of *complex* of engineering activities	C:6 Recognise and addresses the reasonably foreseeable social, cultural and environmental effects of *broadly-defined* of engineering activities	C:6 Recognise and addresses the reasonably foreseeable social, cultural and environmental effects of *well-defined* of engineering activities	C:6 Recognise and addresses the reasonably foreseeable social, cultural and environmental effects of *specifically-defined* of engineering activities
C:7 Meet all legal and regulatory requirements and protect the health and safety of persons in the course of *complex* engineering activities	C:7 Meet all legal and regulatory requirements and protect the health and safety of persons in the course of *broadly-defined* engineering activities	C:7 Meet all legal and regulatory requirements and protect the health and safety of persons in the course of *well-defined* engineering activities	C:7 Meet all legal and regulatory requirements and protect the health and safety of persons in the course of *specifically-defined* engineering activities

REGISTRATION REQUIREMENTS (Cont'd)
Classification of Competence Outcomes

Group D – Act ethically, exercise judgement and take responsibility

Engineers	Engineering Technologists/ Certificated Engineers	Engineering Technicians	Specified Categories
D:8 Conduct engineering activities ethically	D:8 Conduct engineering activities ethically	D:8 Conduct engineering activities ethically	D:8 Conduct engineering activities ethically
D:9 Exercise sound judgment in the course of *complex* engineering activities	D:9 Exercise sound judgment in the course of *broadly-defined* engineering activities	D:9 Exercise sound judgment in the course of *well-defined* engineering activities	D:9 Exercise sound judgment in the course of *specifically-defined* engineering activities
D:10 Be responsible for making decisions on part or all of *complex* engineering activities	D:10 Be responsible for making decisions on part or all of *broadly-defined* engineering activities	D:10 Be responsible for making decisions on part or all of *well-defined* engineering activities	D:10 Be responsible for making decisions on part or all of *well-defined* engineering activities

REGISTRATION REQUIREMENTS (Cont'd)
Classification of Competence Outcomes

Group E – Initial Professional Development

Engineers	Engineering Technologists/ Certificated Engineers	Engineering Technicians	Specified Categories
E:11 Undertake initial development activities sufficient to maintain and extend his/her competence	E:11 Undertake initial development activities sufficient to maintain and extend his/her competence	E:11 Undertake initial development activities sufficient to maintain and extend his/her competence	E:11 Undertake initial development activities sufficient to maintain and extend his/her competence

REGISTRATION REQUIREMENTS (Cont'd)

Degree of Responsibility

Progression of Responsibility			
Level	**Nature of Work**	**Responsibility**	**Level of Support**
A. Being Exposed	Undergoes induction, observes processes, work of competent practitioners	No responsibility, accept to pay attention	Mentor explains challenges and forms of solution
B. Assisting	Performs specific processes under close supervision	Limited responsibility for work output	Supervisor/Mentor coaches, offers feed back
C. Participating	Performs specific processes as directed with limited supervision	Full responsibility for supervised work	Supervisor progressively reduces support, but monitors outputs
D. Contributing	Performs specific work with detailed approval of work outputs	Full responsibility to supervisor for quality of work	Applicant/candidate articulates own reasoning and compare it with those of supervisor
E. Performing	Works in team without supervision, recommends work outputs, responsible but not accountable	Level of responsibility to supervisor is appropriate to a registered person	Applicant/candidate takes on problem solving without support, at most limited guidance

REGISTRATION REQUIREMENTS (Cont'd)

Level of Development

Progression of Competency Level	
a) Appreciation	Applicants must *indicate* that they have a general appreciation of the subject matter.
b) Knowledge	Applicants must *indicate* that they have sufficient knowledge of the subject matter.
c) Experience	Applicants must *indicate* that they have, independently or under supervision, performed the processes under consideration. Experience of the relevant techniques and functions must be gained.
d) Capability	Applicants must *indicate* that they have the capability, independently or (at most) with limited guidance, of performing the process and making the decisions required and also that they have the capability of leading or supervising others in the process.

