Minutes of the Graduate Faculty Council Meeting

Tuesday, February 3, 2009

1) Meeting called to order at 4:08 pm.

Members (14): Bill Yarroch (ASE), Craig Friedrich (MEEM), Claudio Mazzoleni (Physics), Beth Flynn (Humanities), Shekhar Joshi (SFRES), Blair Orr (Peace Corps), Ruth Archer (SBE), Shiyue Fang (Chem), Eugene Levin (School of Technology), Nancy Auer (Bio Sci), Gerald Caneba (Chem Eng), Greg Waite (Geo & Min Eng), Jianping Dong (Math), Richard Honrath (Atmos Sci)

Guests (6): Heather Suokas (Grad School– recording secretary), Jacque Smith (Grad School), Jackie Huntoon (Grad School), Nancy Byers-Sprague (Grad School), Jill Witt (GSC), Tom Vosecky (Humanities), Christa Walck (Library), Ellen Seidel (Library)

2) Review and approval of 1/6/09 meeting minutes pending a change in the description of the Dean’s Fellowship to indicate that the support from the Graduate School is only for the first year.

3) Old Business
   a. Finishing Fellowships (J. Huntoon): Members voted on the text that is to be included in the guidelines for the Finishing Fellowship last month. The new language has been included in the text of the Finishing Fellowship and is now “live” at the following site: http://www.gradschool.mtu.edu/financial/ff.html. Motion to accept this final version passed.
   b. Policy on changing graduate programs (J. Huntoon): Last month a revision in the text was recommended regarding non-departmental degree seeking situations. The following text was added: “Non-departmental PhD programs may or may not accept this form, and students are advised to check with the graduate program director for the appropriate non-departmental PhD program to determine if a new application is required.” Motion to accept this final version passed.
   c. Early Walk form (J. Huntoon): This form has been modified to include an additional signature line to be signed by the department chair or graduate program director. Also, the paragraph regarding which approvals the student needs has been moved to the top of the page. Comments: use positive language in the “Approval signatures” section. Instead of saying “Do Not sign…” say “Only sign…” Modify the wording in the first paragraph to reflect what is included in completing all requirements for the degree. Make a change in the second signature line to reflect which signature is needed in the case of a non-departmental degree situation. The final version of this document will be available in pdf format on-line. Motion passed to accept the form on the condition that the above changes are made.
   d. Committee Reports: Parental/Maternal leave for graduate students (N. Auer): The committee is corresponding and collecting information from other universities on their campus policies.

4) New Business
   a. Master’s Path Policy Change (J. Huntoon): Dean Huntoon revised the wording to reflect the current practice. She also removed wording in the last paragraph to simplify the document. (The document with the tracked changes can be found on the GFC website under 2/3/09 meeting handouts). Motion passed to accept the document.
   b. Procedures to prepare and submit a thesis or dissertation to Michigan Technological University’s Graduate School (Thesis and Dissertation Committee): This is considered a
“living document.” Once the document is approved, it is expected that details will be modified on an ongoing basis. The concept of having a document such as this was unanimously accepted. Discussion focused on:

- Page ten, item six (copyright notice): There were concerns in regards to the amount of work the adviser helps put into the thesis/dissertation and how the student exclusively copyrights the work in their name. Answers provided to these concerns:
  1) The student is not copyrighting the idea. The student is copyrighting the text and presentation of the text. 2) There is an option of obtaining a jointly held copyright. 3) A student needs to be better trained on their responsibility to give back to the University/adviser by getting their works published. 4) There is an understanding that when the appropriate people sign off on the student’s thesis it becomes solely the student’s work. 5) Even if the copyright symbol is not shown, the student owns the copyright to the document. The group concluded that use of the copyright symbol was appropriate.

- Page sixteen, Review of article by committee prior to journal submission: The committee questioned why does the student need permission from the committee for a journal article? Why can’t we keep the journal issue separate from the thesis/dissertation since a student’s committee will reevaluate the section if it is submitted as part of the thesis/dissertation? The group concluded that the Thesis/Dissertation Guidelines Committee members review this part of the document and consider lifting the requirement that committee members be given the opportunity to review journal articles and eliminate the use of the TD-Journal form.

- Page thirty-four, first bullet in regards to the bold text: “At the draft stage, there are no penalties if a submitted document contains plagiarized material.” Why are there no penalties? There are penalties for undergraduates who turn in plagiarized material at the draft stage. Answer: the Graduate School wants the students to feel as though it is a place to go for help. They don’t want the student to be fearful and they want the student to know that the Graduate School will provide assistance. Based on that response the committee felt that the Thesis/Dissertation Guidelines Committee members carefully define the word “draft” so that it is clear that the pre-defense draft is not viewed as anything other than a work in progress that is not intended for final submission. The wording on page thirty-three also needs to be cleaned up so that it is clear that students have the option of submitting a document for review on their own and to encourage students to do what needs to be done to prevent plagiarism before any draft is turned in.

- Page five, first bullet point: This entire bullet either needs to be reworded or completely taken out. Human Subjects is only one of the rules that must be followed. In addition, Michigan Tech currently allows only faculty to be PIs on Human Subjects IRB review requests. Thus it is the faculty member’s not the student’s responsibility to ensure that Human Subjects rules be followed. In addition, this document is about writing the thesis/dissertation and if Human Subjects (or Animal Research) issues were not addressed at the start of the research, it will be too late for the student if that student only learns of the rules once they begin writing.

- A motion was passed to ask the Thesis/Dissertation Guidelines Committee members and Dr. Charlesworth to review these recommendations and report back to the GFC at its next meeting regarding any changes. In addition, members of the GFC who have additional comments on the document should send them to Heather Suokas who will have the comments compiled and reviewed by the committee. Discussion of this document will be resumed at the next Graduate Faculty meeting.
Proposal to instate a Graduate Dean’s List (R. Archer, J. Huntoon): Approximately 82 percent of the graduate students maintain a 3.5 grade point average or above and approximately 50 percent maintain a 4.0 grade point average. If this concept is instituted it needs to be prestigious. How can we recognize exceptional students? Possible ideas: through a scholar’s program, recognition during the graduation ceremony or with individual certificates for such things as research. This discussion will be continued at the next Graduate Faculty Council meeting.

5) Motion to adjourn at 5:10 pm.
TO: Graduate Faculty Council

FROM: Debra Charlesworth (on behalf of the committee)

DATE: December 22, 2008

RE: Thesis and Dissertation Procedures

On behalf of the Thesis and Dissertation Committee, I am pleased to present the attached “Procedures to prepare and submit a thesis or dissertation to Michigan Technological University’s Graduate School.” The committee is comprised of a broad cross-section of faculty and students who together represent each college or school at the University with a graduate program. The committee was formed in October 2007, and met regularly through the academic year to develop and revise the procedures.

We look forward to feedback from the graduate faculty and students.

Committee Members:
Debra Charlesworth (chair), Assistant to the Dean of the Graduate School
Elizabeth Flynn, Professor, Humanities
Craig Friedrich, Professor, Mechanical Engineering – Engineering Mechanics
Robert Keen, Associate Professor, Biological Sciences
Emily McCarthy, Graduate Student, Geology
Thomas Vosecky, Graduate Student, Rhetoric and Technical Communication
Christopher Webster, Associate Professor, School of Forest Resources and Environmental Science
PROCEDURES TO PREPARE AND SUBMIT A
THESIS OR DISSERTATION TO
MICHIGAN TECHNOLOGICAL UNIVERSITY’S GRADUATE SCHOOL

By:
The Graduate School

Michigan Technological University

2008
# Table of Contents

List of Tables .................................................................................................................................. 4

1. Issues to consider before writing ........................................................................................... 5
   1.1. Forms related to theses and dissertations ..................................................................... 6

2. Introduction ............................................................................................................................. 6

