Word Processing

M269 Word Toolbar & Marking

Contents

1 Introduction

When producing Microsoft Word documents for M269 eTMAs there are several word processing questions to answer:

- How do I insert any of the almost 40 mathematical symbols into my document ?
- What font should I use so that a tutor or student receiving my work or marking will be able to see all the symbols as I intended ?
- If I receive a document where font substitution has taken place and mangled the intended characters, how do I find out what the original characters were ?

This note addresses these questions for M269 students and staff producing and marking eTMAs in Microsoft Word:

1. It provides Microsoft Word templates that give toolbars and keystroke shortcuts to insert the mathematical characters for M269 which are not on the keyboard. For tutors there are also templates which give toolbars and keystroke shortcuts for some marking tasks.
2. The note provides instructions for creating or editing the templates to add any other items you want to the the toolbars or keyboard shortcuts.
3. The note ends with a section on the fonts you should use so that tutors and students do not get problems with font substitution and missing fonts

2 For Those in a Hurry

Microsoft Word Templates in the same place as you found this file, there should also be:

- M269MolyneuxWordTemplate2013Stu.dot
- M269MolyneuxWordTemplate2013Stu.dotx
- M269MolyneuxWordTemplate2013Tut.dot
- M269MolyneuxWordTemplate2013Tut.dotx
- M269MolyneuxWordTemplate2013Mon.dot
- M269MolyneuxWordTemplate2013Mon.dotx

The templates with file extensions `.dot` are compatible with Word 97–2004 format, while those ending in `.dotx` are in the XML based format for later versions of Word. None of the templates contain macros (at least none written by me). This note assumes that you have made *file extensions* visible (see section A.1)

The files with names ending in *Stu* are aimed at students, while those ending with *Tut* and *Mon* have some extra features for marking and are aimed at tutors and monitors.

Choose one and place it somewhere where Word can find it — this will probably be your Microsoft *User Templates* folder — if you do not know where this is then see section 3.1 below. Copy the autotext and styles to your *Normal.dotm* and for existing Word files, copy the styles into them.

Font Recommendations — use the font *Arial Unicode MS* for any mathematical operators you use in your documents you are sending to other people. *DejaVu* fonts are available for all platforms from `http://dejavu-fonts.org` and have most of the mathematical operators as well as fonts suitable for the text. *Lucida Sans Unicode* is the M269 recommendation and is available for both PC and Mac for recent versions of operating system and Word but lacks some of the symbols I use — such as the (red) ticks ✔ and crosses ✘

Missing Fonts — if you see odd boxes (□) or unexpected symbols then it may be that you have some missing fonts and *font substitution* has taken place. To get the *Font Substitution* dialog box:

Word 2010 for Windows — in the *File* tab, click *Options*, then *Advanced*, scroll to the *Show Document Content* options and click the *Font Substitutions* button.

Word 2011 for Mac — from *Word* menu → *Preferences...* item → *Compatibility* item and click *Font Substitution...*

See section 5 for more details and notes for other versions of Word.

3 Word Templates

The Word templates with names ending in `Stu` provide the toolbar shown in figure 1, while the templates with names ending in `Tut` are shown in figure 2 (The interface for the templates ending in *Mon* are similar to those for `Tut`)

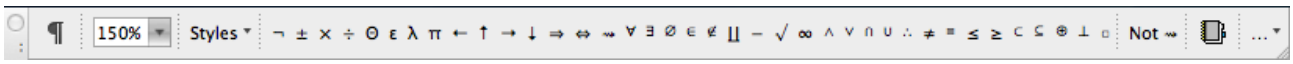

Figure 1: Toolbar from Template ending *Stu*

Figure 2: Toolbar from Template ending *Tut*

The toolbar from template *2013Stu* has all the mathematical characters not on the keyboard plus the *not a functional dependency* (↛) symbol which is formed by placing two characters on top of each other. The toolbar from templates *2013Tut* and *2013Mon* provide a superset of the features of the previous toolbar. Along with the math symbols, they provide buttons (and keystroke shortcuts) to produce ticks, crosses, add comments, toggle track changes, zoom, a marking submenu that has a highlighted style for block or inline (code or ordinary text) marking comments and also a submenu of further symbols. The autotext in the templates uses *Lucida Sans Unicode*

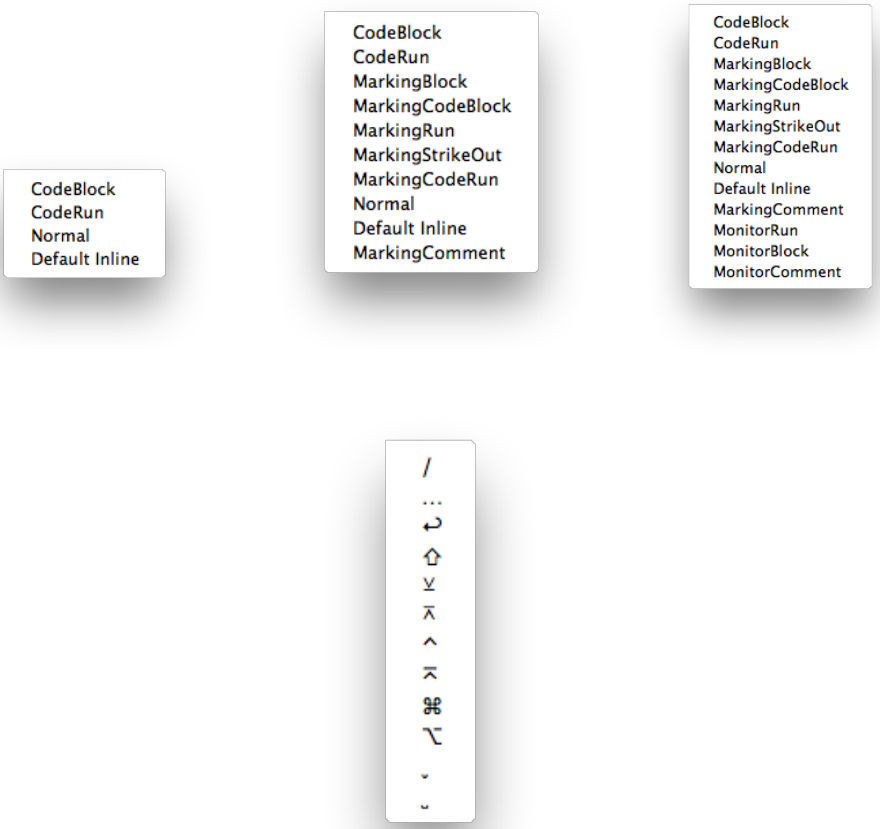

Figure 3: Menus from the Templates

3.1 Installing the Word Templates

The installation varies slightly depending on your choice of template and version of Word.

