

# Registers of Security Engineers and Specialists Technical Report Route Guidance Note



## Introduction

If you do not have the appropriate educational base for Register of Security Engineers and Specialists (RSES) membership, the RSES Technical Report Route (TRR) may allow you to use the equivalent academic knowledge gained by other means, including through your work experience, without completing a period of formal study. However, if you are professionally qualified or satisfy the educational base for registration, then you may apply through the standard routes outlined in the [RSES Guidance](#).

There are three grades of registration which are broadly equivalent to Technician, Incorporated and Chartered status. They are referred to as Technician Member, Ordinary Member and Principal Member grades respectively.

Applicants applying through TRR may apply in any category at any grade.

In addition to specific criteria, your grade of registration, through the TRR, will depend on your experience in fulfilling the generic technical and/or scientific engineering competences. The generic engineering competences are set out in [Appendix A, RSES Guidance](#). The specific competences are set out in Appendix B, RSES Guidance. If you believe you possess the required generic technical and/or scientific engineering competences and the specific competences appropriate to the relevant grade, you can apply to the RSES TRR.

If you hold a non-accredited security-related academic qualification(s), i.e. they do not meet the requirements as outlined by UK-SPEC, your qualifications will need to equate to the following:

### For Technician Member:

- a) *Usually both an accredited security-related qualification and suitable professional experience. However, if you are suitably experienced, you can apply via the Technical Report Route at Technician level whether or not you have an approved qualification such as BTEC, NC/ND, NVQ, SVQ or an advanced modern apprenticeship. If you do not have accredited academic qualifications, you must place particular focus on the understanding and practical application of security engineering in describing your technical abilities in your submission.*

### For Ordinary Member:

- a) *HND/HNC (accredited with Further Learning for IEng) or equivalent or an overseas qualification assessed to be of an equivalent standard – (indicative 5 years\*); or*  
b) *ND/NC, approved NVQ or an overseas qualification assessed by the RSES AQG to be of an equivalent standard – (indicative 10 years\*)*  
c) *Applicants who do not hold the required academic base for Member grade will be required to demonstrate underpinning knowledge equivalent to a BEng degree (indicative 15 years)*

### For Principal Member:

- a) *BEng (Hons) degree (accredited with Further Learning for CEng) (indicative 7 years\*)*  
b) *An engineering or cognate degree with sufficient technical basis of an equivalent standard or an overseas degree assessed to be of an equivalent standard or an IEng accredited degree - (indicative 7 years \*)*  
c) *Foundation Degree, HND/HNC or an overseas qualification assessed by the RSES Academic Qualifications Group (AQG) to be of an equivalent standard – (indicative 10 years\*)*

*d) Applicants who do not hold the required academic base for Principal Member grade will be required to demonstrate underpinning knowledge equivalent to a BEng degree (indicative 15 years)*

\* The years of experience set out above are for guidance only. What matters is that you must show that the experience gained within your career, is sufficient to compensate for the lack of formal academic qualifications. It is unlikely, however, that you will have obtained this in less than the indicative periods.

### **Initial Enquiries**

Should you require assistance with your eligibility to apply for the RSES please complete an [RSES Enquiry Form](#). With reference to the [RSES Guidance document](#), you will need to prepare a 300 – 500 word statement. This should include details of your academic and professional qualifications together with your current employment responsibilities. You will also need to demonstrate your experience and technical expertise as a security practitioner in support of your preferred category and grade. Although you may be requested for further details, you are not required to submit authenticated copies of academic qualifications at this stage.

When complete, please forward to the Professionalism Services Executive at [rses@ice.org.uk](mailto:rses@ice.org.uk). You will then receive feedback on your eligibility to apply.

