GNU Emacs
Quick Reference Guide
for CS61B

Bullets (•) mark a suggested starting set of commands. Daggers (†) denote key bindings that are not standard in GNU Emacs. *ARG* denotes the prefix numeric argument (entered with `C-u` or `M-`*digit*).

Cursor motion.

`C-f`	Forward character.•
`M-f`	Forward word.•
`C-e`	Forward to end of line.•
`C-b`	Backward character.•
`M-b`	Backward word.•
`C-a`	Backward to start of line.•
`M-e`	Forward sentence.
`M-[`	Forward paragraph.
`M-a`	Backward sentence.
`M-]`	Backward paragraph.
`C-n`	Next line.•
`C-p`	Previous line.•
`M-<`	Beginning of buffer.•
`M->`	End of buffer.•
`C-v`	Scroll text up one screen (or *ARG* lines).•
`M-v`	Scroll text down (or *ARG* lines).•
`M-g`	Go to line number *ARG*.†
`M-x what-line`	Display line number.
`C-M-v`	Scroll other window up one screen (or *ARG* lines).

Marking regions of text

`C-@`	Set mark at point.•
`C-x C-x`	Exchange mark and point.•
`C-SPC`	Same as `C-@`.
`M-@`	Set mark after end of next word.
`M-h`	Set mark and point around current paragraph.
`C-x h`	Set mark and point around current buffer.

Deletion and yanking

`DEL`	Delete character before cursor.•
`M-DEL`	Delete word before cursor and add to kill buffer.•
`C-d`	Delete character at cursor.•
`M-d`	Delete word at and after cursor and add to kill buffer.•
`C-k`	Delete to end of line and add to kill buffer.•
`M-W`	Delete current region, and add to kill buffer.†•
`M-\`	Delete surrounding blanks and tabs.
`M-SPC`	Delete all but one surrounding blank.
`C-x C-o`	Delete all but one surrounding blank line.
`C-M-w`	Cause next command, if a kill, to append to previous kill buffer, instead of new one.
`C-y`	Insert text from kill buffer at point.•
`C-u C-y`	Insert text from kill buffer at point without moving point.
`M-y`	Replace preceding `C-y` text with next most recent kill buffer.
`M-w`	Copy region to kill buffer, no deletion.

Indentation

`TAB`	Indent according to mode.•
`LF`	Same as RET TAB.
`M-;`	Indent and start comment.
`M-LF`	Continue comment on next line.
`C-x TAB`	Indent region rigidly by *ARG*.
`C-M-\`	Indent region according to mode.•

Search

`C-s`	Search forward.•
`C-s C-s`	Same as `C-s` with last string.•
`C-r`	Search backward.•
`C-r C-r`	Same as `C-r` with last string.•
`C-u C-s`	Search forward for regular expression.
`M-x occur`	Display lines matching a regular expression.
`M-x grep`	Display results of UNIX `grep` utility.
`M-x count-matches`	

The following subcommands are valid during a search.

`RET`	End search.•
`DEL`	Undo effect of last search character typed.•
`C-g`	Abort search.•
`C-s`	Search for next match forward.•
`C-r`	Search for next match backward.•
`C-q`	Quote next character.
`C-w`	Extend search string with next word.
`LFD`	Extend search string with rest of line.

Replacement

`M-q`	Query replace.•†
`M-Q`	Query replace regular expression.†
`M-x delete-matching-lines`	
`M-x delete-non-matching-lines`	

During a query-replacement, the following are valid responses to prompts.

`SPC`	Make replacement and go to next.•
`DEL`	Skip replacement and go to next.•
`RET`	End replacement.•
`!`	Replace all remaining instances without asking.•
`C-r`	Enter recursive edit; return with `C-M-c`.

