ENSURING THE EXPERTISE TO GROW SOUTH AFRICA

Training and Mentoring Guide for Specified Categories

R-04-T&M-GUIDE-SC

REVISION 2: 15 October 2020

ENGINEERING COUNCIL OF SOUTH AFRICA
Tel: 011 607 9500 | Fax: 011 622 9295
Email: engineer@ecsa.co.za | Website: www.ecsa.co.za

ECSA

TABLE OF CONTENTS

LIST OF TABLES 4
LIST OF FIGURES 4
DEFINITIONS 5
ABBREVIATIONS 7
DOCUMENT CUSTODIAN 7
BACKGROUND 8
1. PURPOSE OF THIS DOCUMENT 10
2. THE ENGINEERING SPECIFIED CATEGORY PRACTITIONER DEVELOPMENT PROCESS 10
3. SPECIFIED CATEGORY PRACTITIONER COMPETENCY AND COMPETENCY STANDARD FOR REGISTRATION 12
3.1 Competency Standard definition 13
3.2 Demonstration of Competency 15
4. Guide to the Competency Standards for Registration in a Specified Category 15
4.1 The categories of professional and Specified Category registration 15
4.2 Registration as a candidate 16
4.3 Common requirements for all applicants 17
5. MEETING EDUCATIONAL REQUIREMENTS 17
5.1 ECSA-accredited qualifications 18
5.2 Educational evaluation 18
6. TRAINING THROUGH A CANDIDACY PROGRAMME 20
6.1 Process of training and experience 20
6.2 Roles and responsibilities 23
6.2.1 Candidate 24
6.2.2 Supervisor 24
6.2.3 Mentor 24
6.2.4 Referees 26
6.3 Planning and managing the candidacy process 26
6.3.1 Types of programmes 26
6.3.2 Duration 26
6.3.3 Planning principles 27
6.3.4 Progression of training programme 28
6.3.5 Documenting training and experience 29

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

6.4 Demonstrating responsibility 30
6.4.1 Legal constraints 31
6.4.2 Managing tensions 31
6.4.3 Diversity of engineering 32
6.5 Competency-focused planning and monitoring of candidacy programmes 33
6.5.1 Goals of training and experience 33
6.5.2 Relating the competency standards to specific work 34
6.5.3 Evidence-based system 35
6.6 Advanced study while a candidate 36
7. ADDITIONAL INFORMATION FOR EXPERIENCED APPLICANTS 36
7.1 Mature applicants for Specified Category practitioner registration 36
7.2 Process for persons already registered in a professional category 36
8. UNSUCCESSFUL APPLICATIONS 37
8.1 Educational requirements incomplete 37
8.2 Application for Specified Category practitioner registration deferred 37
8.3 Application for Specified Category practitioner registration refused 38
REVISION HISTORY 39

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

LIST OF TABLES

Table 1: Background: The Engineering Specified Category practitioner lifecycle and process of professional development 12

Table 2: Roles in training candidates and supporting applicants 23

Table 3: Referee requirements 25

Table 4: Progression throughout the candidacy period 29

LIST OF FIGURES

Figure 1: Documents defining the ECSA Registration System for Specified Categories 8

Figure 2: Main elements of the professional development process through a candidacy programme. 22

Figure 3: Visualising the interconnectedness of the outcomes that are evidence of engineering competence 33

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

QM-TEM-001 Rev 0 – ECSA Policy/Procedure

DEFINITIONS

Accredited qualification: A qualification awarded on successful completion of an accredited programme.

Competency Standard: Statement of competency required for a defined purpose.

Continuing Professional Development (CPD): The systematic, accountable maintenance, improvement and broadening of knowledge and skills, and the development of personal qualities necessary for the execution of work throughout an engineering practitioner's career.

Generic Baseline Competency: The competence for a Specified Category defined in terms of outcomes, including the expected level of performance that can be demonstrated in a range of occupational and/or managerial contexts.

Initial Professional Development (IPD): Systematic participation in the activities typical of CPD but carried out prior to registration.

Integrated Performance: Demonstration of competence via an activity requires several outcomes and specific requirements to be satisfactorily attained.

Practice Area: A distinctive area of knowledge and expertise developed by an engineering practitioner via the path of education, training and experience followed.

Professional Review: An integrative assessment of the applicant's competence, including professional attributes specified in the standard and sub-discipline specific requirements for the category and the sub-discipline via a comprehensive review of the applicant's evidence and an interview.

Refusal: When an application for registration as an SC Practitioner is refused.

Standard: In the educational context, see Qualification Standards in documents **E-02-PN** / **E-02-PT** / **E-05-PT** / **E-06-PN/E** / **E-07-SC** / **E-08-PN** / **E-09-PGDip** / **E-09-PT** / **E-21-PN** / **E-22-P** and in the registration context, see document Competency Standard **R-02-STA-SC**.

Specified Category: A category created for registered persons other than Professional and Candidate Engineers, Certificated Engineers, Engineering Technologists and Engineering Technicians who have specific training and experience pertaining to a specialised field that

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

must be regulated. It is a category of registration created for persons who must be registered through the Engineering Profession Act, 46 of 2000 (EPA) or a combination of the EPA and external legislation as having specific competencies related to an identified need to protect the safety, health and interest of the environment in relation to engineering activity.

Substantial Equivalence: Applied to educational programmes and means that two programmes, while not meeting a single set of criteria, are both acceptable for preparing their respective graduates to gain training and experience towards registration.

Supervisor: A person who oversees and controls engineering work performed by an applicant.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

ABBREVIATIONS

ECSA	Engineering Council of South Africa
EPA	Engineering Profession Act, 46 of 2000
C&U	Commitment and Undertaking
QE	Qualification Evaluation
IA	Individual Assessment
TER	Training and Experience Report
TES	Training and Experience Summary

DOCUMENT CUSTODIAN

The custodian of this document is the Research Policy and Standards Division. The Regulatory Functions Division is responsible for its implementation.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

BACKGROUND

The illustration below defines the documents that comprise the Engineering Council of South Africa (ECSA) system for registration in specified categories. The illustration also locates the current document.