3. Formatting requirements ........................................................................................................ 6
   3.1. Fonts ........................................................................................................................... 7
   3.2. Margins ....................................................................................................................... 8
   3.3. Paper size ................................................................................................................... 8
   3.4. Page numbers ............................................................................................................ 8
   3.5. Line spacing ............................................................................................................. 9
   3.6. Sections included and order .................................................................................... 9
      3.6.1. Title page ........................................................................................................... 9
      3.6.2. Signature page ................................................................................................. 11
      3.6.3. Dedication ......................................................................................................... 11
      3.6.4. Table of contents ........................................................................................... 11
      3.6.5. List of figures .................................................................................................... 11
      3.6.6. List of tables ..................................................................................................... 11
      3.6.7. Acknowledgements .......................................................................................... 12
      3.6.8. Definitions ......................................................................................................... 12
      3.6.9. Lists of abbreviations ....................................................................................... 12
      3.6.10. Abstract ........................................................................................................... 12
      3.6.11. Contents ............................................................................................................ 13
      3.6.12. Reference list ................................................................................................. 18
      3.6.13. Appendices ....................................................................................................... 18
   3.7. Formatting of in-text references and the reference list .................................................. 18
      3.7.1. Formatting of references within the text ............................................................ 19
      3.7.2. Formatting of reference list ............................................................................. 20
   3.8. Table formats ................................................................................................................. 23
   3.9. Figures .......................................................................................................................... 24
   3.10. Including oversize pages or media ............................................................................. 25
3.11. Use of color ............................................................................................................... 25

4. Document submission .......................................................................................................... 26
4.1. Document preparation ....................................................................................................... 26
4.2. Embargos and restricted publication ........................................................................... 27
4.3. Submission of draft prior to defense ............................................................................. 28
  4.3.1. How to submit ........................................................................................................ 28
  4.3.2. Review of submission ............................................................................................ 29
4.4. Final document submission ............................................................................................ 29
  4.4.1. Timeline ................................................................................................................ 29
  4.4.2. How to submit ........................................................................................................ 30

5. Academic integrity and responsible conduct for research ....................................................... 31
5.1. Definitions ...................................................................................................................... 32
5.2. Responsibilities ............................................................................................................... 32
  5.2.1. Students ................................................................................................................ 32
  5.2.2. Faculty .................................................................................................................... 33
  5.2.3. Graduate School .................................................................................................... 33
5.3. Misconduct procedures .................................................................................................. 34

6. Degree programs and degree types ....................................................................................... 35

7. Sample pages ....................................................................................................................... 38

8. Suggested resources for students .......................................................................................... 43
8.1. Style guides .................................................................................................................... 43
8.2. Writing guides ................................................................................................................ 43
List of Tables

Table 3.1. Fonts allowed for use in theses and dissertations. ..................................................... 7

Table 3.2. Sections for inclusion in a thesis or dissertation listed in order of appearance. ..... 10

Table 4.1. List of acceptable multimedia file types that can be included as supplemental files with a thesis or dissertation submission................................................................. 26

Table 4.2. Deadlines for receipt of final forms and thesis or dissertation. Materials must be submitted no later than 4:00 p.m. on the day indicated. ......................................................... 30

Table 6.1. Listing of master’s programs. ......................................................................................... 36

Table 6.2. Listing of doctoral programs............................................................................................ 37
1. Issues to consider before writing

Students are expected to be familiar with all of the procedures required to submit a thesis or dissertation. There are, however, several issues that students should be aware of well before beginning the writing process. A brief summary of these issues is presented here for easier reference for the student:

- If a project involves human subjects, animal subjects, or recombinant DNA, the protocol must be reviewed by the Office of Research Integrity and Compliance prior to conducting the research. Research with human subjects is not limited to projects that could cause physical harm to people, but also includes studies that could cause psychological distress, including surveys. See 3.6.11.1 on page 13 for more details.

- A thesis or dissertation may be presented as a collection of journal articles that have been submitted, accepted or published in a journal. Please see Section 3.6.11.3 on page 15 for important information about formatting these documents.

- If a student wishes to include copyrighted material in their thesis or dissertation that has been published on the Internet, in a journal article, in a book or from any other source, the publisher must be contacted for permission prior to publication. **This includes work that the student or advisor has authored.** Additional resources to aid students in determining the copyright status of the work they wish to use can be found at [http://www.proquest.com/en-US/products/dissertations/copyright/](http://www.proquest.com/en-US/products/dissertations/copyright/). Please see page 16 for more information on copyright permissions.

- If a student wishes to publish a journal article prior to publishing the thesis or dissertation, the student will give each committee member an opportunity to review the article prior to submission. Please see page 16 for more information.

- Formatting of the thesis or dissertation is covered in Section 3, beginning on page 6.

- Submission of the thesis or dissertation is covered in Section 4, beginning on page 26.

- Remember that a draft of the thesis or dissertation must be submitted to the Graduate School at least two weeks before the oral defense. Failure to do so will result in a delay of the oral defense. The form, TD-Publishing, must also be submitted at this time.

- When submitting a final thesis or dissertation, please allow one week for processing the document. This time is necessary for review of the thesis or dissertation and payment of any publication fees.
1.1. Forms related to theses and dissertations

There are several forms related to theses and dissertations found on the Graduate School’s web page. They are summarized here.

- **TD-Journal**: This form is for the student’s and advisor’s records. It allows students to track internal review by the advisory committee of a journal article that is planned to be published in the thesis or dissertation. See “Review of article by committee prior to journal submission” (page 16) for more details.

- **TD-Publishing**: Due two weeks before the oral defense, this form informs the Graduate School of the publishing options desired, contains a statement of originality, and gives the Van Pelt and Opie Library permission to photocopy the work for interlibrary loan requests. See “Embargos and restricted publication” (page 27) for more details.

- **TD-Review**: This form is generated by the Graduate School after review of a thesis or dissertation. It communicates to the student all of the changes that are required prior to acceptance of the thesis or dissertation and may also include suggestions for formatting. See “Review of submission” (page 29) for more details.

- **TD-Bindery**: This form allows the student to order bound copies of the thesis or dissertation and pay any fees related to submission to ProQuest/UMI. See “How to submit” (page 30) for more details.

2. Introduction

Writing a thesis or dissertation is a large task, representing the culmination of a research project, and a professional representation of not only the student’s work, but the advisor, graduate program, and Michigan Tech. This document will form the primary basis of communication of the research to an examination committee. The term “document” is commonly used in these procedures to refer to either a thesis or dissertation. Presentation of the document in a professional and consistent manner will reflect well on the student and aid in the defense of the research project. These procedures outline the requirements for formatting and submitting a thesis or dissertation in Sections 3 and 4, respectively. Following these procedures will ensure that a document is ready for publication by ProQuest/UMI Dissertation Publishing (ProQuest/UMI) and the Van Pelt and Opie Library. A summary of the policies surrounding academic integrity and responsible conduct for research pertaining to a thesis or dissertation are presented in Section 5.

3. Formatting requirements

These procedures present the basic style requirements for all theses and dissertations submitted to the Graduate School. Compliance with these procedures will also ensure acceptance for
publication with ProQuest/UMI. For style questions not covered in these procedures, students must refer to the current edition of the *Chicago Manual of Style*, which is available in the Library. For some items of formatting, the style of a journal or appropriate style manual may be substituted for these procedures or those specified by the *Chicago Manual of Style*. These substitutions should only be made when the student’s field customarily uses a different style, and must be indicated on TD-Publishing when a student submits a thesis or dissertation. When appropriate, these allowed substitutions will be outlined. Examples include the MLA style for Rhetoric and Technical Communication, APA style for social sciences or CSE style (formerly CBE) for the sciences. A list of these style manuals, as well as the call numbers in the Library is listed in Section 8.1 on page 43.

### 3.1. Fonts

The fonts used in a thesis or dissertation convey important information about the style of the document and enhance (or detract from) the readability of it. In order to ensure readability and compliance with ProQuest/UMI guidelines, the fonts and font sizes listed in Table 3.1 are allowed for the body text of a thesis or dissertation. Some of these fonts are recognized as web fonts, indicating that they are easily read on a computer screen and may be preferable for preparing documents for electronic access.