### **Pre-Application**

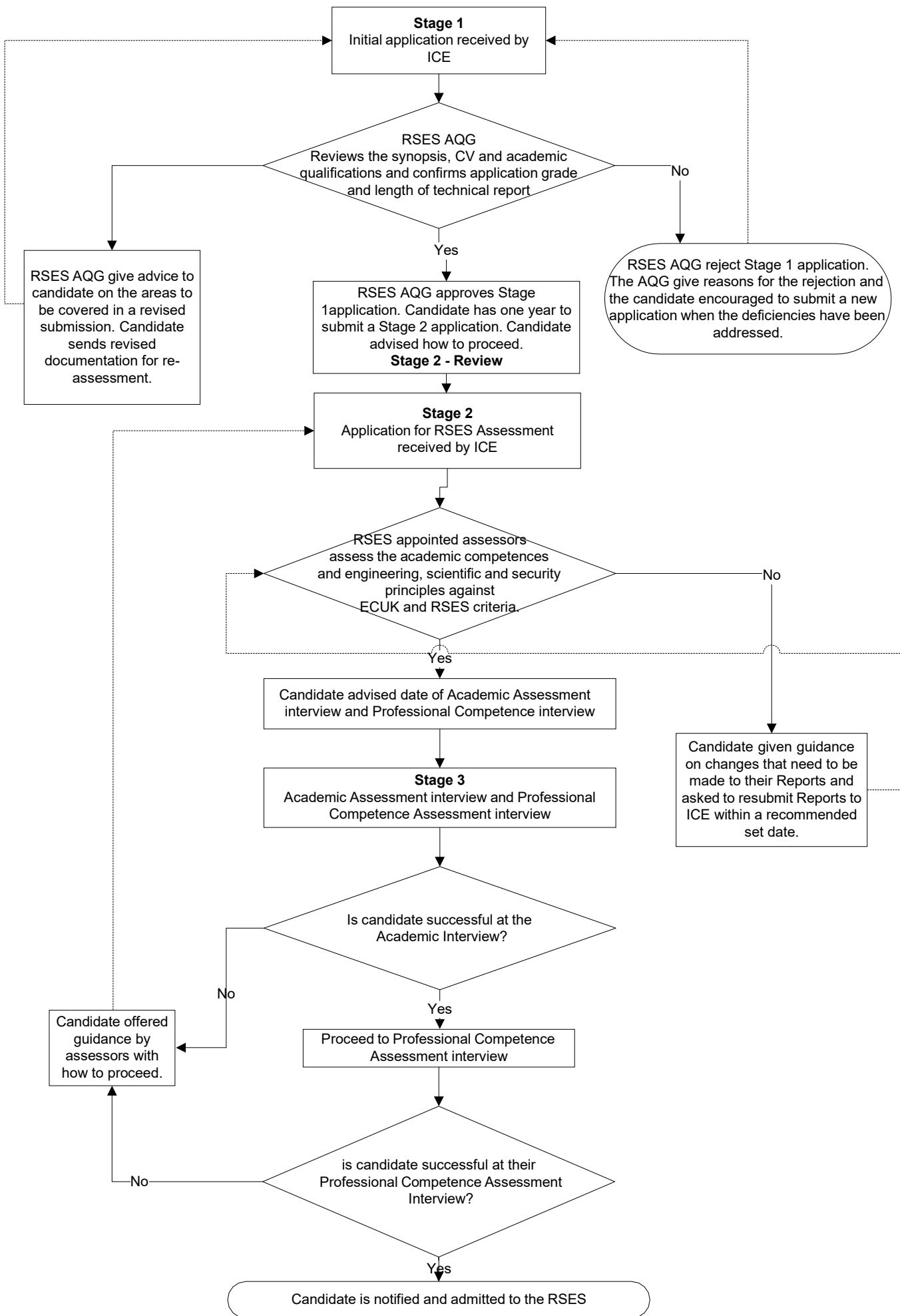
Once you have received feedback, and if you are eligible to apply to the RSES via the TRR, the Professionalism Services Executive may assist with arranging a mentor/sponsor to support you with your application.

To progress with a full application, you are required to submit a [Pre-Application form](#) which is countersigned by your mentor/sponsor, together with a brief CV and authenticated copies of any academic qualifications you have gained.

Your CV at this stage should be no more than 1000 words. It should provide a chronological review of your career and indicate your role and responsibilities held in various projects and/or activities with which you have been associated.