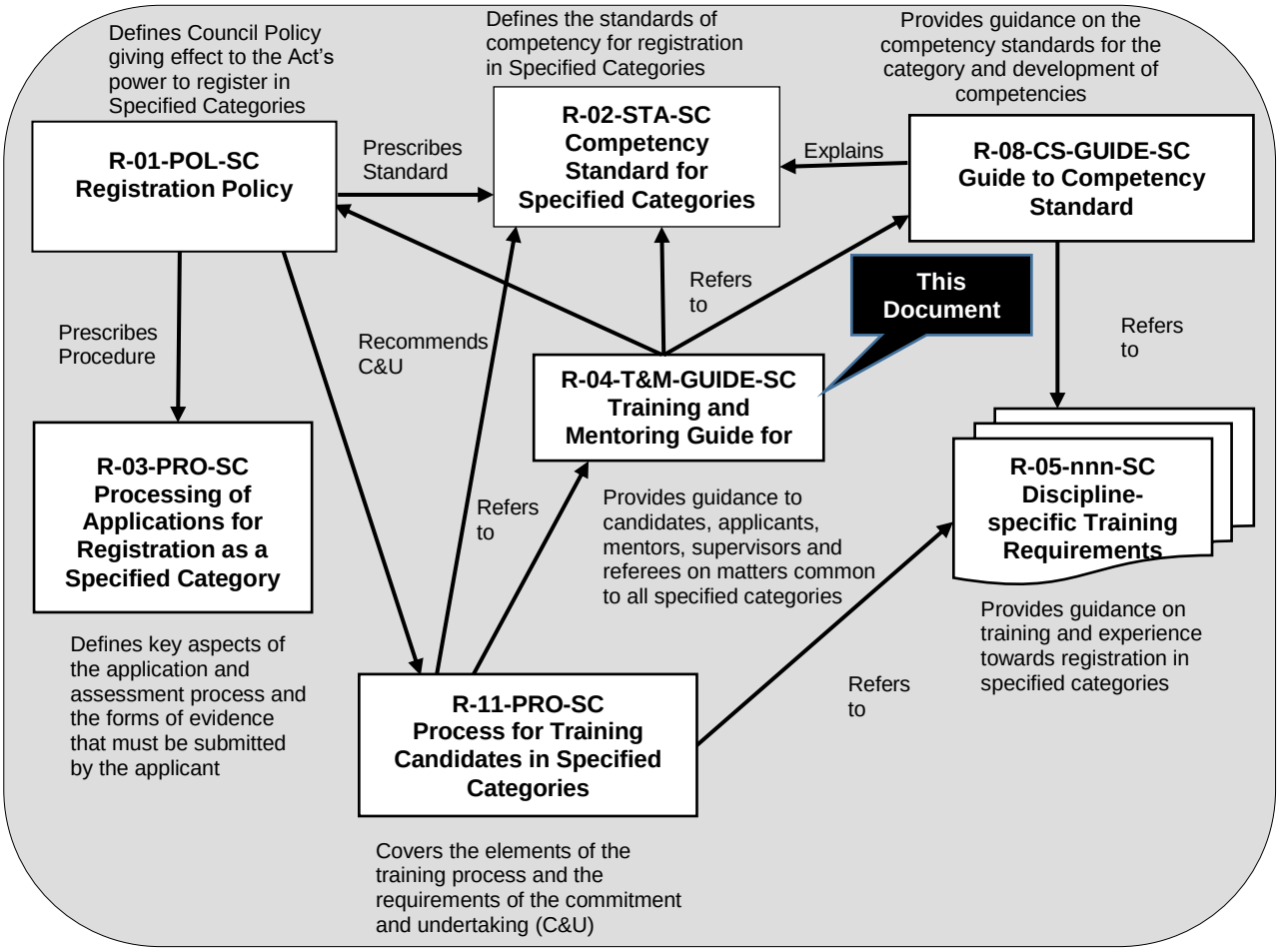

Figure 1: Documents defining the ECSA Registration System for Specified Categories

ECSA's registration system is defined in four types of document: policies, standards, procedures and guidelines. This document is of the fourth type, namely a guide to persons who aspire to register as candidate or Specified Category practitioner and apply for registration. The main documents and their relationships are shown in Figure 1.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

The registration policy applicable to specified categories of registration and applicants proceeding by different routes is defined in ECSA document **R-01-POL-SC**: Policy on Registration of Practitioners in Specified Categories.

The competency standard applicable must be consulted as it defines the outcomes that must be demonstrated by the applicant for registration and the level at which the applicant must perform. The document is **R-02-STA-SC**: Competency Standard for Registration in a Specified Category.

The application process for registration in a Specified Category is contained in document **R-03-PRO-SC**: Process for Processing of Application in Specified Category.

A further *guideline* to persons proceeding to registration as a Specified Category practitioner is document **R-08-CS-GUIDE-SC:** Guide to Competency Standards for Registration in Specified Category.

Sub discipline-specific requirements (including Training Guidelines) specific to individual sub disciplines are available in the following documents:

- **R-05-LMI-SC**: Sub Discipline-specific Training Requirements for Candidate Lifting Machinery Inspectors.
- **R-05-LI-SC**: Sub Discipline-specific Training Requirements for Candidate Lift Inspectors.
- **R-05-MEM-SC**: Sub Discipline-specific Training Requirements for Candidate Medical Equipment Maintainers.
- **R-05-FPSP-SC**: Sub Discipline-specific Training Requirements for Candidate Fire Protection Systems Practitioners
- **R-05-FPSRD-SC:** Sub discipline-Specific Training Requirements for Candidate Fire Protection System Rational Designers (Fire Specialists)
- **R-05-EIP-SC:** Sub Discipline-Specific Training Requirements for Enterprise Integration Practitioners

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

- **R-05-CLTC-SC:** Sub Discipline-Specific Training Guideline for Civil Laboratory Controller.
- **R-05-nnn-SC**: Sub Discipline-Specific Training Requirements for Candidate Future Specified Categories.

1. PURPOSE OF THIS DOCUMENT

This document provides guidance to persons who are committed to registering in a Specified Category with ECSA. The process of training toward registration and the requirements that must be met are described. Particular emphasis is placed on candidacy programmes as the preferred method of training toward registration. Guidance is given to those who supervise candidates in the workplace and to their mentors. This guide covers the common requirements for all Specified Categories.

This guide is designed for two main audiences:

- Persons proceeding to registration in a candidate or specified category
- Mentors and supervisors who support their training.

This guide is supplemented by a guide to the specified category competencies (**R-08-CS-GUIDE-SC**). Each discipline may, in addition, provide further guidance on training and registration requirements in the form of a Discipline Specific Training Guide (**R-05-nnn-SC**).

This guide and its companion documents are informative documents. Their interpretation is subject to the applicable standards, competency indicators, policies and procedures.

2. THE ENGINEERING SPECIFIED CATEGORY PRACTITIONER DEVELOPMENT PROCESS

The main stages in the development of an engineering Specified Category practitioner are described in Table 1. This guide applies to the development process between graduation with an accredited or recognised qualification and applying for registration as a practitioner.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

This period is bracketed by two important stages in the development of an engineering practitioner at which assessment takes place:

- Stage 1: Meet the education requirements for registration in the category.
- Stage 2: Meet the practitioner competency requirements for registration.

