

**TDL Metadata Working Group**

**MODS Application Profile for Electronic Theses and Dissertations  
Version 1**

**December 2005**

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

### Introduction

This MODS application profile for electronic theses and dissertations (ETDs) describes the best practices for descriptive metadata for members of the Texas Digital Library (TDL). This document defines the mandatory minimum elements for ETDs. Besides these elements, other valid MODS elements may be included in ETD records. Optional elements, subelements, and attributes are described throughout the document.

### MODS elements for ETDs:

**Title Information (mandatory)**  
**Name of Author (mandatory)**  
**Name of Thesis Advisor (mandatory)**  
**Name of Committee Member (optional)**  
**Name of Degree Grantor (mandatory)**  
**Type of Resource (mandatory)**  
**Genre (mandatory)**  
**Origin Information (mandatory)**  
**Language (mandatory)**  
**Physical Description (mandatory)**  
**Abstract (mandatory)**  
**Subject (mandatory)**  
**Identifier (mandatory)**  
**Location (mandatory)**  
**Degree Information (mandatory)**  
**Record Information (mandatory)**

### Instructions for formatting and encoding:

#### Title Information

Mandatory practice: Encode the title information in a <mods:titleInfo> wrapper element. Encode the title proper in a <mods:title> subelement. Encode the subtitle in a <mods:subTitle> subelement.

Optional practice: Other valid subelements or attributes within the <mods:titleInfo> element may be used.

Example:

```
<mods:titleInfo>
  <mods:title>Critical processes and performance measures for patient safety
    systems in healthcare institutions
</mods:title>
```

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

```
<mods:subTitle>a Delphi study</mods:subTitle>
</mods:titleInfo>
```

### Name of Author

Mandatory practice: Encode information about the name of the author in the <mods:name> wrapper element with the type attribute set to “personal.” Encode the MARC relator term “Author” in the <mods:roleTerm> subelement under the <mods:role> subelement. Encode the various parts of the name in the <mods:namePart> subelement. Include the type attribute in each <mods:namePart> subelement. The “given” and “family” name types are mandatory.

Optional practice: Encode the birthdate in a <mods:namePart> subelement with type set to “date”. Other valid subelements or attributes within the <mods:name> element may be used.

Example:

```
<mods:name type="personal">
  <mods:namePart type="given">Ralitsa B.</mods:namePart>
  <mods:namePart type="family">Akins</mods:namePart>
  <mods:namePart type="date">1967-</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator"
      type="text">Author</mods:roleTerm>
  </mods:role>
</mods:name>
```

### Name of Thesis Advisor

Mandatory practice: Encode information about the thesis advisor in the <mods:name> wrapper element with the type attribute set to “personal.” Encode the MARC relator term “Thesis advisor” in the <mods:roleTerm> subelement under the <mods:role> subelement. Encode the various parts of the name in the <mods:namePart> subelement. Include the type attribute in each <mods:namePart> subelement. The “given” and “family” name types are mandatory. The element <mods:name> is repeatable for thesis advisors.

Optional practice: Encode the birthdate in a <mods:namePart> subelement with type set to “date”. Other valid subelements or attributes within the <mods:name> element may be used.

Example:

```
<mods:name type="personal">
  <mods:namePart type="given">Bryan R.</mods:namePart>
  <mods:namePart type="family">Cole</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator" type="text">Thesis
      advisor</mods:roleTerm>
  </mods:role>
</mods:name>
```

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

### Name of Committee Member

Optional practice: Encode information about committee members in the <mods:name> wrapper element with the type attribute set to “personal.” Encode the term “Committee member” in the <mods:roleTerm> subelement under the <mods:role> subelement. Encode the various parts of the name in the <mods:namePart> subelement. Include the type attribute in each <mods:namePart> subelement. The “given” and “family” name types are mandatory. The element <mods:name> is repeatable for committee members. Encode the birthdate in a <mods:namePart> subelement with type set to “date”. Other valid subelements or attributes within the <mods:name> element may be used.

Example:

```
<mods:name type="personal">
  <mods:namePart type="given">Jane R.</mods:namePart>
  <mods:namePart type="family">Smith</mods:namePart>
  <mods:role>
    <mods:roleTerm type="text">Committee member</mods:roleTerm>
  </mods:role>
</mods:name>
```

### Name of Degree Grantor

Mandatory practice: Encode information about the degree grantor in the <mods:name> wrapper element with the type attribute set to “corporate.” Encode the name of the degree granting institution in a <mods:namePart> subelement. Use the form of the name authorized by the Library of Congress Name Authority File. Encode the name of the department that granted the degree in a <mods:namePart> subelement. Encode the MARC relator term “Degree grantor” in the <mods:roleTerm> subelement under the <mods:role> subelement.

