
MEDICAL PHYSICS EXPERT CERTIFICATION SCHEME

**MPE2: Instructions and Guidance for the Creation of a Portfolio of
Evidence for MPE Certification**

Table of contents

1	INTRODUCTION.....	2
2	DEPARTMENT OF HEALTH REQUIREMENTS FOR MPEs	2
3	PRESENTATION OF THE PORTFOLIO	2
3.1	<i>Content.....</i>	2
3.2	<i>Construction</i>	3
3.3	<i>Length.....</i>	3
3.4	<i>Navigation</i>	3
4	FURTHER GUIDANCE	4
4.1	<i>Introduction.....</i>	4
4.2	<i>Items of evidence.....</i>	5
4.3	<i>Demonstration of Underpinning Knowledge: Cross-Reference Table 1, application form MPE1</i>	6
4.4	<i>Demonstration of Practical Competence and Workplace Experience: Cross-Reference Table 2, application form MPE1</i>	7
4.5	<i>Simulation.....</i>	8
4.6	<i>Applicants from Outside the UK</i>	9

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	1 of 9

1 INTRODUCTION

- (i) All portfolios of evidence must comply with these instructions; no other construction of a portfolio is acceptable to RPA2000. Portfolios that do not closely reflect these instructions will be returned to applicants. The objective is to create a portfolio through which the assessors can easily navigate and obtain the necessary information to enable them to reach a decision with regards to certification.
- (ii) You are required to provide sufficient evidence from education, training, knowledge and practical experience to meet the requirements of the scheme. Your portfolio of evidence should therefore contain details of your training and relevant examples of your work that together provide evidence to demonstrate your core competence to act as a Medical Physics Expert (MPE).
- (iii) It would be usual for evidence demonstrating a “Detailed Understanding” to be from post-STP (or equivalent) experience. If you do provide evidence gained during training, you must explain why this has been included.

2 DEPARTMENT OF HEALTH REQUIREMENTS FOR MPEs

- (i) These instructions are for the compilation of a portfolio of evidence satisfy the requirements of the Department of Health & Social Care (DHSC) for the assessment of competence of persons seeking to gain recognition as Medical Physics Experts (MPEs).
- (ii) The DHSC, with assistance from the MPE Working Group, has developed a syllabus which is based on the requirements given in the Basic Safety Standards Directive 2013/59/Euratom Article 83.
- (iii) The demonstration of competence depends on a combination of knowledge and experience. Applicants seeking to gain recognition as an MPE must provide adequate evidence to demonstrate the appropriate level of competence for each topic in the DHSC’s syllabus. This will consist of knowledge-based evidence and experience-based evidence.
- (iv) The most recent version of the DHSC MPE syllabus can be found on the RPA2000 web site.

3 PRESENTATION OF THE PORTFOLIO

3.1 Content

The portfolio should include the following:

- (i) The completed **application form** (Document MPE1), including a checklist and authentication by a suitable referee and your signed declaration. Referees should be in a position to confirm that you have sufficient experience to be awarded a Certificate of Competence as a MPE. Where the portfolio covers work for more than one employer (e.g. consultancy), the separate parts may be authenticated by different people, as appropriate.
- (ii) A comprehensive **contents list**, detailing and indexing all the items of evidence included.

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	2 of 9

- (iii) A **summary section**, 5-6 pages in length, in which each of the major items of evidence is summarised into a **short contextual paragraph** that clearly identifies the competence(ies) and experience(s) that it supports.
- (iv) **Cross Reference Table No. 1**, linking the relevant pieces of evidence to the required underpinning knowledge competencies/experiences followed by the appropriate evidence.
- (v) **Cross Reference Table No 2** Demonstrating practical competence and workplace experience in the topic and sub-topic areas.
- (vi) Each piece of evidence should be preceded by **Linking Notes**, explaining why it is relevant to the syllabus elements it is used as evidence for.

3.2 Construction

The sole way to present the portfolio is to place the various items of evidence, suitably numbered and indexed, in an A4 ring folder. It is helpful to separate the various sections of the portfolio using a simple system such as numbered, tabbed dividers.