1. Place a copy of the template in your *User Templates* folder. (see section A.3)

2. Open the template in Word — you have to do this by going *File* > *Open...* — if you double-click on the template it will open a new Word document based on the template not open the template file itself.
3. Now navigate to the *Organizer* dialog box (see 4)

   M269MolyneuxWordTemplate2013Stu — copy the autotext from the template to your *Normal.dotm* — the autotext entries all start with *mx*. Also copy the styles *CodeBlock*, *CodeRun*.

   M269MolyneuxWordTemplate2013Tut — copy the autotext from the template to your *Normal.dotm* — the autotext entries all start with *mx*. Also copy the styles *CodeBlock*, *CodeRun*, *MarkingBlock*, *MarkingCodeBlock*, *MarkingRun*, *MarkingStrikeOut* and *MarkingCodeRun* to your *Normal.dotm (global template)*.

   M269MolyneuxWordTemplate2013Mon — as for the *Tut* templates but also copy the styles *MonitorBlock*, *MonitorRun*, and the autotext *mxmonitor:* to your *Normal.dotm (global template)*.

   You will only have to do this once (*Normal* will retain the autotext and styles)
4. The steps in getting the *Organizer* dialog box depend on your version of Word (and there are many alternative ways in each version of Word)

   Toolbar — click on the item towards the right of the toolbar (this works for me in Word 2011 but I haven't tested it elsewhere)

   Word 2011 Go Format > Style... > Organizer...

   Word 2010 We need to use both the *Organizer* (to copy the styles) and the *Building Blocks Organizer* (to copy the autotext) (Murray, 2010, pages 123,231)

   - Go *Developer* tab > *Templates* group, click *Document Template*. In the *Templates and Add-ins* dialog box, click *Organizer...*
     Developer > Templates > Document Template > Organizer...
   - For the *Building Blocks Organizer*, go *Insert* tab > *Text* group > *Building Blocks Organizer*
     Insert > Text > Building Blocks Organizer
5. You can now open a new Word session, navigate to the *Templates and Add-ins* dialog box and load the template (see section A.4). The marking styles will be available in new documents based on *Normal.dotm* (or *.dot*) — however they will not be available in existing documents or documents from third parties without an extra step — see 6 below.
6. For existing or third party documents, if you are using *M269MolyneuxWordTemplate2013Tut.dotm* you have to copy the marking styles into the document using the *Organizer* dialog — copy them from *Normal.dotm* (or the original template *M269MolyneuxWordTemplate2013Tut.dotm* but that will require opening that file and if you have already copied them to *Normal.dotm* then it will be quicker).

Explanation

If you haven't played around with templates, styles, autotext, toolbars and macros before then some of the above instructions may appear a bit mysterious (they still appear convoluted to me). Here is a brief description of what happens when you open a Word document:

New document inherits styles, autotext, toolbars, menu items, macros from the attached template (usually *Normal.dotm*). Any loaded global template provides further toolbars, menu customisation and macros.

Existing document does not inherit styles from the attached template (though it may have obtained the styles it uses from that template when created). The autotext in the attached template can be used though. Any loaded global template provides further toolbars, menu customisation and macros.

For more detail on this, see Microsoft note *Word Document Templates vs. Word Add-ins (Global Templates)* at http://msdn.microsoft.com/en-us/library/aa141685(v=office.10).aspx and *Shauna Kelly on Sending Word Documents* at http://www.shaunakelly.com/word/sharing/willmyformatchange.html

If you have noticed the button labeled *Automatically update document styles* in the *Templates and Add-ins* dialog, do not be tempted to check it. If you received a third party document which was based on that

user's *Normal.dotm* then you would clobber any document styles with the same names as styles in your *Normal.dotm* and if the third party had edited those styles then some formatting would be altered — read the *Shauna Kelly* article mentioned above for the full details.

Further Customisation Notes

Making Word Open Documents in a Certain View http://word.mvps.org/faqs/general/SaveViewAndZoom.htm

3.2 Shortcut Keys

For a more complete list of keyboard shortcuts see:

Word for Mac http://office.microsoft.com/en-gb/mac-word-help/word-keyboard-shortcuts-HA102929541.aspx

Word for Windows http://support.microsoft.com/kb/290938

To list all Word commands and keyboard shortcuts in Word 2011 for Mac, go *Tools* menu, *Macro* menu, click *Macros...* to get the *Macros* dialog. In the *Macros in:* pop-up menu, click *Word commands* and then in *Macro name:* box, type *ListCommands*, click *Run* and in the resulting dialog box choose *Create a new document which lists:* with either *Current menu and keyboard settings* or *All Word commands*

To Clear Character and Paragraph Direct Styles see http://support.microsoft.com/kb/123302, http://office-watch.com/t/n.aspx?a=1552 and use the shortcuts for the *Reset Char* and *Reset Para* commands.

ResetChar Makes the selection the default character format of the applied style

ResetPara Makes the selection the default paragraph format of the applied style

Notes on the following table:

***Styles* color coding**

- *Stu*: Stu,
- *Tut*: Stu+Tut,
- *Mon*: Stu+Tut+Mon

Health Warning there may be some conflicts with other shortcut keys — you may want to change some. In particular, the ␣✔␣ and ␣✘␣ actions are bound to ctrl+` and ctrl+~ because that key is at the bottom left on a Mac keyboard — Windows users may want to change this to ctrl+\ and ctrl+|