The fonts that can be used for headings in a thesis are listed in Table 3.1. The size and style of these fonts will be adjusted for each heading level to visually indicate the importance of each

<table>
<thead>
<tr>
<th>Font</th>
<th>Minimum Size for Body Text</th>
<th>Web Font</th>
<th>Minimum Size for Headings</th>
<th>Maximum Size for Headings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arial</td>
<td>10 pt</td>
<td>Yes</td>
<td>12 pt</td>
<td>24 pt</td>
</tr>
<tr>
<td>Century</td>
<td>11 pt</td>
<td>No</td>
<td>13 pt</td>
<td>25 pt</td>
</tr>
<tr>
<td>Courier New</td>
<td>10 pt</td>
<td>Yes</td>
<td>12 pt</td>
<td>24 pt</td>
</tr>
<tr>
<td>Garamond</td>
<td>12 pt</td>
<td>No</td>
<td>14 pt</td>
<td>26 pt</td>
</tr>
<tr>
<td>Georgia</td>
<td>11 pt</td>
<td>Yes</td>
<td>13 pt</td>
<td>25 pt</td>
</tr>
<tr>
<td>Lucida Bright</td>
<td>10 pt</td>
<td>No</td>
<td>12 pt</td>
<td>24 pt</td>
</tr>
<tr>
<td>Microsoft Sans Serif</td>
<td>10 pt</td>
<td>No</td>
<td>12 pt</td>
<td>24 pt</td>
</tr>
<tr>
<td>Tahoma</td>
<td>10 pt</td>
<td>No</td>
<td>12 pt</td>
<td>24 pt</td>
</tr>
<tr>
<td>Times New Roman</td>
<td>12 pt</td>
<td>Yes</td>
<td>14 pt</td>
<td>26 pt</td>
</tr>
<tr>
<td>Trebuchet MS</td>
<td>10 pt</td>
<td>Yes</td>
<td>12 pt</td>
<td>24 pt</td>
</tr>
<tr>
<td>Verdana</td>
<td>10 pt</td>
<td>Yes</td>
<td>12 pt</td>
<td>24 pt</td>
</tr>
</tbody>
</table>
section. For example, a heading used for a chapter title will be larger and more prominent than
the sub-headings of the chapter. One way to improve the distinction of heading is to select a font
with serifs for the body text (such as Century or Times New Roman) and a font without serifs for
the headings (such as Arial or Verdana).

Exceptions to these requirements will be granted by the Graduate School when the student can
demonstrate that a journal in their field has different font requirements. Student must submit the
“Instructions to Authors” for the journal with their thesis or dissertation.

3.2. Margins

The binding edge margin of all pages will be at least 1.5 in. but no more than 1.6 in. For a page
with a portrait orientation (for example, this page in these procedures), the left hand margin is the
binding edge. For a page with a landscape orientation, the binding edge margin will be at the top
of the page. The margins of the remaining sides will be at least 1 in. but no more than 1.1 in.
These margins apply to all material in the document including page numbers and appendices.

3.3. Paper size

Theses and dissertations must be formatted to print on 8.5 × 11 in. paper with the exception of
oversized maps or tables as detailed in Section 3.10 on page 25.

3.4. Page numbers

Students may choose to number their pages according to the traditional scheme, or Arabic
numbering. In the traditional scheme, page numbers for the preliminary pages are formatted as
lower case roman numerals (i, ii, iii, etc.). The title page and signature page are included in the
numbering; however, a page number is not placed on these pages. With the exception of the title
and signature pages, all pages must be numbered. In the traditional scheme, the body of the
document uses Arabic numbers (1, 2, 3, etc.). Table 3.2 on page 10 has a summary of all of the
sections included in a thesis or dissertation, their order, and the type of page number necessary
for each.

Students may also choose to use Arabic numbering throughout the document. With this choice,
every page is numbered from the start to the end with Arabic numbers (1, 2, 3, etc.). Note that
the title page and signature page are pages 1 and 2, respectively, but no numbers appear on these
pages. With this numbering scheme, the page numbers in a PDF file will automatically match
the page numbers printed on the document which can make it easier to find the desired material
in the document.

Regardless of the numbering scheme chosen, page numbers must appear in the same place
throughout the document. Page numbers may either be placed at the center of the bottom edge of
the paper or in the upper right corner. Page numbers must be at least 1 in. from the edge of the
page. Note that the default for most word processors is to place page numbers approximately \( \frac{1}{2} \)
in. from the edge of the page, so students must adjust the placement of the page numbers accordingly. If the orientation of a page is landscape, the page number will be in the same location as the rest of the pages. This means that the text on landscape pages must be rotated.

### 3.5. Line spacing

Line spacing refers to the amount of height given for each line of text. The body of the text may use either double-spacing or one-and-a-half line spacing. This includes the appendices and preliminary pages. The exceptions to this spacing are figure captions and table captions, which must be single spaced. The table of contents, list of figures, list of tables, and references may be double or single spaced. If the references are single spaced, a blank line will be inserted between each, and a hanging indent will be used. Single spaced table of contents, list of figures, and list of tables, will have blank lines inserted as appropriate to enhance legibility. For example, a blank line between chapters would be appropriate. If the student is following the MLA style, the table of contents, list of figures, and list of tables are double-spaced.

### 3.6. Sections included and order

A thesis or dissertation contains many sections that are typical for a book but not usually used in other reports. The order of these sections is important, particularly since not all sections are found in all documents. Table 3.2 lists the sections that may occur in a thesis or dissertation. If required, the type of page number used in the traditional scheme for the section and where more information about the section can be found in these procedures is also listed. If additional sections are desired, students should consult the *Chicago Manual of Style* for appropriate placement relative to the other sections.

#### 3.6.1. Title page

Page numbering begins with the title page; however, no page number is placed on this page. The format for a title page is shown in Section 7 (see page 38). Please pay careful attention to the formatting shown for the title page. The font and size of font is the same as that used for the body text of the document. Accepted fonts are listed in Table 3.1 on page 7. A title page contains:

1. A title. The title will be in all capital letters.
2. The author’s full name.
3. A statement indicating:
   a. The type of document in all capital letters (A THESIS or A DISSERTATION).
   b. The text, “Submitted in partial fulfillment of the requirements for the degree of”
Table 3.2.
Sections for inclusion in a thesis or dissertation listed in order of appearance.

<table>
<thead>
<tr>
<th>Section</th>
<th>Required?</th>
<th>Page Number Type with Traditional Page Numbering</th>
<th>More details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title Page</td>
<td>Yes</td>
<td>None (this is page i)</td>
<td>3.6.1, page 9</td>
</tr>
<tr>
<td>Signature Page</td>
<td>Yes</td>
<td>None (this is page ii)</td>
<td>3.6.2, page 11</td>
</tr>
<tr>
<td>Dedication</td>
<td>No</td>
<td>None (this is page iii)</td>
<td>3.6.3, page 11</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>Yes</td>
<td>iii, iv, v</td>
<td>3.6.4, page 11</td>
</tr>
<tr>
<td>List of Figures</td>
<td>Yes, if figures present</td>
<td>iii, iv, v</td>
<td>3.6.5, page 11</td>
</tr>
<tr>
<td>List of Tables</td>
<td>Yes, if tables present</td>
<td>iii, iv, v</td>
<td>3.6.6, page 11</td>
</tr>
<tr>
<td>Preface</td>
<td>Yes, if journal articles are chapters in the document</td>
<td>iii, iv, v</td>
<td>3.6.11.3, page 15</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>No</td>
<td>iii, iv, v</td>
<td>3.6.7, page 12</td>
</tr>
<tr>
<td>Definitions</td>
<td>No</td>
<td>iii, iv, v</td>
<td>3.6.8, page 12</td>
</tr>
<tr>
<td>List of Abbreviations</td>
<td>No</td>
<td>iii, iv, v</td>
<td>3.6.9, page 12</td>
</tr>
<tr>
<td>Abstract</td>
<td>Yes</td>
<td>iii, iv, v</td>
<td>3.6.10, page 12</td>
</tr>
<tr>
<td>Contents</td>
<td>Yes</td>
<td>1, 2, 3</td>
<td>3.6.11, page 13</td>
</tr>
<tr>
<td>Reference List</td>
<td>Yes</td>
<td>1, 2, 3</td>
<td>3.6.12, page 18</td>
</tr>
<tr>
<td>Appendices</td>
<td>No</td>
<td>1, 2, 3</td>
<td>3.6.13, page 18</td>
</tr>
</tbody>
</table>

c. The degree type (Master of Science, Master of Forestry, Doctor of Philosophy, etc.)

d. The degree program – note that this does not always match the name of the department or school with which the student is associated. A complete list of degree programs can be found in Section 6, page 35.