During this time, the person undergoes training and gains experience to develop the competencies required for registration and is normally registered as a candidate. A programme of training and experience designed to develop a person is called a candidacy programme or the candidacy phase. In this guide, a person working toward registration is referred to as a candidate. While training through a structured programme is the advised method of developing the competencies for registration, a person may not have registered as a candidate. Unless the context requires otherwise, the term candidate is used throughout this guide and its companion documents.

When the candidate reaches the stage of applying for registration and during this process, the term *applicant* is used.

During the period of training and experience, the person is in employment and works with and under the supervision of qualified engineering practitioners. The training process may involve structured activities including induction and training courses on specific skills or technologies. The candidate also participates in self-initiated Specified Category practitioner development activities, termed *Initial Professional Development* activities.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

Table 1: Background: The Engineering Specified Category practitioner lifecycle and process of professional development

The training process described in this document is a critical part of the development of an engineering specified category practitioner. The benchmark engineering specified category practitioner lifecycle has a number of stages:	
School Education	Achievement of literacy, numeracy and a first level of mathematics, science and language proficiency.
Higher Education	Completion of an accredited programme or equivalent and the attainment of a required level of engineering education.
Candidacy Phase	A programme of training and experience that builds on the higher education qualification to develop the competencies required for registration.
Practice as a Registered Person	Registration certifies that the person has demonstrated, through work performed, that he or she has satisfied the generic baseline competency standards for the Specified Category practice and is permitted to practice and take responsibility for engineering work for which he or she is competent by virtue of education, training and experience. There is a recognition that the person's competence will grow with further experience.
The process of developing competency for registration normally proceeds in the above sequence. The educational requirement is fulfilled first. This step means that requirement for registration as a candidate is met. Registration as a candidate in the category and relevant sub discipline is strongly recommended.	

3. SPECIFIED CATEGORY PRACTITIONER COMPETENCY AND COMPETENCY STANDARD FOR REGISTRATION

Specified Category practitioner competence means having the attributes necessary to perform the activities within the practice to the standards expected in independent

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

employment. The EPA uses a competency-based approach to registration. It says that the ECSA Council must register an applicant in a category who has demonstrated competency against standards that it has determined for the category. This statement embodies the notion of standards of competency and demonstration of competency.

3.1 Competency Standard definition

The competence of an engineering specified category practitioner is defined as having the proven attributes necessary to perform the activities within the category to the standards expected. The standard of competency, or simply the competency standard, defines the outcomes that a person must achieve. To be judged competent to register in a category, the outcomes must be achieved at the level stated. Eleven outcomes are defined, and these are conveniently grouped in five sets.

The stem of each outcome is the same in the Professional Engineer, Professional Engineering Technologist, Professional Certificated Engineer, Professional Engineering Technician and Specified Category Practitioner standards. The standards are differentiated by the insertion of *level discriminators* (defined in the standards) at the locations shown by level.

Group A: Knowledge-based engineering problem-solving

- **Outcome 1:** Define, investigate and analyse specifically defined engineering problems.
- **Outcome 2:** Design or develop solutions to specifically defined engineering problems.
- **Outcome 3:** Comprehend and apply knowledge embodied in specific engineering practices and knowledge specific to the field in which he/she practices.

Group B: Manage engineering activities

- **Outcome 4:** Manage part or all of one or more specifically defined engineering activities.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

- **Outcome 5:** Communicate clearly with others in the course of his or her specifically defined engineering activities.

Group C: Risk and impact mitigation

- **Outcome 6:** Recognise the reasonably foreseeable social, cultural, environmental and sustainability effects of his or her specifically defined engineering activities.
- **Outcome 7:** Meet all legal and regulatory requirements and protect the health and safety of persons in the course of his or her specifically defined engineering activities.

Group D: Act ethically, exercise judgement and take responsibility

- **Outcome 8:** Conduct engineering activities ethically.
- **Outcome 9**: Exercise sound judgement in the course of specifically defined engineering activities.
- **Outcome 10:** Be responsible for making decisions on part or all of specifically defined engineering activities.

Group E: Continuing Professional Development

- **Outcome 11:** Undertake professional development activities sufficient to maintain and extend his or her competence.

Outcomes 1 and 2 require a level descriptor for the level of problem solving. This descriptor considers the knowledge required for analysis and design or development of solutions, the degree to which the problem is defined, factors that may make the solution difficult and the uncertainty and consequences of the problem and solution
Outcomes 4, 6, 7, 9 and 10 require a level descriptor for the demands of the engineering activity for each category.

These level descriptors are defined for the five categories in the competency standards **R-02-STA-PE/PT/PCE/PN** and **R-02-STA-SC**. The candidate or prospective applicant for

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

registration should be familiar with the requirements of the applicable standard for the category.

3.2 Demonstration of Competency

The first stage is the attainment of an educational qualification as an important foundation. During the training and experience phase, the candidate progressively performs more demanding work and takes on more responsibility. In the final phase, the candidate should be working at Level E, which is expected of a registered person but who is still under supervision and control of a registered person.

While working at level E, the candidate undertakes work that requires problem analysis and solution, taking impacts and regulation into account, managing processes to ensure that the engineering goals are met, behaving ethically, exercising judgement in decision-making and taking full responsibility to the supervisor for the work completed. Effective performance of this work is therefore evidence of competence. The applicant for registration must document this evidence for the registration applications and must undergo interactive documentary assessment by engineering Specified Category practitioners who judge the demonstrated competency against the defined standards.

Detailed guides are available to the competency standards for Specified Category practitioners:

- Guide to the Competency Standards for Registration in a Specified Category.

4. Guide to the Competency Standards for Registration in a Specified Category

4.1 The categories of professional and Specified Category registration

ECSA is empowered to register persons in four *professional categories*:

- Professional Engineer
- Professional Engineering Technologist
- Professional Certificated Engineer
- Professional Engineering Technician.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

ECSA is further empowered to register persons as:
Specified Category practitioner in various Council approved sub disciplines

4.2 Registration as a candidate

Each professional category and sub discipline in a specified category has a corresponding candidate category where the requirement for registration is that the educational requirements for the category must have been met for benchmark route:

- Candidate Engineer
- Candidate Engineering Technologist
- Candidate Certificated Engineer
- Candidate Engineering Technician
- Candidate Specified Category Practitioner

Registration as a candidate is intended for persons who have completed their engineering education and are training toward registration. Registration as a candidate serves several purposes:

- It signals the person's intent to seek registration.
- It confirms that educational requirements have been met.
- It provides access to mentoring, information and advice.
- It provides the opportunity to incorporate discipline specific requirements for registration in the training.
- It provides an environment for planning and monitoring the candidate's training and experience.
- It clarifies the position of the as yet unregistered person with respect to performing identified engineering work.

