

# DESCRIPTION OF "DISSERTATION" TEMPLATE FOR WORD 2007 FOR WINDOWS

## Version Information

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## **Dissertation Template for Word 2007**

### **1 Introductory Notes**

This manual is an update to the “Dissertation Template Manual 2005”. The 2005 version of the template worked well with Word 2003 and earlier versions of Word that used the standard “doc” format. The template itself still works with Word 2007, but unfortunately, the previous version of the manual is obsolete. In this new version of the user’s manual, we attempt to clarify some of the differences between Word 2003 and Word 2007 and how they relate to the problem of using this template to create your dissertation.

### **2 Warning and Disclaimer**

I am providing this template to UTD with the understanding that it is intended as an aid only. The user will have to take ultimate responsibility for detecting and fixing any mistakes.

Having said that, however, don’t get discouraged. The template has been tested and used extensively over a period of years to produce actual dissertations. If used correctly, it will greatly reduce the time and effort required to format your dissertation.

Please note that using a Word template is a non-trivial operation. To use it successfully you need at least an average working knowledge of Word for Windows, and with Windows in general. For example, it is assumed that the user knows basic operations within Word 2007, such as using the ribbon, setting styles, working with fonts, working with fields, etc. I will include brief descriptions of some of these items, but in general, writing complete descriptions of

basic Word and Windows operations is beyond the scope of this manual. There are many good books on these subjects available.

Although this template will create a dissertation that is acceptable to UTD, there may be some aspects of it that you would like to change. Perhaps you'd like to use a different font, or a slightly different margin (assuming that's acceptable to the Graduate Dean's Office, of course). This is fine. The template can be modified to create almost anything you want. But make sure you know what you are doing if you make any significant changes, especially with the use of styles and outline numbering. Many of the nice features, such as the ability to generate an entire table of contents with the click of a mouse, are keyed to the style and outline settings. You can change these in the document or in the template, but if they are changed improperly, the related functions may not work.

Keep in mind that minor variations can appear in the end product for reasons that have nothing to do with the template. For example, one printer might format margins slightly differently than another. Problems like this can be fixed, of course, by simply adjusting whatever parameter is not working properly, but I suggest you periodically make test printings of key pages of your dissertation so any abnormalities can be detected early.

And finally, let me emphasize the importance of following the directions outlined in this manual very carefully. Some of the operations described here are somewhat technical and involve several steps. If these steps aren't followed exactly, then the end result might not be correct. A key example is the problem of having exactly two blank lines between the chapter title information and the beginning of the chapter text. As you will see below, the template is set up to provide those two blank lines automatically, but the directions for correcting the chapter title must be followed closely if the end result is to be obtained. Another example is the method of setting up the figure headings so they will be detected and appear in the table of figures. In these and all other cases, it is necessary to parse out the directions very carefully to see how they apply to your particular situation.

### **3 General Characteristics**

As it is, this template will create a dissertation that uses a 12 point Times New Roman font throughout, double-spaced, with the acceptable margins, page numbering, etc. already set up. It includes provisions for the title page of the dissertation, the copyright notice, the acknowledgments, the abstract, an introduction (described in this manual), the table of contents, the table of figures, the chapters, the bibliography, and the vita.

My recommendation is that you treat the entire dissertation as one large file, instead of breaking it up into separate files for chapters. In this way, all page numbering is handled automatically, and cross-referencing between different portions of the document is much simplified. If you have already written separate chapter files, those files can be copy/pasted into a document based on this template.

I further recommend that you do not use the Word "large document" feature. This feature is not well regarded by experts in Word. The general consensus is that it generates more problems than it solves.

The template is divided into sections, which is necessary in order to get the page numbering and other formatting to work out properly. Each chapter resides in its own section. It is best to work entirely within a section at any given time. Don't delete a section break unless you are sure you won't need it.

Virtually everything in this template is controlled by various style settings. To control the creation of the table of contents and the table of figures, I used Outline Numbering linked to the styles and various outline levels. I did not use any Visual Basic in this template.

## 4 General Setup

This template requires only one file: “Dissertation 2007.dotm”. In contrast to the previous version for Word 2003, this one does not require the modification of the “normal.dotm” basic template in Word.

The basic, root level configuration file in Word is called “normal.dotm,” and it contains the basic settings for styles, numbering, fonts, etc. that are necessary for Word to operate. “Normal.dotm” resides in a special folder, the location of which varies depending on the operating system. In Windows XP, which I am using to write this update, it is in the

C:\Documents and Settings\<User>\Application Data\Microsoft\Templates

folder. In Vista and Windows 7, however, it is in the

C:\Users\<User>\AppData\Roaming\Microsoft\Templates

folder.

### 4.1 Locating the correct template folder

To use the template correctly, it should be copied into the “Microsoft\Templates” folder described above. Unfortunately, that folder (and several others) is marked “hidden” in most Windows systems, and access is generally not allowed to hidden files and folders. This is due to a system wide setting called “Do not show hidden files and folders”, which is enabled on most systems. If this setting is enabled, folders that are marked with the attribute “hidden” are invisible to Windows Explorer and cannot be accessed unless an explicit change is made to the default settings for the system. Since both the Application Data folder in XP and the AppData folder in Windows 7 and Vista are marked “hidden” by default, it is necessary to change the “Do not show hidden files and folders” setting in order to access the Templates folder and install the template.

