

Preparing Your Thesis with Microsoft Word 2010: How to use the Rensselaer Polytechnic Institute Template Files

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1. Introduction

To create a long document like a thesis in Microsoft Word 2010, you need a suitable *template* that contains the appropriate styles and settings. Every paragraph (including headings) in Word has a "style" associated with it. A style is a collection of formatting instructions, including font family and point size, alignment, amount of space before and after the paragraph, etc. When creating a long structured document like a thesis, it is important that you apply styles consistently.

The Rensselaer thesis template (**RPithesis.dotx**), available for download, conforms to the requirements of the Graduate School. It includes styles for chapter and section headings (with automatic numbering), as well as regulation margins, page number placement, automatic formatting of title pages, and Table of Contents compilation.

2. Downloading the RPI Thesis Template and Prototype Files

You will need to download several files, all found on the web at:

<http://www.rpi.edu/dept/arc/docs/word-thesis/>

1. First, download the Microsoft Word Template file **RPithesis.dotx**: right-click on the link, select "Save Target as", and save it in the Microsoft Office Templates folder. In Windows 7 this folder is located at:

C:\users*your-userid*\AppData\Roaming\Microsoft\Templates

If you want to keep your thesis files together, save a copy of RPithesis.dotx with your other thesis related files.

2. Next, copy the Word prototype file that contains the boiler-plate text for the title page as well as pages to use for Abstract, tables of contents, etc. There is also an additional one-page file for the abstract title page, needed only for doctoral dissertations. Place the file(s) in the folder you will use for your thesis, such as "Documents\Thesis".

The files you want to download are:

For a masters thesis:

RPIfrontpages-mas.docx
RPIabstitlepage-mas.docx

For a doctoral thesis:

RPIfrontpages-phd.docx
RPIabstitlepage.docx

3. About the RPI Thesis Template

The general layout of the Rensselaer thesis template is as follows:

- Top and bottom margins are 1 inch.

- Left margin is 1.55 inches.
- Right margin is 1 inch.
- Footer, which contains the page number, is 0.5 inch from edge of the paper.
- Line spacing is “line and a half” (acceptable to Graduate School).
- Font of body paragraphs is Times Roman, 12 points.

The RPIthesis template provides the following Microsoft Word paragraph styles: (The Frontmatter heading and Headings 1-3 are included in the Table of Contents by default.)

Title	for the Title of the thesis.
Frontmatter	for “Abstract” and similar headings that are not numbered.
Heading 1	for chapter headings. Numbered, centered, starts a new page.
Heading 2	for section headings. Numbered, left-justified.
Heading 3	for subsection headings. Numbered, left-justified.
Headings 4-6	for subsubsection headings, etc., if needed .
Body Text	for paragraphs that are not indented. This is the default style for paragraphs following section headings.
Body Text First Indent	for indented paragraphs. This is the default for all other body paragraphs.
Caption: Figure	can be used to reformat an existing figure caption in boldface and in the same size font as the rest of the document.
Caption: Table	can be used to reformat an existing table caption in boldface and in the same size font as the rest of the document.
Block Quote	for single-spaced quotations, set off and indented left and right.
Bibentry	can be used for bibliography items. It uses single spacing, and subsequent lines have a hanging indent.

4. Applying the Template and Using Styles

To get started, first open the appropriate frontpages file (either RPIfrontpages-mas.docx or RPIfrontpages-phd.docx). Then, to apply the template, follow these steps.

1. Click on the **File** tab, select **Options** from the drop-down menu.
2. In the *Word Options* window, click on **Add-ins**. Select **Templates** from the *Manage* drop-down menu and click **Go**.
3. In the *Templates and Add-Ins* window, the currently attached template is displayed. Click on **Attach**.
4. In the *Attach Template* window, navigate to the folder where you saved the RPIthesis.dotx and select **RPIthesis.dotx** and click **Open**.
5. In the *Templates and Add-Ins* window, select **Automatically update document styles**, remove any other templates, and click **OK**.

All your front matter (which includes the title page, all the tables of contents, acknowledgement, abstract, etc) is in this file. If your thesis is relatively short, and you want it all in one file, you can create the entire thesis by adding to this file (see Section 6). For a long thesis, leave this file for just the front pages, and create each new chapter as a separate file (see Section 7).