While most candidates are likely to have attained an accredited or recognised qualification, persons proceeding by other routes may find it useful to have formal recognition of meeting

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

the educational requirements as soon as these can be fulfilled. Thereafter, registration as a candidate may benefit the person's training.

In the case of an applicant for registration as a professional or Specified Category practitioner who is not registered as a candidate, the educational standing of the applicant is evaluated within the registration process.

4.3 Common requirements for all applicants

To attain registration with ECSA in a specified category, an applicant must, in terms of the EPA and policies laid out in ECSA document **R-01-POL-SC**, demonstrate that he or she:

- meets the educational requirements for the category
- demonstrates competent performance against the standards laid down for registration in the specified category
- meets the sub discipline specific requirements detailed in the Sub Discipline-specific Training Guide, document R-05-nnn-SC.

The educational requirements may be met in the following ways:

- By holding an accredited qualification or Engineering Trade certificates where applicable.
- By holding a qualification or qualifications recognised under an international agreement
- Holding a qualification or qualifications that are evaluated by ECSA as being substantially equivalent to an accredited qualification, or
- By being assessed by ECSA against criteria for substantial equivalence to an accredited qualification.

5. MEETING EDUCATIONAL REQUIREMENTS

The education requirements are defined in the standard for the accredited qualification for Specified Categories (**E-07-SC**). In the case of recognised and evaluated qualifications, it is Council's policy that substantial rather than exact equivalence is required. Three routes to meeting the education requirements are available.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

5.1 ECSA-accredited qualifications

ECSA accredits engineering education programmes and the qualifications attached as meeting the educational requirements toward registration in candidate specified Category and registered Specified Category practitioners.

Recognition of Higher Certificates in Engineering is subject to confirmation of an acceptable combination of subjects in each case as prescribed by industry and in support of the Discipline Specific Requirements.

5.2 Educational evaluation

Meeting the educational requirements is a first step toward registration in that category and is the sole requirement for registration in a candidate category. Applicants for registration who do not hold a qualification from an accredited programme or who are not recognised through international agreements must have their educational achievement evaluated.

ECSA's policy (**R-01-POL-SC**) on specified categories does not require qualifications to meet the exact requirements for an ECSA-accredited qualification for the category but they must be *substantially equivalent* according to the criteria defined in document **E-17-PRO-SC**. Appropriately worded criteria for substantial equivalence of qualifications and individual achievement are defined for specified categories in Table 1 of document **E-17-PRO-SC**. The criteria broadly follow the criteria for the accredited qualification. Criteria that cannot readily be evaluated and which are covered at the registration level are omitted.

Two cases are distinguished (numbered (iii) and (iv)) in the policy:

(iii) Holders of *qualifications evaluated* (QE) by ECSA as substantially equivalent to an accredited qualification, from both providers whose quality is known to ECSA, allowing an accelerated verification of the qualification, as well as providers where comprehensive evaluation is necessary.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

(iv) Persons who may have partial recognition for qualifications under (iii) and must undergo *individual assessment* (IA) to obtain the balance of their recognition of substantial equivalence. A variety of individual assessment processes are proposed for different purposes.

Processes for Evaluation of Qualifications (case (iii)) and Assessment of Individuals (case (iv)) are clearly demarcated and well-coordinated. The normal sequence is to first treat the application for qualifications evaluation. If an applicant's qualification does not meet all the criteria for substantial equivalence, individual assessment is invoked, with or without additional learning. This deals with most applicants requiring educational evaluation.

Where an applicant's qualifications do not meet criteria defined in **E-17-PRO-SC**, examinations appropriate to each category of registration may be used to fulfil requirements:

- *Engineering Fundamentals*, at the category level, examines knowledge in engineering fundamentals relevant to broad disciplinary groupings, with embedded assessment of essential mathematics and natural science underpinning fundamentals (Criteria 1.1 and 1.2).
- *Specialist Engineering Sciences*, at the category level, evidenced by writing and passing a specified number of examinations at the exit level of an accredited qualification offered by an education provider whose programmes are accredited by ECSA for the category (Criteria 1.3 and 2).
- *Engineer in Society Essay* Test that assesses contextual knowledge (Criteria 7 and 8) and Communications (Criterion 6).

The remaining criteria (4 and 5) may be satisfied through a recognition of prior or workplace learning via design or investigation/research portfolios. A supporting document provides an overview of methods for meeting the educational requirements by methods (iii) and (iv).

This process is essentially an advisory service. There is no concept of refusal to recognise. Rather the applicant is advised of the criteria that have been satisfied for individual categories. Reasons for non-compliance with individual criteria are given. The applicant may

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

provide further evidence, undertake further learning or undergo further assessment until the requirements for the category are fulfilled.

6. TRAINING THROUGH A CANDIDACY PROGRAMME

A candidacy programme normally commences when the trainee graduates from an accredited or recognised programme, registers as a candidate and enters employment with an employer who is committed to training persons toward registration. Candidacy programmes are typically at least three years in duration. The final level of competence must be that defined in the standard for the category.

The objective of the programme is, through training, experience and IPD, to attain the level of competence for registration and through work performance, provide evidence of that competence.

Note: IPD consists of activities identified as meeting the post-registration CPD requirements but carried out before registration.

6.1 Process of training and experience

We use the terms training and experience in the following way. *Training* is a process of learning specific practical knowledge, skills, attitudes and values under the direction of competent persons. Training may be supported by formal courses and other learning activities. Most training time is spent in engineering work. *Experience* is a process of gaining competence by active involvement in the work environment.

The trainee should register as a candidate in the relevant category as early as possible in the training process, preferably on graduation from an accredited or recognised educational programme. The process of training and experience, generally, consists of phases or substantial tasks that form convenient units for planning the training and assessing performance.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

Figure 2 shows the general elements of a programme of training and experience. The process is governed by standards, policies and procedures. The candidate engages in a sequence of activities that may be the completion of a particular aspect of training or a unit of work, shown as a development phase in Figure 2. For each of the development phases, the candidate, working with the supervisor and mentor, sets and documents the competency development objectives of the phase. At the end of the phase, the candidate, supervisor and mentor review the achievements of the just-completed phase against the objectives set for the phase. Objectives are then set for the next phase. After one or more phases, when the candidate has worked at the exit level (Level E), defined in Table 4, the mentor and candidate may determine that sufficient evidence of competence has been accumulated to apply for registration, provided that the three-year minimum period has elapsed. The candidate then prepares an application for registration, setting out evidence of competency.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