To change the “Do not show hidden files and folders” setting, perform the following steps:

1. Access the Control Panel
  - 1.1. In Windows XP and Windows 7, this can be accessed through the “Start” button.
2. Make sure the icons are being displayed and choose “Folder Options.”
  - 2.1. In Windows 7, if the icons are not being displayed, type “Folder Options” in the search box. A link to the “Folder Options” will appear in the search results.
3. In Folder Options, click on the “View” tab.
4. Part way down the list is an option called “Hidden Files and Folders.”
5. Expand that option if necessary and click on “Show Hidden Files and Folders.”
  - 5.1. This will automatically unclick the “Do not show hidden files and folders” option.

## 4.2 Installing and initializing a document from the template

Once this “Show Hidden Files and Folders” option is enabled, the AppData and lower folders will become visible and it is then possible to follow the entire path down to the Templates folder. Installing the template in Windows is subsequently a simple matter of copying it to this location.

Once you’ve done this, you can start your new dissertation by basing it on the “Dissertation 2007” template. From within Word, click on the round Office Button in the upper left and choose “New.” In the left-hand column of the resulting dialog box, click “My Templates...” If the dissertation template was copied into the correct folder, it should be visible at that point. You can either double-click on it or single click and hit “Enter” or “OK.”

Make sure you do not use the dissertation template directly, that is, as a “dotm” file. Word templates are not designed to be opened directly, unless they are being modified. Basing a new document on a template in the manner described is the proper way to use them.

## 5 Some Basic Operations and Notes

Before we get into the dissertation template itself, I want to describe some basic Word operations that you will use often while working on your dissertation.

### 5.1 Show/Hide

If you look on the Home tab, upper right hand corner of the Paragraph group, you’ll find an icon that looks like a paragraph mark. This is the “Show/Hide” button, and I suggest you always work with this button turned on. This will allow paragraph marks, field codes, section breaks, and other hidden features to be visible while you work. Although this clutters up the display a bit, it is worth it in my view. It is far more useful to be able to see the hidden codes and fields that Word uses while you are working, than to have a perfectly clean display. I personally never turn this switch off.

### 5.2 Context sensitive menus

In this write-up, I frequently refer to “context sensitive menus.” This phrase refers to the menu that appears when you “right click,” or otherwise use the secondary mouse button, when the mouse cursor is positioned over some object. The contents of this menu will change depending on the object the mouse cursor is pointing to, hence the name “context sensitive.”

### 5.3 Fields

Fields are embedded codes that Word uses to control many operations. They are extremely powerful mini-functions that return results or perform some operation. Word has over 75 of them that can be used for various things. In my dissertation, I used mostly TOC fields, which control the creation of the table of contents and table of figures, REF fields, which, in conjunction with bookmarks, can be used to create cross-references to remote parts of the document, and STYLEREf fields, which are more complicated but can be used to generate numbers among other things. I suggest you become familiar with the use of fields.

You can access the Field dialog box in Word 2007 by: “Insert Tab | Text Group | Quick Parts | Field...” In addition, you can always add an entry to the “Field” dialog box to your Quick

Access toolbar, which I recommend. To do that, right click on the “Field...” option and choose “Add to Quick Access Toolbar” from the context menu.

Normally Word displays the result of a field rather than the field itself. At times, however, it is useful to be able to access the field code itself. This can be done by: (a) highlighting the result of the field, and (b) choosing “Toggle Field Codes” from the context sensitive menu. Once the field code is displayed in this manner, it can be edited like any other text string.

## 5.4 Updating fields

A very important operation when working with fields is the “update fields” operation. This causes Word to recalculate the results of a particular field, which is often necessary since Word does not generally recalculate field results unless a document is being loaded or printed. For example, if you move a picture to a different location in the document, the figure number, if it is calculated by a field code (as it will be if you use my method), will not be updated unless you tell Word explicitly to do that. Similarly, cross-references to bookmarks or other items will need to be updated manually.

To update a particular field, highlight it and hit F9, or choose “Update Field” from the context sensitive menu. To update all the fields in a document, first select the entire document with Ctrl-A, and then hit F9.

Note that fields can be “chained” in a sense, by which I mean that the results of one field can be used by another. If you perform the update process for the whole document and it doesn’t correctly update all entries, try doing it more than once.

## 5.5 Setting styles

As mentioned, styles are extremely important in Word, and this template uses them extensively to control various formatting requirements and other operations. In Word 2007, styles can be accessed in the Styles group of the Home tab. Simply put the cursor on the line whose style you want to change, and choose the correct style from the list.

The Home tab of the ribbon conveniently lists about six styles for immediate access, and the user can quickly call down a larger list of around twenty four. However, I often prefer to work with the entire style set displayed. To do this, click on the small arrow in the lower right hand corner of the “Styles” group. This will display a list of the available styles on the right hand side of your screen. As the insertion cursor moves from one area of text to another within your document, an indicator will appear in the style list identifying the current style. Having the style list open does reduce the area available for you document slightly, but the convenience is often worth it.

