



CabinetOffice

Infosec Training Paths & Competencies: Certificate of Infosec Competency

Candidate handbook
(All training paths)

February 2008

Infosec **&** Training Paths
Competencies

**Making
government
work better**

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Introduction

Welcome to the Infosec Training Paths & Competencies scheme (ITPC).

This booklet gives details of the ITPC scheme certificate of Infosec competency. It is designed for all candidates for the certificate, whether for the Government Practitioner certificate or specialist certificates, and offers guidance on application and sources of help at various stages of the process.

Please read this booklet carefully, and in conjunction with the other relevant material on the ITPC website. If you have any queries, including advice on developing your target competencies, please contact the scheme at the address below.

We hope that, as you progress through the syllabus, you will feel free to contribute any ideas you have for improvements – do get in touch!

The ITPC Scheme
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Room 2.20
26 Whitehall
London
SW1A 2WH

itpc@cabinet-office.x.gsi.gov.uk
www.cabinetoffice.gov.uk/infosec

About ITPC

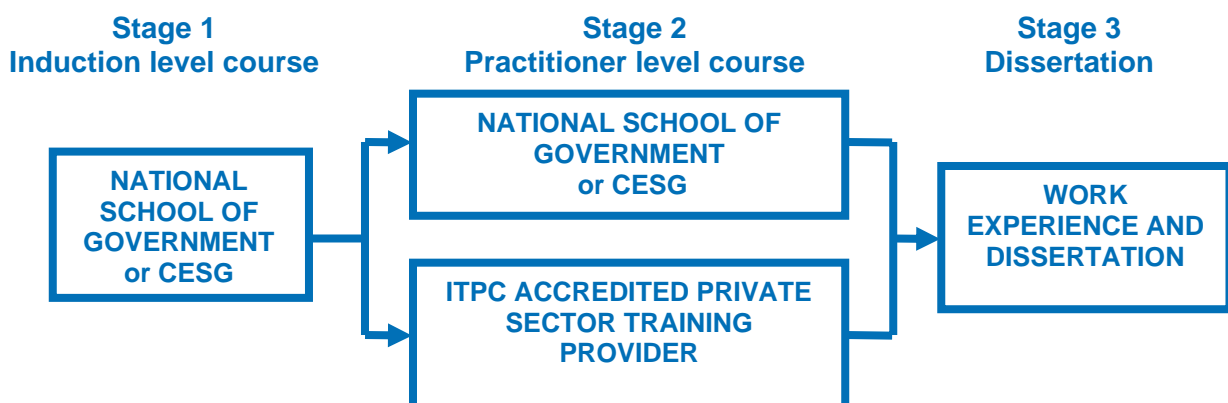
The Infosec Training Paths & Competencies (ITPC) scheme offers competency-based qualifications that accredit the knowledge, learning and skills of information assurance specialists working to HM Government standards - government, police and accredited contractors.

ITPC is managed by the Cabinet Office with the support of a steering committee, which includes representatives from government and the police as well as academia and affiliated bodies.

The scheme awards a range of Certificate of Infosec Competency qualifications, each geared to a set of core competency profiles: these include the Government Practitioner Certificate, and specialist certificate for Accreditors. The Certificate is recognised across the HM Government standards community, and also as an entry qualification to Infosec MSc programmes offered by UK universities, and for Associate Membership of the Institute of Information Security Professionals (IISP).

ITPC Process Overview

The ITPC syllabus provides complete basic practitioner training for government information assurance roles, structured around three stages of learning: two tiers of formal training followed by a project applying your learning in your work, explained in a dissertation (see diagram). The syllabus must normally be completed within two years, although it should be possible to complete it within one year. Core training is provided by the National School of Government and CESG, as well as some private sector training providers: a full and up-to-date list of all accredited courses can be found on the website. All three learning stages focus on addressing the core competencies contained in the Infosec competencies matrix, which can also be found on the website.



