



ECOSA

ENGINEERING COUNCIL OF SOUTH AFRICA




An Effective Regulator Assuring Engineering Excellence

**Guideline for Establishing Virtual Panel
Members for Existing, New Disciplines
and Specified Categories**

R- GUIDE-EVPM-002

REVISION 0: 19 September 2025


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DEFINITIONS

Graduate Attribute: A statement of the learning outcomes that a student must demonstrate at the exit-level to qualify for award of a qualification; these actions indicate the student's capability to fulfil the educational objectives.

International Engineering Alliance (IEA): A global not-for-profit organisation that comprises members from jurisdictions within numerous countries across seven international agreements. These international agreements govern the recognition of engineering educational qualifications and professional competence.

Initial Professional Development: Systematic participation in the activities typical of Continuing Professional Development but carried out prior to registration

Qualification: The formal recognition of a specified learning achievement that is usually awarded upon successful completion of a programme.


Standards: Statements of outcomes to be demonstrated and the levels of performance and content baseline requirements in the context of engineering educational programmes. In the educational context, see Qualification Standards in documents **E-02-PE / E-02-PT / E-02-PN / E-09-PT/ E-09-PGDip / E-05-PT / E-06-PN / E-07-SC / E-08-PN / E-21-PN / E-22-PE** and in the registration context, see document Competency Standard **R-02-STA-PE/PT/PN, R-02-STA-PCE and R-02-STA-SC**.

Specified Category: A category of registration created for persons who must be registered through the Engineering Profession Act, 46 of 2000 or a combination of the Engineering Profession Act, 46 of 2000 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.

Sub-discipline (an engineering speciality): A generally recognised practice area or major subdivision within an engineering discipline, for example, Structural and Geotechnical Engineering within Civil Engineering.

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Virtual Panel Member: ECSA appoints registered persons in good standing with the Council to serve as Virtual Panel Members (VPMs) to evaluate professional registration applications. These individuals fulfil one of three distinct roles within the approved registration process:

- Assessors conduct the Experience Appraisal through a desktop evaluation of submitted evidence.
- Reviewers serve as interviewers during the Professional Review Interview.
- Moderators review and verify the outcomes of the process to confirm final registration decisions.

VPMs play a critical role in ensuring consistency, quality and fairness throughout the professional registration process.

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1. CONTEXT

The current global technological and innovation advancement, particularly from the late 20th century into the 21st century, including South Africa, has led to the emergence of many new engineering disciplines across all engineering fields. Recent research undertaken by the ECSA Research Unit (recorded in document **RES-AGE-ECSA-001**) has identified emerging disciplines in both South Africa and abroad. These include but are not limited to Biomedical Engineering, Biosystems Engineering, Control, Automation and Instrumentation, Energy Systems Engineering, Environmental Engineering, Nano Engineering and Maritime Engineering, among others.

In certain emerging fields, we have noticed graduates from higher education institutions entering areas with no experienced engineers, engineering technologists or engineering technicians to mentor and guide them. As a result, ECSA is required to ensure the availability of qualified assessors, reviewers and moderators (Virtual Panel Members or VPMs) to support the registration process in these new disciplines, sub-disciplines and specified categories. Currently, however, ECSA lacks a formal framework or policy for recruiting and selecting a database of VPMs for applications in such emerging disciplines, sub-disciplines and specified categories. This gap presents a challenge in adequately supporting the registration process, wherein a minimum of six registered persons in a similar Category and Discipline to that of the applicant must be available to assess and review the application and determine the applicant's competence to register.

2. PURPOSE


This document provides a guide for ECSA in establishing the initial database of VPMs in new engineering disciplines, sub-disciplines and specified categories to enable ECSA to efficiently manage the registration process for applications in these same engineering fields.

3. RATIONALE

ECSA currently recognises 11 disciplines of engineering, as outlined in Section 3.1, and 11 specified categories, detailed in Section 3.2 below. The assessment, review and moderation of applications in these established disciplines and specified categories are conducted through a peer review process, drawing on ECSA's existing pool of registered and

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experienced Engineers, Engineering Technologists, Engineering Technicians, Certificated Engineers and Specified Category Practitioners.

However, the emergence of new disciplines and specified categories presents a significant challenge. The peer review registration model requires a minimum of six registered professionals in the same or a closely related discipline and category as the applicant. In newly approved disciplines and specified categories, often no registered professionals are available at the time of recognition or approval of the field by ECSA's Governing Council. Consequently, if an application for registration is received in such a new field, the registration process cannot proceed under the current model due to the absence of suitably qualified registered VPMs.