Note that styles can be easily modified. If you right-click on the style entry you wish to modify and choose “Modify...” from the context menu, you will have access to all the options available for that style. Any changes you make here will simultaneously affect all instances of that style in your document.

A word of caution, however. Be very careful when modifying the “Body Text” or any of the several “Heading,” TOC, or “Table of Figures” styles, as they are used to control the various operations of the template. If you need some special purpose style for any reason, I suggest you create a new one with a unique name.

## 5.6 Enabling spell checking in capitalized words

In Word, the spell checking function is turned off by default for text that is printed in all-caps. This includes elements such as the title of your dissertation and some other items.

The Graduate Dean's Office has requested that every student turn this functionality on. To enable spell checking in words that are printed in all-caps, perform the following steps:

1. Click on the round "Office" button in the upper left and choose "Word Options" from the lower right hand side of the resulting dialog box.
2. In the left-hand column, choose "Proofing."
3. In the section entitled "When correcting spelling in Microsoft Office programs," clear the check-box that says "Ignore words in UPPERCASE."

This will enable spell checking in upper case words. Please be aware that spell checking is your responsibility, not that of the Graduate Dean's Office. Be especially careful to check your spelling in the document title.

## 6 General Notes for Use

When you create your dissertation document, you will notice some fields that say things like "Click here and type the title" or something similar. To use these fields, highlight the whole line in a block, and then type the title of your dissertation or whatever information the field is asking for.

There are also notes embedded at various positions in the template that do not necessarily require a whole line. These are placed in angled brackets, like "<" and ">". I intended those to be notices to the user of needed information at that point. To use them, simply highlight the whole note in a block, including the angled brackets, and type in whatever information is asked for. This will replace that angled bracket and included text with the correct information.

Use the "Body text" style, not the "Normal" style, for all text in your document. This applies even to text that you have copy/pasted from another document. If you move text from another document into your dissertation, make sure to change the style of the inserted text to "Body Text".

One of the nice things about this template is that it will correctly number chapters, sub-sections within a chapter, pages, and figures for you. The automatic numbering features available in Word really save time when you need to generate something involving the whole document, like a table of contents, for example. However, in order for these features to work, the template must be used in a very specific manner when new chapters are created. The following sections describe this process.

## 7 To Create New Chapters

### 7.1 General comments

The beginnings of the first two chapters are included with the template so that the page numbering scheme will be correct. **It is very important to use these chapter "stubs" for the first two chapters**, otherwise the page numbering scheme won't work properly. Chapters from 3

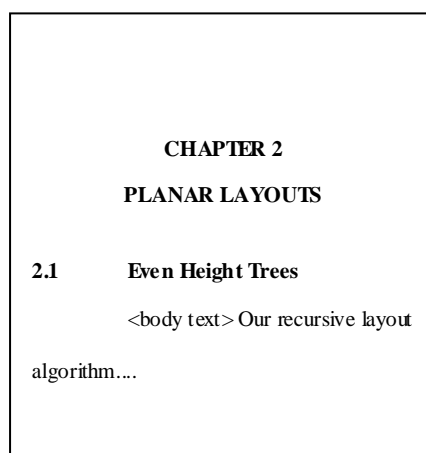
and beyond are handled differently than chapters 1 and 2, and I will discuss their creation in subsection 7.2.

Note that two elements are required in the chapter headings for each chapter. The first required element is a *chapter number line*, which has the word "CHAPTER" in capital letters followed by the chapter number. This line is formatted with the "Heading 1" style. Beneath the chapter number line must be found a *chapter title*, which is formatted with the "Heading 2" style.

After these two elements, the user may either begin the text of the chapter or include a subheading for that chapter. Two levels of subheadings are provided in the template, which are formatted with the "Heading 3" and "Heading 4" styles respectively. Like the chapter number line, subheadings are automatically numbered by Word.

Please note the following: **It is very important that all four of these styles, Headings 1 through 4, be used for these purposes and for no others. I recommend that you do not change these styles, nor use them for any other purpose.**

In my dissertation I used three elements at the beginning of each chapter, the chapter number line (required), the chapter title (also required), and a subheading (optional). Here is an example of those three elements taken from my dissertation:



Here the chapter number line is "CHAPTER 2," the chapter title is "PLANAR LAYOUTS," and the sub-heading is "2.1 Even Height Trees." (Note that this is a small example created only for the purposes of illustration only. I did not use the specified styles in the example.)

In order to create chapter headings like this, it is necessary to understand two issues: (a) how to create sections within the document for chapters greater than chapters 1 and 2, and (b) how to create a chapter heading. Let's first consider how to create new sections for chapters beyond chapters 1 and 2.

## 7.2 Creating new chapters (beyond chapters 1 and 2)

As mentioned, chapter stubs for Chapters 1 and 2 were included to make the chapter numbering scheme work properly. Of course, you'll certainly have more than two chapters in your dissertation. Each chapter must reside in its own section. To create new sections for all subsequent chapters, perform the following steps:



1. Move the insertion (blinking) cursor to a point immediately above the section break for the preceding chapter, but after any chapter text.
  - 1.1. If you can't see the section break, make sure the "Show/Hide" option is turned on. See Section 5.1 above.
2. Insert a "Section Break Next Page".
  - 2.1. This option can be found by choosing the "Breaks" option in the "Page Layout" tab, "Page Setup" group. This will create a new section for the next chapter.