REGISTRATION REQUIREMENTS (Cont'd)

Solving Complex Engineering Problems

Table 1 : Characteristics of Complex Engineering Problems

STEP	MAIN QUESTION	CRITERIA
Step 1 Identify the engineering problem	Is the problem an engineering problem?	a) Does solving the problem require in-depth fundamental and specialised engineering knowledge?
Step 2 Establish the level of complexity of the initial problem state	What is the nature of the problem? Does it have one or more of the characteristics b, c or d?	b) The problem is ill-posed, under-or over specified and requires identification and refinement. c) The problem is a high-level problem and includes component parts or sub-problems. d) The problem is unfamiliar or involves infrequently encountered issues.
Step 3 Determine the complexity of the solution path from the initial state	What is encountered in the solution process? Do solutions have one of characteristics e, f, g or h? Solutions:	e) The solutions are not obvious and require originality or analysis based on fundamentals. f) The solutions are outside the scope of standards and codes. g) The solutions require information from a variety of sources that are complex, abstract or incomplete. h) The solutions involve wide-ranging or conflicting issues such as technical and engineering issues and interested or affected parties.
Step 4 Determine the level of decision-making required and potential consequences	What is involved in the decision-making while solving the problem and evaluating the solution? Does it have one or more of the characteristics i and j?	i) Decisions require judgement in decision-making in uncertain contexts. j) Decisions have significant consequences in a range of contexts.

REGISTRATION REQUIREMENTS (Cont'd)
Solving Complex Engineering Problems

- The test for a complex engineering activity stated in R-02-STA-PE/PT/PCE/PN is based on involvement in the six (6) descriptors illustrated in Table 2.

Table 2 : Complex Engineering Activities	
Complex engineering activities are characterised by the following aspects:	
a)	The scope of activities may encompass entire complex engineering systems or complex subsystems and may extend beyond previous experiences, i.e., unfamiliar scenarios.
b)	Where the context of the activity is complex and requires identification and specification.
c)	Requiring diverse and significant resources, including people and money.
d)	Involvement of multiple facets such as equipment, materials and technology.
e)	Significant and complex interactions between wide-ranging or conflicting technical, engineering and other issues.
f)	Constraints and challenges with respect to time, finance, infrastructure, resources, facilities, applicable laws, standards and codes.

REGISTRATION REQUIREMENTS (Cont'd)

Solving Broadly-Defined Engineering Problems

Table 1 : Characteristics of Broadly-Defined Engineering Problems

STEP	MAIN QUESTION	CRITERIA
Step 1 Identification of the engineering problem	Is the problem an engineering problem?	a) Does solving the problem require coherent and detailed engineering knowledge underpinning the applicable technology area?
Step 2 Establishment of the level of complexity of the initial problem state	What is the nature of the problem? Does it have one or more of the characteristics b, c and d?	b) The problem is ill-posed, is under or over specified and requires identification and refinement into the technology area. c) The problem encompasses systems within complex engineering systems. d) The problem is classified as falling within typical engineering requirements and is solved in well accepted and innovative ways.
Step 3 Complexity of the problem path from the initial state	What is encountered in the problem investigation and analysis process? Does it have one or more of the characteristics e, f, g and h?	e) The problem can be solved by structural analysis techniques/tools/methodologies. f) Standards, codes and procedures must be applied to solve the problem, and justification to operate outside these standards and codes must be provided. g) The solutions require information from a variety of sources that are complex, abstract or incomplete. h) Involve set of interested and affected parties with defined needs to be taken into account, including needs for sustainability.
Step 4 Level of decision-making required and potential consequences	What is involved in the decision-making while analysing the problem? Does it have either or both characteristics i and j?	i) Practical solutions to the problem require knowledge and judgement in decision-making in the practice area and require consideration of the interface with other areas. j) Decisions have significant consequences that are important in the practice area but may extend more widely.

REGISTRATION REQUIREMENTS (Cont'd)

Solving Broadly-Defined Engineering Problems

- The test for a broadly-defined engineering activity stated in R-02-STA-PE/PT/PCE/PN is based on involvement in the six (6) descriptors illustrated in Table 2.

