

The ETDLaTeX template uses BibTeX, which is a bibliography formatting and collating system for LaTeX. BibTeX is especially useful when working with documents that have a large number of references. You are not required to use BibTeX, and it is possible to add your references and create your bibliography manually within the template.

BibTeX works with other components and packages in LaTeX to provide flexibility in formatting your citations and bibliography. To use BibTeX effectively, you need to be familiar with these key elements:

- **References.bib file** – this is the file that contains the bibliographic data for your references (author, title, journal title, year, etc.)
- **\bibliographystyle command** – this command in the etdrtemplate.tex file determines the style of your bibliography.
- **natbib package** – this package enables customizing the citation format and punctuation.
- **\setcitecommand** – works with the natbib package to customize citation format and punctuation as well as the style of your bibliography
- **\cite, \citep, and citet commands** – these commands are used in your chapter files to create citations.

Details on each element are given below

### References.bib File

This file contains the bibliographic data for all your references and needs to be in the same folder as your other ETDLaTeX files. Individual references within this file must follow a specific format and contain these elements:

- **@{**  
Each entry must start with @ followed by an open brace
- **Type**  
This defines the type of item cited (book, article, etc.) BibTeX has a standard list of item types, shown later in this document.
- **Label**  
This is what you include in the \cite command when you cite the item in your text. The label can be any string of characters and must be followed by a comma.
- **Bibliographic fields**  
This is where you provide the data for the reference (author, title, journal title, year, etc.) BibTeX provides required and optional bibliographic fields for each item type. Each field must be followed by an equal sign (=). The data for each field must be enclosed in braces (or double quotes) and followed by a comma. Fields can appear in any order.

- }  
Each entry must end with a closing brace

Here is an example of a BibTeX entry as it appears in the references.bib file:

```
@article{myref1,
  author={Alam,S. M. S. and Natarajan,B. and Pahwa,A. and Curto,S.},
  year={2015},
  title={Agent based State Estimation in Smart Distribution Grid},
  journal={IEEE Latin America Transactions},
  volume={13},
  number={2},
  pages={496-502},
}
```

The file references.bib contains sample entries for the ETDR template. Replace these sample entries with entries for your bibliography.

There are a number of ways to create your references.bib file, but for most students, it's easiest to follow these steps:

1. Use RefWorks or EndNote to collect and manage your references. Other citation managers may work, but make sure they can export references in BibTeX format.
2. Export your references from RefWorks or EndNote as a text file in BibTeX format.
3. Copy/paste the text file into the references.bib file.
4. For each item, you will need to create a unique label. Use this label with the \cite command to create a citation in your text.

The conversion to BibTeX is usually not 100% accurate, so check each reference and edit as necessary.

You can also create entries manually within the references.bib file. Be sure to follow the BibTeX format and save your file each time you add to it.

A full list of available types and fields is given at the end of this document.

### **\Bibliographystyle Command**

The references.bib file contains the data for your bibliography, but the basic style for your bibliography is set with the \bibliographystyle command, which appears in the etdrtemplate.tex file. The format for the command is:

```
\bibliographystyle{style}
```

Where *style* is the name of style you want to use. While LaTeX supports many styles, it is recommended to use one of the following styles designed for use with the natbib package:

- plainnat – sorts items in the bibliography alphabetically by first author
- abbrvnat – same as plainnat except author initials are used instead of first and middle names
- unsrnat – lists items in the bibliography in the order cited. Full author names are used.

The template comes with the style set to “unsrnat.”

For author-year citations, use the plainnat or abbrvnat styles. Use the unsrnat style with numerical or superscript citations. See the section on the \setcitestyle command below for details on how to set the citation style

Other styles are available for use with LaTeX, and they may work with the natbib package. If there is a particular style you want to use in your ETDR, edit the \bibliographystyle command to specify the desired style. For example:

```
\bibliographystyle{ieeetr}
```

Additional styles are available here: <https://www.ctan.org/tex-archive/biblio/bibtex/contrib>. To use one of these styles, you will need to download the file to the \styles directory in your latex\_source folder. A few additional styles are already included in the \styles directory. These styles can be invoked from the \bibliographystyle command. For example:

```
\bibliographystyle{styles/aip}
```

Be sure to use the forward slash in the path, and do not include the file extension (.bst).

The Graduate School allows for any style to be used in your bibliography, but check with your major professor to see if your department requires you use a specific style.

## Natbib Package

The natbib package allows extensive customization of citations and how they appear as references in your bibliography. For example, if you need to make a reference to an item that does not have an author, natbib provides a way to do this. See *Natural Sciences Citations and References* (natbib.pdf), included in the template download, for a complete description of all the natbib options and commands.

In the template, two options are set in this command:

```
\usepackage[super,sort&compress]{natbib}
```

The “super” option specifies a superscript citation style. Change this to “authoryear” for author-year citations.

The “sort&compress” option will compact a series of numerical citations. For example, a citation 3, 4, 5, 6, 7, 12 will be shown as 3-7, 12.