Action	Keyboard Shortcut	
␣✔␣	Ctrl+` (Grave)	ctrl + `
␣✘␣	Ctrl+~ (Shift + Grave)	ctrl + ~
CodeBlock	Ctrl+Alt+K	ctrl + ⌥ + K
CodeRun	Ctrl+Alt+T	ctrl + ⌥ + T
MarkingBlock	Ctrl+Alt+B	ctrl + ⌥ + B
MarkingCodeBlock	Shift+Ctrl+Alt+B	⇧ + ctrl + ⌥ + B
MarkingRun	Ctrl+Alt+R	ctrl + ⌥ + R
MarkingCodeRun	Shift+Ctrl+Alt+R	⇧ + ctrl + ⌥ + R
MarkingStrikeOut	Ctrl+Alt+S	ctrl + ⌥ + S
Normal	Ctrl+Alt+N	ctrl + ⌥ + N
Default Inline	Ctrl+Alt+D	ctrl + ⌥ + D
MarkingComment	Ctrl+Alt+M	ctrl + ⌥ + M
MonitorRun	Ctrl+Alt+Z	ctrl + ⌥ + R
MonitorBlock	Ctrl+Alt+X	ctrl + ⌥ + B
MonitorComment	Shift+Ctrl+Alt+M	⇧ + ctrl + ⌥ + M
π	Ctrl+Alt+P	ctrl + ⌥ + P
←	Ctrl+Alt+Left	ctrl + ⌥ + ←
↑	Ctrl+Alt+Up Arrow	ctrl + ⌥ + ↑
→	Ctrl+Alt+Right	ctrl + ⌥ + →
↓	Ctrl+Alt+Down Arrow	ctrl + ⌥ + ↓
⇒	Shift+Ctrl+Alt+Right	⇧ + ctrl + ⌥ + →
⇔	Shift+Ctrl+Alt+Up Arrow	⇧ + ctrl + ⌥ + ↑
∀	Shift+Ctrl+Alt+A	⇧ + ctrl + ⌥ + A
∃	Shift+Ctrl+Alt+E	⇧ + ctrl + ⌥ + E
∈	Shift+Ctrl+Alt+I	⇧ + ctrl + ⌥ + I
∧	Ctrl+Alt+A	ctrl + ⌥ + A
∨	Ctrl+Alt+O	ctrl + ⌥ + O
∩	Ctrl+Alt+I	ctrl + ⌥ + I
∪	Ctrl+Alt+U	ctrl + ⌥ + U

Copy & Paste Keyboard Shortcuts		Mac	Win
Copy	Cmd+C	⌘ + C	Ctrl + C
Cut	Cmd+X	⌘ + X	Ctrl + X
Paste	Cmd+V	⌘ + V	Ctrl + V
Paste Special. . .	Ctrl+Cmd+V	ctrl + ⌘ + V	Ctrl + Alt + V
Paste and Match Formatting	Shift+Alt+Cmd+V	⇧ + ⌥ + ⌘ + V	*none*
Copy as RTF (TextMate)	Ctrl+Alt+Cmd+R	ctrl + ⌥ + ⌘ + R	*n/a*
Copy Format	Shift+Cmd+C	⇧ + ⌘ + C	⇧ + Ctrl + C
Paste Format	Shift+Cmd+V	⇧ + ⌘ + V	⇧ + Ctrl + V
Select column + ↑,↓,→,←	Shift+Cmd+F8	⇧ + ⌘ + F8	F8
Exit extended mode	Cmd+.	⌘ + .	Esc
ResetChar	Shift+Cmd+Z	⇧ + ⌘ + Z	Ctrl + Space
ResetPara	Alt+Cmd+Q	⌥ + ⌘ + Q	Ctrl + Q

4 Font Recommendations

Here are the issues for sharing documents with some maths fonts:

1. There are not many fonts that have all the required maths symbols.
2. There are not many combinations of fonts for text that work well (look right) with maths fonts.
3. Of the fonts fonts that satisfy the above two points, there are even fewer that are guaranteed to be available in all versions of Word and all platforms.

Here are my suggestions for fonts to use:

Arial Unicode MS — available on just about all likely combinations on Word version and platform and has all the required maths symbols. However it isn't my choice for ease of reading on screen (it is a bit cramped).

Lucida Sans Unicode — available on most Windows versions of Word and on Mac versions from 2008 (but not 2004 unless installed from elsewhere). This has all the required maths symbols but does not have the Dingbat tick ✔ (Unicode U+2713 CHECK MARK) and cross ✘) (Unicode U+2717 BALLOT X) — however I use the glyphs from *Arial Unicode MS* for just those two. Lucida has the advantage of having a family of fonts that work together and being originally designed to be clear for reading on low resolution devices such as computer screens (till we all get retina screens, anyway). *Lucida Sans Unicode* is the M269 recommended font.

In the past, I have used the Wingdings ticks (252) and crosses (251) (Unicode Private Area characters U+F0FC and U+F0FB, in Wingdings 2 they are characters 80, Unicode U+F050 and 79, Unicode U+F04F) but this is probably not a good thing — see http://www.alanwood.net/demos/wingdings.html

DejaVu fonts — *DejaVu* fonts are available for all platforms from http://dejavu-fonts.org and have most of the mathematical operators as well as fonts suitable for the text. However you would have to persuade the recipient of your document to install them as well.

Some fonts can be embedded but not all versions of Word provide an interface to do the embedding.

Cambria and Cambria Math are available in Word 2007, 2010 and 2011 for Mac and are the default fonts — see a description of them in *Three Typefaces for Mathematics* at http://www.typeculture.com/academic_resource/articles_essays/ and navigate to the article.

If you use the *Equation Tools* then *Cambria Math* is the only font you can currently use. This leads to a subtle problem if you are saving your document in Word 97–2004 format: all the maths is saved as bit maps and the file can become huge. The author of the Word Equation Tools has a series of articles on maths in Word at http://blogs.msdn.com/b/murrays/archive/2012/01/09/math-in-office-links.aspx

5 Font Substitution & Tools

The screen snap from an *MS Word* document viewed using *MS Word 2004 for Mac* in figure 4 shows some missing glyphs with a box □ symbol.

Word does *font substitution* if the document has fonts your version of Word and platform do not have — unfortunately, it may substitute a font which does not have a glyph for a particular character — this is very common when the character is from the maths symbols. You can find which fonts have been substituted for missing fonts:

Word 2004, 2008 and 2011 for Mac Word > Preferences... > Compatibility... and click on Font Substitution...