Table 2 : Broadly-Defined Engineering Activities	
Broadly defined engineering activities are characterised by the following aspects:	
a)	The scope of the practice area is linked to the technologies used and the changes due to the adoption of new technology into current practice.
b)	The practice area is located within a wider, complex context; it requires teamwork and has interfaces with other parties and disciplines.
c)	Involve the use of a variety of resources, including people, money, equipment, materials and technologies.
d)	Require the resolution of occasional problems arising from interactions between wide-ranging or conflicting issues such as technical and engineering issues.
e)	Constrained by available technology, time, finance, infrastructure, resources, facilities, applicable laws, standards and codes.
f)	Having significant risks and consequences in the practice area and related areas.

REGISTRATION REQUIREMENTS (Cont'd)
Solving Well-Defined Engineering Problems

Table 1 : Characteristics of Well-Defined Engineering Problems	
Is the problem an engineering problem?	Factors
Can the problem	a) be solved mainly by practical engineering knowledge that is underpinned by related theory?
What is the nature of the problem? Does it have one of the characteristics, b, c or d? Problems	b) are largely defined but may require clarification; c) are discreet, focused tasks within engineering systems; and d) are routine and frequently encountered and may be unfamiliar but in a familiar context.
What is encountered in the solution process? Do the solutions have one of the characteristics, e, f, g or h? Solutions	e) can be solved in standardised or prescribed ways; f) are encompassed by standards, codes and documented procedures (require authorisation to work outside limits); g) require information that is concrete and largely complete but require checking and possible supplementation; and h) involve set of interested and affected parties with defined needs to be taken into account, including needs for sustainability.
What is involved in decision-making while solving the problem and in evaluating the solution? Does it have one of the characteristics, i or j? Do decisions	i) require practical judgement in the practice area of evaluating solutions and considering interfaces with other role-players? j) have consequences that are locally important but not far reaching (wider impacts are dealt with by others)?

REGISTRATION REQUIREMENTS (Cont'd)

Solving Well-Defined Engineering problems

- The test for a well-defined engineering activity stated in R-02-STA-PE/PT/PCE/PN is based on involvement in the six (6) descriptors illustrated in Table 2.

Table 2 : Well-Defined Engineering Activities	
Well-defined Engineering Activities are characterised by the following aspects:	
a)	Scope of practice area is defined by the techniques applied and the techniques that are changed through the adoption of new techniques into current practice.
b)	Practice area is located within a wider, complex context and involves well-defined working relationships with other parties and disciplines.
c)	Work involves a familiar and defined range of resources, including people, money, equipment, materials and technologies.
d)	Resolution of interactions manifested among specific technical factors with limited impact on wider issues is required.
e)	Constrained by operational context, defined work packages, time, finance, infrastructure, resources, facilities, applicable laws, and standards and codes.
f)	Demonstrate risks and consequences that are locally important but are not generally far reaching.

Process flow-diagram of Registration

SRM_TEM_009 Rev 0

05-10-2020

Candidates

Administrative Screening
Application with Educational Requirements

CEO Delegated Approval to Register/Refuse

Professionals

Administrative Screening
Application with Educational

Complete

Set Up Experience Appraisal (EA)
(4 Registered Peers in the Category
&

3+ CT

2+ CNI

Set Up EA Moderation
Set Up EA Moderation
(Panel of Moderators: 1–2 Registered Peers

Application sent back to Panel of Moderators

Set Up & Conduct Interview to elicit more information (2 Registered Peers in the Discipline & Specialisation of the Applicant)

Moderator recommends Interview

Kept in Abeyance

Moderator sign off

Conduct Professional Review (PR) &
Report (3 Registered Peers in the Category & Discipline of the Applicant)

2 or more positive recommendations

Negative recommendations

Assessments, which may include interviews and other processes that ECSA may determine. R-01-POL, Clause 8.14

Set Up PR Moderation
(2–3 Registered Peers in the Category & Discipline of the Applicant) [Due Process] & Outcome Sign-off

Report to CRC

Report to CRC

Register

Central Registration
Discussion & endorsement oversight

Panel of Moderators will refuse

If refusal, decision is appealed against

ECSA Council

CBE

Registration Process Finalisation and Communication (Administration)