4. MICHIGAN TECHNOLOGICAL UNIVERSITY

5. The year of the degree. Note that this may not be the same year a thesis or dissertation is defended.

6. A copyright notice in the form “©Year Owner’s Name”. US Copyright Law does not require this notice to provide copyright protection, but it is recommended. “Copyright” or “Copr.” may be used instead of “©.” Dissertation or thesis copyrights may be registered, for a fee, when students submit their document to ProQuest/UMI.
3.6.2. Signature page
Page numbering continues with the signature page, but no number is placed on this page. The format for a signature page is shown in Section 7 (page 38). Original signatures must be obtained for each individual listed on the signature page. Please pay careful attention to the formatting of the signature page. The font and size of font is the same as that used for the body text of the document. Accepted fonts are listed in Table 3.1 on page 7. Ensure that the correct degree program, administrative home department or school of student, and degree type are specified. A complete list of degree programs and more information can be found in Section 6, page 35.

3.6.3. Dedication
If present, this is the first page with a number printed on it. Students may choose to dedicate their thesis or dissertation to an individual, several people, or a group. The word “dedication” is usually not needed on this page. The formatting of this page is up to the student’s discretion, as long as the text is double spaced and uses an approved font. Customarily, the dedication is short, such as, “To my mother.”

3.6.4. Table of contents
A table of contents is required. Each chapter or section heading, with the exception of the table of contents, must be listed in the table of contents. Additionally, at least the first- and second-level subheadings in each chapter will be listed. Additional subheadings may be included at the author’s discretion. The table of contents must be formatted so that the distinction of each level of heading is clear and page numbers are easily found. Page numbers must align flush right and must be preceded by a leader of periods. One way to clearly identify section headings is to indent each subheading more than the previous subheading. These formatting requirements are illustrated in the table of contents for these procedures.

3.6.5. List of figures
If figures are present in the document, a table listing the figure number, figure caption, and page number of each must be included. The formatting of the list of figures is similar to that of a table of contents, except that there are no subheadings, simply a list of the figures with their captions and page numbers. Captions should be shortened to eliminate extensive description. Multi-line entries must be formatted so that each line after the first line is indented (also known as a hanging indent).

3.6.6. List of tables
If tables are present in the document, a table listing the table number, table caption, and page number of each must be included. The formatting of the list of tables is similar to that of a list of figures. Captions should be shortened to eliminate extensive description. Multi-line entries must be formatted so that each line after the first line is indented. See the List of Tables in this document on page 4 for an example.
3.6.7. Acknowledgements
An acknowledgements section is optional. Many students wish to use this page to thank individuals, groups, or organizations for support of their research. The thanks could be for financial support, such as a fellowship or research grant, or for the emotional support of friends and family. The formatting of this section must match the body of the work, but the content is the responsibility of the author.

3.6.8. Definitions
A definitions section is optional. Definitions will be alphabetized. The term to be defined will be typed in bold, lowercase letters and followed with a period. Terms will only be capitalized if they appear in capital letters in the body of the document. The definition will be typed in sentence case using punctuation. If the definition is longer than one line, the text will be indented after the first line with a hanging indent. See the example below.

definition. A definition follows the word. When the definition is longer than one line, text on the subsequent lines is indented to make it easier to find the words being defined.

3.6.9. Lists of abbreviations
A list of abbreviations is optional, and it may be formatted in one of two ways. The first option is for abbreviations to be typed in a two-column format with the first column showing the abbreviation and the second column describing the abbreviation. The abbreviations in the second column will be flush left with each other. The first column will be wide enough so that the longest abbreviation fits on one line.

A list of abbreviations may also be presented in the same way as a list of definitions. Each abbreviation will be in bold text and followed by a period. Capitalize the abbreviation if it is capitalized within the text. If the description of the abbreviation is longer than one line, utilize a hanging indent for subsequent lines.

For both methods, list abbreviations in alphabetical order, placing those with Greek letters first.

3.6.10. Abstract
An abstract is a concise summary of the research. The abstract is found in the document and is used for the ProQuest/UMI index. Publication with ProQuest/UMI is required for both theses and dissertations. Writing an abstract that clearly identifies the topic areas of the research will aid others in finding the document. When an abstract is placed in a search engine, many databases will truncate an abstract at 350 words for a dissertation and 150 words for a master’s thesis. Students are strongly encouraged to adhere to these word limits in order to maximize the distribution of their entire abstract. Under no circumstances will an abstract be longer than two pages.
3.6.11. Contents

The organization of a thesis or dissertation is a matter for an advisor and student to consider carefully. A traditional document presents the graduate research as a single book. A second format which is gaining popularity presents the graduate work as a collection of journal articles. Both formats offer a variety of disadvantages and advantages, and one may be more appropriate for a particular project. This section is meant to guide the student in selecting a method of presentation that is appropriate and meets the needs of the student, advisor, and project. It is not meant to be an all-inclusive guide to writing these documents, nor a statement of which method is preferred. Writing a thesis or dissertation as a collection of journal articles does require some special considerations and the procedures in this section must be followed carefully. The reference books listed in 8.2, page 43 are also good resources to help guide the student in the selection of an appropriate format and guidance during the writing process. *The Craft of Research* is particularly useful for students in the rhetoric and technical communication program.

3.6.11.1. Research involving human and animal subjects

Research projects that involve human subjects, animal subjects, or recombinant DNA must be reviewed by the Office of Research Integrity and Compliance. The research protocol must be submitted for approval prior to conducting the research. Please note that research with human subjects is not limited to research that could cause physical harm to people but also includes research that could cause psychological distress, including surveys. Every reviewed project, including those exempted, receives an approval number for the research protocol. This approval number must be included in the thesis or dissertation in an appropriate place. For a traditional document, the appropriate place could be the methods or an appendix. If a thesis or dissertation is a collection of papers, this information could be included as a footnote to a chapter, or in an appendix. Please contact the Office of Research Integrity and Compliance (906-487-2902) with any questions about the submission or review of a research protocol.

3.6.11.2. Traditional

A traditional thesis or dissertation includes content in an order similar to a lab report or term paper. Particularly in the sciences or engineering, the document is sequential in nature, meaning that all of the methods are described, followed by all of the results, discussion, and conclusions. The format of a dissertation in the rhetoric and technical communication program varies greatly depending on the nature of the research, and cannot be as easily summarized. An advantage of a traditional thesis or dissertation is that it is easy to include all experimental details in the body of the document. For experimental work, the thesis or dissertation may serve as a summary of the research to date for the next student continuing the research. A disadvantage of this type of thesis or dissertation is that the text must be shortened and rearranged, sometimes substantially, in order to submit an article to a journal. If the material has been published in a journal prior to submission as part of a thesis or dissertation, it must be cited. If the student wishes to reproduce any section of an article that is larger than allowed for by “fair use” policies, appropriate copyright permission must be obtained, as described on page 16. Some common sections in a traditional document are briefly described below.
Introduction
The introduction lays the foundation for the current research and places the work in context within the field. It should be an analysis of the existing body of research that has a bearing on the project. It is important to not only review the literature, but also to critique it. This section should outline some of the limitations of current research and areas that need further exploration so that the goals of the work to be discussed can be easily seen.

Goals and hypotheses
Following the introduction is usually a section outlining the goals of the current work and the hypotheses to be tested. A goal is an overall aim of the work, for example, to develop a new method. A hypothesis is an idea about what the result will be when something is changed. For example, a hypothesis could test whether or not the new method improves something. A good hypothesis is testable, meaning that some experimental method can be applied to determine if it is true or false.

Methods
The methods section describes all of the experimental methods used in the study. Each of these methods should be testing one or more hypotheses. Methods include computer programs, surveys, experiments, and characterization techniques. If the methods are lengthy, such as computer code used to analyze data, it is appropriate to include an overview of the methods in the body of the document and include the details in an appendix.

Results
The results section presents all of the data obtained from the methods described. A common mistake is to include methods in the results section. This is usually done when a student wants to describe a test that was done to verify or continue an experiment. This should be avoided in nearly all circumstances. Summaries of data may be included in the body with extensive tables located in an appendix. Alternate ways of expressing the data may also be in an appendix.

Discussion
In the discussion section, the results are interpreted and are put in context with current research in the field. The author should explain what the results mean and if the hypotheses were proven or disproven. It is common to refer to the literature to compare and contrast the results found in the current work to that done by others. Sources of discrepancies, limitations, or errors in the current work should also be presented here.