Certified English translations of academic qualifications should also be provided where applicable. Please note we may need to contact your university/college or professional body to verify the authenticity of your academic qualification(s). If any qualification is identified as fraudulent the application will be rejected.

**Those applicants advised to apply via the TRR will be required to prepare and submit the Stage 1 TRR documentation. There are three stages to the application process which are outlined in the flowchart on page 3.**



# 1. Stage 1 – TRR initial assessment

You will need to submit electronically, the following documentation to [rses@ice.org.uk](mailto:rses@ice.org.uk) :

- i. [Pre-Application form](#) that includes confirmation of Mentor support
- ii. a synopsis of your proposed Technical Report, endorsed by your Mentor
- iii. authenticated copies of transcripts of your academic qualifications indicating the full module breakdown\*
- iv. a detailed CV
- v. an application [fee](#)

## Academic Qualifications

The information you will need to provide about your qualification depends on the qualification itself. The ICE provides this information on the [academic section](#) of its website.

Copies of academic qualifications can be signed by the awarding college or by persons of responsibility, your manager or professionally qualified member of a professional body/organisation, etc. This information is also available on the academic section of the ICE website.

## Sponsor support

Sponsors also act as mentors to applicants. The role of the sponsor is to identify which aspects of competence will form the basis for demonstrating the relevant attributes, to approve your submission and prepare you for interview. Your sponsor has a duty to act as a mentor during your submission process.

You must obtain the support of a sponsor to undertake the TRR. The sponsor plays a vital role in assessing whether your Technical Report and the preceding synopsis clearly demonstrates your understanding and application of the generic and/or specific engineering, scientific and security principles and how you have compensated for the shortfall in your academic achievement.

Your sponsor will be required to confirm, in some depth, your suitability for registration. The scope of your sponsor's involvement should extend to constructive criticism of reports as well as advice on presentation and practice in both the RSES Academic Assessment and RSES Competence Assessment interviews.

They must read and sign both submitted reports and ensure that you are fully prepared for Stage 3.

Your sponsor should be consulted at all stages of your TRR application.

## Synopsis of Technical Report

**1.2** The synopsis of your Technical Report **must** set out clearly how you intend to demonstrate your knowledge and understanding of the engineering, technical and security principles. You must show how you have compensated for the shortfall in your academic achievement rather than just describing the project(s) on which you have been working. For further information on the structure of the Technical Report please see Appendix A.

In order to assist with the preparation of your synopsis and your Technical Report, Appendix B outlines the required academic competencies to be demonstrated at your Academic Assessment interview at Ordinary Member and Principal Member grades. Appendix C sets out examples of some of the generic engineering, technical and security principles that you might seek to identify and demonstrate.

You should ensure that your Stage 1 synopsis has been reviewed and signed by your sponsor before submitting your Stage 1 application.

## **Curriculum Vitae**

**1.3** This document should record your personal details and any academic achievements, and then set out brief details of the jobs you have worked on together with an indication of your security-related roles and responsibilities. Any challenges you encountered should be mentioned as should any periods where you gained unusual or extensive experience or learned valuable lessons. Of particular interest is work carried out during the last five years. You should also demonstrate in your CV how you have achieved the generic engineering competences and the RSES specialist criteria for the relevant grade. The length of a typical CV might be between two and four pages.

## **Assessment process**

**1.4** On receipt of your Stage 1 submission, ICE will forward to the RSES AQG for review.

The AQG will confirm your appropriateness for the TRR and you will be advised of the word count of your Technical Report. The AQG may also recommend modifications to your application. When a satisfactory conclusion has been reached you and your sponsor will be advised that you can proceed to Stage 2.

**1.5** Your Stage 1 result will be valid for a period of 12 months only and within this time you are expected to make a full submission for Stage 2.

