Style Files for ASCE-like Documents — Version 3.0

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Abstract: Package `ascelike` produces manuscripts that roughly comply with guidelines of the American Society of Civil Engineers (ASCE). The package has the options of producing journal submissions for review (option `Journal`), of producing "camera ready" submissions for ASCE's proceedings publications (option `Proceedings`), and of producing two-column preprints (option `Preprint`). You are reading a document that was produced with the input file `ascexmpl.tex` and with the three components of the `ascelike` package: the document-class file `ascelike.cls`, the bibliographic style `ascelike.bbx`, and the citation style `ascelike.cbx`. This document serves as a brief guide to `ascelike`, as well as a test of its output and a template for your own papers. The package is freely available from the CTAN archive `https://www.ctan.org` and from `https://github.com/mrkuhn53/ascelike`, under the LaTeX Project Public License, version 1.3 or later.

Author keywords: LaTeX; ASCE; Document class; ascelike.cls (version 3.0); ascelike.bbx (version 3.0); ascelike.cbx (version 3.0).

Introduction

Package `ascelike` produces manuscripts that roughly comply with guidelines of the American Society of Civil Engineers (ASCE). The package consists of the `ascelike.cls` document-class; the bibliographic and citation styles, `ascelike.bbx` and `ascelike.cbx`; and the example file `ascexmpl.tex`. All are available from the CTAN website `https://www.ctan.org` and from `https://github.com/mrkuhn53/ascelike` (Kuhn 2025). These files are included in distributions of LaTeX, which are readily available for most computer systems (e.g. TexLive, MikTex, and MacTex). ASCE has significantly changed its formats since the earlier version of `ascelike` was created in 2010, and `ascelike` has been updated accordingly. The current version of `ascelike` is 3.0. If you follow the instructions in this document, but you are using an earlier version of `ascelike`, you will probably encounter errors when trying to run LaTeX with your document.

The document that you are reading was created with the `ascelike` package and with the input (template) file `ascexmpl.tex`. This file also serves as a test of the LaTeX `ascelike` package and as a template for users' papers.

Most persons access LaTeX either through an online cloud service (`CoCalc.com`, `Overleaf.com`, etc.) or with a LaTeX system installed on their computer. If the former, the online service will likely already have updated to version 3.0. If LaTeX is installed on your computer, unless you have recently updated your distribution of LaTeX (e.g. TexLive, MikTex, and MacTex), your version of `ascelike` will likely be an earlier one. The `ascelike` package should eventually be incorporated in your computer's LaTeX distribution, and updating your distribution will activate the new `ascelike`. Until then, you can download and install the most recent files from `http://www.ctan.org`. For example, the three files, `ascelike.cls`, `ascelike.bbx`, and `ascelike.cbx` can be installed in the same folder as your document's ".tex" file before running LaTeX.

In addition to `ascelike.cls`, the files `ascelike.bbx` and `ascelike.cbx` are used with the bibliographic tool BIBER and the package BibLaTeX to produce ASCE-like citations and bibliographic entries (with ASCE's use of quotation marks around titles, etc.) (Kuhn 2025). Note that the package `biblatex` and the helper program BIBER should now be used, instead of the older BIBTEX. Likewise, the older `ascelike.bst` is deprecated by the new files `ascelike.bbx` and `ascelike.cbx`. An example bibliographic data base is given in the supplementary file `ascexmpl.bib`.

The document-class `ascelike.cls` requires several supplementary packages: `setspace`, `endfloat`, `lineno`, `authblk`, etc. Without these packages, `ascelike` *will not work*, and an error message will indicate the `*.sty` files that are missing. These files are typically included with online cloud platforms (`CoCalc.com`, `Overleaf.com`, etc.) and in LaTeX computer distributions, such as TexLive, MikTex, and MacTex. All of the `ascelike` files are freely available from the Comprehensive TeX Archive Network (CTAN) archive, `http://www.ctan.org`. If one of these files is not installed as part of your TeX system, you should download the file from the CTAN archive and place it in the same folder as your manuscript files. On GNU/Linux systems, these files are typically bundled into software packages that can be downloaded and installed with your system's package management utilities.

