AS ISO/IEC 19788.2:2013
ISO/IEC 19788-2:2011
ISO/IEC 19788-2:2011/Amd.1:2016
(Incorporating Amendment No. 1)

AS ISO/IEC 19788.2:2013

Australian STANDARD

# Information technology—Learning, education and training—Metadata for learning resources

## Part 2: Dublin Core elements

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Full document details: AS ISO IEC 19788.2-2013 (2018)

This Australian Standard® was prepared by Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research. It was approved on behalf of the Council of Standards Australia on 19 April 2013.
This Standard was published on 13 May 2013.

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- Education Services Australia
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This Standard was issued in draft form for comment as DR AS/NZS ISO/IEC 19788.2.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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AS ISO/IEC 19788.2:2013
(Incorporating Amendment No. 1)

Australian Standard®

# Information technology—Learning, education and training—Metadata for learning resources

# Part 2: Dublin Core elements

First published as AS/NZS ISO/IEC 19788.2:2013.
Reissued and redesignated incorporating Amendment No. 1 (June 2018)
as AS ISO/IEC 19788.2:2013.

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ISBN 978 1 74342 435 3

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# PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT-019, Information and Documentation, Information Technology—Learning, Education, Training and Research.

A1 Amendment No. 1 to this Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee IT-019. As a consequence of Amendment No. 1, which is published as an Australian-only amendment, the designation of this Standard has been changed from AS/NZS ISO/IEC 19788.2:2013 to AS ISO/IEC 19788.2:2013.

The objective of this Standard is to specify metadata elements and their attributes for the description of learning resources. It provides a base-level data element set for the description of learning resources, from the ISO 15836:2009 Dublin Core metadata element set, using the framework provided in AS/NZS ISO/IEC 19788.1:2013.

A1 This Standard is identical with, and has been reproduced from ISO/IEC 19788-2:2011, *Information technology — Learning, education and training — Metadata for learning resources — Part 2: Dublin Core elements*, and its Amendment 1 (2016), *Non-literal content value data elements*, which has been added at the end of the source text.

As this Standard is reproduced from an International Standard, the following applies:

A1 (a) In the source text ‘this part of ISO/IEC 19788’ should read ‘this Australian Standard’.

(b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

| *Reference to International Standard* | | *Australian Standard* | |
|---|---|---|---|
| ISO 8601 | Data elements and interchange formats—Information interchange—Representation of dates and times | AS ISO 8601 | Data elements and interchange formats—Information interchange—Representation of dates and times |
| ISO 15836 | Information and documentation—Dublin Core metadata element set | AS/NZS ISO 15836 | Information and documentation—Dublin Core metadata element set |
| ISO/IEC 19788 | Information technology—Learning, education and training—Metadata for learning resources | AS/NZS ISO/IEC 19788 | Information technology—Learning, education and training—Metadata for learning resources |
| 19788-1 | Part 1: Framework | 19788.1 | Part 1: Framework |

The term ‘normative’ has been used in this Standard to define the application of the annex to which it applies. A ‘normative’ annex is an integral part of a Standard.

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# INTRODUCTION

The primary purpose of ISO/IEC 19788 is to facilitate:

a) the description of a learning resource by providing a standards-based approach to the identification and specification of the metadata elements required to describe a learning resource, e.g. as a metadata learning resource (MLR) record; and

b) the search, discovery, acquisition, evaluation, and use of learning resources, for instance by learners, instructors or automated software processes.

ISO/IEC 19788 is modularly structured with all subsequent parts corresponding to a specified set of user requirements for the identification and specification of metadata elements having a particular focus and intended use in the description of a learning resource. This includes categories of metadata elements focused on technical perspectives, pedagogical aspects, availability and intellectual property aspects, bindings, etc.

This part of ISO/IEC 19788 uses the data element specification model and framework provided in ISO/IEC 19788-1 to set Dublin Core ISO 15836:2009 elements and associated remarks into the framework of ISO/IEC 19788 so that they can later be used with other data elements from type 1 parts of ISO/IEC 19788, addressing specific user communities' needs for extensions, modularization or refinement.

ISO/IEC 19788-3 provides a recommended approach to further enhance interoperability through an application profile based on the data element specifications from this part of ISO/IEC 19788 as is, or with added constraints.

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AUSTRALIAN STANDARD

# Information technology—Learning, education and training—Metadata for learning resources

## Part 2: Dublin Core elements

## 1 Scope

ISO/IEC 19788 specifies, in a rule-based manner, metadata elements and their attributes for the description of learning resources. This includes the rules governing the identification of data elements and the specification of their attributes.

These metadata elements are used to form the description of a learning resource, i.e. as a metadata learning resource (MLR) record.

This part of ISO/IEC 19788 provides a base-level data element set for the description of learning resources, from the ISO 15836:2009 Dublin Core metadata element set, using the framework provided in ISO/IEC 19788-1. This provides interoperability at the time of expressing existing Dublin Core records within MLR.