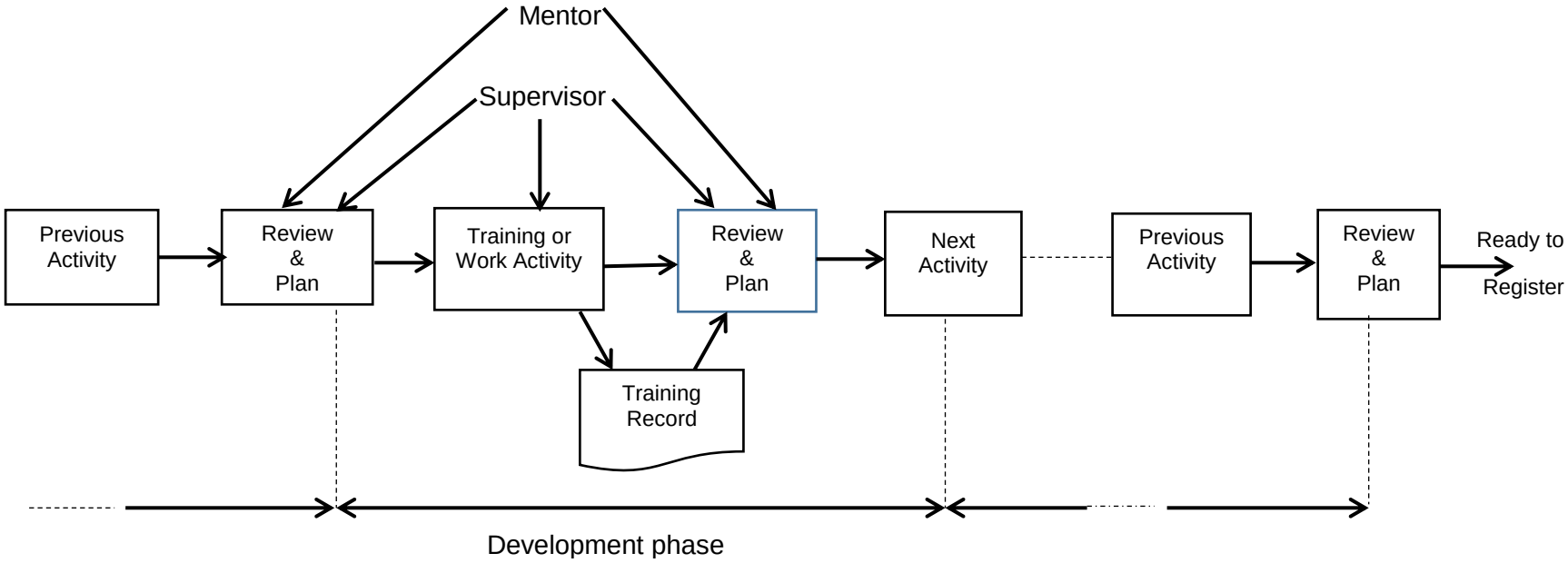

Figure 2: Main elements of the professional development process through a candidacy programme.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

Detailed information on Planning and managing a candidate's programme of training and experience is available later in this guide.

6.2 Roles and responsibilities

The goal of the training programme is to allow the candidate to develop his/her competency 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. Three key players in the training of candidates are supervisors, mentors and referees. Table 2 summarises the roles of these players. They are described in terms of roles because an individual may perform more than one player's function.

Table 2: Roles in training candidates and supporting applicants

Role	Supervisor of Engineering Work	Mentor	Referee
Function	Supervise the work of the candidate, directly or through intermediary: supervisor takes responsibility for work	Guide and facilitate the development of the candidate, guides timing and preparation of application for registration	From knowledge of candidate's work performance, give opinion of competency against standards and integrity
Reporting	Signs training reports		
Registration*	Supervisor registered in terms of s18(4) of EPA; Intermediaries preferably registered	Must be registered	See Table 3
Location	Employer organisation	Employer organisation or external	Employer organisation or external
Multiple roles	An individual may play two or three of the above roles		
* Registration of mentors, supervisors, referees in the category of the applicant, unless otherwise agreed by ECSA			

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

6.2.1 Candidate

Candidates should appreciate that the onus rests on them to ensure that the training received culminates in the competency defined in the standards. Council prefers that they follow a training programme under a Commitment and Undertaking Agreement (C&U) (see Section 6), which has been registered by Council and which, as is required, has at least one mentor registered in terms of the C&U. Should candidate engineers experience difficulties with their training, they should attempt to resolve them through the normal channels; for example, with the mentors responsible for their guidance. The relevant engineering institutions/institutes/ bodies/organisations under the EPA, have indicated their willingness to assist candidates in this regard.

6.2.2 Supervisor

The supervisor is the person who directs and controls the engineering work of the candidate and who takes responsibility for the work performed. Supervision may not be direct but must be performed on an adequately informed base. Intermediaries between the candidate and the supervisor should preferably be registered but, if not registered, must be of adequate engineering competence. 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.

The supervisor may also fulfil the function of the mentor described below.

6.2.3 Mentor

The mentor must be registered in the appropriate category or another category if specifically agreed to by Council in the particular case. The mentor's role is to guide and facilitate the candidate's development. A mentor, in agreeing to assist a candidate, must commit to the following duties:

1. The mentor must participate in the planning and advise on the suitability of the programme of work and experience for the candidate's development. Training tasks or

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

phases must be planned to ensure that the candidate develops toward the competency required for registration standard for the category of registration.

2. Ensure the candidate is exposed to increasing demands in problem solving, management, impact assessment and mitigation, consideration of ethical issues, judgement and responsibility.
3. Ensure the candidate completes the agreed training.
4. If the mentor is not the candidate's supervisor, to liaise with the supervisor to ensure that the work assigned to the candidate is consistent with the training objectives.
5. On the completion of each agreed task or phase, the mentor must receive a report from the candidate and review the outcomes achieved in the light of the objectives.
6. The mentor must assist the candidate to decide when he or she is ready to apply for registration and assist with the actual application.

Should the services of a mentor internal to the organisation not be available to an employer, the employer may use the services of an external mentor through one of the relevant engineering institutions/institutes/bodies. Mentors thus appointed should be sensitive to any limitations the employer may wish to set in any given situation.

Table 3: Referee requirements

Category	Number	Registration	Type of relations an applicant may obtain referees from
Specified Category	3	Engineer Technologist Certificated Engineer Technician Specified Category Practitioner	Mentor Immediate Supervisor Indirect supervisor Employer Colleague (not more than 1) same or higher level, involved in work or not involved in work Client

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

6.2.4 Referees

Referees must be ECSA registered and have first-hand experience of the candidate's engineering activities, particularly those that are indicative of the candidate's competency. Referees will therefore have supervised, mentored or worked with the candidate or have been in a position of authority with clients for whom work was performed. Referees must be in a position to confidently assess both the candidate's competence as a professional and to attest to the candidate's ethical analysing. The eligibility of referees for applicants in various categories is shown in Table 3.