ITPC also recognises an optional level of learning, which may be taken following the two formal tiers and before or during the work-based project. This might be attendance at a technical security course available outside the scheme, or taking the BCS ISEB Certificate in Information Security

Management Principles (for which this syllabus prepares you). While none of these are core requirements for the award of the certificate, the ITPC examiners will recognise the benefits of such additional learning in the event that your certificate submission is considered borderline.

Routes to certification

Many candidates learn about ITPC when they first attend an accredited course. Where this is the case, the candidate should register with the scheme within two months of attending the course.

There are two routes to certification. The Training Route for candidates who have less than three years' Information Assurance experience and Waiver Route for candidates who already have at least three years' experience relevant to the certificate they are applying for.

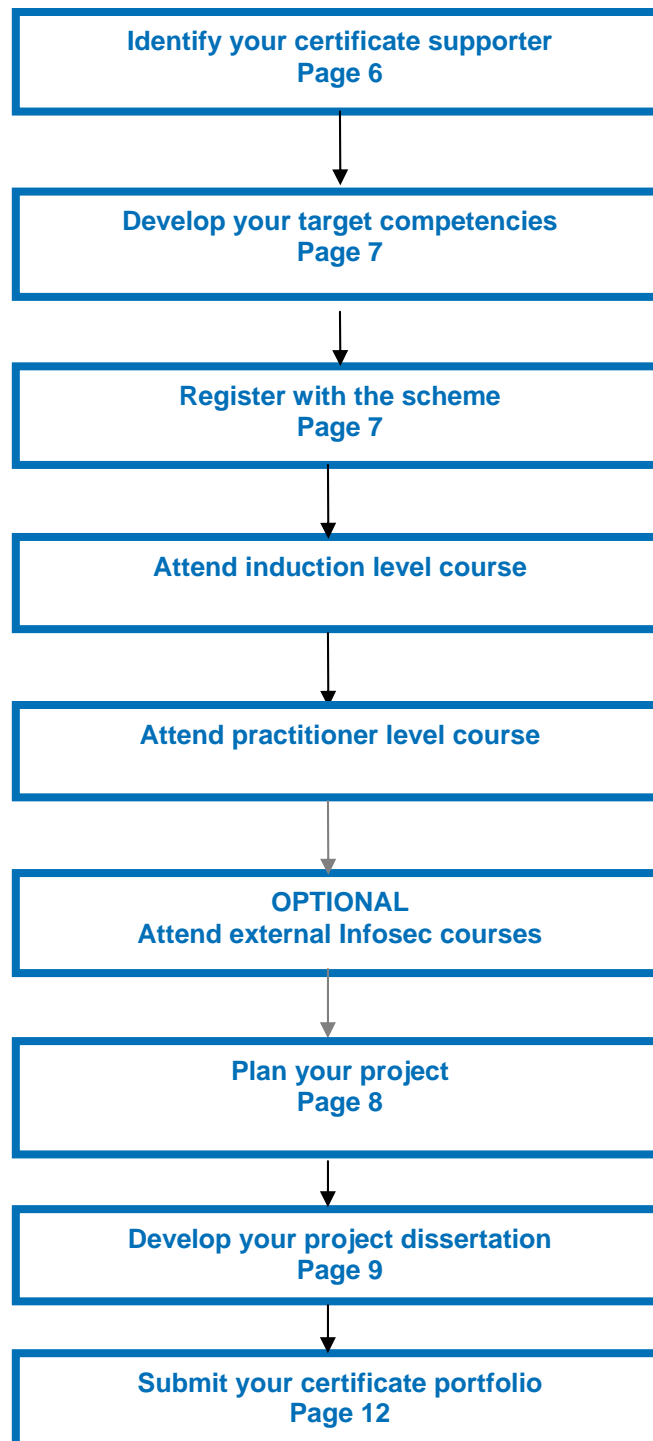
If you qualify as a Waiver route candidate you may omit the two tiers of training and submit a portfolio including either a dissertation or Competency-based form, which will establish the extent of your information assurance experience. Contact the ITPC secretariat or check the website for more information.