Refused applicant can re-apply

ECSA

REGISTRATION REQUIREMENTS (Cont'd)

Understanding the features of the ECSA Digital Registration Certificate

REGISTRATION REQUIREMENTS (Cont'd)

How to certify the ECSA Digital Registration Certificate

- ECSA Office Interim measure:
  - Two legal persons in the ECSA offices can commission a copy of the digital certificate post verification by the registration department
  - This provision is found in Section 18 of the Electronic Communication and Transaction Act, 2002 (Act No. 25 of 2002)
- For any confirmation of registration and/or ECSA certificate, you can email:
  - Mr Zweli Langa: Registration Officer: zwelibanzi@ecsa.co.za
  - Ms **Tshepang Malapile:** Assistant Manager: Registrations Department: tshepang@ecsa.co.za

IEA – INTERNATIONAL REGISTERS

- The international register is **open to any ECSA-registered professional** who meets the requirements of the Competency Agreement as per IEA's rules and procedures.
- ECSA maintains the international registers for **Engineers, Engineering Technologists and Engineering Technicians.**
- These registers are regulated by the three (3) Competency Agreements namely:
  - ***IPEA, IETA, and AIET***
- Each member of the IEA keeps its own section of the international register within its jurisdiction.

REGISTRATION REQUIREMENTS (Cont'd)

IEA - International Registers

- If an ECSA registered persons are registered in the international register section of South Africa, those registrants are entitled to use the following postnominals:
  - **International Professional Engineer - Int PE(SA)**
  - **International Engineering Technologist - Int ET(SA), and**
  - **International Engineering Technician - Int ETn(SA)**

REGISTRATION REQUIREMENTS (Cont'd)

IEA - International Registers

- **Requirements to register on the International Register:**
  - To meet the competence agreements standards, the interested party shall demonstrate or meet the following requirements:
    1. Have academic qualification accredited or recognised by ECSA including those recognised through the relevant accords for the category;
    2. Be professionally registered with ECSA in a relevant category;
    3. Have a minimum period of seven (7) years' practical experience since graduation;
    4. Have a minimum period of two (2) years in responsible charge of significant engineering work; and
    5. Maintain continuing professional development at a satisfactory level.

REGISTRATION REQUIREMENTS (Cont'd)

IEA International Registers

- **Requirements to register on the International Register**
  - To meet the competence agreements standards, the interested party shall demonstrate or meet the following requirements:
    - Have academic qualification accredited or recognised by ECSA including those recognised through the relevant accords for the category;
    - Be professionally registered with ECSA in a relevant category;
    - Have a minimum period of seven (7) years' practical experience since graduation;
    - Have a minimum period of two (2) years in responsible charge of significant engineering work; and
    - Maintain Continuing Professional Development (CPD) at a satisfactory level.

REF: ECSA & IEA Websites

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REGISTRATION REQUIREMENTS (Cont'd)

IEA International Registers

- **Requirements to be registered on ECSA's section of International Register.**
  - The following documents would be required for any Applicant to be considered on ECSA section of the International Register:

1. Completed prescribed Application Form
2. Completed Experience Report
3. Summary of Experience Reports
4. Referee Reports
5. Record of CPD
6. Applicable fee

REF: ECSA Website

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REGISTRATION REQUIREMENTS (Cont'd)

Mutual Recognition Agreements (MRAs)

These jurisdictions, ***Engineers Australia, Engineers Ireland and the Engineering Council UK*** have established mutual recognition of their requirements for **Professional Registration** and agreed that such registered people of at least certain period of each of the parties to these agreements will be accorded corresponding registration of the other on receipt of a duly completed acceptable application form.

Mutual Recognition Agreements

Engineers Australia	Engineers Ireland	Engineering Council UK
All Disciplines	All Disciplines	Civil Engineering
All Categories	All Categories	Pr Eng Only

RELATIONSHIP WITH THE VOLUNTARY ASSOCIATIONS (VAs)

ECSA

Functions:

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

Recognition

Recommends Peers on request : Assessors, Reviewers & Moderators

Engineering Voluntary Associations

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

THANK YOU

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www.eit.edu.au/news-events/events/

Q&A

Thank you for attending.

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