In this way, you can create sections for as many chapters as you need. They will all have the correct formatting for the margins and page numbers. (For example, the number for the first page of a chapter will be located in the middle of the bottom of the page, and all other page numbers will be located at the upper right.)

Now that a section has been created for a new chapter, let's examine how to create the chapter headings within that section.

### **7.3 Creating chapter headings**

Each chapter heading must have a chapter number line and a chapter title. To create the chapter number line and title, perform the following steps:

1. Move the insertion cursor (blinking vertical line) to the first line of the section.
2. Format that line to the "Heading 1" style.
  - 2.1. This will automatically insert a line of the form "CHAPTER X", where the "X" is the number for that chapter.
  - 2.2. The format of "CHAPTER X" will be correct (bold, centered, etc.), and the number will be calculated by Word automatically.
3. With the insertion cursor at the end of "CHAPTER X" but still on the same line, hit the <enter> key.
  - 3.1. This will move the cursor to the middle of the next line, and change the style to "Heading 2."
4. Type the chapter title for that chapter.
5. Hit <enter> once again.

Note that chapter "stubs" for chapters 1 and 2 have already been provided. Since those chapters already have the "CHAPTER 1" and "CHAPTER 2" number lines, the headings for those chapters can be completed by beginning with Step 3 above.

That's all it takes to create a chapter heading. Both elements of the heading will be correctly formatted for you and will be included in the Table of Contents when it is created.

Now let's examine how to create subheadings within a chapter.

### **7.4 Creating subheadings within a chapter**

To create subheadings within a chapter, it is necessary to distinguish between a subheading created on the first line of the chapter after the chapter heading, and subheadings created on any other line. These two issues will be discussed separately below.

Note that it is not required to use any subheadings at all, although it is very useful and adds to the clarity of your dissertation. Furthermore, if these directions are correctly followed, all subheadings will be included in your Table of Contents automatically.

And finally, all of the directions for creating subheadings require the user to move the insertion cursor to the desired location in the document and format that line to a specific style. Make sure that it is done on an empty line. Otherwise, you'll simply change the format of an existing paragraph.

#### **7.4.1 To create a subheading on the first line after the chapter heading**

The example provided above has a subheading on the first line after the chapter heading. To create such a subheading, perform the following steps:

1. Move the insertion cursor to the first line after the chapter heading.
2. Format that line to the "Subsubtitle" style.

This will create a subheading (or "subtitle" if you prefer) that will be correctly formatted and numbered.

Note that the "Subsubtitle" style is used to create subheadings only on the first line of the chapter following the chapter heading. On any other line of the chapter, use the following technique to create subheadings.

#### **7.4.2 To create a subheading on any other line of the chapter**

To create a subheading on any other line of the chapter *except* the first line after the chapter heading, perform the following steps:

1. Move the insertion cursor to the desired line.
2. Format that line to the "Heading 3" style.

Again, this will create a subheading that will be correctly formatted and numbered.

#### **7.4.3 To create level 2 subheadings**

It is often useful to create subheadings within subheadings, that is, "level 2" subheadings. These "level 2" subheadings should continue with the same numbering scheme as the "level 1" subheadings and be correctly formatted.

To create level 2 subheadings within a chapter, perform the following steps:

1. Move the insertion cursor to the desired line.
2. Format that line to the "Heading 4" style.

This will create a level 2 subheading, and the numbering scheme will reflect the number of the current subheading.

Two different levels of subheadings are provided in this template. If the user desires a third level, I suggest using the "Heading 5" style and modifying it to the correct format.

## 8 To Create Figures with Captions

This is a difficult problem with Word, and it is one of several areas that Latex handles more naturally. The problem in Word is that the figures must reside in the text layer (not the graphics layer) of the document if the figure captions are to be automatically detected when the table of figures is created, whereas the graphics, of course, reside in the graphics layer. To keep these two items together and still allow the captions to be detected I used frames, since frames by definition reside in the text layer. I recommend you familiarize yourself with the use of frames before attempting to do use my method.

Note that, in contrast to frames, “Text Boxes” reside in the graphics layer of the document. Consequently, they can’t be used when a particular style or text is the object of a search, and there are certain fields that can’t be used inside them. Text boxes do, however, provide more control over the formatting than frames do. Therefore text boxes might be a better option if you don’t have any text within the box that might be the object of a search. (Word performs a search when it creates a Table of Contents or Table of Figures.)

### 8.1 Specific steps

I followed the following steps to place a captioned figure within my document:

1. Create an empty frame where you want the figure to go. The only way to do this in Word 2007 is to first create a text box, then convert it to a frame. You can do that with the following steps:
  - 1.1. Position the insertion cursor where you would like the frame to go.
  - 1.2. Choose “Text Box” from the Insert Tab | Text group of the ribbon, and pick the type of box you want.
  - 1.3. Right click on the border of the text box, and choose “Format Text Box.”
  - 1.4. Under the “Text Box” tab of the subsequent dialog box, choose “Convert to Frame” in the lower right hand corner.
2. Once the frame has been created, click inside the frame to select the internal region. A blinking cursor should appear inside the frame. (Note that this is not the same as clicking on and selecting the frame itself.)
3. The following steps vary depending on whether you are creating the figure itself from scratch or importing it from outside the document.
  - 3.1. Creating a figure from scratch.
    - 3.1.1. Word 2007, like Word 2003 before it, includes a powerful Picture Canvas option that can be used to manually draw diagrams of many types. This can be accessed by choosing “Insert Tab | Illustrations Group | Shapes”, and then choosing “New Drawing Canvas” at the bottom of the Shapes menu.
 