Word 2010 —- From the *File* tab, click *Options* then click *Advanced*, scroll to the *Show Document Content* options and click *Font Substitution...*

Word 2007 — Click the *Microsoft Office Button* and then *Options* and continue as Word 2010

You can also run the *Compatibility Checker* to see if there are any other issues:

Word 2007 — click the *Microsoft Office Button* and then *Prepare* and click *Run Compatibility Checker*

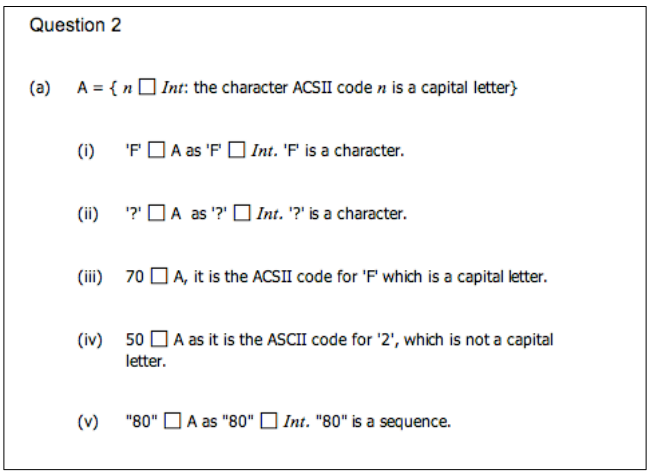

Figure 4: MS Word 2004 Missing Fonts

Word 2010 — from the *File* tab, click the *Info* tab and the *Check for Issues* tool and click on *Check Compatibility*

Word 2004 for Mac — from the menu bar, click *Tools* > *Compatibility Report...*

Word 2008 for Mac — as Word 2004 but also you can click on the *Toolbox* icon in the *Standard* toolbar and choose the *Compatibility Report* tab.

Word 2011 for Mac — from the menu bar, click *View* > *Toolbox, Compatibility Report* or click on the *Toolbox* icon in the *Standard* toolbar and choose the *Compatibility Report* tab.

5.1 Font Tools

The tools we are looking for need to address the following questions — we wish to view the fonts rather than have font creation tools:

1. Which glyphs are in this font ?
2. Which fonts have this particular glyph ?
3. Given a character displayed as not present (□), what character is it ?

We would also like to know which versions of which package or operating system include particular fonts — here are a couple of Web sites that have some information on that:

Microsoft typography > Fonts and Products > Products http://www.microsoft.com/typography/fonts/product.aspx — which fonts are supplied with which product

Microsoft typography > Fonts and Products > Families http://www.microsoft.com/typography/fonts/family.aspx

Microsoft Fonts with Office 2003 http://support.microsoft.com/kb/837463 (15 September 2012)

Microsoft Fonts with Office 2007 http://support.microsoft.com/kb/924623/en-us (15 September 2012)

Microsoft Fonts with Office 2010 http://support.microsoft.com/kb/2121313/en-us (15 September 2012)

Guide to Pre-Installed Fonts http://www.apaddedcell.com/web-fonts (15 September 2012)

Office for Mac Compatible Fonts http://blog.officeformac.com/power-tips-2/

Prepressure Fonts http://www.prepressure.com/fonts/basics/snow-leopard-fonts/list, http://www.prepressure.com/fonts

The Alan Wood web site has descriptions of lots of tools for Unicode fonts — see http://alanwood.net/unicode/index.html

UnicodeChecker — from http://earthlingsoft.net/UnicodeChecker/index.html.en — *donation ware* Mac, runs on Lion. This will answers questions 2 and 3 on an Apple Mac — this is one of the few tools that will identify the character with the missing glyph. To do this, copy the missing character (by copying the □ character from MS Word) and paste it into the *UnicodeChecker* character area in the main window.

Unicode Font Info — from http://pixel.recoil.org/code/unicodefontinfo/index.html — free. Runs on Mac, Snow Leopard (but not yet on Lion or above). This will answer question 1 on an Apple Mac

Font Book — comes with *Mac OS X* — answers question 1 but not as conveniently as *Unicode Font Info*

Character Viewer — comes with *Mac OS X* — find it from *System Preferences* > *Language & Text* > *Input Sources* tab — put it on your menu bar by checking the *Show input menu in menu bar*

PopChar X & PopChar Win — from http://www.ergonis.com/products/, not free, runs on Mac and Windows. Answers questions 1 and 2

Microsoft Font Properties Extension — The *Microsoft* web site http://www.microsoft.com/typography/ has lots of useful information (Krieger (2007, page 26) describes this). *Font Properties Extension* can be downloaded from this site — this gives details of embedding permissions (amongst other things). To get the dialog box, do a *secondary click* (right click, usually) on a font file in the *Fonts* directory — accessible from the *Control Panel* or as C:\WINDOWS\Fonts

MS Word Insert Symbol Dialogue The *MS Word Insert Symbol* dialogue gives access to symbols in a particular font. This dialogue is obtained as follows:

MS Word 2007, 2010 *Ribbon* → *Insert* tab → *Symbol* group → *Symbol* contextual tab → *More Symbols...*

MS Word 2003 (& earlier) *Menu bar* → *Insert* → *Symbol...*

MS Word 2004, 2011 for Mac (& earlier) *Menu bar* → *Insert* → *Symbol...*

Word Equation Tools — only available in versions of Word after 2004 — if you use this feature and then convert to pre-2004 format, your equations will become bit maps and the files will become very large. Use this when the OU accepts .docx format.

MS Windows Character Map Tool — *MS Windows* also has a *Character Map* tools to display all the characters in a particular font — this enables characters to be inserted into a document as well as finding which glyphs are in a font. It also gives the *Alt* + numeric keypad digits that may be used to insert the character from the keyboard. (see Karp et al. (2002, page 117) and http://tlt.its.psu.edu/suggestions/international/accents/charmap.html)

This is obtained from *Start* → *All Programs* → *Accessories* → *Character Mapper* (sic) or *Start* → *Run...* → charmap (Windows Vista and earlier, I have not checked later versions)

A Template Locations

The locations of folders for system and user templates and how you inspect or change the locations or activate the templates depends on:

- Operating system: Windows XP, Windows Vista, Windows 7, and Mac OS X
- Version of Microsoft Office: Office 2003, Office 2007, Office 2010 (for Windows), Office 2004, Office 2008, Office 2011 (for Mac)
- The folder locations may be *hidden* and you may need to look up how to access certain folders or make them visible.