3.3 Length

- (i) The exact length of the portfolio clearly depends on the amount and type of evidence being presented. However, the expectation is that you should be able to provide sufficient evidence in a single A4 ring folder.
- (ii) The emphasis should be on the quality of the evidence rather than its quantity. Remember that the assessors may have to read carefully through each piece of evidence presented in the portfolio several times. For the Detailed Understanding (DU) topics, you should be able to demonstrate competence as an MPE with 20 pieces of evidence, and certainly no more than 25.
- (iii) In general, one 'significant' item of evidence may well be sufficient to demonstrate knowledge and/or practical competence in a Cross-Reference Table 2 sub topic. A good item of evidence may well cover several of the competences listed.
- (iv) Where an applicant has doubts about the value of an item of evidence, it is acceptable to supply not more than 3 additional items of supporting evidence. The assessor may not read more than the first 4 pieces of evidence listed against a single competence.
- (v) The term 'significant' is related to both the nature of the evidence and the ease with which an Assessor can judge the relevant competence of the applicant from that evidence.

3.4 Navigation

- (i) Good navigation aids are essential, since aiding the assessors in their navigation through the portfolio is beneficial for all parties. Each piece of evidence must have an associated linking note that explains which competences it addresses and how.

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	3 of 9

- (ii) Essential items of evidence may be contained within a larger document to give context, in which case the relevant parts of the larger document should be clearly identified in the linking notes attached to the item of evidence, or the contextual note provided in the summary.
- (iii) The essential navigational elements of the portfolio are included in the list of portfolio contents described above in section 3.1.

4 FURTHER GUIDANCE

4.1 Introduction

- (i) It is recognised that different individuals applying to be certificated as an MPE may have followed different education routes and have gained different workplace experiences. This will be particularly true for those working outside of the NHS.
- (ii) The DHSC syllabus does not take account of these differences, requiring the individual to demonstrate knowledge and competence in their own area of practice. As a result, it is likely that individuals applying for MPE certification will submit a wide range of types of evidence in order to demonstrate the required knowledge and practical experience to cover all of the identified topics and sub-topics in their area of practice.
- (iii) Applicants must be able to demonstrate that they have the necessary underpinning knowledge indicated in the topics in Cross Reference Table 1. For the Detailed Understanding topics, the evidence should be from the scope of practice for which MPE competence is being assessed. Applicants must be able to demonstrate that they have the practical skills in the topics and sub-topics in Table 2 with regard to their own area of practice. Do not alter the layout or form of the tables or use an alternative cross reference method.
- (iv) Cross Reference Table 2 identifies some items of evidence that could be used to demonstrate the detailed understanding and practical competency requirements for an individual working in each Nuclear Medicine, Diagnostic Radiology and Radiotherapy. MPEs are also required to support employers undertaking non-clinical medical exposures. Given the range of potential environments in which such exposures may take place it is not possible to give any specific guidance regarding the evidence which should be provided to support an MPE application.
- (v) It is expected that some applicants will work across more than one specialty. For example:
 - Nuclear medicine in large centres now includes multi-modality imaging, in particular PET-CT and SPECT-CT, and molecular radiotherapy. It is therefore anticipated that applicants from such departments may include evidence relating to diagnostic radiology and/or radiotherapy in their portfolios.
 - Applicants from radiotherapy departments would be expected to include reference to planning and/or verification exposures in their evidence.

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	4 of 9

- (vi) Please note that the MPE certificate will not identify any specialist area. It is up to the employer to choose suitable MPEs to support its work activities and it is the responsibility of the individual MPE to work within their own sphere of competence and scope of entitlement.
- (vii) Examples of evidence for each competency are listed in Cross Reference Tables 1 and 2. It should be noted that the examples of evidence are for guidance only to indicate the kind of evidence required, and other items may be provided that satisfy the scheme requirements. No items are mandatory, and applicants should not consider that they have to provide evidence for every piece of suggested evidence.
- (viii) The summary notes are the only text that is initially sent to the supporting assessors and so do need to clearly summarise the evidence and not simply be statements that the evidence meets the competence. The supporting assessors will usually only read the full portfolio in the event of a question about its adequacy.

4.2 Items of evidence

- (i) To determine the appropriateness of a potential piece of evidence, examine it and ask yourself ***‘How does this evidence show that I have the basic knowledge/competence/ experience?’*** This will help in determining what material to include to ensure adequate coverage of all the requirements. Evidence can be generated specifically to demonstrate knowledge, understanding and competence.
- (ii) Evidence of practical competence must be from the applicant’s own work and predominantly from work undertaken within the last five years: the date of the work should be included. Evidence of training and education may precede the five years, as may some unique pieces of evidence of practical competence and workplace experience. However, in such situations additional evidence should be submitted to show that knowledge and skills have not been lost, for example by having been kept up to date through professional development and practical application.
- (iii) An item of evidence consisting of workplace documentation (e.g. employers procedures or QC procedures) alone is unlikely to provide an adequate demonstration of performance. It will need some “linking notes” to explain the thought process the applicant went through at the time, and perhaps the background and details of the situation involved. Include details of numerical calculations, logical reasoning behind decisions and reference to legislation, where appropriate.
- (iv) Practical evidence should be sufficiently wide-ranging to indicate familiarity with the breadth of situations implied by the area(s) of practice identified in the application
- (v) Some individual items or types of evidence may demonstrate more than one sub-topic. A single item can be referenced by more than one sub-topic.