## **2. Stage 2 - The Application**

You will need to submit electronically, the following documentation to [rses@ice.org.uk](mailto:rses@ice.org.uk) :

**2.1** Stage 2 requires the submission of the following documentation:

- an RSES application form [RSES Application form](#)
- Sponsors Statements [RSES Sponsors Statement](#)
- a record of Continuing Professional Development (CPD)
- Unspent Criminal Convictions Statement [RSES Criminal Convictions Statement](#)
- a Technical Report, endorsed by your Mentor (see below for length limits)
- a 2000 word Experience Report

An initial check of your documentation will be conducted by the ICE Professionalism and Registers Executive before forwarding to your assessors. Your assessors may request further technical and/or professional information; or they may report that your reports and records do not meet the RSES TRR standards and will require re-drafting. The purpose of this intervention is to ensure that you have complied with the process prior to presenting for the RSES Academic Assessment at Stage 3.

## **2.2 Record of Continuing Professional Development (CPD)**

You must maintain a Personal Development Record (PDR), or similar, and prepare a Development Action Plan (DAP), for the forthcoming year (see [ICE's CPD Guidance](#)). An alternative system of recording CPD, providing it demonstrates the same basic information, can be submitted.

Your CPD must include security-related activities. Of particular interest are your records for the last three years.

## **2.3 The Technical Report**

Based on your approved synopsis you are required to prepare a Technical Report.

A minimum of 3,000 words to a maximum of 5000 words is normally sufficient if your academic qualifications have been assessed to be worth 300 credits or more. A minimum of 10,000 words to a maximum of 15,000 words is recommended if your academic qualifications have been assessed to be worth less than 300 credits.

The report should set out the key aspects of your technical competence and must offer an ordered and critical exposition of some technical aspect or aspects of security practice in which you have played a major part. You must define the technical problems involved and demonstrate how you resolved them by the application of generic engineering, scientific and security principles and knowledge to meet the academic competencies set out in Appendix A.

**The focus of the Technical Report *must* be on the demonstration of the engineering, technical and security principles which underpin attributes A and B in Technician or attributes 1 and 2 in Ordinary and Principal generic competencies as indicated in the [RSES Guidance document Appendices](#).**

It is not expected that you will need to demonstrate an advanced mathematical or computing ability but your submission may include relevant calculations and drawings. It is important that in this document you do not set out to demonstrate your professional competence, e.g. management and leadership skills, interpersonal skills and communication, etc. These matters are to be covered in the Experience Report.

The structure of the Technical Report is not prescribed, and should be decided by you and your mentor to suit your individual circumstances.

The RSES considers plagiarism and collusion to be examples of behaviour that breach the RSES Code of Ethics (see RSES Guidance, Appendix C). Accordingly, instances of plagiarism and collusion will be treated seriously.

Your sponsor must have confidence that you can articulate the key aspects of your technical competence in the Technical Report, the presentation and at interview.

## **2.4 The Experience Report**

The purpose of the Experience Report is to concentrate on the demonstration of the generic security engineering competences and the specific GSA or specialist category criteria.

The generic engineering, scientific and security competences, for the grade of registration for which you are applying, are set out in Appendix B below.

Further generic and specific GSA and specialist category competences are set out in the RSES Guidance, Appendices A and B respectively.

When your assessors are satisfied with your submission, the Professionalism Services Executive at ICE will arrange the time and date of your Stage 3 interviews.

## **3. Stage 3 - The RSES Academic Assessment and Professional Competence Assessment Interviews**

**3.1** The RSES assessment is a two part interview process with both parts undertaken on the same day.

### Part 1

The RSES Academic Assessment, based on your Technical Report, is to ascertain how your experience has compensated for the shortfall in your educational base compared with someone of similar experience who does have the required educational base.

### Part 2

The RSES Professional Competence Assessment is to determine whether you possess the required generic engineering competences and the specific GSA or specialist criteria.

**You will have to be successful at the RSES academic assessment to be allowed to undertake the RSES Professional Competence Assessment.**

**3.2** At the RSES Academic Assessment interview you will be given up to 30 minutes to make a presentation based upon your Technical Report. In order to confirm the range and depth of your knowledge, you will then be invited to respond to questions based upon your Technical Report. The overall duration of the Academic Assessment interview, including your presentation, will be around 90 minutes.