This note was written using Office 2011 for Mac (10.7 Lion) and instructions for any other combination should be checked — I have included some references I have used below:

Manage Templates in Office 2007 & 2010 http://support.microsoft.com/kb/924460

Location of Templates in Word 2003 and 2007 http://support.microsoft.com/kb/826867

Books see the *References* below — in particular Krieger (2007, 2011)

A.1 Showing File Extensions

All of these notes assume you have made *file extensions* visible:

Mac OS X (versions 10.1 to 10.8, all versions to date) Go *Finder* > *Preferences* and in the *Advanced* tab, check *Show all filename extensions*

Windows XP In *Windows Explorer*, go *Tools* > *Folder Options* and uncheck *Hide extensions for known file types*

Windows Vista In *Windows Explorer*, go *Organize* > *Folder and Search Options* and then you get exactly the same dialogue box as above in Windows XP

Windows 7 I think it is similar to Windows Vista (but cannot verify that)

A.2 Showing System and Other Hidden Folders

You may also need to view some hidden system or user library folders:

Mac OS X the are several ways to view the user library folder ~/Library — the ~ (tilde character) is shorthand for the user folder.

- The easiest way is to install *TinkerTool* (free from http://www.bresink.com/osx/TinkerTool.html) and in the *Finder* tab, check *Show hidden and system files*
- In *Finder* in the *Go* menu, press the *Alt* key and the *Library* folder appears as part of the menu of destinations.
- To unhide just ~/Library, in *Terminal* say:

```
chflags nohidden ~/Library
```

- To unhide all folders, in *Terminal* say:

```
defaults write com.apple.finder AppleShowAllFiles -bool true
```

Windows get to the *Folder Options* dialogue box (as above for file extensions) and do the right thing. (it should just be checking or unchecking some box)

A.3 Template Locations

Word templates *can* be stored anywhere you like but Word pays more attention to some locations:

User Templates — these can be loaded as global templates (or add-ins) or attached as document templates (building on *Normal.dotm*)

Windows XP C:\Documents and Settings\user name\Application Data\Microsoft\Templates

Windows Vista and Windows 7 C:\Users\user name\AppData\Roaming\Microsoft\Templates

Mac OS X ~/Library/Application Support/Microsoft/Office/User Templates/My Templates

User Startup Folder Word will load templates on startup from this folder — only use this folder if you want the M269 toolbar for every Word session. There are system wide startup folders but you probably shouldn't be using those for individual users. Below I have used the environment variable APPDATA instead of typing everything in full — it expands to the paths in the user templates above.

Windows XP %APPDATA%\Microsoft\Word\STARTUP

Windows Vista and Windows 7 %APPDATA%\Microsoft\Word\STARTUP

Mac OS X no default but can be set — see below.

Inspecting and Changing Template Locations

Word 2003 Go *Tools* menu > *Options*. On the *File Locations* tab, click *User Templates* and then click *Modify*

Word 2007 Click on the *Microsoft Office Button*, then click *Word Options*, in the *Advanced* tab, click *File Locations*. In the *File Locations* dialogue box, select *User templates* and then click modify.

Word 2010 From the *File* menu click *Options*, then follow the instructions for Word 2007

Office 2004, 2008, and 2011 for Mac In the Word menu, select *Preferences* > *File Locations* and see figure 5

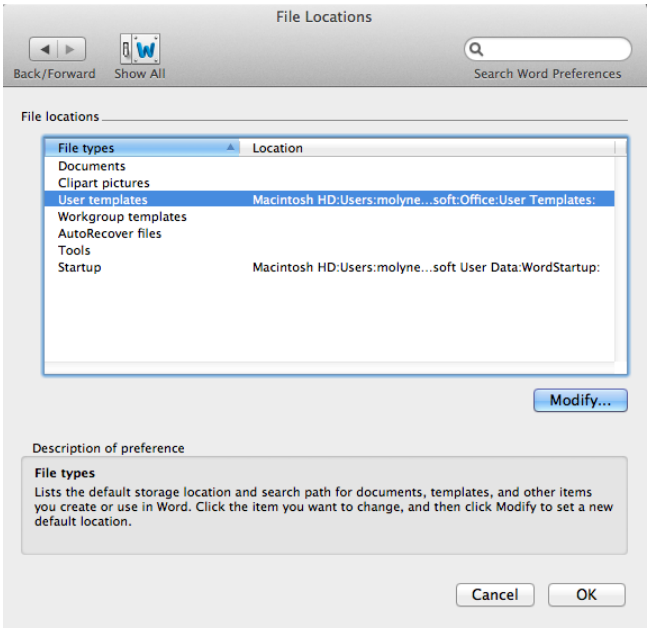

Figure 5: Word 2011 File Locations dialog box

A.4 Loading and Attaching Templates

The differences between *attached* templates (or document templates) and *global* templates (or add-ins) is described in http://msdn.microsoft.com/en-us/library/aa141685(v=office.10).aspx — you probably only want to use my templates as global templates but unfortunately this means that certain features of my templates would have to be copied to your Normal.dotm (this includes the marking custom styles)

Word 2003 go *Tools* > *Templates and Add-Ins...*

Word 2007 click the *Microsoft Office Button*, then click *Word Options*, click *Add-Ins*, in the *Manage* list select *Word Add-Ins* and then click *Go*. Click the *Templates* tab, under *Global templates and add-ins* select the template you wish to add or remove.

Word 2010 From the *File* menu click *Options*, then follow the instructions for Word 2007 (I haven't checked this)

Office 2004, 2008, and 2011 for Mac go *Tools* > *Templates and Add-Ins...* and see figure 6