The canvas can be inserted into a frame, which allows the picture and the caption for the picture to be treated as one unit.
  - 3.2. Importing a figure from an external file.

- 3.2.1. You have two options if importing a figure from a separate file: You can choose either to include the picture in the document, or to include only a link to the figure.

In the latter case, a link to the picture will be placed in the dissertation document, but the picture itself will reside in a separate file. This method minimizes the file size of your main document at the cost of having to manage more than one file.

To insert a picture from a file, choose “Insert Tab | Illustrations Group | Picture” and pick the file from that dialog. You’ll notice that the “Insert” button in the lower right hand corner of the dialog has a drop down menu option.

3.2.1.1. To store the picture in the file, simply choose “Insert” from that menu.

3.2.1.2. To link to the picture in Word 2007, choose the “Link to file” option.

4. After the picture has been inserted into the frame, select the frame itself by clicking on it. When the frame is properly selected, small blue sizing boxes will appear at the corners and the midpoints of all four sides of the frame.
5. To insert a caption after the frame has been selected, go to the “References Tab | Captions group | Insert Captions.” This will call up the caption dialog box.

Here you can change several options, such as the label (e.g. “Figure” or “Equation”) and the type of numbering used. (The label defaults to "Figure" and the numbering defaults to Arabic.) Note that the label is inserted as text, but that the number is a field.

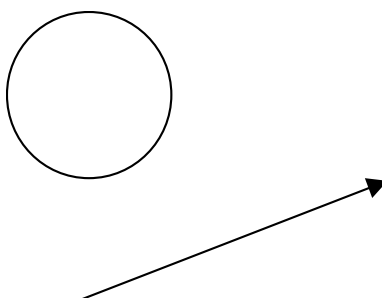
Note that this dialog will not let you enter anything into the caption box, but that is not a problem.

- 5.1. If you want to have the chapter number included with the figure:
  - 5.1.1. Choose the “Numbering..” button in the dialog.
  - 5.1.2. Make sure the “Include Chapter Number” check box is checked.
  - 5.1.3. Set the format the way you want it (I personally used a period, “.”, between the chapter and section numbers, but other options, like a dash, “-”, are also available.)
  - 5.1.4. Hit “OK.”
6. After exiting that dialog, the words "Figure X.Y" will be added below your figure, where "X" refers to the chapter number and "Y" to the sub-section number. (This assumes you used chapter numbers, of course. If not, then just the “Y” will appear.) These words will automatically be in the "Caption" style, and will be detected when the table of figures is created later.

7. To create another line of text in the caption that contains some description of the figure, and which you want to appear in the table of figures, make sure the cursor is on the same line as "Figure X.Y", hold down the shift key, and hit <enter>. The next line will still be in the "Caption" style, and will also automatically appear in the tables of figures.
8. To create another line of text in the caption that contains some description of the figure, and which you do not want to appear in the table of figures, make sure the cursor is on the same line as "Figure X.Y", and hit <enter> without the shift key. This next line will then be formatted with the "CaptionExtra" style, which is not detected when the table of figures is created.
9. Note that you may have to manually format the captions after they are inserted. For example, you may want to center or bold them.

## 8.2 An example of figure creation

There are many variations that can be used when dealing with figures; the steps I followed above are certainly not exclusive. But however you do it, once the figure and caption are in a frame, you have quite a bit of control over figure placement and size. Again, this is the method I used, and although it takes a bit of time to master, it will work.



**Figure 8.1**  
Example Figure with Caption

The preceding figure is an example. To create it, I performed the following steps: (1) created a frame using the method described above, (2) inserted a picture canvas inside the frame, (3) drew the picture of a circle and a long arrow, (4) clicked outside the picture but inside the frame, (5) highlighted the frame and chose "References Tab | Insert Caption", (6) clicked "OK", which put in a default "Figure X.Y" type caption which was automatically formatted to the "Caption" style (assuming "include chapter" was selected), (7) made some changes to the field codes (discussed below), (8) manually formatted the caption to be bold and centered, and finally, (9) hit Shift-<enter> to put in a soft carriage return and typed the "Example Figure..." line. The result is a nice caption that will move with the figure wherever it is placed. Furthermore, the figure number, "8.1" in this case, was automatically calculated by Word and will be recalculated if the figure is moved to another position in the document and field codes are updated.

