The ECULetter class*

Mark W. Sprague spraguem@ecu.edu

September 11, 2017

Abstract

The ECULetter class provides a personalized ECU letterhead in a La-TeX environment. It also includes commands for elements of letters and memoranda written on the letterhead.

Contents

1	Inti	roduction			
2	Usa	${f ge}$			
	2.1	Class Declaration and Options			
	2.2	Required Packages			
	2.3	Required Graphics Files			
	2.4	Letterhead Content			
	2.5	Memo Header Content			
	2.6	Other Formatting			
	2.7	Letter commands in the main document			
	2.8	User Definitions			
3	Sample Files				
	3.1	Sample User Configuration File			
	3.2	Sample Document Template for Letter			
	3.3	Sample Document Template for Memo			
1	Imr	Nementation			

^{*}This document corresponds to ECULetter v2.0, dated 2017/09/12.

1 Introduction

The ECULetter class formats the document on official-looking ECU letterhead. It also provides macros to format letters and memos on the letterhead. User settings can be included in a file ECULetterDefs.cfg in the latex path.

2 Usage

2.1 Class Declaration and Options

\documentclass

The class declaration statement is

 $\documentclass[\langle options \rangle]$ {ECULetter}

The following options are valid:

bw Use black and white graphics for the letterhead.

color Use color graphics for the letterhead (set by default).

memo Write the memo header to the first page.

noletterhead Do not write the letterhead to the first page.

All other options are passed to the article class (n.b., not the letter class), upon which this class is based. The article class options 10pt, 12pt, and twocolumn are not compatible with ECULetter and are silently ignored.

2.2 Required Packages

The ECULetter class loads the packages geometry, graphicx, color, fancyhdr, lastpage, and ragged2e. Commands from each of these packages may be used in the document. Use the \geometry command from the geometry package to adjust the document layout and paper size (which defaults to letterpaper).

2.3 Required Graphics Files

The ECULetter class requires three graphics files to be placed within the latex (graphicx) path: ECULogo2017 (color ECU logo, 2017 version), ECULogo2017BW (black and white ECU logo, 2017 edition), and signature (signature image). These files may be in any format accessible to the graphicx package (with the appropriate extensions) and the files in the latex path may be symlinks.

2.4 Letterhead Content

The letterhead content is set with commands that begin with \lh... Omitting any of these definitions or defining it as empty (\{\}) or whitespace-only (\{\}) results in that item being omitted from the letterhead. The letterhead content

is usually defined in the configuration file ECULetterDefs.cfg or in the document preamble.

\lhname

The author's name on the letterhead is set with

```
\lname \{\langle Author\ Name \rangle\}
```

where $\langle Author\ Name \rangle$ is the name as it appears at the top of the letterhead. Remember to use a backslash (\) after periods following initials to prevent end-of-sentence spacing (for example, John H.\ Doe).

\lhdegree

The author's degree on the letterhead is set with

```
\lhdegree \{\langle Deg \rangle\}
```

where Deg is the degree abbreviation as it appears after the author's name on the letterhead. The degree is only written to the letterhead if \lnmme is defined.

\lhtitle

The author's title on the letterhead is set with

```
\lhtitle \{\langle Title \rangle\}
```

where $\langle Title \rangle$ is the title (e.g. Associate Professor) on the letterhead. The title is only written to the letterhead if \lambdalname is defined.

\lhECUaddress

The department address on the letterhead is set with

where $\langle address \rangle$ is the campus portion of the address on the letterhead. The $\langle address \rangle$ can contain formatting and line breaks. The $\langle address \rangle$ field can be used to format a departmental letterhead (with \lnme left undefined).

\lhECUPostal

The macro \ECUPostal gives the portion of the postal address after the departmental address. This macro is defined as

East Carolina University | Greenville, NC 27858-4353

and can be redefined with $\mbox{renewcommand}(\mbox{lhECUPostal}){\mbox{$\langle New\ Address\rangle$}}.$

\lhphone

The telephone number on the letterhead is set with

```
\lhphone \{\langle xxx-xxx-xxxx\rangle\}
```

where $\langle xxx-xxx-xxxx \rangle$ is the telephone number. Note that it can be formatted in as desired, e.g. (123) 456-7890 or 123.456.7890.

\lhfax

The fax number on the letterhead is set with

```
\  \  \  \{\langle xxx-xxx-xxxx\rangle\}
```

where $\langle xxx-xxx-xxxx \rangle$ is the fax number. Note that it can be formatted in as desired, e.g. (123) 456-7890 or 123.456.7890.

\lhemail

The E-mail address on the letterhead is set with

$$\verb|\label{themail}| \{\langle pirateid@ecu.edu\rangle\}|$$

where $\langle pirateid@ecu.edu \rangle$ is the E-mail address.