Later, you will start with the front pages file and append all the chapter files, as described in Section 14.

As mentioned previously, *it's very important to use the template's styles as you work*, particularly for the headings. First, to make sure Word will display the template styles rather than ad hoc formatting choices, click on the **File** tab, and select **Options**. In the *Word Options* window, select **Advanced**. Uncheck the box next to **Keep track of formatting**. Click **OK**.

Next, click on the **Home** tab. In the *Styles* section of the toolbar, click on the arrow pointing



down and to the right to display the *Styles* task pane. Look for these styles in the *Styles* task pane: Bibentry, Caption: Figure, Caption: Table, Frontmatter, headings, etc. You can customize the *Styles* task pane look and feel by clicking on **Options...**

To apply a style, do the following:

1. Click the words or paragraph to which you want to apply the style or just click in the spot where you'd like to begin typing in a certain style, such as a heading.
2. Find the style you want in the *Styles* task pane and click its name.

Note that when you click in a paragraph, its style is displayed in the *Styles* task pane.

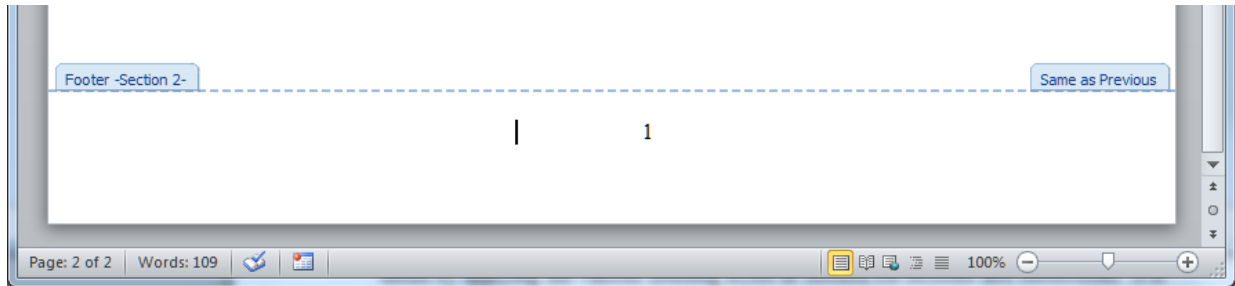
5. The RPIfrontpages File

In the RPIfrontpages prototype file, the first page is the RPI thesis title page. You will need to replace the title, author, advisers, etc. with your own information. You can delete the copyright page if you don't want it. For now, leave all the Tables of Contents pages as they are (empty); they will get filled in later after you complete the thesis. (See Section 16). After typing your own information, you can save this file with a different name if you wish.

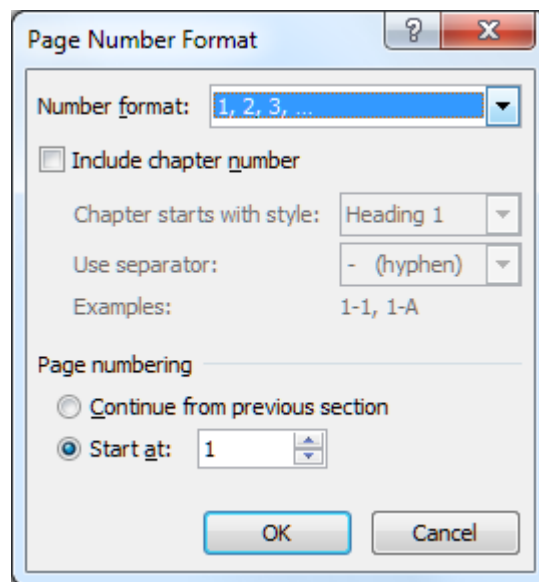
6. Putting the Thesis All in One File (short thesis)

If your thesis is relatively short, you can use your frontpages file for the whole thesis. Start your first chapter by moving to the end of the file (use **Ctrl-End**).