6.3 Planning and managing the candidacy process

In this section we examine various things that would be of interest to someone who has committed to training toward registration in a professional category:

6.3.1 Types of programmes

These guidelines apply to candidates proceeding via candidacy programme. It is recognised that an individual candidate may experience a combination of training in and outside of a candidacy programme and that training may be carried out with different employers. The end result must always be the same: being able to perform at the level of competency, including the ability to be responsible for work performed, required for registration in the chosen sub category. Mixed mode training requires extra planning and management effort on the part of supervisors, mentors and the candidate. Three measures are recommended:

- The candidate's record keeping must be consistent across the various periods and modes of training.
- The candidate should, if possible, retain the same mentor if the employer or mode of training changes.
- In the final analysis, the candidate must take ownership of the training and negotiate with employers to ensure that the necessary competencies are attained.

6.3.2 Duration

The purpose of a training programme is to allow a person who has fulfilled the educational outcomes to attain the competence required for registration. It is unlikely that this

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.
QM-TEM-001 Rev 0 – ECSA Policy/Procedure

competency can be developed in less than three years and demonstrated at the required level. **R-01-POL-SC** sets a minimum of three years of training and experience. During this period, the candidate's competency develops and must be demonstrated at the required level over a period. Mentors, candidates and employers must plan for a period of not less than three years.

6.3.3 Planning principles

Three principles must be followed by supervisors and mentors when planning a candidate's training:

1. The planning, execution and monitoring must focus on the competencies to be developed.
2. A variety of work activities is necessary for the proper development of a candidate.

   The object of having a variety of work is to broaden the candidate's experience and to ensure that all aspects of competency are developed and ultimately assessed. Variety may be obtained in different ways, singly or in combination:

   - The engineering activities of an individual are located at various stages in the lifecycle of an engineering activity: conception, planning, design (develop), construction/implementation/execution, operation and withdrawal.
   - Associated with this lifecycle are specific functions including commissioning, testing, improving and trouble-shooting. The candidate should experience several stages in the lifecycle of a project or projects.

   Variety may also involve different aspects of a discipline (or cross-disciplinary fields) The Discipline Specific Training Requirements and Guidelines give indications of acceptable variety of experience in different disciplines and may enlarge on training aspects appropriate to the discipline.
3. Increasing responsibility and accountability within the organisation must be imposed on and accepted by the candidate until he or she is capable of accepting responsibility in making and executing engineering decisions at the full registration level. The descriptors defined in Table 4 should be used to quantify the degree of responsibility.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

6.3.4 Progression of training programme

During development from the graduate level to meeting the competency requirements for registration, the candidate progresses through levels of work capability until the required level for registration is attained. A useful scale of achievement over a candidacy programme is shown in Table 4. At each of the five degrees of responsibility, the table shows the nature of the candidate's work, ranging from being oriented in the engineering environment at degree A, to working at the degree of responsibility required for registration, namely E or *Performing*. The responsibility that should be placed on the candidate at each stage is in terms of the candidate's own responsibility and the extent of supervision and mentoring support.

More detailed information on progression – that is how this general definition would map into particular disciplinary contexts – may be included in the discipline-specific training requirements.

The main learning process is through working with competent engineering personnel. The trainee is under the direct or indirect supervision of an engineering practitioner. A mentor guides the trainee's development. The candidate is involved in engineering work of adequate variety and increasing demand and responsibility. The candidate first *assists* with engineering work, doing defined tasks under close supervision. The candidate progresses to making contributions individually and as a team member to the work. By the end of the training period, the candidate must perform individually and as a team member at the level of problem-solving and engineering activity required for registration and exhibit degree of responsibility Level E. This level of work provides evidence of competency against the standards. Over time, the emphasis on *training*, that is, learning through inputs of others, gives way to learning by doing engineering work and reflecting on observations and achievements, that is *experience.*

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

Table 4: Progression throughout the candidacy period

Degree of Responsibility	Nature of work: the candidate	Responsibility of Candidate to Supervisor	Extent of Supervisor/ Mentor Support
A: Being Exposed	Undergoes induction, observes processes, work of competent practitioners	No responsibility	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 immediate quality of work	Candidate articulates own reasoning and compares 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; supervisor is accountable for candidate's decisions	Candidate takes on problem solving without support, at most limited guidance

6.3.5 Documenting training and experience

Phase-by-phase planning and review of the candidate's training must be supported by documentation, both for the immediate purpose of managing training and for compiling evidence when the candidate comes to apply for registration.

Training and experience are generally arranged in discrete activities, tasks or phases as shown in Figure 2. Each phase of activity is designed to develop specific aspects of competency (outcomes) at an agreed level of problem-solving and engineering activity with an appropriate degree of responsibility. Such a unit typically ranges from several weeks to several months in duration. For each task or phase, the candidate, together with the

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

supervisor and mentor, should use a suitable format for recording the planned outcomes and level to be achieved and the results of the previous phase. A suitable template is, for example, the Training and Experience Report (TER) form for specified category applicants. This form allows particular aspects of competency to be identified as being amenable to development in this task or phase. In addition, the level at which competency is to be demonstrated is identified as well as the nature of the candidate's responsibility.

When the task or phase is complete, the candidate, supervisor and mentor must assess the level of competence learned and displayed. Level descriptors for problem solving and the demands of engineering work should be consulted to determine progress to the exit level. Such achievement (or shortfall) may influence the planning for subsequent tasks or phases. This assessment is also recorded on the TER form. The assessment at the end of one phase should form an input to the planning of the next or future phases. The process continues until the candidate is working at the level required for registration against individual outcomes and as a whole.

When the candidate applies for registration, each task or phase must be summarised in the Training and Experience Summary (TES) document and reported in a TER. Each activity is described in company and generic terms. Company terms include the names of specific plants, processes, sites etc. while generic descriptions would include terms such as design (development), trouble shooting, construction and commissioning. The TES and TER are required in the application for registration. It is therefore advisable for the candidate to complete the TER and update the TES at the same time.

As the programme progresses, the candidate's competency must develop towards that required for registration. Supervisors and mentors should be alert to the candidate arriving at this level of competence.

6.4 Demonstrating responsibility

The competency standards require not only the demonstration of technical and engineering management proficiency but also the ability to assume responsibility for engineering decisions. An important outcome that applicants for registration must demonstrate is

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

Learning Outcome 10**,** namely, to be responsible for making decisions on part or all of engineering activities at the level expected for the category. The requirement that candidates demonstrate that they are able to take responsibility for the engineering work performed requires careful management by the supervisor. This section outlines the legal constraints on candidates taking responsibility for engineering work and ways of allowing candidates to display responsibility.