\lhwww

The web page URL on the letterhead is set with

\lhwww $\{\langle ecuurl.ecu.edu \rangle\}$

where $\langle ecuurl.ecu.edu \rangle$ is the URL as should appear on the letterhead.

2.5 Memo Header Content

If the document is a memo, these commands, usually included in the document preamble, format the memo header.

\memotitle

The macro \memotitle gives the label MEMORANDUM at the top of the memo header and can be redefined with \renewcommand{\memotitle} ${\langle newtitle \rangle}$ }.

The TO, FROM, DATE, and SUBJECT listings in the header are formatted using a tabular environment with the labels on the left and the appropriate fields on the right.

\memotolabel

The macro \memotolabel gives the label TO: in the memo header and can be redefined with \renewcommand{\memotolabel}{ $\langle newlabel \rangle$ }.

\memoto

The recipient of the memo is defined with

```
\memoto \{\langle therecipient \rangle\}
```

where $\langle therecipient \rangle$ is the name listed in the TO-field of the memo header (TO: therecipient). Note that a second line (for example the recipient's title) can be included by specifying

```
\verb|\memoto{|} \langle therecipient \rangle \  \  \  \& \  \langle line \ 2 \rangle \}
```

\memofromlabel

The macro \memofromlabel gives the label FROM: in the memo header and can be redefined with \renewcommand{\memofromlabel}{ $\langle newlabel \rangle$ }.

\memofrom

The sender of the memo is defined with

```
\mbox{\em memofrom } \{\langle the sender \rangle\}
```

where $\langle thesender \rangle$ is the name listed in the FROM-field of the memo header (FROM: thesender). Note that a second line (for example the sender's title) can be included by specifying

```
\mbox{\ensuremath{\mathsf{Memofrom}}} \langle thesender \rangle \setminus \& \langle line 2 \rangle \}
```

If \memofrom is not specified in the document, it defaults to the author's name on the letterhead as specified by \lname.

\memodatelabel

The macro \memodatelabel gives the label DATE: in the memo header and can be redefined with \renewcommand{\memodatelabel}{ $\langle datelabel \rangle$ }.

\memodate

The date of the memo is defined with

```
\memodate \{\langle date \rangle\}
```

where $\langle date \rangle$ is date to be used in in the DATE-field of the memo header (DATE: date). If \memodate is not supplied, it is replaced by \today.

\memosubjlabel

The macro \memosubjlabel gives the label SUBJECT: in the memo header and can be redefined with \renewcommand{\memosubjlabel}{ $\langle subjectlabel \rangle$ }.

\memosubject

The subject of the memo is defined with

```
\memosubject \{\langle subject\ text\rangle\}
```

where $\langle subject\ text \rangle$ is used in in the SUBJECT-field of the memo header (SUBJECT: subject text). Normally the $\langle subject\ text \rangle$ would fit in a one-line, regular-width table file. A second line for the subject text can be included by specifying

```
\verb|\memosubject{| \langle subject\ text \rangle \  \  \& \  \langle line\ 2 \rangle }|
```

Another possibility to extend the subject text is to place it inside a minipage environment.

2.6 Other Formatting

These preamble commands format other parts of the letter.

\ptwohead

An optional header included after the first page is defined with

\ptwohead $\{\langle header\ text \rangle\}$

If \ptwohead is not supplied, it defaults to the author's name on the letterhead as specified by \lname.

2.7 Letter commands in the main document

These commands are used in the body of the document to format the letter.

\letterhead

The letterhead is written to the document using the content defined in the preamble with \letterhead. The \letterhead command should be the first thing written on the page. This is done by default, unless the noletterhead class option is given. The \letterhead command allows the letterhead to be written to other pages (e.g., when the file contains multiple letters).

\memohead

The memo header is written to the document using the content defined in the preamble with \memohead. The memo header is written to the first page when the memo class option is given. The \memohead command allows the memo header to be written to other pages.

\iaddress

The inside address of the letter is included with

This is usually the first command given in the body of the letter (but not for a memo) after the \letterhrad command. The inside address is usually followed with the date, either using \today or the appropriate date text.

\greeting

The greeting in the letter is included with

```
\greeting \{\langle greeting \ text \rangle\}
```

For example, \greeting{Dear Jane:} would format the greeting text "Dear Jane:" on the left margin of the letter. The \greeting command usually follows the date.