- Click on the **Page Layout** tab and click on **Breaks** and select **Next Page** under *Section Breaks*.
- Position the cursor on the new page and from the style choices, select **Heading 1**. Type the title of your first chapter, and press Enter.
- Click on the **Insert** tab, click on **Page Number**. Select **Bottom of page** then select **Plain Number 2**.
- You are now editing the footer.



- Note the *Same as Previous* label. Click on **Link to Previous** to start a different footer for this section. The *Same as Previous* label vanishes.
- In the footer, right click on the page number and select **Format page numbers...**
- In the *Page Number Format* window,



for *Number format*, select **1, 2, 3 ...** from the pull-down menu. For *Page numbering*, select **1** for the *Start at* value.

- Click **OK**.

Note: If the page number “1” doesn’t appear on the bottom center of your new page, be sure you started a new section with the page break, not simply a new page.

To add subsequent chapters, just select the “Heading 1” style. The heading will start a new page, and the page numbering will continue from the previous chapter. Continue to write the thesis by applying the various heading styles as needed for sections and subsections. It is essential to use the heading styles provided by this template! Styles for Heading 1 through Heading 6 will format the headings correctly in your chapters and mark the headings (by default levels 1-3) for proper inclusion in your Table of Contents.

See Section 16 for instructions on how to update your tables of contents, cross references, etc.

7. Creating the Chapters as Separate Files (long thesis)

If your thesis is long, it is easier to work with smaller files, and should anything happen to destroy a file, you lose less of your work. Start a new file for each chapter, using the RPI thesis template: first start Word, then click on the **File** tab and select **New**. Click on **My Templates** under *Available Templates*. In the *New* window, click on **RPIthesis.dotx** to highlight it, and click **OK**.

While working, it is essential to use the heading styles provided by this template! Styles for Heading 1 through Heading 6 will format the headings correctly in your chapters and mark the headings (by default levels 1-3) for proper inclusion in your Table of Contents. The chapter numbering and page numbering will start with “1” in each file, but after you assemble the chapters (see Section 14), the numbering will be sequential.

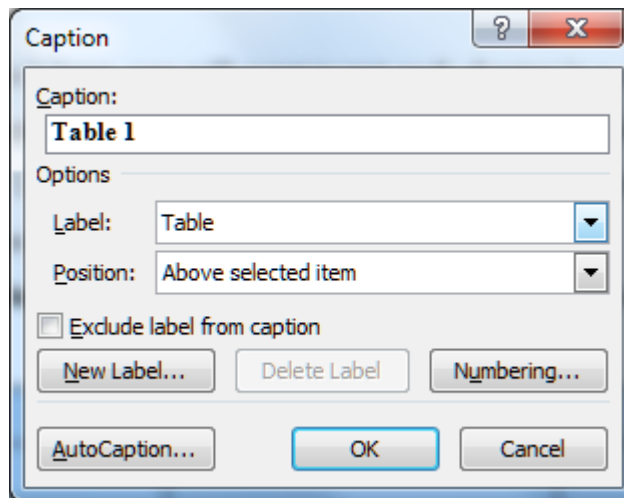
8. Inserting Figures, Tables and Captions

Note that captions for tables usually go above the table, while captions for figures go below the figure.

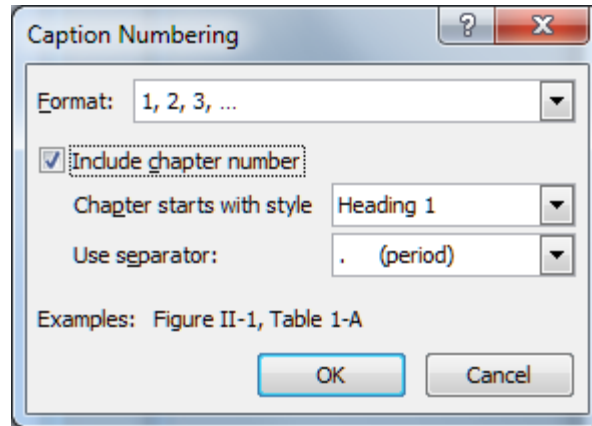
Insert a table into your document by clicking on the **Insert** tab, then click on **Table**. Choose the number of rows and columns or use one of the other methods to create your table. Enter your information.

To make a caption, click somewhere inside the table. Click on the **References** tab, then click on **Insert Caption**.