Although this last point is not directly relevant to the template, it is such a useful technique that I thought I'd spend a few minutes on it while we are discussing the figure. Take a look at the number "8.1", also found in the last sentence of the preceding paragraph. If you highlight that brief segment of text (in the preceding sentence) and choose "Toggle Field Codes"

from the context sensitive menu, you will see that a REF field creates the number. That is, the number itself is not “hard coded” into the document in any way; it is the result of a calculation. The phrase “ExampleFigure” inside the REF field is the name of a bookmark that surrounds the actual number in the figure caption. (If you go to “Insert Tab | Links group | Bookmark” you can go to that bookmark to verify.) When the REF field is used in this way, it simply copies the information inside the bookmark to the location of the REF field. If the information inside the bookmark is updated in any way, that change will be reflected in the REF field with no effort on your part (except to instruct the computer to “update fields”). For example, if this figure were moved to a different section, say to section “8” instead of section “9,” as it is in this case, the values inside the REF field would be automatically updated when the field codes for the whole document are updated. Therefore, it would not be necessary to manually search through your document looking for references to that figure to make sure they are correct; the computer will handle the change of section automatically. This “bookmark / REF field” combination is an incredibly useful technique, and I used it throughout my dissertation.

The slight problem I had with step (7) above was that the STYLEREF field, which is used to get the number that appears before the period in the “X.Y” number format in the figure caption, uses the “Heading 1” style by default. You can see this if you select “Toggle Field Codes” immediately after the caption is installed. The field at that point will read “{STYLEREF 1 \s}”, where the “1” refers to the “Heading 1” style.

This setting will work only if the “Heading 1” style is used to create the heading numbers. Unfortunately, we used the “Heading 3” style to create those headings in this paper, causing the STYLEREF field initially to return an error message indicating that it could not find the correct style. To fix this problem, I simply changed that “1” to a “3” in the STYLEREF field code. Thereafter, the numbering worked fine.

## 9 To create the Table of Contents (TOC)

I used a TOC style that looked something like this in my dissertation:

TABLE OF CONTENTS	
Acknowledgements.....	v
Abstract .....	vii
List of figures.....	xi
CHAPTER 1 INTRODUCTION.....	1
1.1 General Background.....	1
1.2 Definitions.....	4
1.3 Summary of Previous Work.....	6
1.4 Summary of Our Results.....	21
CHAPTER 2 PLANAR LAYOUTS.....	25
2.1 Even Height Trees.....	25
2.2 Odd Height Trees.....	40
2.3 Asymptotic Upper Bounds on Expansion.....	46

This TOC, including the calculation of the correct page numbers, was created by a single operation that took, perhaps, less than a minute.

Having said that, this particular TOC style is a bit complicated to set up and requires some discussion to understand fully. The main complication is that chapter headings like “CHAPTER 1” and “CHAPTER 2” are created by a multilevel list that is embedded within the TOC, instead of being created by the more natural method of reading them from the Heading 1 style. The benefit of this technique is that it allows the chapter titles, such as “INTRODUCTION” and “PLANAR LAYOUTS” in the example above, to be placed on the same line as the “CHAPTER X” text. The downside is that it is a bit complicated to set up, and further, that it requires each chapter to have a chapter title to work correctly, since the multilevel list is linked to the style TOC2 (the “Heading 2” style is also linked to TOC2). Nevertheless, you may want to have a TOC like this, so we’ll include detailed instructions on how to create one.

If you wish to have a TOC like this, perform the following steps exactly:

1. Highlight the line that says “Click and Insert Table of Contents”
2. Go to the “References” tab, “Table of Contents” group. Click on “Table of Contents” and choose “Insert Table of Contents...” at the bottom.
  - 2.1. The resulting dialog should be set on the Table of Contents tab.
3. In that dialog, make sure that “Show page numbers” and “Right align page numbers” are both checked, the tab leader is “...”, and that “Show levels” through 4 are set.
4. Choose the “Options” button in the lower right.
5. Make sure the “Styles” box is checked.
6. In the “Available Styles” list, do the following
  - 6.1. Clear the number for “Heading 1.”
  - 6.2. Make sure Heading 2 through 4 are set with the numbers 2 through 4.
  - 6.3. Set the “Section Label” style to the number 9.
  - 6.4. Set the “SectionLabel2” style to the number 7.
  - 6.5. If there is an “INTRODUCTION” section, set the “SectionLabel3” style to the number 8. (See Section 11 for a discussion on setting up an “INTRODUCTION” section.)
    - 6.5.1. This is unnecessary if there is no “INTRODUCTION” section.
  - 6.6. Verify that the style “SubSubTitle” is set to number 3.
7. Choose “OK” to close the options box.
8. Choose “OK” to create the TOC.

This will create a reasonable TOC that is acceptable to the UTD Graduate School. All page numbers should be automatically calculated. If not, highlight the entire TOC and choose “Update Field” from the context sensitive menu. Sometimes it is necessary to do this even after the table has been created to get the correct page numbers.

Note that TOC’s can be directly edited after they are created. You can use this feature to adjust the formatting if necessary. (For example, if you want to manually change the spacing

between some lines after the TOC is calculated, Word allows you to do that. Note that all lines in the calculated TOC are in various TOC styles.)