\closing \closingsig \closingname

 name}. The $\langle closing \ name \rangle$ may include formatting commands and line breaks (for titles, etc.).

afterclose

\ps
\encl
\cc
\CC
\pc
\PC

The afterclose environment allows the letter postscript (P.S.), enclosure, and carbon copy statements . The command \ps will format a postscript statement (P.S.) and format the text following it to have a hanging indent. The command \enc1 will format an enclosure statement with the list of enclosed documents following the command. A short enclosure list can be separated by commas, or a longer list can be separated by linebreaks. The command \cc will format the carbon copy statement "cc:" and format the text following it to have a hanging indent. Alternate copy statements \CC (for "CC:"), \pc (for "pc:"), and \PC (for "PC:") are also defined. The afterclose environment is based on the latex description environment, so additional items can easily be provided with \item [$\langle label: \rangle$].

2.8 User Definitions

The class reads user definitions from the file ECULetterDefs.cfg placed within the latex path. Definitions in this file may be overridden on an *ad-hoc* basis with commands in the document preamble. Examples of useful user definitions include letterhead content definition commands so frequently-used values to not have to be specified in each document.

3 Sample Files

This section includes sample files for use with the ECULetter class. The first sample file is a configuration file for storing default user settings. The second sample file is a document template for a letter. The third sample file is a document template for a memo.

3.1 Sample User Configuration File

```
% Define the departmental/campus address.
\lhECUaddress{Department of Physics \textbar\ Mail Stop 563}
%
% Define the telephone number. You can use different formats for the
% number if desired.
\lhphone{252-867-5309}
%
% Define the fax number. Again, use the desired telephone number format.
\lhfax{252-328-6314}
%
% Define the E-mail address.
\lhemail{piratepd@ecu.edu}
%
% Define the web page.
\lhwww{myweb.ecu.edu/piratepd}
```

3.2 Sample Document Template for Letter

```
\% This is a sample document template for a memo using the ECULetter class.
\documentclass[ ]{ECULetter}
\begin{document}
\today
% Insert inside address in brackets below. Include linebreaks (\\).
\iaddress{Address\\ of\\ Recipient}
\% Insert the complete greeting with name and punctuation in brackets
% below.
\greeting{Dear Recipient:}
% Begin body of the letter below.
\% The following creates the closing. Include the closing text in the
\% brackets. Use \closing to sign by hand and \closingsig to use the
\% scanned signature in the file signature.pdf (stored in the latex path).
\closing{Sincerely}
% \closingsig{Sincerely}
% Uncomment commands below to include afterclose items.
% \begin{afterclose}
%
% \ps
%
% \cc
```

```
% \encl
%
% \end{afterclose}
\end{document}
```

3.3 Sample Document Template for Memo

```
\% This is a sample document template for a memo using the ECULetter class.
\documentclass[memo] {ECULetter}
% Define memo parameters.
\memoto{Patricia T.\ Pirate}
% Include a two-line version with the following:
% \memoto{Patricia T.\ Pirate, Chair\\ & Tailgating Committee}
\% The following defines the FROM field. Omit it to use the letterhead
% name instead.
\memofrom{P.\ D.\ the Pirate}
% Include a two-line version with the following command.
\% \mbox{ hemofrom{P.\ D.\ the Pirate, Chair} & Trebuchet Committee}
\memosubject{Saturday Activities}
\ensuremath{\text{\%}} The following defines the DATE field. Use any date format desired.
% Omit the command to use \today.
\memodate{October 31, 2017}
\begin{document}
%Begin body of the memo below.
% Uncomment commands below to include afterclose items.
% \begin{afterclose}
% \ps
% \cc
% \encl
% \end{afterclose}
\end{document}
```