Optional practice: Other valid subelements or attributes within the <mods:name> element may be used.

Example:

```
<mods:name type="corporate" authority="lcnaf">
  <mods:namePart>Texas A & M University</mods:namePart>
  <mods:namePart>Philosophy</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator" type="text">
      Degree grantor
    </mods:roleTerm>
  </mods:role>
</mods:name>
```

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

### Type of Resource

Mandatory practice: Encode the type of resource in the <mods:typeOfResource> element. The element <mods:typeOfResource> is repeatable for ETDs with multiple files.

Example:

```
<mods:typeOfResource>
  text
</mods:typeOfResource>
```

### Genre

Mandatory practice: Encode the MARC genre term “theses” in the <mods:genre> element. Set the authority attribute to “marcgt.”

Optional practice: Other valid attributes within the <mods:genre> element may be used.

Example:

```
<mods:genre authority="marcgt">
  theses
</mods:genre>
```

### Origin Information

Mandatory practice: Encode relevant dates for the ETD in the <mods:originInfo> wrapper element. The creation date is defined as the date the student graduates or the date the degree is conferred. The publication date is defined as the date the ETD is released to the public.

Encode the month and year of the creation date, according to ISO 8601, in the <mods:dateCreated> subelement. Set the encoding attribute to “iso8601.”

Encode the month and year of the publication date, according to ISO 8601, in the <mods:dateIssued> subelement. Set the encoding attribute to “iso8601.”

Optional practice: The day of the month may be included date encodings. Other valid subelements or attributes within the <mods:originInfo> element may be used.

Examples:

```
<mods:originInfo>
  <mods:dateCreated encoding="iso8601">200408</mods:dateCreated>
  <mods:dateIssued encoding="iso8601">200412</mods:dateIssued>
</mods:originInfo>
```

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

### Language

Mandatory practice: Encode information about the language of the ETD in the <mods:language> wrapper element. Encode the language, according to ISO 639-2b, in the <mods:languageTerm> subelement. Set the type attribute to “code” and the authority attribute to “iso639-2b.” The <mods:languageTerm> subelement is repeatable.

Optional practice: Other valid subelements or attributes within the <mods:language> element may be used.

Example:

```
<mods:language>
  <mods:languageTerm type="code" authority="iso639-2b">
    eng
  </mods:languageTerm>
  <mods:languageTerm type="code" authority="iso639-2b">
    spa
  </mods:languageTerm>
</mods:language>
```

### Physical Description

Mandatory practice: Encode the physical description in the <mods:physicalDescription> wrapper element. Encode the MARC format term “electronic” in the <mods:form> subelement. Set the authority attribute to “marcform.” Encode the MIME type in the <mods:internetMediaType> subelement. Encode the digital origin (“born digital” or “reformatted digital”) in the <mods:digitalOrigin> subelement.

Optional practice: Other valid attributes within the <mods:physicalDescription> element may be used.

Example:

```
<mods:physicalDescription>
  <mods:form authority="marcform">electronic</mods:form>
  <mods:internetMediaType>application/pdf</mods:internetMediaType>
  <mods:digitalOrigin>born digital</mods:digitalOrigin>
</mods:physicalDescription>
```

### Abstract

Mandatory practice: Encode the abstract in the <mods:abstract> element. Include the language attribute encoded in ISO 639-2b.

Optional practice: Valid attributes within the <mods:abstract> element may be used.

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

Example:

```
<mods:abstract lang="eng">This dissertation study presents a conceptual framework for implementing and assessing patient safety systems in healthcare institutions. The conceptual framework consists of critical processes and performance measures identified in the context of the 2003 Malcolm Baldrige National Quality Award (MBNQA) Health Care Criteria for Performance Excellence...</mods:abstract>
```

### Subject

Mandatory practice: Encode topical subject terms in the <mods:subject> wrapper element. Encode individual terms or phrases in the <mods:topic> subelement. The <mods:subject> element is repeatable.

Optional practice: Controlled subject headings may be included by using the authority attribute of the <mods:topic> subelement. Other valid subelements or attributes within the <mods:subject> element may be used.