It is important to keep all your paperwork as anonymous as possible. Please refer to yourself only once by name at the start of each document and for the remainder of the document use "the Candidate". Any paperwork not following these guidelines will be returned for correction unmarked.

The training (standard) route

The Certificate Syllabus, step by step

The following diagram shows the complete ITPC process, step by step. Each Step is described in more detail in this document, and is the same for all certificates of Infosec competency (Government practitioner and Specialist certificate for Accreditors)



Identify your certificate supporter

All candidates must have a 'supporter' or mentor. Normally, this will be your line manager but there are circumstances where someone else may be more appropriate. The key requirement for a supporter is that they have sufficient knowledge of information assurance to judge whether you have correctly identified and, later, achieved your target competencies. They should also be able to offer you guidance on your information assurance role.

The candidate's supporter is required to:

- Agree with the candidate their target competencies and endorse these to the scheme;
- Provide opportunities for the candidate to put their formal learning into practice;
- Monitor the candidate's progress toward achieving their target competencies; and
- Endorse the candidate's dissertation to the scheme

Develop your target competencies

The booklet "*The Infosec Competencies*" contains the core competencies for all ITPC Certificates. You will notice the core competencies are expressed in generic terms. Take each core competency in turn and add some detail which is both relevant to your work and can be measured in some way by your supporter and the scheme's examiner. You may need to scope your area of responsibility – for example, to state that you perform your role within a departmental site, business area or manage a particular team of people. Whatever it is that your role demands make sure it is reflected in measurable details that you add to each core competency description in your chosen core competency profile. The key to this process is that you identify how you achieve the baseline levels of competency within your own role. There is an example of how to do this in the booklet *The Infosec Competencies*, and further help is on our web site www.cabinetoffice.gov.uk/infosec

Register with ITPC

Before you can begin work towards the certificate, you must register with ITPC. Send your target competencies direct to the ITPC scheme secretariat at the address given in this booklet. They must be accompanied by an endorsement from your supporter and your application form (see "Information for candidates" section of the website). When the scheme secretariat have reviewed and approved your target competencies, you will receive confirmation that you are registered with the scheme and you will be allocated a scheme ID number. You will also be invoiced for the scheme registration fee. You can then proceed to enrol on the courses and start planning your dissertation subject.

Attend the courses

Ideally, your first course will be an induction level course and the second, taken three to six months later, a practitioner level course. If you first learn of the scheme during a practitioner level course, you must also complete an induction level course. These two courses do not need to be taken with the same training provider, but both must be accredited for the certificate.

The scheme requires you to complete simple learning logs, noting the main points that were of relevance to you each day. The logs will be provided when you attend the courses. They are an integral component of your certificate submission, and will help you put together your dissertation – so don't overlook these as you attend the courses.

Your training provider should give you a certificate of attendance when you complete each course. These are also required as part of your Certificate Submission - so don't lose them.

Many courses include a recommended reading list. Though not a core requirement for certification, we recommend you consider using these to supplement your training. If you are thinking about working towards a higher level of qualification, this would also help prepare you to meet the entrance requirements for the MSc providers that recognise the Certificate of Infosec Competency for admission to their courses.

The waiver route

ITPC recognises that potential candidates may already have considerable information assurance experience and that the specified training courses may therefore be inappropriate: this might be the case where an individual has moved into their role from a wider public sector or industry background.

As ITPC is aligned to HM Government security policy, it is important that individuals should have a good knowledge of government processes. If you are coming in from a non-government environment, one option is that you consider whether formal training in HMG policy is appropriate.

