

# STYLE FILES FOR ASCE-LIKE DOCUMENTS

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## ABSTRACT

This document was produced with the  $\text{\LaTeX}$  typesetting program using the document class “`ascelike.cls`” and the example document “`ascexmpl.tex`”. The objective is manuscripts that roughly comply with the guidelines of the American Society of Civil Engineers. The document class produces either double-spaced manuscripts for journal submissions or camera-ready manuscripts for conference proceedings. This document serves as a brief guide to `ascelike.cls`, as well as a test of the output that is produced by the input file `ascexmpl.tex`. The package is freely available under the LaTeX Project Public License, version 1.1

**Keywords:**  $\text{\LaTeX}$ , ASCE, document class.

## INTRODUCTION

The experimental document class “`ascelike.cls`” produces manuscripts that roughly comply with the guidelines of the American Society of Civil Engineers. However, it was *not* produced by ASCE, its agents, or employees; nor is it in any way sanctioned or approved by that organization. The program `ascelike.cls` is distributed under the terms of the LaTeX Project Public License Distributed, available from the CTAN archives; either version 1.1 of the License, or any later version. If you modify `ascelike.cls`, you should rename it so that “contaminated” copies are not later disseminated.

The document class “`ascelike.cls`” requires the following supplementary packages: `ifthen.sty`, `setspace.sty`, and `endfloat.sty`. *Without these files, `ascelike.cls` won't work.* These files are typically included in  $\text{\LaTeX}$  distribution, such as the `tetex` and `MikTeX` distributions. All three files are also freely available from the Comprehensive  $\text{\TeX}$  Archive Network (CTAN) archive, through <http://www.tug.org>, but they may need to be unbundled from a `*.dtx` form. In addition, the file `ascelike.bst` can be used with the tool `BIB $\text{\TeX}$`  to produce ASCE-like reference citations and entries (with the weird use of quotation marks around titles, etc.). An example bibliographic data base is given in `ascexmpl.bib`.

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In addition to these important files, we have found the following packages most useful (and we will use this opportunity to illustrate a  $\LaTeX$  itemized list):

- `epsfig.sty` and its companion files for incorporating encapsulated postscript (figure) files into the document
- `subfigure.sty` for arranging and numbering sub-figures
- `amstex.sty` and its companion files for the AMS extensions to mathematical formatting.

All of these packages are also freely available from the CTAN archive, but they are included in most  $\LaTeX$  distributions.

## INPUT AND OPTIONS

Prepare your `*.tex` input file as a regular  $\LaTeX$  file using the standard `article.cls` constructs, but, of course, substitute `ascelike` for `article` as the document class. You will, however, likely need to specify a number of options. In addition, I have provided two new commands: `KeyWords` and `NameTag`, both of which are described further below. Document class `ascelike.cls` has a the options given below (and we will also use this opportunity to illustrate an enumerated list). The `Proceedings|Journal` options are the most important; the other options are largely incidental.

1. `Journal|Proceedings` specify the overall format of the output manuscript.

`Journal` produces double-spaced manuscripts for ASCE journals. It places tables and figures at the end of the manuscript, and produces lists of tables and figures. It numbers the appendices with Roman numerals and produces proper headings for sections, subsections, subsubsections, appendices, and abstract. It produces the proper page margins and numbers the pages.

`Proceedings` produces camera-ready single-spaced manuscripts for ASCE conference proceedings. It produces the proper page margins as given on the old shiny, camera-ready paper (with the light blue lines) supplied by ASCE. It places figures and tables within the text. It produces proper headings for sections, subsections, subsubsections, appendices, and the abstract. Pages are numbered, and the bottom left corner can be “tagged” with the author’s name (this can be done by inserting the command `\NameTag{<your name>}` within the preamble of your document).

2. `BackFigs|InsideFigs` can be used to override the default placement of tables and figures in the `Journal` and `Proceedings` formats.
3. `SingleSpace|DoubleSpace` can be used to override the default text spacing in the `Journal` and `Proceedings` formats.
4. `10pt|11pt|12pt` can be used to override the default text size (12pt).
5. `NoLists` suppresses the inclusion of the lists of tables and figures that would normally be included in the `Journal` format.