These elements can later be combined with other descriptive elements, including those from other type 1 parts of ISO/IEC 19788 or other standards, including Dublin Core refinements and IEEE 1484.12.1-2002, in order to address more specific topics such as technical or educational information.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 639-2:1998[1)], *Codes for the representation of names of languages — Part 2: Alpha-3 code/Codes pour la représentation des noms de langue — Partie 2: Code alpha-3*

ISO 8601:2004, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO 15836:2009, *Information and documentation — The Dublin Core metadata element set*

ISO/IEC 10646:2003, *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*

ISO/IEC 19788-1:2011, *Information technology — Learning, education and training — Metadata for learning resources — Part 1: Framework*

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1) This part of ISO/IEC 19788 uses Table 2 Terminology code set, hereafter referred to as “ISO 639-2/T”. For additional information, see ISO 639-2:1998, 4.1, Form of language codes.

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## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19788-1 apply.

NOTE The following terms and definitions from ISO/IEC 19788-1 are the most important for the comprehension of this document.

**3.1**
**content value**
information recorded as the content of the **data element** (ISO/IEC 19788-1:2011, 3.11), in compliance with its **data element specification** (ISO/IEC 19788-1:2011, 3.14)

[ISO/IEC 19788-1:2011, 3.10]

**3.2**
**definition**
representation of a concept by a descriptive statement which serves to differentiate it from related concepts

[ISO/IEC 19788-1:2011, 3.15]

**3.3**
**domain**
⟨data element⟩ **resource class** (3.9) whose **resource**s (ISO/IEC 19788-1:2011, 3.30) are described by the **data element** (ISO/IEC 19788-1:2011, 3.11) under consideration

[ISO/IEC 19788-1:2011, 3.16]

**3.4**
**identifier**
sequence of characters capable of uniquely identifying an **entity** (ISO/IEC 19788-1:2011, 3.17)

[ISO/IEC 19788-1:2011, 3.19]

**3.5**
**learning resource**
**resource** (ISO/IEC 19788-1:2011, 3.30) used for learning, education and training

[ISO/IEC 19788-1:2011, 3.20]

**3.6**
**name**
designation of an object by a linguistic expression

[ISO/IEC 19788-1:2011, 3.25]

**3.7**
**range**
⟨data element⟩ **resource class** (3.9) to which the **content value**s (3.1) of the **data element** (ISO/IEC 19788-1:2011, 3.11) belong, or set of **literal**s (ISO/IEC 19788-1:2011, 3.21) comprising the string representations of the permissible values of the data element under consideration

[ISO/IEC 19788-1:2011, 3.28]

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**3.8**
**refine**
〈data element specification〉 have an associated property which is a sub-property of the property associated with

NOTE 1 This implies that the value of the domain attribute of the first data element specification is identical to or a proper subset of the value of the domain attribute of the second data element specification and that the value of the range attribute of the first data element specification is identical to or a proper subset of the value of the range attribute of the second data element specification.

NOTE 2 Data element instances of the first data element specification are said to refine data element instances of the second data element specification.

EXAMPLE 1 Property “is son of” refines property “is child of”.

EXAMPLE 2 Property “has mother” refines property “has parent”.

[ISO/IEC 19788-1:2011, 3.29]

**3.9**
**resource class**
set of **resource**s (ISO/IEC 19788-1:2011, 3.30) that can be identified by listing or description of boundaries and meaning and whose properties and behaviour follow the same **rule** (ISO/IEC 19788-1:2011, 3.32)

NOTE 1 A resource class has the following attributes:

— Identifier;
— Name;
— Definition;
— SubclassOf [multiple inheritance];
— Note.

EXAMPLES *Learning Resource* (set of all learning resources), *Person* (set of all Persons), *Rights* (set of all rights objects), and *Document* (set of all documents).

NOTE 2 Adapted from the definition of “object class” in ISO/IEC 11179-1:2004, 3.3.22.

[ISO/IEC 19788-1:2011, 3.31]

**3.10**
**rule set**
defined and pre-established set of **rule**s (ISO/IEC 19788-1:2011, 3.32) that are used together

[ISO/IEC 19788-1:2011, 3.33]

## 4 Abbreviated terms

| | |
|---|---|
| DC | Dublin Core |
| DCMI | Dublin Core Metadata Initiative |
| DES | Data Element Specification |
| DOI | Digital Object Identifier |
| ISAN | International Standard Audiovisual Number |
| ISBN | International Standard Book Number |
| ISIN | International Securities Identification Number |

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| | |
|---|---|
| ISMN | International Standard Music Number |
| ISSN | International Standard Serial Number |
| PRS | Predefined Rule Set |
| PURL | Persistent Uniform Resource Locator |
| RC | Resource Class |
| URI | Uniform Resource Identifier |
| URL | Uniform Resource Locator |
| URN | Uniform Resource Name |
| UUID | Universally Unique IDentifier |