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	5 of 9

- (vi) Items of evidence that include contributions by other people should be annotated to clearly show the extent of the applicant’s contribution to the work and their relationship to the others. For example, where the applicant has updated documentation, rather than authoring it, they should explain or show the changes that they made and include background/details of the situation that led to the need for change.
- (vii) Evidence should not disclose personal details relating to any individual patient or any other information that would allow a patient to be identified.
- (viii) Evidence should not contain information that compromises any sensitivities relating to the employer’s business (e.g., financial details of contractual agreements with commercial companies) or its employees. Should you have concerns on such matters, you should blank out names or other details that it is not appropriate to disclose. However, it is not necessary to redact names of other professionals in your organisation where their role is effectively a matter of public record. Where your items rely on communication from such professionals, identification of them can help to demonstrate the positive acceptance of advice that you give.
- (ix) Evidence should never contain information that could compromise the security of radioactive materials. Details of high activity source strengths, quantities of bulk radioactive materials, storage facilities and source security should always be omitted. If you are uncertain about the confidentiality of the evidence you intend to submit, you should discuss the matter with your employer and, if necessary, the RPA 2000 Assessment Secretary.

4.3 Demonstration of Underpinning Knowledge: Cross-Reference Table 1, application form MPE1

- (i) Applicants must provide sufficient evidence to demonstrate underpinning knowledge in the topic areas indicated in Cross-Reference Table 1. This may be achieved by:
 - the applicant’s degree, postgraduate study, professional training courses, certificated study or other local training events; and/or
 - as part of the applicant’s work experience. This evidence could be in the form of a resume of the applicant’s work history and relevant work experience and must clearly highlight those aspects that demonstrate the necessary knowledge for each relevant topic.
- (ii) Course outlines, syllabus information, meeting programmes attended or similar items would usually suffice for the evidence in those areas where general awareness or basic understanding is required, provided the evidence is sufficient to demonstrate the necessary knowledge.
- (iii) It is possible that some training course providers will be able to demonstrate that their course meets the knowledge requirements for many of the topics of the basic syllabus. Demonstration of attending and passing (if course was assessed) that course is sufficient evidence for those topics. The course provider should be able to provide appropriate information.
- (iv) Information should be provided as to whether or not performance on the training course(s) was formally assessed. If it was, a brief description of the method(s) of assessment should be provided together with the result(s) achieved by the applicant

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	6 of 9

- (v) Cross Reference Table 1 has been specifically designed to identify all the evidence that the applicant needs to supply and to provide a convenient format:
- the applicant to provide the evidence
 - the assessors to record the outcome of the assessment; and
 - RPA2000 to easily identify where further evidence is required.

Do not alter the layout or content of Cross Reference Table 1, or use an alternative cross reference method.

- (vi) The following should be borne in mind concerning the underpinning requirements:
- Individuals who are HCPC-registered Clinical Scientists in Medical Physics will be able to demonstrate knowledge and practical competence in parts of the RPA2000 MPE curriculum but will need to provide evidence of having developed both to a higher level. Specifically, they will need to demonstrate additional knowledge for competencies A15 to A17. This can be done directly or by using evidence presented in Cross-Reference Table 2 to demonstrate practical competency
 - Individuals who have successfully completed the HSST training scheme and / or have obtained entry onto the Academy for Healthcare Science Higher Specialist Scientist Register are considered to have adequate knowledge.
 - Individuals with an RPA or RWA certification will not have to demonstrate competencies A1 to A7.