In the *Caption* window,



make sure **Table** is selected for the *Label* field. The *Position* field should be **Above selected item**. Click on **Numbering...**. In the *Caption Numbering* window,



select **Include chapter number**. Select **Heading 1** for the *Chapter starts with style* field and period for the *Use separator* field.

The text “Table 1.1” will be inserted above your table. Follow this with the text of your caption. By default, the caption will be left-aligned and in a smaller font. To put it in the same size font as the rest of the document, highlight the entire caption (left-click 3 times) and apply the style **Caption: Table**. To center it (recommended for one-line captions), simply select the entire caption and click the *center* icon on the *Home* ribbon.

Insert a figure in your document either by creating a drawing or by inserting an image from a file. Make the caption in the same way as for a table. Click on the figure, click on the **References** tab, then click on **Insert Caption**. Make the *Label* field says **Figure** and the *Position* field says **Below selected item**. To put it in the same size font as the rest of the document, highlight the entire caption (left-click 3 times) and apply the style **Caption: Figure**. To center it (recommended for one-line captions), simply select the entire caption and click the *center* icon on *Home* ribbon.

To refer to a figure or table in your document (for example “see Figure 1.2”), see the instructions in Section 11, *Cross References*.

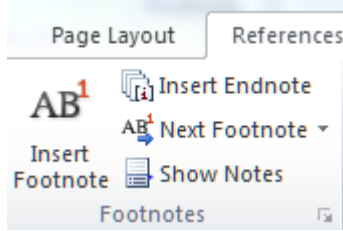
9. Equations

If the Microsoft Word 2010 equation editor does not meet your needs, you might consider MathType from Design Science. This program integrates with Word by extending the capabilities of Word’s equation editor and providing an additional MathType menu. See <http://www.mathtype.com/>. The academic price is \$57. However, if your thesis is heavy on mathematics, you may want to consider using LaTeX instead of Word to create your thesis. See <http://helpdesk.rpi.edu/update.do?artcenterkey=325>.

10. Footnotes

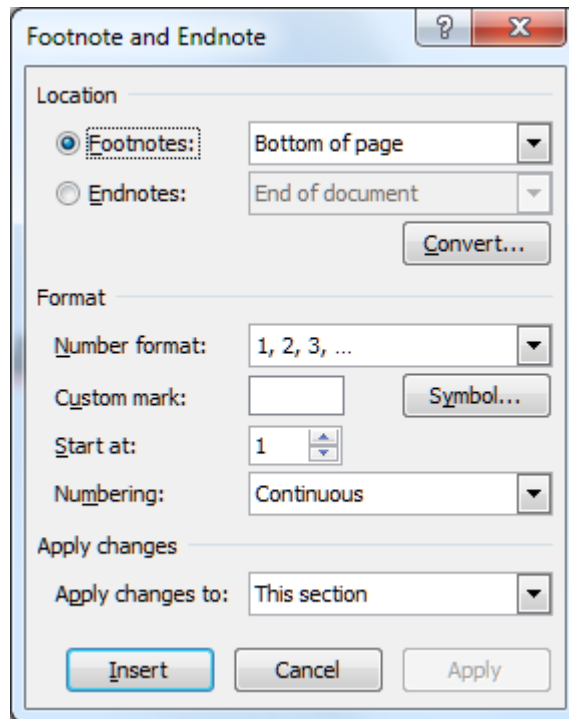
Create a footnote by clicking on the **References** tab and selecting **Insert Footnote**. Type the text of your footnote in the space provided at the bottom of the page. The default gives you

continuously numbered footnotes. To change this behavior, click on the arrow pointing down



and to the right

to open the *Footnote and Endnote* window.



Enter your preferences in the appropriate fields and click **Apply**.

11. Cross References

You can only cross-reference items in the same document. Therefore, before inserting references, first assemble your chapters into one document, as described in Section 14.

In the text of your document, you can insert references to several different types of information, such as section headings, figures, and tables. Note that in order to refer to figures and tables, you must create the captions using insert caption as described in Section 8.