**3.3** The presentation is delivered online or sitting opposite your assessors at a table. You may use legible visual aids such as flip portfolios, not larger than A3, to illustrate the presentation. Whilst the use of laptop computers is permitted, experience has shown that people using these will need to plan the practicalities with very great care. *The presentation must expand on the Technical Report, rather than repeat the information already given to your assessors.*

**3.4** On completion of the RSES Academic Assessment interview, your assessors will adjourn to determine whether you have satisfied the educational base for admittance to the RSES.

i. If you are successful, you will be invited to undertake the subsequent RSES Professional Competence Assessment interview.

ii. If you are unsuccessful, you will not be invited to undertake the RSES Professional Competence Assessment interview. However, your assessors will take time to explain to you the reasons for their decision and will give you advice on how to proceed. This will also be confirmed in writing.

**3.5** The aim of the RSES Professional Competence Assessment interview is to allow you to demonstrate that you have satisfied the generic engineering competences and the specific criteria, as set out in the [RSES Guidance document, Appendices A and B](#), respectively, for the grade of registration applied for.

**3.6** Observers may be in attendance at the assessment interviews; they will take no part in the conduct of the assessments or be involved in any decisions taken.

#### **4. RSES Assessment result**

**4.1** Time is required after the Stage 3 RSES Assessment interview for the quality control, audit and approval processes. You will then be formally notified of the results.

**4.2** If you are successful at the RSES Academic Assessment, but are unsuccessful at the RSES Professional Competence Assessment, this will be recorded and you may apply at a future date for a re-sit of the RSES Professional Competence Assessment interview only.

**4.3** There is no limit to the number of times you may apply for the RSES TRR.

**4.4** There is a right of Appeal in cases of perceived error in process or for unforeseen events. Appeals are only accepted if received within two months from the date of the deferral letter. For details contact the ICE Professionalism and Registers Executive.

#### **5 Associated Documents**

The below documents are downloadable from the ICE website:

[RSES Enquiry form](#)

[RSES Application form](#)

[RSES Sponsors Statement](#)

[RSES Criminal Convictions Statement](#)

[RSES Pre-Application form](#)

[ICE CPD Guidance](#)



## Appendix A: Guidance on the Structure of the RSES Synopsis and Technical Report

Submissions may take a variety of forms but they will generally fall into one of the following categories:

- Report on a security related project with a commentary and connecting dialogue indicating how the material meets the objectives for the Assessment; or
- A speciality paper based on a security related project(s); or a report on original work carried out by you.

The synopsis must not exceed 750 words and needs to indicate how your final Technical Report will demonstrate:

1. The academic competencies set out in Appendix B below to demonstrate your use of underpinning engineering, scientific and security principles to solve problems.
2. The knowledge criteria set out in Appendix B of the RSES Guidance document.

Subdivisions of the Technical Report typically might be:

- TITLE
- INTRODUCTION - What the Technical Report is about.
- AIM – How does the report meet the specific requirements.
- BACKGROUND - Setting the scene. Where does the project lie in relation to the “total picture”?
- TECHNICAL CONTENT/DESCRIPTION – Draws out the fundamentals underlying the subject(s). The Technical Report must not merely demonstrate the application of codes and standards but must illustrate your understanding and application of engineering, scientific and security principles. It is not expected that you will need to demonstrate an advanced mathematical or computing ability but your submission may include relevant calculations and drawings. Diagrams or drawings should preferably be included with the relevant text.
- CONCLUSIONS - In relation to the application of engineering, scientific and security principles, what were the successes and failures?
- LESSONS LEARNT – What were they?
- APPENDICES - For supporting detail, if appropriate.
- BIBLIOGRAPHY - If appropriate.

**All content must be either the product of your original thoughts and work or referenced to the original author.**

**All documentation is to be reviewed by your Mentor/sponsor before submission.**

## Appendix B: Required Academic Competencies to be demonstrated at Assessment

The following knowledge criteria are to be demonstrated at the RSES Academic Assessment (Attributes of the generic competencies, Appendix A of the RSES Guidance document).

### Academic competencies required for RSES Technician Member grade (equivalent to Engineering Technician)

1. Have understanding and knowledge of security engineering technologies, standards and practices relevant to the applicant's area of work and have evidence of maintaining and applying this knowledge. Review and select appropriate techniques, procedures and methods to undertake tasks. Use appropriate scientific, technical or engineering principles that underpin security engineering.
2. Have the ability to apply security engineering knowledge effectively and efficiently to the individual tasks for the role. Be able to identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions. Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact.