4.4 Demonstration of Practical Competence and Workplace Experience: Cross-Reference Table 2, application form MPE1

- (i) Applicants must provide evidence to demonstrate practical competence and workplace experience in the topic areas indicated in Cross-Reference Table 2.
- (ii) For each of the sub-topic areas in Cross-Reference Table 2, the applicant will need to provide evidence to convince the assessors that they have sufficient practical competence and workplace experience to satisfy the requirements for certification as an MPE. The practical evidence should come preferably from the applicant's workplace, but simulation and/or mentored practical exercises may be used where such practical experience has not been available to you (see section 4.5. for more information).
- (iii) The advisory notes included in Cross-Reference Table 2 are designed to assist applicants to adopt a pragmatic approach towards the evidence that they could submit. The evidence should be sufficiently wide-ranging to indicate familiarity with the breadth of situations implied by the topic area and should concentrate on quality rather than quantity. Evidence must be provided for all sub topics in Cross-Reference Table 2.
- (iv) Applicants do not need to provide evidence to cover every element in the advisory notes in Cross-Reference Table 2. These are only indicative suggestions of evidence that might be provided. Assessors are looking for 15-25 pieces of good evidence only, and the evidence should be easy to navigate.

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	7 of 9

- (v) As a general principle, and where appropriate, it is acceptable for one significant item of evidence to be used to demonstrate more than one competence. Where this is the case the applicant must be careful to maintain clarity in the presentation of the evidence.
- (vi) Items of evidence may also include operating data or documentation produced in the workplace, reports, minutes or notes on meetings, schedules, programmes, objectives/goals achieved, details of work on special projects, images, plans, drawings, etc.
- (vii) Lectures or presentations prepared by the applicant should be clearly annotated to identify those elements of the lecture/presentation that are dependent on the applicant's practical competence, as opposed to knowledge.
- (viii) When using minutes or notes of meetings as evidence, ensure that they are from meetings where the applicant made a significant contribution and are detailed enough to clearly identify that contribution.
- (ix) Linking notes are required as a means of enabling the applicant to identify the extent to which they contributed towards an item of evidence or to provide additional background in support of what might otherwise appear as a less significant item of evidence.
- (x) Cross-Reference Table 2 has been specifically designed as a convenient format for:
 - The applicant to cross-reference all items of portfolio evidence to the appropriate practical experience; and
 - RPA 2000 to easily identify where further evidence is required.

Do not alter the layout or content of Cross Reference Table 2, or use an alternative cross reference method.

4.5 Simulation

- (i) The DHSC recognises that some applicants may have difficulty in obtaining practical experience in some areas and encourages the use of simulation in place of, or to supplement, "real-life" workplace evidence.
- (ii) Simulation involves the creation of a realistic workplace scenario incorporating relevant radiation protection and clinical issues that an MPE would be expected to address. The applicant submits evidence to demonstrate the necessary practical competence to resolve those issues.
- (iii) MPE Certification can only be awarded to applicants who have accrued significant levels of practical competence in workplace situations. Even high levels of knowledge may not be considered to be sufficient, without an appropriate level of actual workplace experience. However, the Board recognise the importance of simulation, as an aid to meeting MPE certification requirements in certain situations, and offers the following guidance regarding the use of simulation:
 - Evidence from simulation should only be used when the applicant's employment is unable to provide the opportunity to demonstrate the competency.

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	8 of 9

- In all cases, the reason for submitting this type of evidence should be fully explained.

- (iv) The DHSC considers all applicants should be able to submit some actual workplace evidence for most in Cross-Reference Table 2. Simulated evidence may be used to supplement this particularly with regard to the specification of equipment and requirements relating to other events which do not happen regularly.
- (v) With regard to the quantity of simulated items that are acceptable, there should not be a problem awarding certification if a ‘good portfolio’ includes no more than one quarter of the competencies being demonstrated by evidence from simulation (i.e., at least three quarters are from direct work experience). However, it is unlikely that certification would be awarded if more than one third of the competencies are demonstrated by evidence from simulation (i.e., less than two thirds are from direct work experience). In all situations, the award of certification will be greatly influenced by the quality of both the practical evidence and the evidence from the simulation, together with the reasons for having to use simulation.

4.6 Applicants from Outside the UK

- (i) Any person may apply for a Certificate of Competence to act as an MPE, irrespective of where they live or work. All evidence submitted must be in English. A translation from an original document is acceptable.
- (ii) Applicants for MPE certification must be able to satisfy the Assessors that they have a Detailed Understanding of relevant UK Legislation and the practical implementation of the associated regulatory requirements. If necessary, such a demonstration may be achieved by providing portfolio evidence of legislative knowledge in their own country of work, with contextual statements showing how that Country’s legislation relates to or differs from the requirements of UK Legislation.
- (iii) Such persons must demonstrate the ability to communicate effectively, provide suitable training and give adequate advice to employers and other duty holders.

Document Name	Version	Date	Author	Page
MPE2	1.5	30/11/2022	KLA & AWP	9 of 9