## **\Setcitestyle Command**

While the `\bibliographystyle` command determines the style used for formatting references in your bibliography, the `\setcitestyle` command is used to format your in-text citations. The `\setcitestyle` command is part of the `natbib` package and replaces the older `\bibpunct` command. `\Setcitestyle` duplicates many of the `natbib` package options, but this command overrides any options specified in the `natbib` package. The basic format for the `\setcitestyle` command is

```
\setcitestyle{options}
```

The `\setstyle` command can contain multiple options, separated by commas. The following options are available:

- Citation mode: *authoryear*, *numbers*, *super*
- Braces around author-year: *round*, *square*, *open={char}*, *close={char}*
- Punctuation between citations: *semicolon*, *comma*, *citesep={char}*
- Punctuation between author and year: *aysep={char}*
- Punctuation between years with common author: *yysep={char}*
- Punctuation preceding a post-note: *notesep={char}*

The default settings for `\setcitestyle` are `authoryear`, `round`, `comma`, `aysep={;}`, `yysep={,}`, `notesep={, }`

The template is set to use superscript citations, so the `\setcitestyle` command appears in the `etdrtemplate.tex` file like this:

```
\setcitestyle{super}
```

To change to an author-year citation style, edit the command like this:

```
\setcitestyle{authoryear}
```

Multiple options can appear in any order and must be separated by commas, for example:

Examples:

```
\setcitestyle{authoryear,notesep={; },round,aysep={},yysep={;}}
```

## **\Cite Commands**

The `natbib` package has two basic citation commands, `\citet` and `\citep`. `\Citet` is used for textual citations, e.g., Erickson (1990) and `\citep` is used for parenthetical citations, e.g., (Erickson, 1990).

See `chapter1.tex` file for examples of how the `\cite` commands are used.

You may be familiar with using the standard LaTeX `\cite` command. This command will work with natbib. In author-year mode, `\cite` functions the same as `\citet`. In numerical mode, `\cite` is the same as `\citep`. Do not use `\citet` in numerical mode; it will include the author-year before the citation number.

You will be using one or more of the `\cite` commands throughout your ETDR, so think carefully about the bibliography and citation styles you want to use before you begin writing. If you want to use a parenthetical author-year citation style, for example, use the `\citep` rather than the `\cite` command. `\Cite` functions the same as `\citet` and will produce a textual citation, e.g., no parentheses around the author's name.

## **BibTeX Types and Fields**

BibTeX uses standard reference types, and each type has required and optional fields. Your entry must use one of these types and can contain required or optional fields for that type.

### **article**

An article from a journal or magazine.

Required fields (Rf): author, title, journal, year.

Optional fields (Of): volume, number, pages, month, note.

### **book**

A book with an explicit publisher.

Rf: author or editor, title, publisher, year.

Of: volume or number, series, address, edition, month, note.

### **booklet**

A work that is printed and bound, but without a named publisher or sponsoring institution.

Rf: title.

Of: author, howpublished, address, month, year, note.

### **inbook**

A part of a book, which may be a chapter (or section or whatever) and/or a range of pages.

Rf: author or editor, title, chapter and/or pages, publisher, year.

Of: volume or number, series, type, address, edition, month, note.

### **incollection**

A part of a book having its own title.

Rf: author, title, booktitle, publisher, year.

Of: editor, volume or number, series, type, chapter, pages, address, edition, month, note.

### **inproceedings**

An article in a conference proceedings.

Rf: author, title, booktitle, year.

Of: editor, volume or number, series, pages, address, month, organization, publisher, note.

#### manual

Technical documentation.

Rf: title.

Of: author, organization, address, edition, month, year, note.

#### mastersthesis

A Master's thesis.

Rf: author, title, school, year.

Of: type, address, month, note.

#### misc

Use this type when nothing else fits.

Rf: none.

Of: author, title, howpublished, month, year, note.

#### phdthesis

A PhD thesis.

Rf: author, title, school, year.

Of: type, address, month, note.

#### proceedings

The proceedings of a conference.

Rf: title, year.

Of: editor, volume or number, series, address, month, organization, publisher, note.

#### techreport

A report published by a school or other institution, usually numbered within a series.

Rf: author, title, institution, year.

Of: type, number, address, month, note.

#### unpublished

A document having an author and title, but not formally published.

Rf: author, title, note.

Of: month, year.

### **URLs and Other Identifiers in Citations**

BibTeX does not yet have a consistent way to handle URLs and other identifiers within a citation. If you use one of the natbib styles (plainnat, abbrvnat, or unsrnat), these fields are available:

- URL – web address of an online document
- DOI - Digital Object Identifier, used by some journals instead of a URL
- EID - used instead of page numbers for online journals
- ISBN - for the ISBN number in books
- ISSN - for the ISSN number in periodicals

If you use one of the natbib styles, you can include a URL within a BibTeX entry. For example:

```
@ARTICLE{
CT:Phillips:1985,

  AUTHOR = {W.~D.~Phillips and J.~V.~Prodan and H.~J.~Metcalf},
  TITLE = {Laser cooling and electromagnetic trapping of neutral
JOURNAL = JOSAB,
VOLUME = {2},
  PAGES = {1751-1767},
  YEAR = {1985},
  URL = {http://test3.com},
}
```

Using the unsrnat style, this entry produces the following reference:

W. D. Phillips, J. V. Prodan, and H. J. Metcalf. Laser cooling and electromagnetic trapping of neutral atoms. *J. Opt. Soc. Am. B*, 2:1751-1767, 1985. URL <http://test3.com>.

Another option is to use the note field, which is supported in all styles and BibTeX types. Use this syntax when using the note field for a URL:

```
NOTE = {\url{http://test3.com}}
```

An entry with a URL included in a note field produces the following reference:

J. Weiner, V. S. Bagnato, S. Zilio, and P. S. Julienne. Experiments and theory in cold and ultracold collisions. *Rev. Mod. Phys.*, 71:1-85, 1999. <http://asdfasdf4.com>.

See *Natural Sciences Citations and References* (natbib.pdf) for details on all the formatting options available.

Information Technology Assistance Center (iTAC)  
Kansas State University  
214 Hale Library  
1117 Mid Campus Dr. North  
Manhattan KS 66506  
785-532-7722  
800-865-6143  
[helpdesk@k-state.edu](mailto:helpdesk@k-state.edu)