In addition to these essential files, we have found the following packages useful:

- `graphicx` and its companion files for incorporating EPS and PDF graphic files,
- `amsmath` and its companion files for AMS math formatting,
- `booktabs` to produce publication-grade tables, and
- `microtype` for tight kerning, as in ASCE's publications.

These packages are included in most LaTeX distributions and are freely available from the CTAN archive.

The `ascelike` package is distributed under the terms of the LaTeX Project Public License (available from the CTAN archives), either version 1.3 of the License, or any later version.

If you modify `ascelike.cls`, you should rename it so that "altered" copies are not later proliferated. Although `ascelike` is *not* produced by ASCE, its agents, or employees, `ascelike` is now referenced on the ASCE web-site.

Input Options

You should prepare your `*.tex` input file as a regular LaTeX file, but, of course, substituting "ascelike" for "article" in the opening `\documentclass` command. The document class `ascelike.cls` provides the options given below. Choice of the main `Proceedings|Journal|Preprint` option is the most important; whereas, the other options allow variations of the main option.

1. The main option `Journal|Proceedings|Preprint` specifies the overall format of the manuscript. For most manuscripts, this is the only option needed; the other options simply modify the main option.

    - `Journal` is the default format, producing manuscripts intended for paper submissions to ASCE journals for review. The default settings of `Journal` are 12pt text, double-spaced text, numbered lines, and in-text figures. These default settings can be altered with the options that are described below. "`Journal`" produces proper headings for sections, subsections, subsubsections, appendices, and the abstract, and it produces the proper page margins and numbers the pages. Note that ASCE journals do not use numbered sections, subsections, or subsubsections. This behavior can be changed with the `SectionNumbers` option.

    - "`Proceedings`" produces manuscripts for ASCE conference proceedings. As default settings, `Proceedings` uses single-spaced 12pt text, places figures and tables within the text, and does not number lines. All of these default settings can be altered with the options that are described below. `Proceedings` produces proper headings for sections, subsections, subsubsections, appendices, and the abstract.

    - "`Preprint`" produces manuscripts that resemble the ASCE journal papers: two-column output; 10 point fonts; a one-column title, author block, and abstract; and horizontal rules placed around the abstract and under figures. Even with this option, however, some intervention is required by the user in their `*.tex` document to achieve these effects. These interventions are described below in the section titled "Preprints" and are indicated within the example file `ascexmpl.tex`.

2. Option `BackFigs` can be used to override the default placing of tables within the manuscript, so that figures and tables are placed at the end of document. With `BackFigs`, do not place any characters after `\end{figure}` and `\end{table}` commands.

3. Options `SingleSpace|DoubleSpace` can be used to override the default text spacing in the `Journal` and `Proceedings` formats.

4. Options `10pt|11pt|12pt` can be used to override the default text size (12pt).

5. The option `NoLists` suppresses inclusion of lists of tables and figures, when `BackFigs` is also given as an option.

6. The option `NoPageNumbers` suppresses the printing of page numbers.

7. The options `NoLineNumbers|LineNumbers` can be used to override the default use (or absence) of line numbers in the `Journal` and `Proceedings` formats. When `LineNumbers` is used with `Proceedings`, running LaTeX throws a non-critical error message that can be ignored to complete compiling the document.

8. The option `SectionNumbers` produces an automatic numbering of sections. Without the `SectionNumbers` option, sections will *not* be numbered, as this seems is the prefered formatting of ASCE publications (note that appendices will, however, be automatically "numbered" with Roman numerals). With the `SectionNumbers` option, sections and subsections are numbered with Arabic numerals (e.g. 2, 2.1, etc.), but subsubsection headings will not be numbered. To change this default depth of numbering when the option `SectionNumbers` is invoked, insert the `\setcounter{secnumdepth}` command in the preamble of your document. Even with the `SectionNumbers` option, you can use the "starred" form, `\section*{ }`, to create a section heading without numbers. This might be desirable for an Acknowledgements section at the end of a paper. Note, however, that the starred form will not suppress the numbering of subsections or subsubsections.

In addition, `ascelike` provides the new command `KeyWords`, described below.