4 Implementation

32 \fi

Define boolean parameters to implement class options.

```
1 \newif\if@bw
 2 \@bwfalse
 3 \newif\if@printletterhead
 4 \@printletterheadtrue
 5 \newif\if@printmemohead
 6 \@printmemoheadfalse
 7 \newif\if@sizegiven
 8 \@sizegivenfalse
Declare options
 9 \DeclareOption{bw}{\@bwtrue}
10 \DeclareOption{color}{\@bwfalse}
11 \DeclareOption{noletterhead}{\@printletterheadfalse}
12 \DeclareOption{memo}{\@printmemoheadtrue}
   The ECULetter class is based on the article class, not the letter class. Pass font
size options to article class.
13 \DeclareOption{10pt}{
     \@sizegiventrue
     \PassOptionsToClass{10pt}{article}
15
16 }
17 \DeclareOption{11pt}{
     \@sizegiventrue
     \PassOptionsToClass{11pt}{article}
21 \DeclareOption{12pt}{
    \@sizegiventrue
     \PassOptionsToClass{12pt}{article}
24 }
   Declare confliction article class options as \OptionNotUsed.
25 \DeclareOption{twocolumn}{\OptionNotUsed}
   Pass all undefined options to the article class.
26 \DeclareOption*{%
     \PassOptionsToClass{\CurrentOption}{article}%
28 }
   Process options.
29 \ProcessOptions\relax
   If the font size option is not given, use 11pt as default instead of the 10pt
default of the article class.
30 \if@sizegiven\else
31 \PassOptionsToClass{11pt}{article}
```

```
Load the article class.
33 \LoadClass{article}
   Load required packages.
34 \RequirePackage[letterpaper, hmargin={1in}, vmargin=1in]{geometry}
35 \RequirePackage{graphicx}
36 \RequirePackage{color}
37 \RequirePackage{fancyhdr}
38 \RequirePackage{lastpage}
39 \RequirePackage{ragged2e}
   Define ECU colors.
40 \definecolor{ecupurple}{RGB}{80, 45, 127}
41 \definecolor{ecugold}{RGB}{255, 200, 0}
No headrule or footrule.
42 \renewcommand{\headrulewidth}{0pt}
43 \renewcommand{\footrulewidth}{Opt}
   Take care of letterhead definitions. Most commands have a boolean \if@commanddefined
and a value holder \@command.
44 \newif\if@lhnamedefined
45 \@lhnamedefinedfalse
46 \DeclareRobustCommand*{\@lhname}{}
47 \DeclareRobustCommand*{\lhname}[1]{
     \DeclareRobustCommand*{\@lhname}{#1}%
The following command \setbox... strips whitespace and declares the command
undefined if nothing is left. It will cause an error if there are any \\ in the value
(use \linebreak instead).
     50
      \@lhnamedefinedfalse
51
    \else
      \@lhnamedefinedtrue
52
53
     \fi
54 }
55 \newif\if@lhdegreedefined
56 \@lhdegreedefinedfalse
57 \DeclareRobustCommand*{\@lhdegree}{}
58 \DeclareRobustCommand*{\lhdegree}[1]{
     \DeclareRobustCommand*{\@lhdegree}{#1}
60
     \setbox0=\hbox{\@lhdegree\unskip}\ifdim\wd0=0pt
61
       \@lhdegreedefinedfalse
     \else
63
       \@lhdegreedefinedtrue
    \fi
64
65 }
```

```
66 \newif\if@lhtitledefined
67 \@lhtitledefinedfalse
68 \DeclareRobustCommand*{\@lhtitle}{}
69 \DeclareRobustCommand*{\lhtitle}[1]{
    \DeclareRobustCommand*{\@lhtitle}{#1}
    71
72
      \@lhtitledefinedfalse
73
    \else
74
      \@lhtitledefinedtrue
75
    \fi
76 }
77 \newif\if@lhECUaddressdefined
78 \@lhECUaddressdefinedfalse
79 \DeclareRobustCommand{\@lhECUaddress}{}
80 \DeclareRobustCommand{\lhECUaddress}[1]{
    \DeclareRobustCommand*{\@lhECUaddress}{#1}
    \@lhECUaddressdefinedtrue
82
83 }
84 \DeclareRobustCommand{\lhECUPostal}{
      East Carolina University \textbar\
      Greenville, NC 27858-4353
86
87 }
88 \newif\if@lhphonedefined
89 \@lhphonedefinedfalse
90 \DeclareRobustCommand*{\@lhphone}{}
91 \DeclareRobustCommand*{\lhphone}[1]{
    \DeclareRobustCommand*{\@lhphone}{#1}
    93
      \@lhphonedefinedfalse
94
95
    \else
      \@lhphonedefinedtrue
    \fi
98 }
99 \newif\if@lhfaxdefined
100 \@lhfaxdefinedfalse
101 \DeclareRobustCommand*{\@lhfax}{}
102 \DeclareRobustCommand*{\lhfax}[1]{
    \DeclareRobustCommand*{\@lhfax}{#1}
103
104
    105
      \@lhfaxdefinedfalse
106
    \else
      \@lhfaxdefinedtrue
107
    \fi
108
109 }
110 \newif\if@lhemaildefined
111 \@lhemaildefinedfalse
```

```
112 \DeclareRobustCommand*{\@lhemail}{}
113 \DeclareRobustCommand*{\lhemail}[1]{
    \DeclareRobustCommand*{\@lhemail}{#1}
114
    \setbox0=\hbox{\@lhemail\unskip}\ifdim\wd0=0pt
115
       \@lhemaildefinedfalse
116
117
    \else
118
      \@lhemaildefinedtrue
119
    \fi
120 }
121 \newif\if@lhwwwdefined
122 \@lhwwwdefinedfalse
123 \DeclareRobustCommand*{\@lhwww}{}
124 \DeclareRobustCommand*{\lhwww}[1]{
    \DeclareRobustCommand*{\@lhwww}{#1}
126
    127
      \@lhwwwdefinedfalse
128
    \else
      \@lhwwwdefinedtrue
129
    \fi
130
131 }
   Declare memo commands
132 \DeclareRobustCommand*{\memotitle}{MEMORANDUM}
133 \DeclareRobustCommand*{\memotolabel}{TO:}
134 \ensuremath{\mbox{\mbox{\tt lareRobustCommand*{\tt \mbox{\tt Commonto}}}} \{\}
135 \DeclareRobustCommand*{\memoto}[1]{\DeclareRobustCommand*{\@memoto}{#1}}
136 \mbox{ }\mbox{\em monotoned}
137 \@memofromdefinedfalse
138 \DeclareRobustCommand*{\memofromlabel}{FROM:}
139 \DeclareRobustCommand*{\@memofrom}{}
140 \DeclareRobustCommand*{\memofrom}[1]{
    \DeclareRobustCommand*{\@memofrom}{#1}
142
    \@memofromdefinedtrue
143 }
144 \DeclareRobustCommand*{\memosubjlabel}{SUBJECT:}
145 \DeclareRobustCommand*{\@memosubject}{}
147 \newif\if@memodatedefined
148 \@memodatedefinedfalse
149 \DeclareRobustCommand*{\memodatelabel}{DATE:}
150 \DeclareRobustCommand*{\@memodate}{}
151 \DeclareRobustCommand*{\memodate}[1]{
    \DeclareRobustCommand*{\@memodate}{#1}
152
153
    \@memodatedefinedtrue
154 }
```