If you have at least three years' practical UK HMG information assurance experience, and an in-depth understanding of at least one particular aspect of information assurance, then you can apply to be considered as a waiver route candidate. However, the scheme has high standards for assessing applications for waivers from the standard qualification route: you must satisfy the examiner that you meet or exceed the core competencies in the Infosec competencies matrix.

Waiver candidates need to provide they have the required experience in a CV outlining their information assurance experience, together with references and endorsements of their experience from two supporters, one of whom should act as a mentor for the candidate's application and submission.

Waiver candidate also have the option of submitting a competency based form instead of writing a dissertation. This is aimed at candidates who are experienced information assurance practitioners and have a wealth of knowledge from which to prove their competence, and so may wish to call on their experience from a number of different projects in their ITPC submission. This may apply particularly to more senior staff or those whose role is more consultancy-based, as they are often called in to address specific issues.

If you think you meet these criteria and wish to be considered for registration via the waiver route, then contact the ITPC secretariat or check the website for more information.

Planning your project

If you are a training route candidate or apply via the waiver dissertation route your work-based project should be agreed with your line manager and/or supporter. There is virtually no restriction on subject matter – it may be entirely technical in nature, entirely strategic, or a mix of both.

The subject does not need to be a “project” in project management terms. It simply needs to allow you to demonstrate that you meet the regulations of ITPC.

Your project must provide the opportunity to achieve your target competencies and demonstrate that

- you understand the concepts and terminology of information assurance as managed within government
- appreciate the implications your own information assurance role has within your organisation

Develop your project dissertation

You can start your work-based project at any time after you have registered with the scheme. However, we recommend you wait until you have attended your practitioner level course.

The dissertation must be a reasoned case of 3,500-5,000 words, excluding supporting information such as cover notes, references, glossaries and so on. Aim to demonstrate, with clear references, how you have achieved your target competencies. You should define key information assurance concepts covered in your induction level course, and describe your role (or the task that is the subject of the dissertation) making clear how it relates to other internal and external business activities.

Most of all, illustrate a risk management approach to information assurance by describing what options were open to you and what conflicts you had to deal with, justifying the decisions you made. You will not get marks for simply stating what happened.

The dissertation will form part of the certificate submission portfolio, described in detail in the next section.

The scheme recognises that confidentiality may be an issue. As you would expect, scheme examiners have government clearances. They are also required to conform to a code of conduct that should ensure confidentiality throughout the assessment process, and are subject to periodic quality assurance checks. But note that the scheme cannot ultimately accept responsibility for the security of documents submitted to it.

It is your responsibility to ensure your dissertation is sanitised as far as possible and that your own organisation's security authority is content for it to be submitted to the scheme. You should aim to submit only documents that require no protective marking.

The scheme recognises there may be cases where it is not possible to remove all protectively marked content from submissions. If this is likely contact the scheme secretariat as soon as possible to discuss ways of managing your submission securely.

It is important to keep all your paperwork as anonymous as possible. Please refer to yourself only once by name at the start of each document and for the remainder of the document use "the Candidate". Any paperwork not following these guidelines will be returned for correction unmarked.

Project dissertation

The project dissertation is the basis for the certificate award. It should be 3,500-5,000 words long, excluding supporting material such as reading lists, references and personal information. Significantly shorter or longer submissions will be rejected.

The dissertation should include a cover sheet with your personal details, plus a bulleted summary of the subject your dissertation covers.

This sheet will be removed before forwarding to the examiner, to help ensure confidentiality and anonymity between yourself and the examiner. The topic summary will be used to match your submission with an examiner who has experience in your subject.

The project dissertation cover sheet should contain the following information:

CERTIFICATE OF INFOSEC COMPETENCY – GOVERNMENT PRACTITIONER

PROJECT DISSERTATION

NAME:	John Smith
ITPC REGISTRATION:	9999 T
ORGANISATION:	Department of Departmental Affairs
TELEPHONE:	01234 567890
EMAIL:	jsmith@doda.gov.uk
TOPIC:	Network security
ASPECT:	Technical access control measures
DESCRIPTION:	Installing and auditing an upgraded access control system to manage differing sensitivities of information
MARKING:	Not protectively marked

Submitting your certificate submission portfolio

When you have completed your dissertation, you need to compile your certificate submission portfolio.