Preliminaries

Version 3.0 diverges from previous versions: the formatting of citations and bibliographic entries is now managed by the `biblatex` package (not BIBTEX), and this formatting is now processed with the `biber` helper program, rather than with `bibtex`. Unfortunately, `biblatex` cannot be loaded by the document-class file `ascelike.cls`, and it must be manually loaded within your document. In the documents preamble and immediately following the opening statement `\documentclass[...]{ascelike}`, you must include this one line:

    \usepackage{biblatex}

Again, you should use BIBER to process the document's citations, not BIBTEX. The `ascelike` document-class automatically passes the following options to `biblatex`: options `backend=biber`, `uniquename=init`, `style=ascelike`.

Title, Authors, Abstract, and Keywords

These aspects of version 3.0 are quite different from previous versions. The title is entered, as before, with the standard LaTeX command `title{...}`.

The package `authblk` is now used for formatting the author block. As described in the `authblk` documentation, the authors and affiliations are input in the following manner:

    \author[1]{*author1*}
    \author[1]{*author2*}

```
\author[2]{author3}
\author[2]{author4}
\affil[1]{affil1}
\affil[2]{affil2}
...
```

The title and author block are followed by the abstract, which should be placed within the `\begin{abstract}` ... `\end{abstract}` environment.

The command `\KeyWords{<your key words>}` can be used to produce a labeled list of key words. Although it can be placed anywhere in the document, if placed inside of the `abstract` environment, it works nicely with the `preprint` option.

In lieu of the `authblk` construct described above, the standard LaTeX commands of `\author` and `\thanks` can be used, which will cause the affiliations to be appear as footnotes. This alternative maintains backward compatability with `*.tex` files created for older versions of `ascelike`.

Sections, Subsections, Equations, etc.

Sections and equations are entered in the usual manner, and `ascelike` simply formats them in the ASCE styles. For example, section heading are automatically made uppercase with `Proceedings` manuscripts, the first paragraph of sections are not indented in `Journal` manuscripts, etc.

An Example Subsection

No automatic capitalization occurs with subsection headings; you will need to capitalize the first letter of each word, as in "An Example Subsection."

An example subsubsection

No automatic capitalization occurs with subsubsections; you will need to capitalize only the first letter of subsubsection headings.

And now we include an example of a displayed equation (Eq. 1)

$$E = mc^2 \qquad (1)$$

a figure (Fig. 1),

Fig. 1. An example figure (just a box).

and a table (Table 1).

Table 1. An example table using the booktabs package

Assembly attribute	Values
Number of particles	4008
Particle sizes	Multiple
Particle size range	$0.45D_{50}^*$ to $1.40D_{50}$
Initial void ratio, e_{init}	0.179
Assembly size*	$54D_{50} \times 54D_{50} \times 54D_{50}$

*D_{50} represents the median particle diameter

Citations and Bibliographic Entries

When used together, the three components of `ascelike` — `ascelike.cls`, `ascelike.bbx`, `ascelike.cbx` — use your `*.bib` bibliographic database file to produce citations in name–year format. In addition to including the statement `\textttt{authblk}` in your document's preamble (as instructed in the section titled Preliminaries), `biblatex` requires your document include two additional lines. First, within your document's preamble (i.e., prior to the `\begin{document}` statement), you should provide the name of your input database, for example,

`\addbibresource{MyBibFile.bib}`

Note that the "`.bib`" suffix must be included. Second, at the location of your References section (near the end of your document), use the following statement to locate the section.

`\printbibliography`

The above two statements are used *in lieu of* the BIB-TEX statements `\bibliography`, `\bibliographystyle`, and `\thebibliography`.

Unlike previous versions, by using the package `biblatex`, you should now process the bibliographic entries with the helper program BIBER, *not* BIBTEX. The typical command sequence for processing your `*.tex` file to create a PDF file is as follows:

```
pdflatex  <your *.tex file prefix>
biber  <your *.tex file prefix>
pdflatex  <your *.tex file prefix>
```

although extra runs of pdflatex might be needed when figures are placed at the end of the manuscript (option `BackFigs`).

As with previous versions, the following citation options are available:
- `\cite{key}` produces citations with full author list and year (Gaspar and Koenders 2001b; Ireland 1954).
- `\citeA{key}` produces citations with only the full author list: e.g. Ireland
- `\citeN{key}` produces citations with the full author list and year, but which can be used as nouns in a sentence; no parentheses appear around the author names, but only around the year: e.g. Ireland (1954) states that . . .
- `\citeyear{key}` produces the year information only, within parentheses, as in (1954).