Declare other formatting commands.

```
155 \neq 155 \newif\if@ptwoheaddefined
156 \@ptwoheaddefinedfalse
157 \DeclareRobustCommand*{\@ptwohead}{}
158 \verb|\DeclareRobustCommand*{\ptwohead}[1]{|}
     \DeclareRobustCommand*{\@ptwohead}{#1}
     \@ptwoheaddefinedtrue
160
161 }
162 \DeclareRobustCommand{\iaddress}[1]{
     \par
164
     #1
165
     \par
166 }
167 \DeclareRobustCommand{\greeting}[1]{
168
     \par
     #1
169
170
     \par
171 }
172 \neq 172 
173 \@closingnamedefinedfalse
174 \DeclareRobustCommand*{\@closingname}{}
175 \DeclareRobustCommand*{\closingname}[1]{
     \DeclareRobustCommand*{\@closingname}{#1}
176
     \@closingnamedefinedtrue
177
178 }
179 \DeclareRobustCommand{\closing}[1]{
180
     \vspace{\parskip}\vspace{\parskip}#1,
181
182
     \vspace{\parskip}\vspace{\parskip}%
183
     \if@closingnamedefined
184
       \@closingname
185
     \else
186
       \if@lhnamedefined
187
188
         \@lhname
189
       \else
190
191
       \fi
192
     \fi
193 }
194 \newlength{\sigwidth}
195 \setlength{\sigwidth}{1.75in}
This command will include a signature image in the file signature.
196 \DeclareRobustCommand{\closingsig}[2][\sigwidth]{
197
    \par
```

\closingsig

```
198
                                                         \vspace{\parskip}\vspace{\parskip}#2,\\
                                                         \includegraphics[width=#1]{signature}\\
                                         199
                                                         \if@closingnamedefined
                                         200
                                                               \@closingname
                                        201
                                                         \else
                                        202
                                                                \if@lhnamedefined
                                         203
                                         204
                                                                      \@lhname
                                         205
                                                                \else
                                         206
                                                               \fi
                                         207
                                                         \fi
                                         208
                                         209 }
\letterhead
                                        This is the command to include the letterhead in the document.
                                         210 \DeclareRobustCommand{\letterhead}{
                                        211
                                                         \thispagestyle{lhpage}
                                         212 }
       \memohead
                                        The command memohead creates a heading for a memorandum.
                                        213 \DeclareRobustCommand{\memohead}{
                                        214 \begin{tabular}{l 1}
                                        215
                                                         \mbox{\mbox{$\mbox{multicolumn}{2}{1}{\mbox{\mbox{\mbox{$\mbox{$\mbox{$\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox{$}\mbox
                                        216
                                                         \memotolabel & \@memoto\\ \\
                                         217
                                                         \memofromlabel &
                                                         \if@memofromdefined
                                        218
                                                               \@memofrom\\ \\
                                        219
                                        220
                                                         \else
                                                               \if@lhnamedefined
                                         221
                                                                     \@lhname\\ \\
                                        222
                                         223
                                                                \else
                                                                      ~\\ \\
                                         224
                                        225
                                                               \fi
                                                         \fi
                                        226
                                                         \memodatelabel &
                                        227
                                        228
                                                         \if@memodatedefined
                                         229
                                                               \@memodate \\ \\
                                                         \else
                                         230
                                                               \today \\ \\
                                        231
                                        232
                                                         \memosubjlabel & \@memosubject\\ \\
                                        233
                                        234 \end{tabular}
                                        235 }
                                                   The following length definitions are necessary.
                                         236 \headsep = 0.25in
                                         237 \neq 2 2ex
                                         238 \parindent = 0.0in
                                         239 \setminus footskip = 18.7pt
```