- First place the cursor where you want to create the cross reference in your text.
- Click on the **Insert** tab, then click on **Cross-reference**.
- In the **Cross-reference** window, select the *Reference type* from the drop-down menu. Select the type of item you want to refer to such as figure, table, or heading.
- From *Insert reference to* drop-down menu, select the information you want to insert (for example, page number).

- In the *For which* drop-down menu, click the specific item you want to refer to, such as the particular caption to which you are referring.
- Select the settings for *Insert as hyperlink*, *Include above/below*, and *Separate number with fields*.
- Click **Insert**, then click **Close**.

12. Quotations

A *block quotation* is a long quotation, too long to go inline. It appears in the document as a separate paragraph, indented from both left and right, smaller line spacing, and separated from the paragraphs above and below by some vertical space. To make a block quotation, just apply the style “Block quote”.

13. Back Matter

To create headings for appendices or a bibliography, use the “Heading 1” style if you want these sections to be numbered sequentially with your chapters. If you don’t want them numbered, use the “Frontmatter” heading style.

To format your bibliography entries using hanging indentation, use the “Bibentry” style.

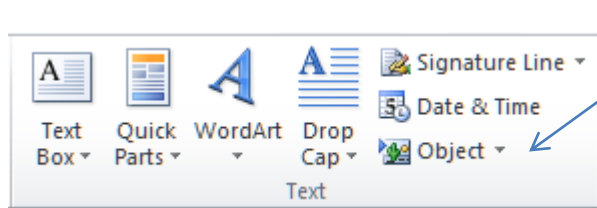
14. Assembling the Thesis from Separate Files

If your thesis is in separate files, you will build the entire thesis by opening the file containing your front matter and then appending each subsequent file in turn, as follows:

First, save and close all chapter files. Next, open your frontpages file and use “Save as” to give it a name appropriate for your whole thesis. Doing this preserves your original frontpages file for backup purposes.

Add the *first* chapter to the end of the whole thesis file, as follows:

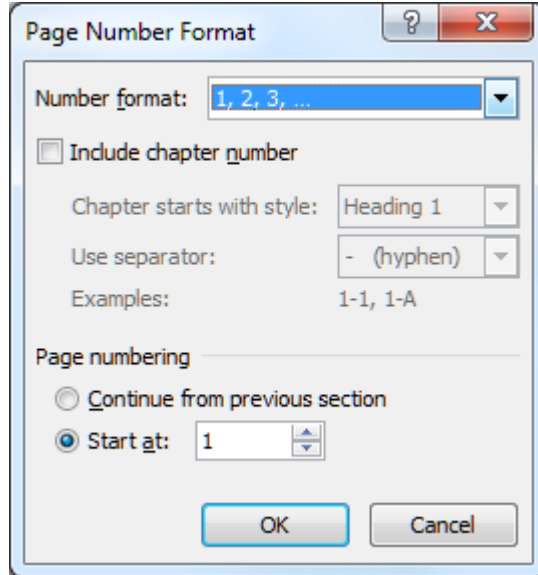
1. Go to end of the introductory material (**Ctrl-End**).
2. Click on the **Page Layout** tab, then click on **Breaks** and select **Next Page** under *Section Breaks*.
3. Place cursor at top of newly created page, then:
4. Click on the **Insert** tab, then click on the arrow to the right of **Object** in the *Text* group



and select **Text from file...** from the drop-down menu.

5. In the *Insert File* window, locate and highlight the file you want to insert. Click **Insert**.
6. In the footer, right click on the page number and select **Format page numbers....**

7. In the *Page Number Format* window,

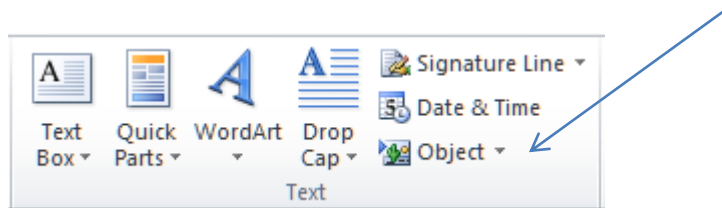


for *Number format*, select **1, 2, 3 ...** from the pull-down menu. For *Page numbering*, select **1** for the *Start at* value.