This document explains the requirements to act as a VPM in existing disciplines and specified categories, and to guide the identification, endorsement or registration and subsequent appointment of VPMs for the assessment, review and moderation of applications in newly recognised disciplines and specified categories. Its purpose is to establish a transitional mechanism to ensure the availability of suitably registered VPMs until a critical mass of professionals has been registered in the new field, at which point the responsibility for assessment, review and moderation can be shared with newly trained VPMs who have also been registered in the relevant field.


3.1 Existing engineering disciplines

The engineering disciplines recognised by the ECSA are the following:

- Aeronautical
- Agricultural
- Chemical
- Civil
- Computer
- Electrical
- Industrial
- Mechanical
- Mechatronics
- Metallurgical
- Mining.

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The list will be updated as and when new disciplines are introduced and approved through the Governing Council.

3.2 Existing specified categories

ECSA recognises the following specified categories:

- Lifting Machinery Inspectors
- Lift Inspectors
- Medical Equipment Maintenance
- Fire Protection System Design Specialist
- Engineering Management Practitioner
- Civil Laboratory Technical Controller
- Enterprise Integration Practitioner
- Glazing Specialists
- Road Safety Auditor
- Dolomite Specialist
- Dams Specialist.

The list will be updated as and when new disciplines are introduced and approved through the Governing Council.


3.3 Emerging disciplines and sub-disciplines

- Biomedical Engineering
- Biosystems Engineering
- Control, Automation and Instrumentation
- Nuclear Systems Engineering
- Environmental and Water Engineering
- Marine Engineering
- Nanoengineering
- Naval Architectural Engineering
- Railway Engineering.

The list is not exhaustive and will be updated as and when new research has been concluded

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3.4 Emerging specified categories

- Lift and Escalator Inspector (LEI)
- Project Engineer (PE)
- Project Manager (PM)
- Qualified Electrical Contractor (QEC)
- Certified Site Supervisor (CSS).


The list is not exhaustive and will be updated when new research has been concluded.

4. REQUIREMENTS FOR APPOINTMENT OF VPMS TO REVIEW APPLICATIONS IN EXISTING DISCIPLINES AND SPECIFIED CATEGORIES

- (a) **ECSA registration:** The individual must be professionally registered with ECSA.
- (b) **Good standing:** The individual must be in good standing with ECSA, which includes full compliance with annual fee payments and Continuing Professional Development (CPD) requirements. ECSA will verify this status prior to appointment.
- (c) **Relevant category and discipline:** The VPM must be registered in the same category and discipline as the applicant being assessed.
- (d) **Contextual expertise (in exceptional cases):** In unique or justified instances, a VPM may be appointed from a different discipline, provided they can demonstrate appropriate contextual knowledge and experience relevant to the applicant's discipline.
- (e) **Minimum registration period:** The individual must have held professional registration with ECSA for a minimum of one year at the time of appointment. The minimum registration period for serving as an assessor, reviewer or moderator may vary from time to time, depending on factors such as the composition of the VPM pool, training needs relative to years of experience and any applicable policy changes.
- (f) **Knowledge of registration framework:** The VPM must possess a sound understanding of ECSA's registration policies, competency standards, the registration model and the full registration process, including all its phases.
- (g) **Disciplinary standing:** The individual must not have been found guilty of misconduct in terms of the Engineering Profession Act, 46 of 2000.

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- (h) **Adherence to the ECSA Code of Conduct:** A VPM must fully understand and consistently comply with the ECSA Code of Conduct in all professional activities undertaken on behalf of the Council.
- (i) **Formal appointment and service level agreement:** Upon successful completion of role-specific VPM training, the registered person will receive a letter of appointment and must sign a service level agreement (SLA) with ECSA, outlining the scope of services and responsibilities for the appointment period.
- (j) **Independent oversight:** All phases of the registration process, including the work and outcomes produced by VPMs, may be subjected to independent moderation to ensure quality, consistency and fairness.
- (k) **Training:** The VPM must have attended and completed the ECSA VPM training and, thereafter must attend and complete refresher training annually.

5. IDENTIFICATION AND APPOINTMENT OF FIRST COHORT OF VIRTUAL PANEL MEMBERS (VPMS) FOR NEWLY APPROVED ENGINEERING DISCIPLINES AND SPECIFIED CATEGORIES

5.1 Scope


This applies to the initial cohort of individuals identified, endorsed and appointed to serve as VPMs for registration of applicants in newly approved disciplines or newly approved specified categories.