Future work
This section highlights additional work that should be done at a later date to continue or clarify the current research. Future work, for example, could illustrate how to address limitations of the current study. The purpose of this section is to show that the student understands the implications of the research and what could come next.
Conclusions
Conclusions summarize the main findings of the current research. It reiterates the main points and limitations of the current research and may highlight some of the areas for future work.

3.6.11.3. Collection of journal articles
The thesis or dissertation as a collection of journal articles has been gaining popularity as an accepted format. In this type of document, the individual chapters consist of individual journal articles. These articles may be published, under review, or planned for submission. Although this section refers to journal articles, the same procedures apply if the material is planned to be or has been published in a book, conference proceedings, or any other form, and will be presented in the thesis or dissertation in an identical format.

Suggested formats for compiling information
When the body of the thesis or dissertation is a collection of journal articles, it is extremely important that the document have an introduction and conclusion section that connects the individual articles in a comprehensive manner. A thesis or dissertation is not simply a collection of articles; it is the presentation, synthesis, and analysis of an entire research project which has occurred over several years. It is suggested that an introduction is followed by or includes a general statement of goals and hypotheses for the overall project.

The text of each chapter must match the formatting procedures as presented in this document, particularly with respect to font selection, line spacing, and margins. Photocopies or PDF versions of published papers will not be acceptable. A footnote must be placed on the first page of the chapter and must include the following information if the paper has been published or submitted for publication:

- “The material contained in this chapter (was previously published in OR has been submitted to) the journal Title of Journal.”

This statement can be modified as appropriate if the material was published in a book or conference proceeding in the same form as that presented in the thesis or dissertation. If the article has already been published, see “Copyright permissions” on page 16 for more information on how to obtain and document these permission in the footnote.

Authorship
It is rare that a graduate student would be the sole author of a journal article. Research is frequently a multi-disciplinary activity that typically requires the use of resources from many laboratories or sources and involves the expertise of several experts. A thesis or dissertation, however, is attributed to one student author. To address the issue of co-authorship of work(s) contained within a document with a sole author, a preface must be included that addresses the contribution made by the thesis or dissertation author to each paper presented. As shown in Table 3.2 on page 10, this will be placed after the List of Tables and before the
It is important to clarify the contribution of the student to each paper whenever the student is not the sole author of the journal article. A thesis or dissertation is intended to be independent work in a research area, although students may work together on interdisciplinary projects. The independent contribution of the student to each journal article must be clear to the committee and future readers of the document.

It is not necessary for the student to explain the role of each author in the paper, but the advisor’s signature on the signature page will serve to verify that the student has accurately represented his or her contribution to each article.

**Review of article by committee prior to journal submission**

A thesis or dissertation is reviewed by a committee. During that review process, the members of the committee may find errors or suggest alternative ways to present information. The review of a committee should occur before submission to a journal, since the committee will likely have formed a long-term commitment to the student and the project. Committee members are not required to review articles, but must be given the opportunity to review the article prior to submission. If there is a deadline from the publisher, and review prior to submission is not feasible, the committee should have the opportunity to review it as soon as possible. The form TD-Journal has been created to facilitate this process and provide a mechanism for the student and advisor to retain a record of internal review. Students are encouraged to work with their committee if substantive revisions are requested by the journal.

A positive internal review of a journal article does not indicate approval of the thesis, dissertation or oral defense. A negative internal review does not exclude the publication of the work since not all committee members will be co-authors on the article, but the student is advised to address the concerns of committee members in the thesis or dissertation to ensure a successful defense. If the committee membership has altered after review of an article but before the defense, the new committee member should be informed of the submission of the article prior to agreeing to serve.

**Copyright permissions**

If material to be included in a dissertation or thesis has already been accepted for publication, the authors of that work may have assigned the copyright to the publisher of the material. Students must obtain permission from the publisher or document that the right to reprint the article has been retained in order to present the material in their thesis or dissertation. This documentation will be included in an appendix so that the copyright and permissions are clear to all readers of the thesis or dissertation.

If the student is not able to obtain permission, the work must be rewritten in such a way that it presents the information using new language. Students are advised to check with potential
publishers prior to publication to ensure that the proposed use of the article will be acceptable to
the publisher. Students are also advised to allow sufficient time to allow the permission to be
obtained. A degree cannot be awarded to a student until the dissertation or thesis is complete,
and students must continuously enroll until their degree is awarded. Exceptions to the
continuous enrollment policy will not be granted while students are waiting for permission from
a publisher.

Copyright permissions must also be obtained to use material published by others, such as a figure
from a journal article, text from a book chapter or a figure on a web page. The only exception to
this is work that is in the public domain. This includes work that has been published by
employees of the federal government, or items where the copyright protection has expired. If the
work is in the public domain, students will obtain proof of this, and place this in an appendix.
All reference materials, including those in the public domain or not requiring permission to use,
must be properly cited with a full and complete reference in the reference list. For each figure,
table or selection of text that requires documentation to reprint, the following two items must
either appear in the caption (for figures and tables) or a footnote (for text or an entire article):

- A credit line that follows the requirements of the publisher or the Chicago Manual of
  Style (see items 12.42 – 12.47). See 12.49 for credit line examples for work in the public
domain. A credit line identifies the source of the material and the copyright holder.

- Reference to permission letters from the publisher or documentation that the material is
  in the public domain (ex: See Appendix A for permission letters to reprint this material.).
  These letters will be placed in an appendix.

Any letters granting permission to the student to include copyrighted material in the document
will be prepared so that the signatures are redacted in the document. Adobe® Acrobat® 8.0 (or
newer) offers powerful redaction features, or a photocopy of the letter may have the signature
redacted before scanning.

A full discussion of copyright, fair use, and public domain is beyond the scope of these
procedures. The Graduate School maintains a web site that contains links to helpful websites
and resources to assist students in obtaining their permissions:

http://www.gradschool.mtu.edu/td/copyright.html

In particular, ProQuest maintains a site entitled “Copyright Law & Graduate Research” that
provides information about copyrights in general, what items require permission, and how to
obtain permission. This site can be found here:

Stanford University also maintains a site that describes copyright and fair use in academia. In addition to addressing concerns of students writing a thesis or dissertation, it also addresses the use of copyrighted materials in the classroom. Their site can be found here:

http://fairuse.stanford.edu/Copyright_and_Fair_Use_Overview/

3.6.11.4. Hybrid thesis
Some theses or dissertations may combine elements of the traditional and collection format. For example, a student could use the traditional approach of including all experimental details in the body of the document but organize the chapters to represent sections of the research that would be submitted to a journal after editing.

3.6.12. Reference list
A reference list presents all of the sources consulted to prepare the document. More information on the formatting of this section is found in Section 3.7.

3.6.13. Appendices
Appendices are used to place lengthy experimental methods, derivations, data, or other supporting material that is not necessary to understand the main body of work but is needed to support it. For example, data can often be presented in a graphical or tabular form. Only one form should generally appear in the body of the document, but the second might be useful to another student continuing the research or to serve as an archive for the data. A subset of data might be included in the body of the document, while the entire table might be included in the appendix.

Appendices will be formatted in the same way as the body of the thesis or dissertation. Students should pay particular attention to the margins, since it is common to place large or lengthy materials in an appendix. When a document is prepared so that the body is a collection of papers, the appendices may be lengthy and care must be taken so that the material can be easily found within an appendix.

3.7. Formatting of in-text references and the reference list
Students may choose to follow the Graduate School formatting of in-text references and reference list, as found in this section, or may choose to follow the formatting guidelines of a journal that is important in their field. The Graduate School style for the reference list follows Scientific Style and Format: The CSE Manual for Authors, Editors, and Publishers (see Section 8.1, page 43 for a full citation, also referred to as The CSE Manual or CSE style) more closely than the Chicago Manual of Style, since the CSE style is more appropriate for most engineering and science fields. It also allows for three different formats of in-text references, one of which is likely to match a style common in the student’s field. Students who choose to follow a journal format will select one that includes the full name of the journal. This will make it easier for the reader to find the cited article. Note that the default for the CSE style is to use abbreviated
journal names, so if commercial templates are used, they must be altered to match the styles shown in Section 3.7.2. Students who choose to use a journal format from their field must provide the “Instructions to Authors” with the submission of their draft to the Graduate School. If the MLA style is used, students may just state this with their submission.