You can use this capability to correct a small problem that sometimes occurs in Word 2007 when the TOC is automatically generated. If you've turned hyperlinks off when you created the TOC, you may discover that the second line in the TOC has a dotted leader going to a page number on the right, but no word identifying that leader on the left. In other words, there may be an apparent gap on the left hand side. This occurs when the word "Abstract," located at the left hand side of that line, is printed in white text. (This results from a white text "Abstract" that was placed on the Abstract page. It only happens if hyperlinks are not used in the table generation.) If that happens, simply highlight the missing word in the calculated TOC and set the font color to "Black." (The font color option is in the "Home" tab, "Font" group, lower right option.)

Also, be aware that TOC's in Word are created by a TOC field. To access the field code itself, highlight the entire TOC and choose "Toggle field codes" from the context menu, which will display the field code itself instead of the result of the field. Note that all Word fields have codes that can be directly edited if the field code is displayed, and many of the formatting and other characteristics can be controlled by switches embedded in these fields. (For example, in the case of the TOC field, if you remove the "\h" switch and then update the table, the TOC entries will no longer function as hyperlinks.)

## 10 To Create the Table of Figures (TOF)

Do the following steps exactly:

1. Highlight the line that says "Click and Insert Table of Figures."
2. On the "References" tab, "Captions" group, click on "Insert Table of Figures."
3. Make sure that "Show page numbers" and "Right align page numbers" are both checked, the tab leader is "...", the formats are "From templates", and the "Include label and number" box is checked.
4. Choose the "Options" button.
5. In the resulting dialog box, make sure the "Style" box is checked. In the styles drop-down list, choose "Caption."
6. Choose "OK" to close the options box.
7. Choose "OK" to create the TOF.

If the computer asks if you want to overwrite an existing table, and highlights the TOC while asking you this, say "No". This will prevent the computer from replacing your TOC with the TOF. (Both TOF's and TOC's are created with a TOC field in Word. Consequently, Word doesn't know, until you tell it, that you want to create an entirely new table instead of updating an old one.) If it is highlighting an existing TOF, and you want to replace it, then it is okay to say "Yes."

This will create an initial TOF, and again, all page numbers should be automatically calculated. If you are not satisfied with the table as it is, however, don't forget that it can be edited by hand. For example, I typically edited the TOF by eliminating the word "Figure" from



each line and adding a tab, instead of a space, between the figure number and the following text. You may want to make these or other changes.

## 11 To Create an Introduction Section

Some users prefer to have a separate “INTRODUCTION” section in their dissertation that is separate from any of the chapter sections. This heading for this section is different from the chapter headings we’ve already discussed, and consist simply of the word “INTRODUCTION” formatted to a style that will be recognized by the TOC. There is no automatic numbering in the heading of the “INTRODUCTION” section.

If an “INTRODUCTION” section is added to the dissertation, it is necessary to reset the page numbering scheme both for the “INTRODUCTION” section and for the “CHAPTER 1” section that follows. That process is described in the following steps as well.

To create an “INTRODUCTION” section, perform the following steps:

1. Move the insertion cursor to a line above the section break for the “List of Figures” section, but after any text.
  - 1.1. Note: The “INTRODUCTION” section should go just before the “CHAPTER 1” section.
2. Insert a “Next page” section break
  - 2.1. “Page Layout” tab | “Page Setup” group | Breaks
3. Put the insertion cursor on the first line of the new section, and format that line to the “Section Label 3” style.
4. Type in the word “INTRODUCTION.”
5. Hit <enter> to move the cursor to the next line.

To reset the page numbering scheme, perform the following steps:

1. Double click in the “footer” region of the “INTRODUCTION” page.
  - 1.1. Alternatively, you can move the cursor to that page and click on “Insert” tab | “Header and footer” group | “Footer” and choose “Edit Footer.”
2. Highlight the page number.
3. Click on “Insert” Tab | “Header and Footer” group | “Page Number” and choose “Format Page Numbers...” from that menu.
4. Set the “Number Format” to “1,2,3...” and the page numbering to “Start at 1”.
5. Click on “OK”.
6. Scroll down to the footer for Chapter 1. If you can’t access the footer, double click in the footer region for Chapter 1.
7. Highlight the page number in Chapter 1.
8. Click on “Insert” Tab | “Header and Footer” group | “Page Number” and choose “Format Page Numbers...” from that menu.
9. Set the “Number Format” to “1,2,3...” and the page numbering to “Continue from previous section.”
10. Click on “OK”

After these steps are performed, there will be a separate section for an “Introduction” that is not included in the chapter numbering scheme. Nevertheless, the word “INTRODUCTION” will appear in the TOC with the correct page number.

## **12 To Remove an INTRODUCTION section**

To remove an “INTRODUCTION” section, perform the following steps:

1. Place the insertion cursor at the beginning of the section. It should be on the same line as the word “INTRODUCTION,” but to the left of the “I”.
2. Scroll down to the end of the section.
3. While holding down the “Shift” key, click at the end of the Section Break for that section.
  - 3.1. Note that it is necessary to have “Show / Hide” turned on in order to see the section break.
4. Hit the delete key to delete the section.