The certificate submission must contain all the following items, each clearly labelled with your scheme ID number: Refer to yourself as the Candidate. **Any paperwork not following these guidelines will be returned for correction unmarked.**

Submit your certificate submission portfolio to the ITPC Secretariat at CSIA, who will forward it to an examiner. As far as possible the examiner will have general knowledge of the topic you cover in your dissertation.

The certificate submission - a checklist

If any of the documents are missing, your submission will be returned to you without further assessment.

For training route candidates

- **Table of target competencies**

You should provide a copy of the target competencies originally submitted and accepted by the scheme secretariat. Your examiner will assess the claims made in your dissertation against these.

- **Certificates of attendance**

Provide copies of the certificates of attendance for the induction and practitioner level courses you attended. If you attended any other relevant courses (for example, courses on technical security issues) during the time you have been registered with the scheme, you may also wish to include copies of these. Candidates must remain anonymous to their examiners, so please make sure you blank out your personal details when making photocopies.

- **Learning logs**

You should provide copies of your learning logs from the induction and practitioner level courses. These can be brief notes: they will be used by your examiner only as a guide to what learning you received and as proof of your understanding. Candidates must remain anonymous to their examiners, so please make sure you blank out your personal details when making photocopies.

- **Supporter's letter**

Your supporter is also required to provide a brief statement to confirm the account you give in your dissertation. They should also confirm they are satisfied that you have achieved your target competencies to a sufficient level. Candidates must remain anonymous to their examiners, so please ask your supporter to refer to you in the letter by your scheme ID number, not your name.

- **Project Dissertation**

**For waiver route candidates-
Dissertation route**

- **Table of core competencies**

You should provide a copy of the brief description of how you have met the core competencies which were accepted by the scheme secretariat. Your examiner will use these in assessing the claims made in your dissertation.

- **CV** outlining your experience implementing UK Government information assurance policy

- **Two supporter's letters**

One of your supporters is also required to provide a brief statement to confirm the account you give in your dissertation. They should also confirm they are satisfied that you have met the appropriate core competencies. Candidates must remain anonymous to their examiners, so please ask your supporter to refer to you in the letter by your scheme ID number, not your name.

- **Project dissertation**

What an examiner is looking for

This itemised list may help you complete your submission - failure to answer two or more of the questions satisfactorily will normally mean your certificate submission will not be successful. Examiners will also take into account their overall impression of your submission, and will credit any additional work you include (for example attendance on information assurance-related courses outside the scheme or evidence in your supporter's letter) in coming to their decision.

Certificate submission component	Assessment check
Table of target competencies	Candidates must satisfy ITPC that they are competent in each of the 10 ITPC core competencies, covering three distinct areas: Infosec expertise, business management and dealing with people. All candidates must satisfy all competencies. Candidates who fail to do so will be failed.

Certificates of attendance	<p>Do the certificates come from accredited training providers?</p> <p>Do the dates of attendance fall within the 2-year time limit for completing the certificate syllabus?</p>
Learning logs	Do the logs show an understanding of the points noted?
Supporter's letter(s)	Does the supporter agree with the candidate's description of their achievement of target competencies?
Project dissertation	<p>Does the text amount to 3500-5000 words?</p> <p>Are all the candidate's target competencies referenced, and enough explanation of their achievement given in each case?</p> <p>Does the candidate define core concepts such as risk management, defence-in-depth and accreditation?</p> <p>Does the candidate show they appreciate how their information assurance activities relate to other internal or external business functions?</p> <p>Does the candidate give detailed illustration of a risk management approach to an information assurance issue they encountered in the workplace?</p>
Overall	Does the certificate submission as a whole demonstrate that the candidate understands the need for information assurance and could be entrusted to manage systems that process sensitive assets?