### Academic competencies required for RSES Ordinary Member grade (equivalent to Incorporated Engineer)

1. **Science and mathematics:** Have knowledge and understanding of the mathematical, scientific and engineering principles that underpin security engineering. Be able to undertake and properly apply engineering analysis to problems using relevant information technology, as well as being able to implement engineering processes and technologies.
2. **Design:** Possess the knowledge, understanding and skills to define problems, identify constraints and contribute to the design and development of engineering solutions in a practical context. Ensure that designs are appropriate to meet their purposes or applications.
3. **Engineering practice:** Demonstrate a knowledge and understanding of relevant materials, processes and products as applied to the solution of security engineering problems. Be able to use and apply information from technical literature, appropriate international and national technical standards, codes of practice and industry generated standards.

### Academic competencies required for RSES Principal Member grade (equivalent to Chartered Engineer)

1. **Science and mathematics:** Have a deeper understanding of the mathematical principles supporting your engineering activity together with knowledge of developing techniques and technologies. Understand the applications and limits of information technology. Demonstrate an ability to develop analysis and solutions to problems faced.
2. **Design:** Possess a wide knowledge and a comprehensive understanding of the design process. Show an ability to adapt solutions and be able to generate innovative design/engineering solutions for/to problems encountered.
3. **Engineering practice:** Have a thorough understanding of current practice and limitations as well as an appreciation of new developments and areas of innovation. Show extensive knowledge and understanding of engineering materials and be able to apply these in the solution of both routine and non-routine problems.

## Appendix C: Examples of Engineering, Scientific and Security Principles

When producing the Technical Report and its synopsis, candidates are required to identify underpinning security principles and demonstrate how they were used to solve problems. Some examples of applying security principles are shown below:

- The process and methodology of conducting Threat and Risk Assessments, interpreting how risk is considered from the outset in determining a security policy or strategy for an organisation / project.
- The process and methodology of conducting Security Surveys and Audits and the use of risk modelling to establish a palette of preferred security options to be considered.
- Developing a basis of design (Concept Design) i.e. design based solutions (DBSs) to underpin the security strategy for a project or organisation.
- Ensuring that identified threats and Risks are properly addressed, within the given design and financial constraints, when liaising with engineers in the production of Outline Design solutions.
- Developing user security requirements i.e. Operational Requirements and how these interface with an ongoing design.
- Use of the 'Onion' model of layering to develop a security strategy.
- Consideration of security requirements at concept design stage so that an intrinsically secure design can be developed, reducing the need for operational security measures.
- Demonstration of reduction in vulnerability utilising at a strategic level the use of a palette of passive, active, operational and procedural security measures i.e. H.V.M, CCTV and guarding, etc.

## Appendix D – Individual requirements

We're committed to making reasonable adjustments to our assessment process to accommodate specific individual requirements. Individual requirements may include disabilities and security clearance. You need to tell us about these requirements in the space provided in your Technical Report Route application form. We'll also need to see any evidence, such as certified documents or statements.

### Disability or sensory impairment

In line with the Equality Act 2010, we'll make whatever 'reasonable adjustments' are required for candidates with a disability, such as dyslexia, speech impairment or sensory loss, for example. Our Equality and Diversity Policy ensures everyone receives the same opportunities during the review process.

### Security clearance

You might be restricted in the information you can include in your review submission, for security reasons. However, there's no reason why this should detract from the quality of your report.

If your submission is affected by security issues, you should consider the following suggestions:

- Make your report non-site specific - don't state that the facility was on the Sellafield site or on the Hinkley site, for example
- Don't state building numbers or names – it's sufficient to say 'nuclear facility' or 'nuclear store'
- Remove site and building names from drawings
- Don't include photographs which reveal the location of buildings and facilities
- Avoid stating technical details (such as wall thickness) which may reveal security-sensitive information

If you work on a security-sensitive project, we recommend that your in-house information security manager reads your review submission.