In either case, students are encouraged to utilize software such as EndNote or Reference Manager to aid in formatting their bibliographies and citations. The use of software will greatly decrease the amount of time required to prepare this portion of the document. A site license is available for EndNote for Michigan Tech faculty, staff, and students. Links to download the software and EndNote styles and filters appropriate for a Michigan Tech thesis or dissertation are available at:

http://www.gradschool.mtu.edu/td/endnote.html

References within the text must be provided for ideas or facts that have been paraphrased in the thesis or dissertation, material that has been reprinted from another source, or figures that have been generated from source data the author did not collect. This includes material that is copyrighted and requires permission to reprint or material in the public domain.

3.7.1. Formatting of references within the text

References within the text (or in-text references) may be citation-sequence, citation-name, or name-year. Citation-sequence and citation-name in-text references may be either numbers in-line with the text and enclosed in parenthesis (Smith (1) proved the following theorem.) or superscripted (Smith\(^1\) proved the following theorem.). Non-adjacent numbers will be separated by a comma with no spaces (for example, (1,3,5) or \(^{1,3,5}\)). Adjacent numbers will be separated by a dash. For example, the in-text references (1-3,5) or \(^{1-3,5}\) refer to references 1, 2, 3 and 5. The difference between citation-sequence and citation-name is in the ordering of the reference list. This will be discussed further in Section 3.7.2 on page 20.

Name-year citations will include the surname of the author and the year of publication. There are numerous variations to this simple rule depending upon, for example, if the same author has published multiple papers in the same year or if different authors with the same surname have published papers in the same year. The most common variations are described below. For additional details and more variations, students are referred to the The CSE Manual.

- **Single author paper**
  The in-text reference (Smith 2006) refers to a paper solely authored by Smith in 2006.

- **Same author, multiple papers in one year**
  Add a lowercase letter to the year to distinguish which paper is being referenced. For example, the in-text references (Smith 2007a) and (Smith 2007b) refer to two different papers written solely by Smith in 2007. The letter is also included in the reference list.
Different authors with the same surname publish papers in the same year
Include the initials of their first and middle names. For example, the in-text references (Smith J 2008) and (Smith K 2008) refer to two different papers written by two different authors with the same surname in 2008.

Paper with two co-authors
Use both surnames in the in-text reference and separate the surnames with an “and.” For example: (Smith and Jones 2007).

Paper with three or more co-authors
Refer only to the first author which is then followed by “et al.”. For example, the in-text citation (Smith et al. 2007) refers to a paper written by Smith with more than one co-author. Note that “et” is not an abbreviation, so it does not have a period after it. A period is required after “al.”.

As discussed in The CSE Manual, each choice has benefits and disadvantages. Citation-sequence and citation-name in-text references are brief in the running text which can make a document easier to read. There are also no additional rules to apply or interpret when adding in-text references. One disadvantage to these in-text references is that they lack bibliographic information within the text, which can hinder the reader who is familiar with the work of a particular author. Without using computer software to organize and maintain the reference list, in-text references and the reference list can be difficult to generate.

Name-year citations, on the other hand, provide rich detail about the in-text reference in the body of the document, and the reference list and in-text references are relatively straightforward to maintain without the use of computer software. Applying the multiple rules necessary to construct in-text references, however, can become cumbersome. Long lists of in-text references, particularly common in the introduction to a thesis or dissertation, are also awkward to read.

The decision of which in-text reference style to use should be considered carefully by the student and advisor. They should consider which method is most prevalent in the field of study and all of the disadvantages and advantages of each style.

3.7.2. Formatting of reference list
There are three ways to organize a reference list, based on the in-text references chosen. The types of in-text references were discussed in Section 3.7.1.

If the student has chosen…

1. citation-sequence in-text references, then the reference list is organized in order of appearance. The first in-text reference is “1,” the second is “2” and so on.
2. **citation-name** in-text references, then the reference list is alphabetized, and each reference in numbered in alphabetical order.

3. **name-year** in-text references, then the reference list is alphabetized.

For both citation-name and name-year reference lists, there are additional rules for alphabetizing the reference list. The most common rules are below:

- Alphabetize the reference list:
  - By the surname of the first author. Papers authored by a single author precede those written by the same first author with additional co-authors.
  - For multiple authors with the same surname, alphabetize by the initials of the first author to group the same authors together.
  - For multiple papers by the same first author, use the title of the reference to alphabetize within the author grouping for the citation-name system. If using the name-year in-text reference style, order the references beginning with the earliest and ending with the most recent.

- Ignore all instances of “a,” “an,” and “the” that may be present at the beginning of a title or organization when alphabetizing either authors or titles. An organization could be the author of a publication, such as the American Society for Testing Materials, which authors a series of testing standards for materials.

- If an organization is the author of a publication, use the full-name rather than its acronym to alphabetize the item.

- If an acronym is used in the title of an article, use the acronym to alphabetize items.

The general format for a few common reference types is shown in Section 3.7.2.1 (for citation-sequence and citation-name in-text references) or Section 3.7.2.2 (for name-year in-text references). Students should consult *The CSE Manual* (see Section 8.1, page 43 for a full citation) for details on other types of references. The Graduate School maintains style files that can be used to format citations and reference lists at

[http://www.gradschool.mtu.edu/td/endnote.html](http://www.gradschool.mtu.edu/td/endnote.html)

Note that the Graduate School requires the full name of a journal, while *The CSE Manual* requires an approved abbreviated name.
3.7.2.1. Reference list formats for citation-sequence and citation-name in-text references

- **Journal Article**
  
  *Generic:*
  
  Author(s). Article Title. Journal title. Date;volume(issue):location.
  
  *Example:*
  

- **Book**
  
  *Generic:*
  
  Authors(s). Title. Edition. Place of publication: publisher; date. Extent (optional; total number of pages). Notes (optional).
  
  *Example:*
  

- **Book Chapter**
  
  *Generic:*
  
  
  *Example:*
  

- **Web page on the internet**
  
  *Generic (as many items as can be found should be included):*
  
  Title of Homepage [medium designator]. Edition. Place of publication: publisher. Title of specific page (not needed if page is the homepage for the domain); Date of publication [date updated; date cited]; [extent if necessary]. Notes.
  
  *Example:*
  

3.7.2.2. Reference list formats for name-year in-text references

- **Journal Article**
  
  *Generic:*
  
  
  *Example:*

Page 22 of 43

- **Book**
  
  *Generic:*
  
  Authors(s). Date. Title. Edition. Place of publication: publisher. Extent (optional; total number of pages). Notes (optional).
  
  *Example:*
  

- **Book Chapter**
  
  *Generic:*
  
  
  *Example:*
  

- **Web page on the internet**
  
  *Generic (as many items as can be found should be included):*
  
  Title of Homepage [medium designator]. Date of publication. Edition. Place of publication: publisher. Title of specific page (not needed if page is the homepage for the domain); [date updated; date cited]; [extent if necessary]. Notes.
  
  *Example:*
  

### 3.8. Table formats

The use of one table format throughout the document is strongly encouraged. The style of text in a table will generally be the same style of text as in the body of the document. Bold text may be used to denote the headings in a table. A style of borders should be chosen that can be uniformly applied to create consistent tables. The tables in this document, for example, are all formatted with the same borders and text styles. Tables should be centered on the page and be located at the top or bottom of a page of text.

Each table will have a caption that identifies the chapter and table number. The chapter and table number are separated by a period. Tables are numbered sequentially within a chapter using Arabic numbers (Table 1.1, Table 1.2, etc.). Table captions are centered above each table, with
the table number on a single line and the caption on a new line centered below the table number. Captions should be brief, and should not comment on the significance of the data presented. Discussion is reserved for the body of the document. The caption will use sentence-style capitalization. This style capitalizes the first word of the sentence and proper names. All other words in the caption are in lower case letters.

3.9. Figures

The use of one format for similar types of figures throughout the document is strongly encouraged. Students should choose one font for items on graphs and use the same font and font size throughout the document for similar purposes. For example, a student might choose the Arial font and use a size of 10 pt for tick labels, 12 pt for legends, and 14 pt for axes titles. Note that the size of all elements does not need to be identical, but the size and font should be consistent throughout the entire document. The fonts listed in Table 3.1 on page 7 are those allowed for figures. It is customary, but not required, to select a sans serif font such as Arial or Tahoma for figures.