Example:

```
<mods:subject>
  <mods:topic>healthcare</mods:topic>
</mods:subject>

<mods:subject>
  <mods:topic>patient safety</mods:topic>
</mods:subject>

<mods:subject authority="lcsh">
  <mods:topic>Medical care</mods:topic>
  <mods:topic>Quality control</mods:topic>
  <mods:geographic>United States</mods:geographic>
  <mods:temporal>20th century</mods:temporal>
</mods:subject>
```

### Identifier

Mandatory practice: Encode the unique identifier in the <mods:identifier> element. The <mods:identifier> element is repeatable.

Optional practice: The type attribute may be used in the <mods:identifier> element. Other valid attributes within the <mods:identifier> element may be used.

Example:

```
<mods:identifier type="hdl">
```

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

```
    http://handle.tamu.edu/1969.1/1042
</mods:identifier>
```

### Location

Mandatory practice: Encode the location in the <mods:location> wrapper element. Encode the uniform resource locator (URL) in the <mods:url> subelement.

Optional practice: Other valid attributes within the <mods:identifier> element may be used.

Example:

```
<mods:location>
  <mods:url>
    http://handle.tamu.edu/1969.1/1042
  </mods:url>
</mods:location>
```

### Degree Information

Note: The MODS standard does not have elements specifically for theses and dissertations. In order to encode degree information in MODS, the <mods:extension> element is used to reference the ETD-MS XML schema.

Mandatory practice: Encode information about the conferred degree in the <etd:degree> wrapper element. Encode the degree name in the <etd:name> subelement. Use the fully spelled out form of the degree name. Encode the degree level, from the TDL vocabulary, in the <etd:level> subelement. Encode the degree discipline, from the TDL vocabulary, in the <etd:discipline> subelement.

Example:

```
<mods:extension>
  <etd:degree>
    <etd:name>Doctor of Philosophy</etd:name>
    <etd:level>Doctoral</etd:level>
    <etd:discipline>Educational Administration</etd:discipline>
  </etd:degree>
</mods:extension>
```

### Record Information

Mandatory practice: Encode information about the MODS record in the <mods:recordInfo> wrapper element. Encode the name of the agency that created the MODS record in the <mods:recordContentSource> subelement, with the authority attribute set to "marcorg." Encode the month, year, and day of the creation date of the record, according to ISO 8601, in the



# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

<mods:recordCreationDate> subelement. Set the encoding attribute to “iso8601.” Encode the month, year, and day of the change date, according to ISO 8601, in the <mods:recordChangeDate> subelement. Set the encoding attribute to “iso8601.” Encode the unique record identifier in the <mods:recordIdentifier> subelement.

Optional practice: Other valid attributes within the <mods:recordInfo> element may be used.

Example:

```
<mods:recordInfo>
  <mods:recordContentSource authority="marcorg">
    TxCM
  </mods:recordContentSource>
  <mods:recordCreationDate encoding="iso8601">
    20050826
  </mods:recordCreationDate>
  <mods:recordChangeDate encoding="iso8601">
    20050826
  </mods:recordChangeDate>
  <mods:recordIdentifier>12345678</mods:recordIdentifier>
</mods:recordInfo>
```

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

### Full example of MODS record for an ETD

```
<?xml version="1.0" encoding="UTF-8"?>
<mods:mods

xmlns:mods="http://www.loc.gov/mods/v3"
xmlns:etd="http://www.ndltd.org/standards/metadata/etdms/1.0/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation=
"http://www.loc.gov/mods/v3
http://www.loc.gov/standards/mods/v3/mods-3-1.xsd

http://www.ndltd.org/standards/metadata/etdms/1.0/
http://www.ndltd.org/standards/metadata/etdms/1.0/etdms.xsd">

<mods:titleInfo lang="eng">
  <mods:title>Critical processes and performance measures for patient safety
    systems in healthcare institutions</mods:title>
  <mods:subTitle>a Delphi study</mods:subTitle>
</mods:titleInfo>

<mods:name type="personal" authority="lcnaf">
  <mods:namePart>Akins, Ralitsa B., 1967-</mods:namePart>
  <mods:namePart type="given">Ralitsa B.</mods:namePart>
  <mods:namePart type="family">Akins</mods:namePart>
  <mods:namePart type="date">1967-</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator"
      type="text">Author</mods:roleTerm>
  </mods:role>
</mods:name>

<mods:name type="personal">
  <mods:namePart type="given">Bryan R.</mods:namePart>
  <mods:namePart type="family">Cole</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator" type="text">Thesis
      advisor</mods:roleTerm>
  </mods:role>
</mods:name>

<mods:name type="corporate" authority="lcnaf">
  <mods:namePart>Texas A & M University</mods:namePart>
  <mods:role>
    <mods:roleTerm authority="marcrelator" type="text">Degree
      grantor</mods:roleTerm>
  </mods:role>
</mods:name>

<mods:typeOfResource>
  text
</mods:typeOfResource>

<mods:genre authority="marcgt">
  theses
</mods:genre>
```