6.4.1 Legal constraints

A candidate is not allowed, under the EPA to take accountability for the work. Various sections of the EPA require registration for particular aspects of work. Section 18(2) requires a person to be registered to be able to practise in a professional category. Section 18(3) requires a person who practises in a consulting capacity to be registered in an appropriate category. Section 18(4) requires a person registered as a candidate to work under the supervision and control of a registered person.

Section 26 empowers and requires ECSA to identify work that must be performed or supervised and controlled only by registered persons who must take responsibility for the work. While the Regulations identifying engineering work have not yet been promulgated, they should be used as prudential guidelines as to whether particular work falls into the "identified" category. The Framework document describes the method used for determining whether particular work is identified as *engineering work*.

Registration as a candidate corresponding to a Specified Category provides a mechanism for persons to perform work under supervision that would otherwise be reserved for registered persons and thereby demonstrate competency for registration. Such work must be performed under the supervision and control of a registered person who must take responsibility for the work.

6.4.2 Managing tensions

Within the training process, it is necessary to manage the conflicting requirements between a candidate not being allowed to take responsibility but nevertheless being required to show that he or she can perform engineering work and take responsibility at registration level.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

It is helpful to identify two aspects of responsibility:

- Taking *due care* to ensure that the objectives of engineering work are achieved and that impacts and risks are addressed.
- Being *accountable* for the work, in particular that due care was taken to deal with risks.

Supervisors and mentors must implement strategies to ensure that the candidate can demonstrate the ability to exercise *due care* without having to make decisions that require accountability; the supervisor must be accountable. Taking due care requires the candidate to exercise the defined competencies: problem solving, management, impact identification and mitigation, ethical behavior, acting responsibly and applying judgement. Working within the limits of those competencies is a clear requirement. In such a mode of working, the candidate would be required by the supervisor to express judgements and propose decisions and recommendations; these may be at the level that a registered person would normally perform. The candidate, while not carrying any legal accountability, is responsible internally within the employer organisation. The supervisor must check the judgements, decisions and recommendations as he/she bears ultimate accountability for the work.

6.4.3 Diversity of engineering

It is recognised that the scope of engineering is too wide for definitive training guides. Engineering education, training and work is generally partitioned according to disciplines/ sub disciplines as well as industry sectors: consulting, contracting, construction, manufacture, mining, process industries, services, utilities and infrastructure. Within a sector or discipline, an engineering practitioner may be concerned with systems, processes, components or materials. The competency standards identify the generic outcomes for competent practitioners, irrespective of discipline or industry sector; for example, identify and analyse problems and synthesise solutions. These represent the fundamental, transferable competencies. Rather than formulating complex requirements for all functions, the system relies on engineering peers for training and assessment. Peers are persons who are engineering practitioners in the same discipline and are registered in the category the candidate aspires to.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

6.5 Competency-focused planning and monitoring of candidacy programmes

The objective of training and experience in a candidacy programme is to develop the competency that must be demonstrated to be registered. Training and work experience must therefore be planned, executed and evaluated to ensure that this goal is attained.

6.5.1 Goals of training and experience

Section 3 summarises and groups the competencies that must be demonstrated in the assessment process when the candidate applies for registration. Engineering practitioner competence is more than satisfying a linear list of outcomes. Figure 3 visualises engineering competence.

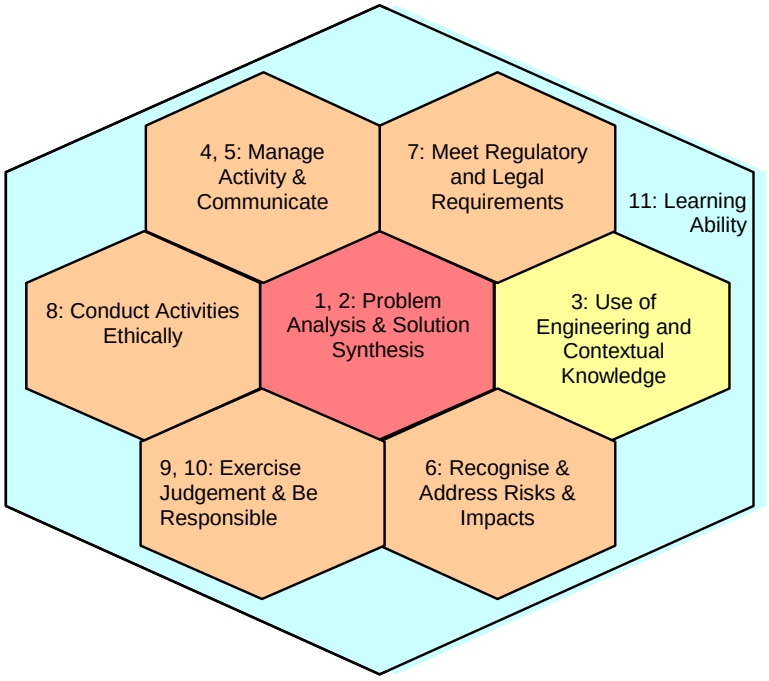

Figure 3: Visualising the interconnectedness of the outcomes that are evidence of engineering competence

The core activity of engineering is problem-solving, that is, bringing about change from an initial state to final state overcoming barriers on the way to achieve a result useful for people, enterprises or society. Engineering science-based knowledge is brought to bear while taking

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

into account impacts, regulatory factors and ethics. Responsible, judgement-based decision-making and management of the process are essential to achieve the engineering goals. Competent engineering practitioners underpin their activities by learning continually, both formally and informally.

Candidates, supervisors and mentors must focus at all times on the goal of training, namely the development of competence as specified by the outcomes in the relevant standard and the required level of performance viewed in an integrated way. The latter has two principal parts: the *level of engineering activities* within which the candidate operates and the *level of problem-solving*.

6.5.2 Relating the competency standards to specific work

The generic competencies, problem solving, management, impact analysis and taking responsibility, manifest themselves in particular forms of activity, for example, design (development), investigation, troubleshooting, improvement and research. Each of these forms of activity expands further. For example, design includes the preparation of a brief. At a company-specific level, the functions are performed in relation to specific plant, operations and business activities.

Candidates should think of both the specific requirements of a task or phase of work and in terms of the generic competencies required for the work. For example, the actual work may be troubleshooting poor performance at the No 4 Acid Plant at the Northern Works. The candidate and colleagues are performing an investigation that may lead to a design review and a redesign of aspects of the plant. Generically, the candidate and colleagues are identifying and analysing problems, synthesising solutions and using their knowledge in the process. They also must examine and deal with regulatory, environmental and economic impacts.

Additional sub-discipline-specific registration requirements for each specified category are detailed in document **R-05-nnn-SC**, where **“nnn”** represent the specific specified category applicable.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the ‘original’ stamp in red does not appear on each page, this document is uncontrolled.