afterclose Define the afterclose environment.

```
240 \newenvironment{afterclose}{\begin{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{description}}{\column{des
```

Define the afterclose items.

```
241 \DeclareRobustCommand*{\ps}{
     \\item[{\rm{P.S.}}]
242
243 }
244 \DeclareRobustCommand*{\encl}{
    \item[{\rm{encl:}}]
246 }
247 \DeclareRobustCommand*{\cc}{
248 \item[{\rm{cc:}}]
249 }
250 \DeclareRobustCommand*{\CC}{
251 \item[{\rm{CC:}}]
252 }
253 \DeclareRobustCommand*{\pc}{
    \item[{\rm{pc:}}]
254
255 }
256 \DeclareRobustCommand*{\PC}{
    \item[{\rm{PC:}}]
257
258 }
Define the page style for the letterhead page.
259 \fancypagestyle{lhpage}{%
        \newgeometry{vmargin={2in, 1in}, hmargin=1in, headheight=62pt, foot=6pt}
260
        \renewcommand{\headrulewidth}{2pt}
261
262
        \renewcommand{\headrule}{\hbox to\headwidth{%
263
          \if@bw\else
            \color{ecugold}%
264
265
          \leaders\hrule height \headrulewidth\hfill}}
266
```

The black and white and color ECU logo files are in the \includegraphics commands below. these files must be somewhere in the latex path. (Test with the terminal command \$ kpsewhich filename.pdf.)

```
267 \fancyhf{}
268 \fancyhead[L]{%
269 \if@bw
270 \includegraphics[scale=0.75, viewport=48 8 144 72]{ECULogo2017BW}
271 \else
272 \includegraphics[scale=0.75, viewport=48 8 144 72]{ECULogo2017}
273 \fi
274 }
```

Next the letterhead text. For a color letterhead, use the color ecupurple defined above.

```
275
                \fancyhead[R]{
                       \if@bw\else
276
                             \color{ecupurple}
277
278
                       \sf\raggedleft \fontsize{9}{10.8}\selectfont
279
280
                          \if@lhnamedefined
281
                                 \textbf{\@lhname\if@lhdegreedefined{, \@lhdegree}\fi}
                                           \if@lhtitledefined
282
                                                 \textbar\ \@lhtitle\\
283
                                          \else
284
285
                                                 //
                                          \fi
286
                                    \fi
287
                             \if@lhECUaddressdefined
288
                                    \@lhECUaddress \textbar
289
                             \fi
290
                             \label{lem:lhecupostal} \
291
                             \if@lhphonedefined
292
293
                                    \@lhphone\ office
294
                             \if@lhfaxdefined
295
                                    \if@lhphonedefined
296
                                          \textbar\
297
                                    \fi
298
                                    \olimits fax
299
300
                             \fi
301
                              \if@lhemaildefined
                                    \textbar\ \@lhemail\
302
                             \fi
303
                             \if@lhwwwdefined
304
                                    \textbar\ \@lhwww
305
306
                             \fi
307
                \fancyfoot{}
308
309
                \fancyfoot[R]{
310
                       \if@bw\else
                             \color{ecugold}
311
312
313
                       \sf\raggedleft \fontsize{16}{19.2}\selectfont
                       \vspace{-12pt}
314
315
                       www.ecu.edu
316
               }
317 }
Set the page style for pages following the first page.
318 \pagestyle{fancy}
{\tt 319 \ \ leadheight=16pt,\ include head}\}
320 \mbox{ } \mbox{
\if@ptwoheaddefined
```

```
\@ptwohead
323
     \else
324
       \@lhname
325
     \fi
326
327 }
328 \ \chead{}
329 \ensuremath{ \mbox{\sc Npageref{LastPage}}}
330 \foot{}
331 \setminus cfoot{}
332 \rfoot{}
   Set the main text to be \raggedright
333 \raggedright
   Read user defined commands from the file ECULetterDefs.cfg if it exists.
334 \InputIfFileExists{ECULetterDefs.cfg}{%
    \ClassInfo{ECULetter}{Loading user configurations from ECULetterDefs.cfg}%
336 }%
337 {%
     \ClassInfo{ECULetter}{User configuration file found.}%
339 }
   Include \letterhead and \memohead at the beginning of the document if ap-
propriate.
340 \land AtBeginDocument{}
     \if@printletterhead
341
       \letterhead
342
343
     \if@printmemohead
344
       \memohead
345
346
       \par
     \fi
347
348 }
```

