



**Australian Government**

# **ICTWEB527 Research and apply emerging web technology trends**

**Release: 1**

# ICTWEB527 Research and apply emerging web technology trends

## Modification History

| Release   | Comments                                                                                                     |
|-----------|--------------------------------------------------------------------------------------------------------------|
| Release 1 | This version first released with ICT Information and Communications Technology Training Package Version 6.0. |

## Application

This unit describes the skills and knowledge required to identify, research and apply emerging web technologies.

It applies to individuals who are highly skilled technicians and have high-level knowledge of the principles of analysis and design.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Unit Sector

Web

## Elements and Performance Criteria

| ELEMENT                                          | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i> | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                                                                                                                                        |
| 1. Identify emerging web technology              | 1.1 Identify needs of web application<br>1.2 Research and review new developments in web technology<br>1.3 Identify new developments in web technology that meet identified needs of web application<br>1.4 Evaluate and select web technology most applicable to web application needs<br>1.5 Identify legislative and organisational requirements and standards applicable to implementation of new technology<br>1.6 Discuss and confirm selection with required personnel |

| ELEMENT                                                      | PERFORMANCE CRITERIA                                                                                                                                                                                                                   |
|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. Implement new web technology                              | 2.1 Create required code to apply web technology<br>2.2 Apply code to web technology according to organisational procedures<br>2.3 Test web application in a variety of browsers and digital devices, and rectify problems as required |
| 3. Review and finalise web technology implementation process | 3.1 Review test results and discuss findings with required personnel<br>3.2 Seek feedback from required personnel and amend as required<br>3.3 Document work performed and findings according to organisational procedures             |

## Foundation Skills

*This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.*

| SKILL                     | DESCRIPTION                                                                                                                                                                                                                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading                   | <ul style="list-style-type: none"><li>Critically analyses complex information from a variety of sources and consolidates information applicable to specific criteria</li></ul>                                                            |
| Writing                   | <ul style="list-style-type: none"><li>Writes and edits code and technical data in a logical manner using required syntax</li></ul>                                                                                                        |
| Initiative and enterprise | <ul style="list-style-type: none"><li>Investigates new and innovative ideas to improve work practices and processes</li></ul>                                                                                                             |
| Planning and organising   | <ul style="list-style-type: none"><li>Accepts responsibility for planning and sequencing complex tasks and workload</li><li>Negotiates key aspects with others, including required capabilities, efficiencies and effectiveness</li></ul> |
| Technology                | <ul style="list-style-type: none"><li>Manages and manipulates data and communicates with others in a secure and stable digital environment</li></ul>                                                                                      |

## Unit Mapping Information

Supersedes and is equivalent to ICTWEB516 Research and apply emerging web technology trends.

## Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

# Assessment Requirements for ICTWEB527 Research and apply emerging web technology trends

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## Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- research, investigate and apply at least two emerging web technology trends to a web application, according to organisational needs.

## Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- principles of the internet and technologies that underpin its existence
- key principles of analysis and design
- programming control structures and object-oriented programming applicable to implementing new web technology
- web programming concepts, including:
  - the hypertext transfer protocol (HTTP)
  - stateless programming
  - session management
  - authentication and web security
  - client-side programming
- latest web technology trends and their application to different clients
- features, functions and requirements of different web applications
- web application testing processes
- sources of information regarding new and emerging trends and technologies
- legislative and organisational requirements and standards applicable to implementation of new technologies.

## Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- a development environment
- a server
- a database server
- hardware and software applicable to implementation of new technology
- the internet
- browsers and digital devices.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

## Links

Companion Volume Implementation Guide is found on VETNet -

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