8. Click **OK**.

Add the remaining chapters to the end of the whole thesis file, as follows:

1. Go to end of contents (**Ctrl-End**).
2. Click on the **Insert** tab, then click on **Page Break**.
3. Click on the **Insert** tab, then click on the arrow to the right of **Object** in the *Text* group



and select **Text from file...** from the drop-down menu.

4. In the *Insert File* window, locate and highlight the file you want to insert. Click **Insert**.

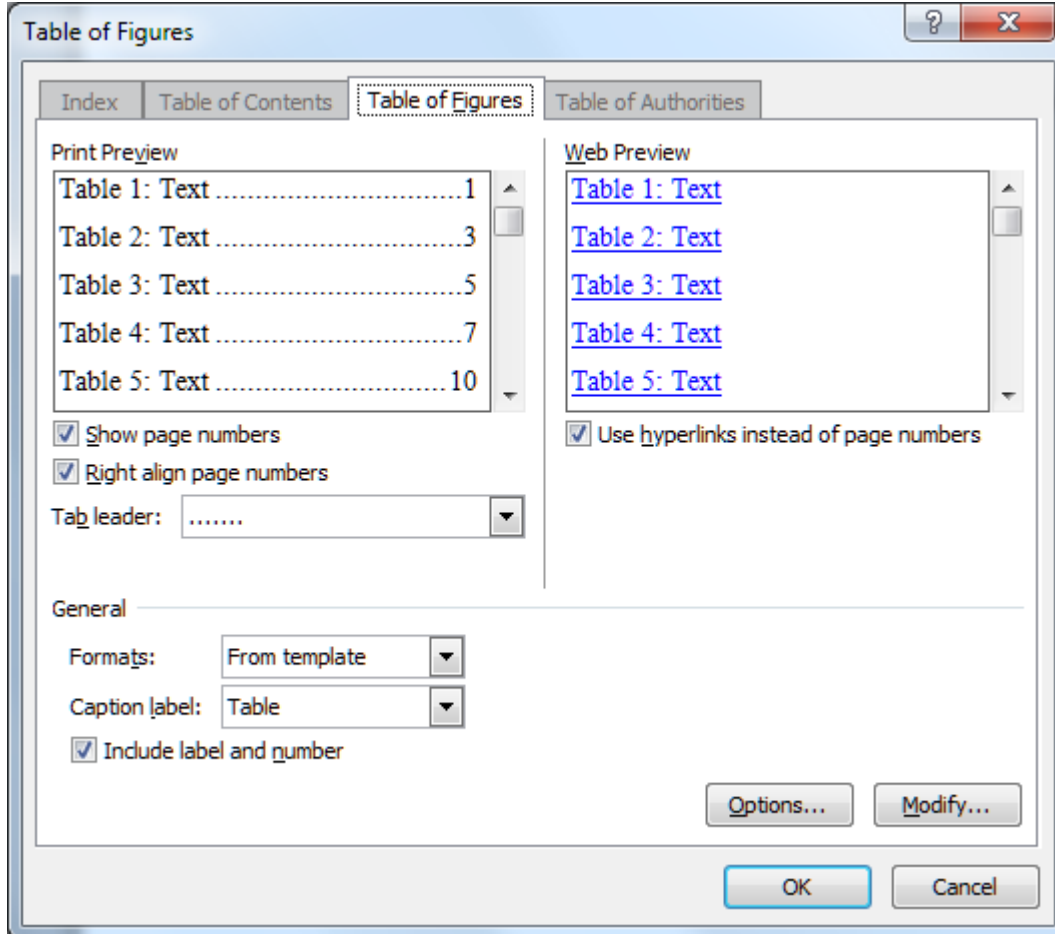
15. Building the Table of Contents, List of Tables and List of Figures

The Table of Contents (TOC) will automatically get filled in when you update (see below), but you will need to initially build the List of Tables (LOT) and List of Figures (LOF) yourself:

To build the List of Tables

1. Go to the page with the heading **List of Tables**.
2. Click underneath the heading.
3. Click on the **References** tab, then click on **Insert Table of Figures**.

- In the *Table of Figures* window,



select **Table** from the *Caption label* drop-down menu.

- Be sure the *Formats* drop-down menu says **From template**.
- Click **OK**.