Some students will utilize graphs that are created by a piece of equipment or software, such as a scanning electron microscope image or a finite element model result. In this case, it may not be possible to have the size and type of the font conform to these guidelines and use the same font as the other figures. In all cases, however, the font must be readable. Pay close attention to the size of the font and clarity of the text when the image is exported.

All images must be clear, readable, and reproducible. Images that look good on a computer screen may not be of sufficient resolution to print well. Images must have a minimum resolution of 300 dpi and should be in focus. Line art must be produced with software that allows for high quality exports and does not create “halos” around the lines or jagged text. Screenshots have a maximum resolution of 72 dpi, and these are allowed when absolutely necessary.

Each figure will have a caption that identifies the chapter and figure number. The chapter and figure number are separated by a period. Figures are numbered sequentially within a chapter using Arabic numbers (Figure 1.1, Figure 1.2, etc.). Figure captions are located below each figure, with full justified text. The first sentence of a caption should be an overview of the figure. Subsequent sentences will include, as necessary, detailed information about the figure. Captions should be descriptive enough that the figure and caption could be easily understood by someone in the field who has not read the body text. If a figure contains multiple parts, each part is generally identified with a letter within the figure. Within the caption, the letter is usually italicized, and then followed by a comma and description of the part of the figure. The caption should be in sentence case with the first word capitalized and all other words in lower case letters.
3.10. Including oversize pages or media

Oversize pages can be incorporated into the document in several ways. Pages of up to 11 × 17” can be included within the body of the document so that the pages fold out from the binding edge. Larger materials can be folded and placed in a pocket constructed by the bindery. Materials can be printed by the student or the bindery. If printed by the student, an appropriate number of copies need to be provided at the time of submission to the Graduate School. The bindery will use these to construct an appropriately-sized pocket. Media, such as CDs, can also be included in a pocket if a student wants to make electronic files available to the reader. An appropriate number of copies of the media will also be provided at the time of submission. There is an extra charge for inserting oversize materials or pockets. Students interested in these options may contact the Graduate School for current pricing.

3.11. Use of color

Color should be used only when necessary. For example, graphs should be formatted using different styles of lines and/or symbols instead of differently colored lines. Although unnecessary use of color will not cause the rejection of a submitted document, students should keep in mind that color pages are more expensive to produce in the bound copy of the thesis or dissertation. Even when a student is willing to accept the extra cost, students should remember that when a document is photocopied, not all colors reproduce equally well. The use of red and green in the same figure is discouraged because readers with color blindness will find it difficult to interpret the material presented. The use of color should also be consistent between graphs. A single color should represent the same type of data throughout the document. For example, if a student were plotting the strength and modulus of a material as a function of different variables in a set of multiple graphs, each graph should have the strength data represented with the same color.

Examples where color is necessary or desirable include:

- Maps
- Pictures of cells with a colored staining
- Finite element analysis with colored areas representing different stress levels
- Web pages
- Visual arguments
- Complex figures with multiple lines
- Response surface (3D graph)
4. Document submission

4.1. Document preparation

Theses and dissertations will be available electronically in the University library and via the ProQuest Theses and Dissertation @ Michigan Tech database. A paper copy of the document will also be archived in the University library. Electronic documents offer a rich variety of content and navigation options not available in traditional paper copies. Although a paper copy will still serve as an archival version in the Library to protect the student’s intellectual property, it is anticipated that online access to these documents will be more common. Therefore, care should be taken to prepare these documents so that they are easy to navigate and contain content that will not change file formats frequently in the future.

Theses and dissertations will be prepared as a single PDF file with all fonts embedded into the document. Compression, password protection, or digital signatures are not allowed. Supplemental files that do not lend themselves to inclusion in a written document such as music or video may also be included but must be linked to text within the PDF document. Supplemental files must match the format types acceptable by ProQuest/UMI in their publishing agreement. A list of these is found in Table 4.1.

<table>
<thead>
<tr>
<th>Type of multimedia</th>
<th>Acceptable file types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Images</td>
<td>GIF (.gif)</td>
</tr>
<tr>
<td></td>
<td>JPEG (.jpeg)</td>
</tr>
<tr>
<td></td>
<td>TIFF (.tif)</td>
</tr>
<tr>
<td>Video</td>
<td>Apple Quick Time (.mov)</td>
</tr>
<tr>
<td></td>
<td>Microsoft Audio Video Interleaved (.avi)</td>
</tr>
<tr>
<td></td>
<td>MPEG (.mpg)</td>
</tr>
<tr>
<td>Audio</td>
<td>AIF (.aif)</td>
</tr>
<tr>
<td></td>
<td>CD-DA</td>
</tr>
<tr>
<td></td>
<td>CD-ROM/XA</td>
</tr>
<tr>
<td></td>
<td>MIDI (.midi)</td>
</tr>
<tr>
<td></td>
<td>MPEG-2</td>
</tr>
<tr>
<td></td>
<td>SND (.snd)</td>
</tr>
<tr>
<td></td>
<td>WAV (.wav)</td>
</tr>
<tr>
<td></td>
<td>MP3 (.mp3)</td>
</tr>
</tbody>
</table>

Table 4.1.
List of acceptable multimedia file types that can be included as supplemental files with a thesis or dissertation submission.
Care should be taken to ensure that no signatures are placed in the electronic document. The signature page in the electronic document will not contain signatures. The original signature page provided with the final documentation will be photocopied by the bindery and placed in each paper copy. The original signature page will be bound in the Library’s archival copy. Students may provide more than one original signature page if they would like original signatures in any other paper copies.

The single PDF file must be bookmarked to aid in navigation. Bookmarks are easily added when the features of a word processing program are used to create headers for each section in a document and when the professional version of Adobe Acrobat is used to prepare the PDF file. See the Graduate School website for tutorials on how to include these features using Microsoft® Word and Adobe® Acrobat®. When choosing software to prepare the thesis or dissertation and create the PDF file, students should be aware of the features and limitations of the software they choose. At a minimum, the table of contents must contain hyperlinks to each section, and each item in the table of contents and the table of contents itself must be listed as a bookmark. It is optional, but recommended, to include a link to figures and tables from the table of contents and from the text within the document.

To avoid possible cross-platform problems and difficulties in future archival processes, the file names of all files must follow the DO+3 naming convention: abedefgh.xyz. Use English letters and Arabic numbers only; no extra punctuation or diacritical marks or spaces are allowed. For example, JJSthes.pdf, not John Smith Thesis.pdf; Fig04.jpg, not Figure 4.jpg.

When including supplemental files, it is recommended to name files so that a computer will sort them in some logical manner. For example, each file name can begin with a 1- or 2-digit number, depending on how many files you have, to ensure they will sort logically: 01Smith.pdf, 02Music.wav, 03Movie.mov, etc.

4.2. Embargos and restricted publication

The default for all theses and dissertations is for these documents to be immediately published and available. This option may not be suitable for students who wish to publish their document as a book after graduation or if the thesis or dissertation contains proprietary material. Some publishers consider a thesis or dissertation a prior publication and will therefore not publish or republish material included in these documents. Most journals do not consider a thesis or dissertation a prior publication, but book publishers tend to be more restrictive on considering a thesis or dissertation a prior publication. Students are advised to check with any future publisher of their work prior to publication of their thesis or dissertation.

Students may place an embargo on their document to prevent it from being published for a certain period of time, restrict access of their electronic document to just the Michigan Tech community or both. Two weeks prior to the oral defense, all students must complete the form, “TD-Publishing.” This form allows students to request an embargo or restriction and gives the
University library permission to make limited photocopies of the work as necessary for interlibrary loan patrons or to replace a lost copy of the document. If TD-Publishing is submitted after the oral defense, an embargo or restriction will not be allowed. Embargos and restrictions must include a justification for the request and must be approved by the advisor or graduate program director. Graduate School staff will review requests for one year or less. The dean of the Graduate School will review requests for longer than one year. Approval is not automatic and requests for embargos longer than one year are rarely granted.

All embargo requests will incur a 10% surcharge on the binding costs. Binding of an embargoed document does not occur until the embargo has expired. Binding charges increase each year making the 10% surcharge necessary.

4.3. Submission of draft prior to defense

At least two weeks before the proposed defense date, students must submit a draft of their thesis or dissertation and an oral defense scheduling form to the Graduate School. If these two documents (appropriate scheduling form and thesis or dissertation) are not in the Graduate School two weeks prior to the defense, the defense will be cancelled, and the student will need to begin the scheduling process again.