Change History

Options 10pt and 12pt are now
available 9
Package color required 2, 10
Package wrapfig no longer
used \dots 2, 10
UNC statement removed from
letterhead $\dots 5, 13$

Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

Symbols	\@lhtitledefinedtrue 74	bw
\@bwfalse 2, 10	\@lhwww 123, 125, 126, 305	
\@bwtrue 9	\@lhwwwdefinedfalse	${f C}$
\@closingname	$\dots \dots 122, 127$	\CC 6, 250
. 174, 176, 185, 201	$\ensuremath{\texttt{@lhwwwdefinedtrue}}$. 129	\cc
\@closingnamedefinedfalse	\@memodate 150, 152, 229	\cfoot
173	\@memodatedefinedfalse	\chead 328
\@closingnamedefinedtrue	148	class declaration 2
177	\@memodatedefinedtrue	class options
\@lhECUaddress	153	\ClassInfo 335, 338
	\@memofrom 139, 141, 219	\closing 5, 179
\@lhECUaddressdefinedfals	e\@memofromdefinedfalse	
	137	\closingname 5, 175
\@lhECUaddressdefinedtrue	\@memofromdefinedtrue	\closingsig 5, <u>196</u>
82	142	color
\@lhdegree 57, 59, 60, 281	\@memosubject	\color 264, 277, 311
\@lhdegreedefinedfalse	\dots 145, 146, 233	\CurrentOption 27
56, 61	\@memoto 134, 135, 216	_
\@lhdegreedefinedtrue	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	D
		\DeclareOption
\@lhemail	\@printletterheadtrue	9, 10, 11, 12,
. 112, 114, 115, 302	4	13, 17, 21, 25, 26
\@lhemaildefinedfalse	\@printmemoheadfalse 6	\definecolor 40 , 41
111, 116	\@printmemoheadtrue 12	\documentclass 2
\@lhemaildefinedtrue	\@ptwohead 157, 159, 323	
	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	${f E}$
\@lhfax 101, 103, 104, 299	156	ECULetterDefs.cfg file
\@lhfaxdefinedfalse	$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	2, 3, 6, 17
100, 105	160	ECULogo2017 file 2
\@lhfaxdefinedtrue . 107	\@sizegivenfalse 8	ECULogo2017BW file . 2
\@lhname	\@sizegiventrue	\encl 6, 244
46, 48, 49, 188,	$\dots \dots 14, 18, 22$	\end 234, 240
204, 222, 281, 325		environments:
\@lhnamedefinedfalse		afterclose $6, 240$
	\□ . 85, 283, 293, 297,	,
\@lhnamedefinedtrue 52	299, 302, 305, 329	\mathbf{F}
\@lhphone 90, 92, 93, 293	A	\fancyfoot 308, 309
\@lhphonedefinedfalse	A (\fancyhead $\frac{268}{275}$
	afterclose (environ-	\fancyhf 267
\@lhphonedefinedtrue 96	ment) \dots 6, $\frac{240}{240}$	\fancypagestyle 259
\@lhtitle 68, 70, 71, 283	\AtBeginDocument 340	\fontsize 279, 313
\@Intitle \\08, 70, 71, 283 \\@Ihtitledefinedfalse	В	\footrulewidth 43
•	-	·
67,72	\begin 214, 240	\footskip 239