The Competency form

In 2007 ITPC introduced an alternative to submitting a dissertation. This recognized that many experienced IA practitioners have a wealth of experience from which to prove their competence, and may wish to call on their experience from a number of different projects in their ITPC submission. This may apply particularly to more senior staff or those whose role is more consultancy-based, as they are often called in to address specific issues.

The competency form requires an individual reasoned case for each core competency. As with the dissertation, simply giving a factual statement of what you have done is not adequate and would result in a fail.

The advantage of using the competency based form is that you can use several projects as examples in your form.

If you have already applied to the scheme as a waiver candidate and you think the competency based form is more suitable for you please inform the Secretariat, who will be happy to accept paperwork in the new format from existing waiver candidates.

You can also re-submit your paperwork in the new format if you have failed via the dissertation route, but it might be easier to alter your dissertation than start the new document.

The submission and assessment process are the same as for the dissertation, and should use the following checklist of documents. **If any of these are missing, your submission will be returned to you without further assessment.**

For waiver route candidates- Competency form route

- **Application form**
- **Application form annex,**
- **CV** outlining your experience implementing UK Government information assurance policy
- **Two supporter's letters**

Your supporters should provide a brief statement to confirm the account you give in your application. They should also confirm they are satisfied that you have met the core competencies. Candidates must remain anonymous to their examiners, so please ask your supporter to refer to you in the letter by your scheme ID number, not your name.

The assessment procedure

The ITPC secretariat at CSIA acts as a clearing house for ITPC certificate submissions. On receiving your submission, they will check all the required sections of your portfolio are present and remove the cover sheet of your dissertation. They will also attempt wherever possible to match your submission with an examiner who has some expertise in your subject area. The examiner is not allowed to know your identity, nor should you know theirs.

Please refer to yourself only once by name on the cover sheet and for the remainder of the document use "the Candidate". Any paperwork not following these guidelines will be returned for correction unmarked.

The examiner will look for evidence that you meet ITPC standards and understand how your information assurance role integrates with and/or is constrained by internal and external business activities. Most of all, they will need to be satisfied that you have illustrated a risk management approach to information assurance; qualified arguments and justifications for decisions you made or actions you took are essential.

What happens if I pass?

If your submission is successful, the examiner will notify the secretariat who will issue your certificate. You should expect to hear the result of your submission within six-eight weeks of the Secretariat receiving your submission.

What happens if I fail?

If your submission is unsuccessful, the secretariat will pass on clear and detailed feedback from the examiner on the reasons for failing your submission, and detailed advice on what needs to be done to reach a satisfactory level.

You are allowed to make two resubmissions, each of which must be made within three months of receiving feedback on the previous submission. Any third certificate submissions will be referred to a different examiner from the original examiner.

Appeals procedure

If you find yourself in this position, and feel strongly that the decision was flawed, you may appeal to the scheme secretariat. In such cases, the secretariat will review your three submissions and the examiner's comments on each submission, and consult with the examiners. If the secretariat disagrees with the decision they can award the certificate.

Where to get help

The scheme secretariat is there to help when you need advice on how to proceed, or are finding it difficult to complete your certificate programme. In exceptional cases, the secretariat will consider extending the period allowed to complete the programme; extenuating domestic circumstances or pressures of work would be taken into account. However, it should be emphasised that candidates are expected to make every effort to complete the programme within the two year period.

Scheme contacts

ITPC Scheme Secretariat

The ITPC Scheme
Cabinet Office CSIA
Room 2.20
26 Whitehall
London
SW1A 2WH

itpc@cabinet-office.x.gsi.gov.uk

www.cabinetoffice.gov.uk/infosec

National School of Government

www.nationalschool.gov.uk

CESG

www.cesg.gov.uk