To build the List of Figures

- Go to the page with the heading **List of Figures**.
- Click underneath the heading
- Click on the **References** tab, then click on **Insert Table of Figures**.
- Select **Figure** from the *Caption label* drop-down menu.
- Be sure the *Formats* drop-down menu says **From template**.
- Click **OK**.

16. Updating the Numbering for Tables of Contents, Figure Captions, Table Captions, Equations, Cross References

Note that when you insert new captions, Word automatically updates the numbering of all the other captions. But if you delete or move captions, you need to explicitly update, using one of the methods below.

To update a single field, you can click in a field (e.g., a table number or a cross reference) and then press F9. Likewise, to update a list, such as the List of Figures, click in the list, then press F9. To update all fields in a document including Figures, Tables, Cross References, Equations, TOC, LOT and LOF, click **Select All** on the **Edit** menu, and then **press F9**.

You now have a completed thesis!

17. Creating the PDF Files for Electronic Submission

Rensselaer requires that electronically-submitted theses or dissertations be in Adobe Portable Document Format (PDF). Your PDF files must have all fonts embedded, be text searchable, and must not be encrypted. The resolution should be at least 600 dpi. Both Master's and Ph.D. candidates will need to submit two PDF files.

File 1: A PDF file containing the complete thesis or dissertation.

File 2: A PDF file consisting of the *abstract title page* and the abstract. Note that the abstract title page is not the same as the title page for the thesis or dissertation.

The easiest method for creating the PDF files is to save in PDF format.

1. Click on the **File** tab, then click on **Save as**.
2. In the *Save as* window, select **PDF (*.pdf)** from the *Save as type* drop-down menu. Click **Save**.

Checking the PDF Files

You should check your PDF files to make sure that everything has converted properly. To do so, open the PDF file in Acrobat Reader or Acrobat and page through to visually make sure it looks right. To more formally check your fonts, follow these steps:

1. Select **File > Properties....**
2. In the *Document Properties* window, click on the **Fonts** tab. Verify that all fonts are either Type 1 or TrueType (TT) fonts.
3. You should see Embedded or Embedded Subset for all fonts (with the possible exception of Times New Roman, Arial/Helvetica and Courier).
4. Click **OK** to close the *Document Properties* window.
5. S
6. From the **Advanced** menu, click on **Use Local Fonts** to turn this option off (the check mark should disappear).
7. Select **Edit > Preferences....**
8. In the *Preferences* window, click on **Page Display**.

9. Click on **Use Local Fonts** to turn this option off (the check mark should disappear). Click on **OK**.
10. Page through your PDF file to visually inspect each page as it would appear on another computer without the same fonts as yours.

Another option is to use Adobe Acrobat Pro (not the free Adobe Acrobat Reader) to convert your Word 2010 document to PDF. Mobile Computing Program laptops come with Acrobat Pro pre-installed. Acrobat Pro is available from the Rensselaer Campus Computer Store at a low educational price. Acrobat Pro is also installed on the Sage 4510 desktop computers and on the computers in the VCC north lobby with the Sage 4510 image.

Finally, print a copy of your file (as described below) and verify that everything prints as expected.

18. Printing the PDF Files

To print a PDF file from Acrobat Reader or Acrobat, select **File > Print...** and select the printer. In the print window that appears, there are two important settings to ensure correct margins:

1. Make sure that **Page Scaling** is set to **None**.
2. Make sure that **Auto-Rotate and Center** is not checked.

19. PDF Tips while preparing your Word document

Avoid unusual fonts if possible. The safest way to ensure a good-looking PDF document is to use Times-Roman (or Times New Roman), Arial (or Helvetica), and Symbol.

If you are going to create the PDF file on a different computer than the one on which you prepared the Word file (such as a computer in the Sage 4510 PC lab), you need to ensure that the fonts necessary for viewing and printing the resulting PDF file are available during PDF creation. Before saving the original document, specify that the fonts should be embedded. In Word, select **File > Options**. In the *Word Options* window, click on **Save**. Select **Embed fonts in the file**. Do not select **Embed only the characters used in the document (best for reducing file size)** or **Do not embed common system fonts**.