After the section is deleted, it may be necessary to reset the numbering for the “CHAPTER 1” section. To do that, perform the following steps:

1. Access the footer for Chapter 1.
  - 1.1. This can either be done by double clicking in the footer region, or using the “Edit Footer” option in the ribbon (described above).
2. Highlight the page number in Chapter 1.
3. Click on “Insert” Tab | “Header and Footer” group | “Page Number” and choose “Format Page Numbers...” from that menu.
4. Set the “Number Format” to “1,2,3...” and the page numbering to “Start at 1.”
5. Click on “OK”

This process will correctly remove an existing “INTRODUCTION” section and reset the page numbering for “CHAPTER 1.”

## **13 Miscellaneous Suggestions and Comments**

### **13.1 Document Map and Outline View**

Word 2007 comes with a feature called the “Document Map,” which creates a map of the entire document in a small window on the left hand side of the screen. Each entry is a link that allows you to move instantly from one part of the document to another, no matter how large it is. It can be very useful when working on large documents, and you will find this option in the “View” tab, “Show/Hide” group.

“Outline View” is also useful, although it works a little bit differently.

You can change between several of the views by using the small icons at the lower right hand corner of the screen, or by using the “View” tab. In addition, the following keyboard shortcuts are also useful: Ctrl+Alt+P (Page Layout View), Ctrl+Alt+O (Outline View), Ctrl+Alt+N (Normal View).

### 13.2 Table of Contents generation and hidden bookmarks

Every time a TOC is generated, Word produces a series of hidden bookmarks. Word does not delete these bookmarks when the tables are updated, so they can build up over time if the TOC is updated repeatedly, eventually corrupting the document.

Consequently, it is best to wait until your document is completely finished before generating the table of contents and the table of figures. If you want to experiment with these functions at any point, create a copy of your dissertation and do your experiments in the copy. (I did this several times to make sure everything was working properly.) This will avoid any problems with the hidden bookmarks.

### 13.3 Citations

In contrast to earlier versions of Word, Word 2007 has a vastly improved method for organizing and displaying citations within your document. In Word 2007, the source information is stored in a database that is included within the document. This information needs to be entered only once and thereafter can be accessed whenever the document is open.

Citing sources in Word 2007 generally involves four steps (Wempen 2007)<sup>1</sup>:

- 1) Select a citation style.
  - a) The UTD Graduate Dean's office prefers the "Turabian" style, which is available in Word 2007 by default.
- 2) Enter the sources.
  - a) This can be done in one operation upfront if desired. Or entries can be added at any time.
- 3) Insert in-text references within the document.
  - a) These references tell Word when to insert a reference to the source in your document.
- 4) Generate a bibliography.
  - a) This will generate a bibliography of all the sources in the database in whatever format you choose.

In Word 2007, citations and bibliographies are handled in the "References" Tab | "Citations and Bibliography" group. The first step is to click on "Manage Sources" and enter the information for all of your sources there. Set the Style indicator to "Turabian." After those data are entered, citations to these sources can be entered at different locations in your document by using "Insert Citation." Some minor editing of the citation format (e.g., adding page numbers) is available, but in general, the format is controlled by the bibliographic style option.

To create a bibliography, place the insertion cursor on the first (blank) line of text following the title "BIBLIOGRAPHY" and click on "Bibliography | Insert Bibliography." This will insert a bibliography at that location. This is created by a BIBLIOGRAPHY field, but the results can be edited after the bibliography is created.

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<sup>1</sup> Wempen, Faithe. *Using Word 2007*. Indianapolis: QUE, 2007.

Please note that entries within the bibliography should be single spaced within each entry but double-spaced between entries. This is handled automatically if you use the “Citations and Bibliography” feature of Word 2007. If you decide to do create a bibliography manually, however, make sure that each line is formatted with the “Bibliography” style. This will help insure that the spacing requirements are met.

Any good book on Word 2007 will have a more detailed description of this process. In the footnote at the bottom of the preceding page, you’ll find the Word reference I used to help write this manual. It is a very good source.

### **13.4 Macros in the template**

I included only two macros in the “docm” version of the template, both of which were tied to keyboard shortcuts. The first macro, “SetCurrPos3,” inserts a bookmark, “CurrPos3” (for “current position”) at the current location of the insertion cursor. It is run with the “Ctrl+J” key combination. The second macro, “GoToCurrPos3,” moves the insertion cursor to that location. It is run with the “Ctrl+Alt+J” key combination.

You don’t have to use these macros at all, but I find them extremely useful. Let’s say you are working in one area of your document and you want to quickly check some other area and then return to your current location. Well, you can set the current position bookmark with “Ctrl+J”, go do your work elsewhere, and then quickly return to your original location with “Ctrl+Alt+J”. It’s very convenient.

Depending on your security settings, Word will detect that there are macros in the template and ask if want to enable them. If you do, simply say “Yes.” These were the only macros included in the template, so there are no security concerns. You can safely enable them.

## **14 Final Comments**

Getting a Ph.D. is difficult enough without being concerned about the huge set of extraneous details involved in formatting the dissertation. I hope this template will facilitate that intrinsically difficult process.

Chances are I won't be able to answer any direct questions about it, but if you read the manual carefully and spend some time with both it and the template, I'm sure you can make the template work. It should save you a lot of time on the basic formatting of the dissertation. (The content, of course, is up to you!)

Best of luck with your dissertation and subsequent career!

Regards,

Charles Shields, Jr., Ph.D.  
2010