Notwithstanding the above instructions, you can also use the many citation options of the `biblatex` package: `\parencite`, `\textcite`, `\smartcite`, etc. Note that version 3.0 is backward-compatible with earlier versions: you can still process the bibliography by *not* using `biblatex`, its commands

`\addbibresource{}` and `\printbibliography`, and BIBER. This is done with the LaTeX command `\bibliography{}` and using BIBTEX.

The bibliographic data base `ascexmpl.bib` gives examples of bibliographic entries for different document types. The References section of this document is created with the `ascelike.bbx` style for the following entries:

- journal articles (Pennoni 1992; Stahl et al. 2004),
- a book (Evans and Furlong 2003; Goossens et al. 1994)
- an article in an edited book using `@INCOLLECTION` (Zadeh 1981)
- proceedings papers, using `@INPROCEEDINGS` (Eshenaur et al. 1991; Garrett 2003)
- a website using `@ONLINE`, with the accessed date given in the `NOTE` field, and with the full "Arizona Dept. of Commerce" given in the `NAME` field inside of braces { } (Arizona Dept. of Commerce 2005; Foucher 2017)
- a masters thesis using `@MASTERSTHESIS` (Sotiropulos 1991)
- a doctoral thesis using `@PHDTHESIS` (Chang 1987)
- a forthcoming article (e.g., in press), with the field `pubstate = "forthcoming"` (note the lowercase "forthcoming", and quotation marks, not braces) (Dasgupta forthcoming; Han et al. forthcoming)
- an anonymous book (*Moody's municipal & government manual* 1988),
- an anonymous report using `@MANUAL` (*Evaluating scour at bridges* 1991)
- data sets using `@ARTICLE` and with the accessed date in the `NOTE` field (Ansolabehere et al. 2014; Thernstrom 1986)
- a building code using `@MANUAL` or `@BOOK` (ACI 1989)
- a discussion of an `@ARTICLE` (Vesilind 1992)
- a paper in a foreign journal (Ireland 1954)
- a standard using `@INCOLLECTION` (ASTM 1991)
- a translated book (Melan 1913)
- a two-part paper (Frater and Packer 1992a,b)
- a university report, using `@TECHREPORT` (Duan et al. 1990)
- an untitled item in the Federal Register using `@MANUAL` (*Federal Register* 1988)
- a newspaper article using `@ARTICLE` and with the date given in the entry field `NOTE` (Mossberg 1993)
- works in a foreign language (Duvant and Lions 1972; Reiffenstuhl 1982)
- electronic material as a CD, using `@ARTICLE` with the entry fields `JOURNAL` and `NOTE` (Liggett and Caughey 1998)
- software using `@MANUAL` (*Lotus 1-2-3 reference manual; release 2.01* 1985)
- two works by the same author in the same year (Gaspar and Koenders 2001a,b)
- two works by three authors in the same year that only share the first two authors (Huang, Bird, and Hendrich 2009; Huang, Bird, and Bell 2009)

Creating Preprint Manuscripts

A manuscript that approximates an ASCE journal paper can be created with the following changes to your `*.tex` file:

1. Use the `\documentclass[Preprint,10pt]{ascelike}` at the start of your `*.tex` file.

2. Include the following command, which should follow the abstract and keywords, and should immediately precede the first section of text:

   `\begin{multicols}{2}`

3. Include the following command, immediately before the `\end{document}` at the end of the file:

   `\end{multicols}`

4. With each figure and table (i.e., float), you should decided whether it is a one-column or two-column float. For one-column floats, use the usual `\begin{figure}` ... `\end{figure}` and `\begin{table}` ... `\end{table}` commands. For full-width floats that span two columns, replace these commands with their starred "*" versions: `\begin{figure*}` ... `\end{figure*}` and `\begin{table*}` ... `\end{table*}`.

Appendix I. NOTATION

The following symbols are used in this paper:

D = pile diameter (m);
R = distance (m); and
$C_{\text{Oh no!}}$ = fudge factor.

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