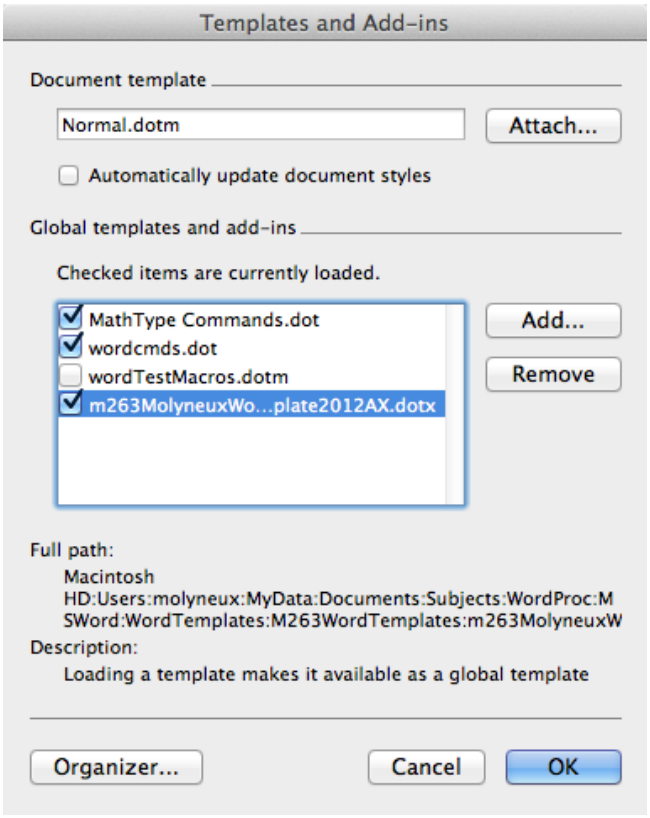

Figure 6: Word 2011 Templates and Add-ins dialog box

B Custom Marking Styles

The templates contain several custom styles — here are the Microsoft Word descriptions of the main ones:

CodeBlock Font: (Default) Lucida Sans Typewriter, Pattern: Clear (Gray-5%), Style: Quick Style, Based on: Normal

CodeRun Font: Lucida Sans Typewriter, Border:: (No border), Pattern: Clear (Gray-5%), Style: Quick Style, Priority: 2, Based on: Default Paragraph Font

MarkingBlock Font: (Default) Lucida Sans Unicode, Font color: Black, Border:Box : (Single solid line, Auto, 0.5 pt Line width), Pattern: Clear (Light Yellow), Style: Quick Style, Based on: Normal

MarkingCodeBlock Font: Lucida Sans Typewriter, Font color: Black, Style: Quick Style, Based on: MarkingBlock

MarkingRun Font: Lucida Sans Unicode, Font color: Black, Border:: (Single solid line, Auto, 0.5 pt Line width), Pattern: Clear (Light Yellow), Style: Quick Style, Priority: 2, Based on: Default Paragraph Font

MarkingStrikeOut Strikethrough, Font color: Red, Not Double strikethrough, Style: Quick Style, Priority: 2, Based on: Default Paragraph Font

MarkingCodeRun Font: Lucida Sans Typewriter, Font color: Black, Border:: (Single solid line, Auto, 0.5 pt Line width), Pattern: Clear (Light Yellow), Style: Quick Style, Priority: 2, Based on: MarkingRun

The styles with names starting *Marking* are not available in the *Stu* template

The *Styles Menu* item *MarkingComment* (Opt+Ctrl+Shift+M) provides an initial comment on the marking style to be placed at the start of the TMA — it is in the *MarkingBlock* style.

The defaults are:

Normal Font: (Default) + Theme Body, 12 pt, Left, Line spacing: single, Widow/Orphan control, Style: Quick Style

Default font Cambria (Body)

To change the default font, paragraph settings and document layout, go *Format* and then *Font...*, *Paragraph...* or *Document...*

There is also a *Monitor's* version of the template *M269MolyneuxWordTemplate2013Mon.dotx* which has the following additions:

Style MonitorBlock Font color: Dark Red, Border:Box : (Single solid line, Dark Red, 0.5 pt Line width), Pattern: Clear (Light Turquoise), Style: Quick Style, Based on: MarkingBlock

Style MonitorRun Font:Lucida Sans Unicode, Font color: Dark Red, Border:: (Single solid line, Dark Red, 0.5 pt Line width), Pattern: Clear (Light Turquoise), Style: Quick Style, Priority: 2, Based on: MarkingRun

Style MonitorTitle Font: Lucida Sans Unicode, 12 pt, Bold, Style: Quick Style, Priority: 2, Based on Strong

Autotext mxmonitor: (Shift+Opt+Ctrl+M) Paragraph in style *MonitorBlock* with words *Monitor's Comments:* in style *MonitorTitle* and two line breaks.

C Word Symbol Table & Examples

The following two pages include the PDF of a Word document illustrating the symbols and marking styles — I have not included examples of the *CodeBlock* and *CodeRun* styles since they are similar to the marking styles but have a grey background.

The table of symbols includes a description of use in M269, the symbol (in Lucida Sans Unicode), the Unicode name and code point (or character code, in hexadecimal), the XML entity and the LaTeX markup for the symbol (this document was written in LaTeX which, for structured documents, is often easier than Word, at least for me)

The *not a functional dependency* symbol $\not\rightsquigarrow$ is a bit different since there is no Unicode character for that — in Word this uses a *field code* to overstrike two characters — see section E.3 for the detail.

M269 Symbols

¬ ± × ÷ Θ ϵ λ π ← ↑ → ↓ ⇒ ⇔ ⇝
∀ ∃ ∅ ∈ ∉ ⨿ − √ ∞ ∧ ∨ ∩ ∪
∴ ≠ ≡ ≤ ≥ ⊂ ⊆ ⊕ ⊥ □ ↯

Description	Symbol	Unicode Hex	Unicode Name	XML Entity	LaTeX
Not	¬	U+00AC	NOT SIGN	¬	\neg
Plus Minus	±	U+00B1	PLUS-MINUS SIGN	±	\pm
Multiplication	×	U+00D7	MULTIPLICATION SIGN	×	\times
Division	÷	U+00F7	DIVISION SIGN	÷	\div
Capital Theta	Θ	U+0398	GREEK CAPITAL LETTER THETA	Θ	\Theta
Epsilon	ϵ	U+03B5	GREEK SMALL LETTER EPSILON	ε	\epsilon
Lambda	λ	U+03BB	GREEK SMALL LETTER LAMDA	λ	\lambda
Pi	π	U+03C0	GREEK SMALL LETTER PI	π	\pi
Assignment	←	U+2190	LEFTWARDS ARROW	←	\leftarrow
Function type operator	→	U+2192	RIGHTWARDS ARROW	→	\rightarrow
Implication	⇒	U+21D2	RIGHTWARDS DOUBLE ARROW	⇒	\Rightarrow
If and only if	⇔	U+21D4	LEFT RIGHT DOUBLE ARROW	⇔	\Leftrightarrow
Functional dependence	⇝	U+21DD	RIGHTWARDS SQUIGGLE ARROW	⇝	\leadsto
Universal quantifier	∀	U+2200	FOR ALL	∀	\forall
Existential quantifier	∃	U+2203	THERE EXISTS	∃	\exists
Empty set	∅	U+2205	EMPTY SET	∅	\emptyset
Element of	∈	U+2208	ELEMENT OF	∈	\in
Not an element of	∉	U+2209	NOT AN ELEMENT OF	∉	\notin
Disjoint union	⨿	U+2210	N-ARY COPRODUCT	∐	\amalg
Set difference	−	U+2212	MINUS SIGN	−	$-$