6. `NoPageNumbers` suppresses the printing of page numbers.
7. `SectionNumbers` produces an automatic numbering of sections. Without the `SectionNumbers` option, sections will *not* be numbered, as this seems to be the usual formatting in ASCE journals (note that the 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 following commands in the preamble of your document:

```
\setcounter{secnumdepth}{1}  Number sections only
\setcounter{secnumdepth}{3}  Number sections, subsections,
                             and subsubsections
```

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.

## SECTIONS, SUBSECTIONS, EQUATIONS, ETC.

I have included this section to test the formatting of sections, subsections, subsubsections, equations, tables, and figures. Section heads are automatically made uppercase, which is great unless your section heading contains mathematics, `$<math stuff>$`. If your head does contain mathematics, you will need to modify `ascelike.cls`, in particular the line containing the `\uppercase` command. To force mathematics symbols to become bold within a section heading, try using the `\boldmath` command before the in-line math, `\boldmath$a_{i}=\sqrt{\beta}$`.

### An Example Subsection with math, $a_i = \sqrt{\beta}$

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)

$$E = mc^2 , \tag{1}$$

a figure (Fig. 1), and a table (Table 1).

I have added a new command `\KeyWords{<your key words>}` for a labeled list of key words. It can be placed anywhere in the document and produces an unindented paragraph of keywords at that location.



**FIG. 1. An example figure (just a box). This particular figure has a caption with more information than the figure itself, a very poor practice indeed.**

**TABLE 1. An example table**

Assembly Attribute (1)	Values (2)
Number of particles	4008
Particle sizes	Multiple
Particle size range	$0.45D_{50}^*$ to $1.40D_{50}$
Initial void ratio, $e_{\text{init}}$	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, `ascelike.cls` and `ascelike.bst` produce APA / *Chicago Manual of Style* citations in name-date format. The code for this format is a modification of the `chicago.sty` and `chicago.bst` packages. I have made available the following citation options:

- `\cite{key}` produces citations with full author list and year (Ireland 1954).
- `\citeNP{key}` produces citations with full author list and year, but without enclosing parentheses: e.g. 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).
- `\citeyearNP{key}` produces the year information only, as in 1954.

The example bibliographic data base `ascexmpl.bib` gives examples of bibliographic entries for different document types. These entries are from the canoni-

cal set in the ASCE web document “Instructions For Preparation Of Electronic Manuscripts”: an anonymous book (Moody 1988), an anonymous report (Federal 1991), an anonymous newspaper story (“Educators” 1993), an ASCE journal paper (Pennoni 1992), a book with editors (Zadeh 1981), a building code (International 1988), a discussion (Vesilind 1992), a doctoral thesis (Chang 1987), a paper in a foreign journal (Ireland 1954), a paper in a proceedings (Eshenaur et al. 1991), a standard (ASTM 1991), a translated book (Melan 1913), a two-part paper (Frater and Packer 1992a; Frater and Packer 1992b), a university report (Duan et al. 1990), an untitled item in the Federal Register (Federal 1988), works in a foreign language (Duvant and Lions 1972; Reiffenstuhel 1982), software (Lotus 1985), and two works by the same author in the same year (Gaspar and Koenders 2001b; Gaspar and Koenders 2001a).

## MISCELLANY

Many ASCE conference proceedings are now published on CD ROM media. I have noticed that instructions on paper formats issued by conference organizers often differ from the standard ASCE instructions. Fortunately most of the differences can be easily accommodated, such as changes in the margins and placement of the authors’ addresses. As for margins, these can, of course, be altered by using `\setlength{<length>}` commands within the preamble to a document without making any changes to `ascelike.cls`. (See the  $\LaTeX$  book (Lamport 1994), its companion (Goossens et al. 1994), or online web documentation.) Authors’ addresses can be placed below the title (instead of in a footnote) by *not* using the `\thanks` command.

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## APPENDIX I. NOTATION

*The following symbols are used in this paper:*

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