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

```
<mods:originInfo>
  <mods:dateCreated encoding="iso8601">200408</mods:dateCreated>
  <mods:dateIssued encoding="iso8601">200411</mods:dateIssued>
</mods:originInfo>

<mods:language>
  <mods:languageTerm type="code" authority="iso639-2b">
    eng
  </mods:languageTerm>
</mods:language>

<mods:physicalDescription>
  <mods:form authority="marcform">electronic</mods:form>
  <mods:internetMediaType>application/pdf</mods:internetMediaType>
  <mods:digitalOrigin>born digital</mods:digitalOrigin>
</mods:physicalDescription>

<mods:abstract lang="eng">This dissertation study presents a conceptual
framework for implementing and assessing patient safety systems in
healthcare institutions. The conceptual framework consists of critical
processes and performance measures identified in the context of the 2003
Malcolm Baldrige National Quality Award (MBNQA) Health Care Criteria for
Performance Excellence. Methodology: The Delphi technique for gaining
consensus from a group of experts and forecasting significant issues in
the field of the Delphi panel expertise was used. Data collection included
a series of questionnaires where the first round questionnaire was based
on literature review and the MBNQA criteria for excellence in healthcare,
and tested by an instrument review panel of experts. Twenty-three experts
(MBNQA healthcare reviewers and senior healthcare administrators from
quality award winning institutions) representing 18 states participated in
the survey rounds. The study answered three research questions: (1) What
are the critical processes that should be included in healthcare patient
safety systems? (2) What are the performance measures that can serve as
indicators of quality for the processes critical for ensuring patient
safety? (3) What processes will be critical for patient safety in the
future? The identified patient safety framework was further transformed
into a patient safety tool with three levels: basic, intermediate, and
advanced. Additionally, the panel of experts identified the major barriers
to the implementation of patient safety systems in healthcare
institutions. The identified "top seven" barriers were directly related to
critical processes and performance measures identified as "important" or
"very important" for patient safety systems in the present and in the
future. This dissertation study is significant because the results are
expected to assist healthcare institutions seeking to develop high quality
patient safety programs, processes and services. The identified critical
processes and performance measures can serve as a means of evaluating
existing patient safety initiatives and guiding the strategic planning of
new safety processes. The framework for patient safety systems utilizes a
systems approach and will support healthcare senior administrators in
achieving and sustaining improvement results. The identified patient
safety framework will also assist healthcare institutions in using the
MBNQA Health Care Criteria for Performance Excellence for self-assessment
and quality improvement.</mods:abstract>

<mods:subject>
  <mods:topic>healthcare</mods:topic>
</mods:subject>
```

# Texas Digital Library

## Application Profile for Electronic Theses and Dissertations

```
</mods:subject>

<mods:subject>
  <mods:topic>patient safety</mods:topic>
</mods:subject>

<mods:subject authority="lcs" >
  <mods:topic>Medical care</mods:topic>
  <mods:topic>Quality control</mods:topic>
  <mods:geographic>United States</mods:geographic>
  <mods:temporal>20th century</mods:temporal>
</mods:subject>

<mods:identifier type="hdl">
  http://handle.tamu.edu/1969.1/1042
</mods:identifier>

<mods:location>
  http://handle.tamu.edu/1969.1/1042
</mods:location>

<mods:extension>
  <etd:degree>
    <etd:name>Ph. D.</etd:name>
    <etd:level>Doctoral</etd:level>
    <etd:discipline>Educational Administration</etd:discipline>
  </etd:degree>
</mods:extension>

<mods:recordInfo>
  <mods:recordContentSource authority="marcorg">
    TxCM
  </mods:recordContentSource>
  <mods:recordCreationDate encoding="iso8601">
    20050826
  </mods:recordCreationDate>
  <mods:recordChangeDate encoding="iso8601">
    20050826
  </mods:recordChangeDate>
  <mods:recordIdentifier>12345678</mods:recordIdentifier>
</mods:recordInfo>

</mods:mods>
```