Description	Symbol	Unicode Hex	Unicode Name	XML Entity	LaTeX
Square root	√	U+221A	SQUARE ROOT	√	\surd
Infinity	∞	U+221E	INFINITY	∞	\infty
And	∧	U+2227	LOGICAL AND	∧	\wedge
Or	∨	U+2228	LOGICAL OR	∨	\vee
Set intersection	∩	U+2229	INTERSECTION	∩	\cap
Set union	∪	U+222A	UNION	∪	\cup
Therefore	∴	U+2234	THEREFORE	∴	\therefore
Not equal	≠	U+2260	NOT EQUAL TO	≠	\not=
Equivalence	≡	U+2261	IDENTICAL TO	≡	\equiv
Less then or equal	≤	U+2264	LESS-THAN OR EQUAL TO	≤	\le
Greater than or equal	≥	U+2265	GREATER-THAN OR EQUAL TO	≥	\ge
Proper subset	⊂	U+2282	SUBSET OF	⊂	\subset
Subset	⊆	U+2286	SUBSET OF OR EQUAL TO	⊆	\subseteq
Concatenation	⊕	U+2295	CIRCLED PLUS	⊕	\oplus
Undefined	⊥	U+22A5	UP TACK	⊥	\bot
Space	□	U+25A1	WHITE SQUARE	□	\Box
Not a Functional Dependency	↛				\not\leadsto

Example tick ✓
Example cross ✗

Example marking block

Start text example marking run text end text

```
function SUMSTACK(s) {
  // Example marking code block
  if (SIZE(s) == 0) then {
    return 0
  }
  else {
    return PEEK(s) + SUMSTACK(POP(s))
  }
}
```

D Marking Points

New Lines & Paragraphs — in a code block, use new lines (*Shift + Return*) and only use new paragraph (*Return*) at the end.

Copying & Pasting when marking can lead to all sorts of odd formatting depending on how the origin and destination are formatted — here is what I probably should do when copying from a solution document (third party, source) into a document being marked (also third party, target)

1. Copy the (possibly styled and formatted) text (and possibly other objects) from the source document.
2. In the target document, create a marking style — *MarkingBlock* (Opt+Ctrl+B), *MarkingRun* (Opt+Ctrl+R), *MarkingCodeBlock* (Opt+Ctrl+Shift+B) or *MarkingCodeRun* (Opt+Ctrl+Shift+R) — which you choose will depend on the particular comment.
3. At the insertion point, get the *Paste Special* dialog by going *Ctrl+Cmd+V* or right-click and choose *Paste Special...* — see figure 7

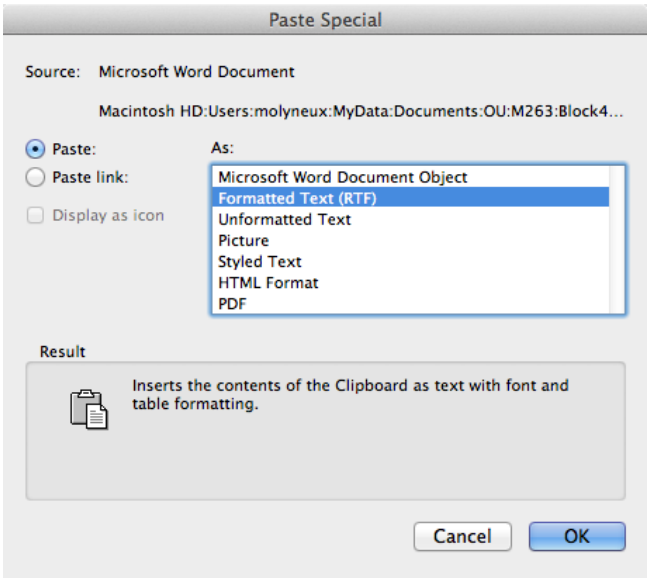

Figure 7: Word 2011 Paste Special dialog box

4. From the *Paste Special* dialog choose *Formatted Text (RTF)* and click OK (or click *Return*). In the result click on the *Paste Options* button at the end of the paste and see something like figure 8

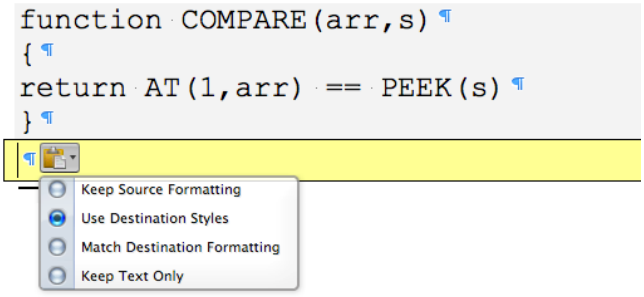

Figure 8: Word 2011 Paste Options dialog box 01

This is not quite what you want since the default is *Use Destination Styles*.