6.5.3 Evidence-based system

Evidence of competent performance has two essential requirements: first, a capability to *perform a number of defined actions* must be demonstrated, and second, the performance must be at or exceed a *specified level of demand*. The defined actions are the outcomes and typifying actions that reflect acceptable performance contained in the assessment criteria. The level is defined by a specification for the demands of the engineering activities and the nature of problem-solving. In a specified category field, evidence of competent performance is obtained from the competent performance of specific engineering tasks by the person being assessed. Typical tasks provide evidence of several outcomes and assessment must be holistic.

The eleven outcomes defined for Specified Category practitioners represent different aspects of holistic performance and specific attributes. The outcomes fall conveniently into five groups: the first relates to problem-solving, the next three to engineering practice and specific attributes and the last to the ability to maintain and develop competence.

While competence is specified by eleven outcomes to be demonstrated at a particular level, the applicant for registration must demonstrate integrated performance against outcomes. This reflects the reality that an engineering task or function is unlikely to require only one outcome, for example, problem analysis seldom stands alone; it will require the use of knowledge, the analysis of impacts and must lead seamlessly into the solution phase. One possible visualisation for engineering competence is shown in Figure 3.

Engineering problem-solving, made up of analysis and synthesis is central to all engineering activity including design (development), investigation and management. Problem-solving is supported by a number of capabilities, corresponding to outcomes 3 to 10. Outcome 11, CPD, better expressed as the maintenance and extension of competency, provides a platform for the performance of outcomes 1 to 10.

Different engineering functions and assignments have different mixes of demand. An applicant for registration is expected to provide evidence of working at the required level of

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

QM-TEM-001 Rev 0 – ECSA Policy/Procedure

problem-solving in engineering activities at the specified level of demand as part of the application for registration.

6.6 Advanced study while a candidate

In a competency-based system, a variety of means can be used to enhance competency and present evidence of competency. Advanced study may contribute to learning towards and providing evidence against the registration outcomes (and educational outcomes for persons without accredited or recognised qualifications). For example, design of novel equipment during an advanced certificate may be considered as evidence against problem-solving outcomes 1 and 2. Because the assessment for registration is competency-focused, the previous policy of considering a reduction in the length of the candidacy falls away.

Where credit is sought against a registration-level outcome, the aspect of further study should be documented using a TER form.

7. ADDITIONAL INFORMATION FOR EXPERIENCED APPLICANTS

7.1 Mature applicants for Specified Category practitioner registration

Within the category of Specified Category practitioner registration, documentation requirements differ between applicants with considerable experience after graduation and at the level required for registration and those who do not. Specific documentation requirements for the category are defined in document **R-03-PRO-SC**.

7.2 Process for persons already registered in a professional category

Applicants, who are already registered in a professional category and wish to register in a Specified Category as well, must meet both the educational and competency requirements for the Specified Category. In most cases, an additional Specified Category registration, the additional category has less demanding education and competency requirements, but additional sub discipline-specific registration requirements must be met (refer to the relevant **R-05-nnn-SC**). A person wishing to pursue this route is advised to become familiar with the educational requirements, the Specified Category competency standards and the sub discipline-specific requirements for the additional category.

CONTROLLED DISCLOSURE
When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

The educational requirements can be met by formal study in an accredited programme or other means. Document **E-17-PRO-SC** defines the criteria for meeting the educational requirements other than accredited or recognised degrees. A supporting document outlines various practical means for meeting the individual criteria. The education requirements may be satisfied at any time before applying for registration.

Specified Category practitioner competencies must be developed through work to the level required for the additional category. The level of problem-solving must be adapted to the required level within engineering activities that satisfy the specific level descriptor.

8. UNSUCCESSFUL APPLICATIONS

8.1 Educational requirements incomplete

The Educational Evaluation process never results in refusal. If an applicant's qualifications are not evaluated as completing the educational requirements, he or she is informed of the criteria that have been met and the outstanding criteria. The applicant should then consult the ECSA document **E-17-PRO-SC** and decide on ways that might be undertaken for learning and assessment to meet the outstanding criteria. Credits awarded against criteria are valid for five years and new evidence of satisfying individual criteria may be submitted as it becomes available.

8.2 Application for Specified Category practitioner registration deferred

Deferment is a way of affording the applicant the opportunity to undertake further training or gain more experience to make up for particular deficiencies in the evidence of competency presented. The normal period of deferment is 12 months. The applicant may submit new evidence when it becomes available. A deferred application is not considered as a refusal and no further fee is payable. The applicant may for good reason apply for an extension up to 12 months. When an application is re-considered after a deferment, a further period of deferment may be granted. An applicant may benefit from an extension or a second deferment but not both.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

8.3 Application for Specified Category practitioner registration refused

Whenever an application is refused, the criteria that were not satisfied are identified and an indication of why the evidence provided was deficient is given. The applicant can then plan further training and experience to generate evidence of competency. A new application can be made once the evidence has been generated. The applicant should keep a record of development activities undertaken. Provided that the new application is made within five years of the refusal and development activities have been ongoing, the applicant will not need to demonstrate competency against the outcomes credited at the first application.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

REVISION HISTORY

Revision number	Revision date	Revision details	Approved by
Concept A	1 November 2015	R-04-P adapted to suit Specified Categories and providing for registration requirements in the SDSTGs. Submitted to JIC for comments on 23 November 2015.	JIC Working Document
Concept B	15 December 2015	Minor editing by JIC members incorporated.	Approved by JIC for submission to TC
Concept C	8 February 2016	Hyperlinks checked.	Finally approved by JIC for submission to TC
Rev 1	24 March 2016	No amendments.	Approved by Council
Rev 2 draft A	01 Sept 2020	Alignment to the Policy and Standards Framework on ECSA Policies. Hyperlinks removed and replaced by table of contents for consistency with other regulatory documents, reference to international agreement removed as ECSA does not have agreement in the specified category space,	Working Group
Rev 2 draft B	21 August 2020	Review by Registration Business Unit	Registration BU
Rev 2	02 Oct 2020	Review by the Executive	EL Nxumalo
Rev 2	15 Oct 2020	Approval	RPSC

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.

The Guide for

Training and Mentoring for Specified Categories

Revision 2 dated 15 October 2020 and consisting 39 pages reviewed for adequacy by the Business Unit Manager and is approved by the Executive: Research, Policy and Standards **(RPS)**.

.....

Business Unit Manager

22/10/2020

Date

.....

Executive: RPS

22/10/2020

Date

This definitive version of this policy is available on our website.

CONTROLLED DISCLOSURE

When downloaded for the ECSA Document Management System, this document is uncontrolled and the responsibility rests with the user to ensure that it is in line with the authorised version on the database. If the 'original' stamp in red does not appear on each page, this document is uncontrolled.