Regular expressions

`.`	Match any character.•
`^`	Match at start of line.•
`$`	Match at end of line.•
`[...]`	Match any character in the '...'.•
`[^...]`	Match any character except those in '...'.•
`*`	Match 0 or more of pattern to left.•
`+`	Match 1 or more of pattern to left.
`?`	Match 0 or 1 of pattern to left.
`\`c	Quotes c, except for the following.
`\b`	Match at beginning or end of word.
`\B`	Match except at beginning or end of word.
`\\|`	Match either pattern to left or right.
`\(...\)`	Grouping.
`\`n	Match copy of whatever matched n^{th} group.

Miscellaneous editing

`C-o`	Insert newline after cursor.
`C-t`	Transpose characters.
`M-t`	Transpose words.
`C-x C-t`	Transpose lines.
`M-u`	Convert whole word to upper case.
`M-l`	Convert whole word to lower case.
`M-c`	Capitalize word.

Files

`C-x C-f`	Find file; load if needed.•
`C-x 4 C-f`	Find file in other window.•
`C-x C-s`	Save file.•
`C-x C-w`	Write to explicitly-named file.
`C-x i`	Insert file at cursor.
`M-x recover-file`	Recover file after disaster from auto-save file.
`M-x revert-buffer`	Throw away changes to buffer and restore from file.

Buffers and windows

`C-x o`	Put cursor in other window.•
`C-x 1`	Grow current window to full screen.•
`C-x 2`	Split current window vertically.•
`C-x b`	Put named buffer in window.•
`C-x 0`	Remove current window.
`C-x 3`	Split current window horizontally.
`C-x C-b`	List all buffers.
`C-x k`	Delete buffer.

Shells

`M-x shell`	Run UNIX shell in a buffer.•
`M-|`	Execute single shell command on region. With *ARG*, replaces region.

Commands active in shell buffers:

`RET`	Send current line to shell.•
`TAB`	Complete preceding file name.•
`C-c C-c`	Send interrupt to shell.•
`C-c C-u`	Erase current input line.•
`C-c C-z`	Send stop signal to shell.•
`C-c C-d`	Send EOF to shell.

Compilation, debugging, and tags

`M-x compile`	Execute command (by default, `make`) asynchronously.•
`C-x ` `	Position to next error or next line found by `M-x grep` command.•
`M-x kill-compiler`	Stop active `compile`.

`M-x visit-tags-table` Specify file containing tags produced by `etags`.•
`M-.` Display source for given tag.•
`C-u M-.` Find next alternate definition for last tag.•
`C-x 4 .` Display source for tag in other window.
`M-x tags-search`
`M-x tags-query-replace` Look for pattern in all files named in tags table.
`M-x tags-apropos` Display matching tags.

`M-x gdb` Run GNU debugger on file.
`M-x gjdb` Run Java debugger on class.

Commands valid in `gdb` and `gjdb` modes.

`C-c C-s` Step.•
`C-c C-n` Next.•
`C-c <` Up stack.•
`C-c >` Down stack.•
`C-c C-r` Finish.•
`C-x SPC` In any source file, sets a break point.•
`C-c C-i` Stepi (gdb only).

Help and documentation

`M-x manual-entry` UNIX man page for given topic.
`C-h a` Look up names of matching commands.•
`C-h b` Display key bindings.•
`C-h f` Help for `M-x` function.•
`C-h C-h` Help for `C-h`.•
`C-h i` Run info browser.•
`C-h k` Help for key.•
`C-h m` Help for current mode.
`C-h t` Tutorial.
`C-h w` Key containing function.

Inside an *info* buffer (result of `C-h i`), the following are defined.

`m` Select menu item.•
`l` Go to last-visited node.•
`?` Get help for browser.•
`u` Go to node's parent.•
`n` Go to next node in sequence.•
`q` Leave browser.•
`.` Go to top of node.
`d` Go to top-level node.

Mouse commands

Left, middle, and right buttons are `LB`, `MB`, and `RB`.
`LB` Put cursor at mouse. Dragging marks region.
`MB` Paste text from window-system cut buffer at mouse.
`RB` Extend region to pointer and copy into cut and kill buffers. Clicking twice deletes region.
`C-LB` Select a buffer.