5. Choose *Match Destination Formatting* and see something like figure 9
6. You can abbreviate this process if you know you want to always match destination formatting by doing steps 1 and 2 and then going *Edit* > *Paste and Match Formatting* (Alt+Shift+Cmd+V)

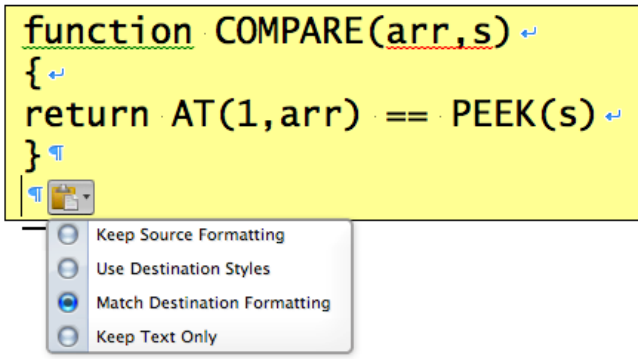

Figure 9: Word 2011 Paste Options dialog box 02

Show all non-printing characters — in figure 9 you can see some (blue) new line characters ↩ and the ¶ (pilcrow) end of paragraph marker — I often find it easier to see what is going on if I use the pilcrow icon in the standard toolbar to show all non-printing characters. (this is where you do it in Word 2011 there will be something similar in other versions of Word)

Configure AutoCorrect and Spelling and Grammar — I make the following changes:

- Uncheck *Capitalize first letter of sentences* — avoids unwanted capitals in code blocks.
- Uncheck *Capitalize first letter of table cells* — similar reason to above
- Uncheck *Replace text as you type* — otherwise (c), (r) and (tm) always turn into ©, ®, ™ and <-- turns into ←
- In *Spelling and Grammar*, uncheck *Check grammar as you type* — to avoid distraction in code blocks.

Find *AutoCorrect Options* by

Word 2011 for Mac *Word* menu > *Preferences. . .* > *AutoCorrect* dialog > *AutoCorrect* tab

Word 2010 for Windows *File* tab > *Options* > *Proofing* section > *AutoCorrect Options* button

Word 2007 for Windows click the *Microsoft Office Button*, then click *Word Options* then as Word 2010

E Creating and Editing Autotext, Styles, Fields and Toolbars

TODO:

E.1 Autotext

TODO:

E.2 Styles

TODO:

E.3 Fields

TODO: Finish this by adding some screen snaps

- In the various tables of symbols, the *not a functional dependency* symbol ↛ is the odd one out — there is no Unicode character for that (that I could find) so the templates have used the EQ (Equation) field to overstrike the RIGHTWARDS SQUIGGLE ARROW U+21DD with a SOLIDUS U+002F — this was done as follows:
  1. In Word 2010 access the Field dialogue by going to the Insert tab on the ribbon, in the Text group click Quick Parts and then click Field. In Word 2011 for Mac access the Field dialogue by clicking the Insert menu and then Field...
  2. In Word 2010 select the Eq field and in Properties select the \O for overwrite. In Word 2011 select the Eq field name and click on the Options... button to add \O()
  3. The arguments for \O() should be ⇝ followed by a comma and then /
  4. Right click and in the context menu select *Toggle Field Codes*
  5. Create an Autotext entry so that you can type (say) *mxnotleadsto:* to generate the new symbol.
  6. The autotext entry can then be given a keystroke shortcut and added to the custom toolbar
- You can display all field codes by pressing Alt+F9. In Word 2010 Ctrl+F9 converts selected text to a field (if correct) and F9 updates the field. In Word 2011 you can use Cmd+F9 to convert selected text to a field but F9 triggers Exposé by default.
- Web sites with information on field codes include
  - Insert and format field codes in Word 2010 — Word — Office.com
  - Field codes in Word — Word — Office.com
  - Field codes: Eq (Equation) field — Word — Office.com
  - Insert or update a field code — mac word — Office.com

E.4 Toolbars

TODO:

F Reference Tables

TODO:

G Using Word Math Autocorrect

If you do not wish to install the Word templates, you can use *Math Autocorrect* to generate many of the symbols:

Word 2007,2010 Go *File* > *Options* > *Proofing* > *Autocorrect Options...* > *Math Autocorrect* and check *Use Math AutoCorrect rules outside of math regions*

Word 2011 for Mac Go *Word menu* > *Preferences* > *Autocorrect* in the *Authoring and Proofing Tools* group > choose the *Math Autocorrect* tab and check *Use Math AutoCorrect rules outside of math regions*

In either PC or Mac version of Word you can now type *\exists* and get ∃ and many other symbols. The markup is very similar (mainly identical) to LaTeX — Murray Sargent's MSDN blog has articles on this at http://blogs.msdn.com/b/murrays/ — in particular see http://blogs.msdn.com/b/murrays/archive/2012/01/09/math-in-office-links.aspx

H Issues & Future Work

Shortcut key in ScreenTips — only show if the template is attached (not global, except for *Normal*) — this may of course be a mistake on my part — if you know a solution, let me know.

Style issues

- The light yellow background shading for marking blocks or runs works (for me) on screen but only the black border is visible in print. An addition of a 5% background pattern is visible in print with the yellow but may detract from readability of maths expressions — let me know what you think.
- Opening an existing Word document requires the *Automatically update document styles* button to be checked in the *Templates and Add-ins* dialog box — but read http://www.shaunakelly.com/word/sharing/willmyformatchange.html and http://word.mvps.org/faqs/macrosvba/UpdateStyles.htm

TODO: Items — various sections remain to be filled in from notes elsewhere — and there will be some typos.

I Contact & Updates

Email — my preferred email address is molyneux@pobox.com — please send any bug reports or queries to that address.

M269 Word Templates will be available at http://www.pmolyneux.co.uk/WordProc/MSWord/WordTemplates/M269WordTemplates/ — if I update them I may change their names (unless it is just a bug fix)

This File will be available at http://www.pmolyneux.co.uk/WordProc/MSWord/WordTemplates/WordtemplatesNo M269WordTemplatesNotes/ — the name of the original file is m269WordMarking2012.pdf — any updates will either have the same name (small updates) or a similar name (larger updates)

J Versions & Updates

15 September 2012 version 1 for OU module M263

7 October 2012 version 1.01

- added style *MarkingStrikeOut* with changes to making menu (figure 3 in section 3), *Keyboard Shortcut* table (section 3.2), description of custom marking styles (section B)
- Added autotext *mxmarking:* (Opt+Ctrl+Shift+M) to provide initial marking comment and added that to the *Keyboard Shortcut* table (section 3.2).

5 October 2013 version 2 for OU module M269

7 October 2013 version 2.1

- Corrected installation instructions for Word 2010 — have to use the *Building Blocks Organizer* as well as the *Organizer*
- Added material in Appendix E

21 December 2013 version 2.2

- Added keystroke shortcuts for *Reset Char* and *Reset Para*

15 January 2014 version 3

- Changed Tick and Cross from Ctrl+S and Ctrl+F to Ctrl+grave and Ctrl+tilde
- Added health warning about keyboard shortcuts

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