# 5 Data element specifications

## 5.1 Title (DES0100)

| **Data element specification** | |
|---|---|
| Identifier | ISO_IEC_19788-2:2011::DES0100 |
| ***Data element attributes*** | |
| Property name | title |
| Definition | name given to the learning resource |
| Linguistic indicator | linguistic |
| Domain | *Learning Resource*<br>(ISO_IEC_19788-1:2011::RC0002) |
| Range | *literal* |
| Content value rules | MLR String<br>(ISO_IEC_19788-1:2011::PRS0001) |
| Refines | - |
| Example(s) | Example 1 金葉和歌集 (jpn)<br><br>Example 2 Collection of Golden Leaves (eng) |
| Note(s) | This element refines the element “title” described in Table 1 of ISO 15836:2009(E), *Information and documentation — The Dublin Core metadata element set.* |


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### 5.2 Creator (DES0200)

| Data element specification | |
|---|---|
| Identifier | ISO_IEC_19788-2:2011::DES0200 |
| ***Data element attributes*** | |
| Property name | creator |
| Definition | entity primarily responsible for making the learning resource |
| Linguistic indicator | linguistic |
| Domain | *Learning Resource* (ISO_IEC_19788-1:2011::RC0002) |
| Range | *literal* |
| Content value rules | MLR String (ISO_IEC_19788-1:2011::PRS0001) |
| Refines | - |
| Example(s) | John Doe |
| Note(s) | 1. This element refines the element “creator” described in Table 1 of ISO 15836:2009(E), *Information and documentation — The Dublin Core metadata element set.*<br><br>2. Examples of Creator include a person, an organization, or a service. Typically, the name of a Creator should be used to indicate the entity. |

### 5.3 Subject (DES0300)

| Data element specification | |
|---|---|
| Identifier | ISO_IEC_19788-2:2011::DES0300 |
| ***Data element attributes*** | |
| Property Name | subject |
| Definition | topic of the learning resource |
| Linguistic indicator | linguistic |
| Domain | *Learning Resource* (ISO_IEC_19788-1:2011::RC0002) |
| Range | *literal* |

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| | |
|---|---|
| Content value rules | MLR String<br>(ISO_IEC_19788-1:2011::PRS0001) |
| Refines | - |
| Example(s) | Creutzfeldt–Jakob disease (eng) |
| Note(s) | 1. This element refines the element “subject” described in Table 1 of ISO 15836:2009(E), *Information and documentation — The Dublin Core metadata element set.*<br><br>2. Typically, the subject will be represented using keywords, key phrases or classification codes. Recommended best practice is to use a controlled vocabulary.<br><br>3. To describe the spatial or temporal topic of the learning resource, use the ISO_IEC_19788-2:2011::DES1400 (coverage) element. |

### 5.4 Description (DES0400)

| **Data element specification** | |
|---|---|
| Identifier | ISO_IEC_19788-2:2011::DES0400 |
| ***Data element attributes*** | |
| Property Name | description |
| Definition | account of the learning resource |
| Linguistic indicator | linguistic |
| Domain | *Learning Resource*<br>(ISO_IEC_19788-1:2011::RC0002) |
| Range | *literal* |
| Content value rules | MLR String<br>(ISO_IEC_19788-1:2011::PRS0001) |
| Refines | - |
| Example(s) | This Java applet shows a car moving with constant acceleration. The green control panel contains text fields where you can vary the values of initial position, initial velocity and acceleration. (eng) |
| Note(s) | 1. This element refines the element “description” described in Table 1 of ISO 15836:2009(E), *Information and documentation — The Dublin Core metadata element set.*<br><br>2. Description may include, but is not limited to, an abstract, a table of contents, a graphical representation, or a free-text account of the learning resource. |

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### 5.5 Publisher (DES0500)

| Data element specification | |
|---|---|
| Identifier | ISO_IEC_19788-2:2011::DES0500 |
| ***Data element attributes*** | |
| Property Name | publisher |
| Definition | entity responsible for making the learning resource available |
| Linguistic indicator | linguistic |
| Domain | *Learning Resource* (ISO_IEC_19788-1:2011::RC0002) |
| Range | *literal* |
| Content value rules | MLR String (ISO_IEC_19788-1:2011::PRS0001) |
| Refines | - |
| Example(s) | British Museum (eng) |
| Note(s) | 1. This element refines the element “publisher” described in Table 1 of ISO 15836:2009(E), *Information and documentation — The Dublin Core metadata element set*.<br><br>2. Examples of Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to identify the entity. |

### 5.6 Contributor (DES0600)

| Data element specification | |
|---|---|
| Identifier | ISO_IEC_19788-2:2011::DES0600 |
| ***Data element attributes*** | |
| Property name | contributor |
| Definition | entity responsible for making contributions to the learning resource |
| Linguistic indicator | linguistic |
| Domain | *Learning Resource* (ISO_IEC_19788-1:2011::RC0001) |

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