${f G}$	\if@sizegiven 7, 30	О
geometry package 2	\includegraphics	\OptionNotUsed 25
\greeting 5, 167	\dots 199, 270, 272	-
	\InputIfFileExists . 334	P
\mathbf{H}		packages, required 2
\headrule 262	${f L}$	\pageref 329
\headrulewidth	\leaders 266	\pagestyle 318
. 42, 261, 266, 320	\letterhead . 5 , 210 , 342	\parindent 238
\headsep 236	\lfoot 330	$\P \$
\headwidth 262	\lhdegree	. 15, 19, 23, 27, 31
\hfill 266	\lhead 321	\PC
\hrule 266	\lhECUaddress 3, 80	\pc
ī	\lhECUPostal . 3, 84, 291	\ProcessOptions 29
-	\lhemail 3, 113	\ps
\iaddress 5, 162 \if@bw 1,	\lhfax	\ptwohead 5, 158
263, 269, 276, 310	\lhname	D
\if@closingnamedefined	\lhphone	R
172, 184, 200	\lhtitle	\raggedleft 279, 313
\if@lhdegreedefined	\lhwww	\raggedright 333
55, 281	\LoadClass 33	\relax 29
\if@lhECUaddressdefined		\renewcommand
	${f M}$	42, 43, 261, 262, 320
	M memo	$\Require Package 34,$
		\RequirePackage 34, 35, 36, 37, 38, 39
	memo	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot332
77, 288 \if@lhemaildefined 110, 301 \if@lhfaxdefined 99, 295	memo	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot
77, 288 \if@lhemaildefined	$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot
77, 288 \if@lhemaildefined	memo	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot
77, 288 \if@lhemaildefined	memo	\text{RequirePackage} 34, \\ 35, 36, 37, 38, 39 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
77, 288 \if@lhemaildefined	memo	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot
77, 288 \if@lhemaildefined	memo	\RequirePackage 34,
77, 288 \if@lhemaildefined	$ \begin{array}{llllllllllllllllllllllllllllllllllll$	\RequirePackage 34,
77, 288 \if@lhemaildefined	memo 2 \memodate 4, 151 \memodatelabel 4, 149, 227 \memofrom 4, 140 \memofromlabel 4, 138, 217 \memohead 5, 213, 345 \memosubject 4, 146	\RequirePackage 34,
77, 288 \if@lhemaildefined	memo 2 \memodate 4, 151 \memodatelabel 4, 149, 227 \memofrom 4, 140 \memofromlabel 4, 138, 217 \memohead 5, 213, 345 \memosubject 4, 146 \memosubjlabel 4, 144, 233	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot
77, 288 \if@lhemaildefined	memo 2 \memodate 4, 151 \memodatelabel 4, 149, 227 \memofrom 4, 140 \memofromlabel 4, 138, 217 \memohead 5, 213, 345 \memosubject 4, 146 \memosubjlabel	\RequirePackage 34,
77, 288 \if@lhemaildefined	memo	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot
77, 288 \if@lhemaildefined	memo 2 \memodate 4, 151 \memodatelabel 4, 149, 227 \memofrom 4, 140 \memofromlabel 4, 138, 217 \memohead 5, 213, 345 \memosubject 4, 146 \memosubjlabel 4, 144, 233 \memotitle 4, 132, 215 \memoto 4, 135	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot
77, 288 \if@lhemaildefined	memo 2 \memodate 4, 151 \memodatelabel 4, 149, 227 \memofrom 4, 140 \memofromlabel 4, 138, 217 \memohead 5, 213, 345 \memosubject 4, 146 \memosubjlabel 4, 144, 233 \memotitle 4, 132, 215 \memotolabel 4, 133, 216	\RequirePackage 34, 35, 36, 37, 38, 39 \rfoot
77, 288 \if@lhemaildefined	memo 2 \memodate 4, 151 \memodatelabel 4, 149, 227 \memofrom 4, 140 \memofromlabel 4, 138, 217 \memohead 5, 213, 345 \memosubject 4, 146 \memosubjlabel 4, 144, 233 \memotitle 4, 132, 215 \memotolabel 4, 133, 216	\text{RequirePackage} 34, \\ 35, 36, 37, 38, 39 \\rfoot \cdot \cdot 329 \\rm \cdot \cdot 242, 245, \\ 248, 251, 254, 257 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
	memo 2 \memodate 4, 151 \memodatelabel 4, 149, 227 \memofrom 4, 140 \memofromlabel 4, 138, 217 \memohead 5, 213, 345 \memosubject 4, 146 \memosubjlabel 4, 144, 233 \memotitle 4, 132, 215 \memotolabel 4, 133, 216 \multicolumn N \newgeometry 260, 319	\text{RequirePackage} 34, \\ 35, 36, 37, 38, 39 \\ \text{rfoot} \cdots 329 \\ \text{rm} \cdots 242, 245, \\ 248, 251, 254, 257 \\ \text{S} \\ \text{selectfont} \cdots 279, 313 \\ \text{setlength} \cdots 279, 313 \\ \text{signature file} \cdots 2, 5, 13 \\ \text{signature file} 2, 5, 13 \\ \text{signature file} 3, 285, 283, 289, 297, 302, 305 \\ \text{signature file} 3, 305 \\
	memo 2 \memodate 4, 151 \memodatelabel 4, 149, 227 \memofrom 4, 140 \memofromlabel 4, 138, 217 \memohead 5, 213, 345 \memosubject 4, 146 \memosubjlabel 4, 144, 233 \memotitle 4, 132, 215 \memotolabel 4, 133, 216 \multicolumn 215	\textbar \te