Important distinctions

- Only individuals who are already professionally registered with the Council in an existing discipline may be considered for appointment as VPMs for a newly recognised discipline.
- These registered professionals do not need to be registered in the newly recognised discipline to serve as VPMs for it. As per normal procedure, VPMs may be appointed if they:
 - belong to the same registration category and discipline as the applicant (4(c) above), or

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- belong to the same registration category and demonstrate relevant conceptual and contextual knowledge and experience in the applicant's discipline (4(d) above).

For VPM appointments for new **Specified Category** applications, it is important to distinguish between:

- individuals who are professionally registered with the Council in another category, and
- individuals not registered with the Council in any category.

Further details are provided in Section 5.2.2

5.2 Requirements for appointment of first cohort of VPMs in newly recognised disciplines

As part of its mandate, ECSA conducts feasibility studies to assess the viability and sustainability of emerging new disciplines and specified categories.


Where a feasibility study demonstrates sufficient merit and the outcome is approved by the ECSA Governing Council, the RIDR Business Unit appoints a Working Group to develop the relevant Discipline-specific Training Guide (DSTG). Members of the Working Group must possess proven conceptual and contextual experience and knowledge in the new field and are typically but not always required to be professionally registered in an existing approved category and discipline.

However, in cases where the DSTG is developed for a new specified category, one or more Working Group members may not be registered in an existing professional category or discipline. This is acceptable and often necessary, as specified categories are typically created to cover scopes of engineering work not adequately represented within the existing categories of registration namely, Professional Engineer, Professional Engineering Technologist, Professional Engineering Technician and Professional Certificated Engineer.

The following process will therefore be followed to appoint the first cohort of VPMs for applications in a newly approved discipline versus in a newly approved specified category.

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5.2.1 First cohort of VPMs for applications in a newly approved discipline

Professionally registered individuals in existing categories and disciplines who possess clear conceptual and contextual understanding of and experience in the newly approved discipline will be identified and appointed to a Working Group. This Working Group will be responsible for developing the new DSTG under the administrative leadership of the Regulatory Instruments and Document Review (RIDR) Business Unit (BU).

Upon approval of the DSTG, the Manager of the RIDR BU will issue formal endorsement letters to individuals who contributed meaningfully to its development. These letters will confirm the individual's conceptual and contextual understanding of and experience in the newly approved discipline. Copies of the endorsement letters will also be submitted to the Senior Manager: Registration and Compliance.

The Senior Manager: Registration and Compliance will receive each individual's CV and the corresponding endorsement letter, verifying their suitability to act as VPMs.

Based on the submitted documentation, eligible individuals will be trained and formally designated as the first cohort of VPMs to assess applications in the newly approved discipline.


5.2.2 First cohort of VPMs for applications in a newly approved specified category

Individuals with clear conceptual and contextual understanding of and experience in the newly approved specified category – regardless of whether they are currently registered with ECSA – may be identified and appointed to a Working Group tasked with developing the new DSTG, under the administrative leadership of the RIDR BU.

Once the DSTG is approved, the Manager of the RIDR BU will issue formal endorsement letters to contributors who demonstrated meaningful input, confirming their expertise in the new specified category. These letters will also be forwarded to the Senior Manager: Registration and Compliance.

The Senior Manager: Registration and Compliance will receive CVs and the accompanying endorsement letters. Based on this information, the following actions may apply:

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- Individuals already professionally registered with ECSA in another category will be registered in the new specified category and trained to serve as VPMs for the first cohort of applicants.
- Individuals who are not yet professionally registered with ECSA will be registered as Candidates in the new Specified Category. Once they meet the minimum requirement of 3 years of relevant work experience, they may apply for professional registration through the standard process.


6. IMPORTANT STAKEHOLDERS FOR COLLABORATION

New technology and innovation in industry around the world including automation, robotics, AI, renewable energy, climate change, 4IR, health and safety and Covid-19, etc have led into emerging of new disciplines and specified categories. Many stakeholders are involved in developing these disciplines and categories due to new requirements and legislation that is related to the health and safety of human beings and the environment. For the smooth execution of this guide, ECSA has to consider working with the following stakeholders, some of whom are already collaborating with ECSA but will be mentioned to avoid any omissions:

- Voluntary Associations
- Higher Education Institutions
- Private Companies
- State owned Enterprises
- Government departments
- Water Boards
- Municipalities.

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Rev. 0	19 September 2025	Approval	RPSC

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Revision 0 dated 19 September 2025 and consisting of 13 pages reviewed for adequacy by the Business Unit Assistant Manager and is approved by the Acting Executive: Regulatory Services & International Relations (**ERSIR**).

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Business Unit Assistant Manager

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 14 October 2025

Date

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Acting Executive: RSIR

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 14 October 2025

Date

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