The two documents may be submitted to the Graduate School at separate times. For example, some students may need to schedule their defense a month in advance in order to accommodate the travel schedules of their committee but might not have a complete draft of the thesis or dissertation ready at that point. Alternatively, the student may wish to submit their draft earlier, to facilitate review.

To schedule the oral defense, the student must submit an M5 (Master’s degree) or D7 (PhD degree) scheduling form at least two weeks before the proposed defense date. The intent of this policy is to ensure that a draft of the thesis or dissertation will be delivered to the committee members and Graduate School with sufficient time for review of the document prior to the defense. The draft submitted to the Graduate School does not need to be the final copy of the thesis or dissertation provided to the committee. The recommendation is that the oral defense is scheduled two weeks after the draft has been submitted to the Graduate School and that a final thesis or dissertation can be submitted to the Graduate School a month after the oral defense.

4.3.1. How to submit

A Blackboard course has been established for all master’s and doctoral students. Active students will automatically be enrolled each semester; if students become inactive, please contact the assistant to the dean for professional development for assistance in gaining access to the course. Doctoral students who are submitting a thesis for a master’s degree should also contact the assistant to the dean for professional development to gain access to the master’s level course. Students can find Blackboard at:
Blackboard provides a secure area where materials can be uploaded and reviewed by appropriate staff in the Graduate School. Students will select the appropriate assignment to upload their document. Follow the instructions available online to upload the document and any supplemental files.

### 4.3.2. Review of submission

Each thesis or dissertation will be reviewed using a standardized form (TD-Review) to ensure that each review is uniform and complete. Documents will be reviewed to ensure that they meet the University’s formatting requirements. Required changes will be noted, and these must be addressed in the final version or the document will not be accepted for publication and the degree will not be awarded. Suggestions regarding the layout of the document, appearance of the figures or use of proper language may also be included. Suggestions to improve the document that are not required should be discussed by the student with their advisor to determine if they are necessary. Comments will be returned to the student via Blackboard and e-mailed to the advisor. Each year, a random sample of theses and dissertations will be submitted to a plagiarism detection service for review. See Section 5.2.3 on page 33 for a description of Graduate School responsibilities and procedures regarding originality of theses and dissertations.

Theses and dissertations are reviewed in the order they are received by the Graduate School. Every effort is made to review documents in a timely manner; however, students should keep in mind that the end of the semester is a busy time for reviewers, and reviews may take longer than during the middle of a semester.

### 4.4. Final document submission

#### 4.4.1. Timeline

To complete a graduate degree, students must submit tracking forms (such as the M5, D7, etc.) to report on the results of the examination and their plans for after graduation. They must also submit a final copy of their thesis or dissertation, and the form “TD-Bindery” to order paper copies and pay publication fees. These procedures only outline how to submit the thesis or dissertation and TD-Bindery. Students should refer to the Graduate School web page for current information on the other forms required and the date they should be received in the Graduate School.

To finish in a given semester (for instance, fall), all final paperwork is due in the Graduate School no later than 4:00 p.m. on the Friday before the next semester begins. The thesis or dissertation must be accepted in its final form no later than this deadline if the student is to avoid registering for the next semester. Since a draft of the final thesis or dissertation must be reviewed to ensure that all required changes have been made, a final copy of the thesis or dissertation must be received by the Graduate School at least one week before the final deadline. If this date falls on a holiday, the thesis or dissertation will be due by 4 p.m. on the next business
Table 4.2.  
Deadlines for receipt of final forms and thesis or dissertation.  Materials must be submitted no later than 4:00 p.m. on the day indicated.

<table>
<thead>
<tr>
<th></th>
<th>Submit final thesis or dissertation no later than...</th>
<th>Submit final forms no later than...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall 2008</strong></td>
<td>January 2, 2009</td>
<td>January 9, 2009</td>
</tr>
<tr>
<td><strong>Spring 2009</strong></td>
<td>May 1, 2009</td>
<td>May 8, 2009</td>
</tr>
<tr>
<td><strong>Summer 2009</strong></td>
<td>August 21, 2009</td>
<td>August 28, 2009</td>
</tr>
<tr>
<td><strong>Fall 2009</strong></td>
<td>January 4, 2010</td>
<td>January 8, 2010</td>
</tr>
<tr>
<td><strong>Spring 2010</strong></td>
<td>April 30, 2010</td>
<td>May 7, 2010</td>
</tr>
</tbody>
</table>

Regardless of when the thesis or dissertation is submitted, students should allot enough time to submit their final draft, receive the review of it and make any final changes before the deadline to finish in a given semester. See Table 4.2 for deadlines for upcoming semesters.

Theses and dissertations are reviewed in the order they are received by the Graduate School. Every effort is made to review documents in a timely manner; however, students should keep in mind that the end of the semester is a busy time for reviewer, and reviews may take longer than in the middle of a semester.

### 4.4.2. How to submit

To complete the submission process, students will:

1. Complete a draft of TD-Bindery. This form orders the necessary paper copies of the thesis or dissertation and contains the invoice for payment of the publication fees. Students will check with their graduate program assistant, advisor and committee to ensure that the appropriate number of paper copies are ordered.

2. Submit their final thesis or dissertation and draft of TD-Bindery to Blackboard ([http://courses.mtu.edu](http://courses.mtu.edu)) using the instructions available online.

   a. If the final copy of the thesis or dissertation is accepted for publication by the Graduate School, the thesis editor will check and return an electronically signed copy of TD-Bindery.

   b. If the final copy of the thesis or dissertation is not accepted for publication by the Graduate School, the student must re-submit their document with the required changes along with an updated TD-Bindery form if required. The document must be accepted in its final form no later than the final form deadline to graduate in the desired semester.
3. Submit the final, accepted copy to ProQuest/UMI using their online submission process available at: http://dissertations.umi.com/michigantech. Use the instructions available online to complete the submission. Traditional Publishing (or option TR-1) is the minimum requirement. Open Access publishing, registration of the copyright, and printed copies from ProQuest/UMI are options that students may select if desired. Students may begin this process before receiving final approval of their document but must ensure that the copy submitted to Blackboard and ProQuest/UMI are identical.

4. Obtain any signatures required from the graduate program on TD-Bindery. Signatures are required from the graduate program assistant or advisor and from each account holder if the student is using university accounts to pay for any portion of the publishing costs.

5. Obtain original signatures for the signature page of the thesis or dissertation. The signatures of the student’s advisor, co-advisor (if applicable) and chair of the program’s department are required. If the program resides in a school, the signature of the dean of the school is required instead of a department chair. Interdisciplinary programs that do not reside in an academic department or school, such as atmospheric sciences, require the signature from the chair or dean of the administrative home department or school. Signatures of the committee members are optional.

6. Pay the fees indicated on TD-Bindery at the Cashier’s office and obtain a receipt. Take the signed invoice, receipt for payment, and the original, signed signature page to the Graduate School.

Once all publication fees have been paid and it has been verified that the student has completed all other requirements for graduation, the electronic copies of the document will be released to the University library. Documents are submitted to ProQuest/UMI after degrees are granted for the semester.

5. Academic integrity and responsible conduct for research

All work done by students, faculty and staff is expected to be completed with the highest level of integrity and to follow the code of conduct for the University and each individual’s field. Michigan Tech addresses academic integrity and misconduct in research, scholarly, and creative endeavors (hereafter, “misconduct”) in separate policies and procedures. The integrity of academic assignments is addressed by the Academic Integrity Policy (Senate Proposal 8-06, http://www.sas.it.mtu.edu/usenate/propose/06/8-06.htm), while the integrity of research is addressed by the Misconduct in Research, Scholarly, and Creative Endeavors Policy (Senate Proposal 4-08, http://www.sas.it.mtu.edu/usenate/propose/08/04-08.htm). A thesis or dissertation is considered research, and allegations of misconduct are handled according to the misconduct procedures.
5.1. Definitions

All student work will be completed with the highest level of integrity and follow the code of conduct for the University and the student’s field. Misconduct includes, but is not limited to, fabrication, falsification, or plagiarism. The misconduct procedure found at:


provides definitions of these terms as well as what misconduct does not include. These are copied below for easier reference:

1. **Fabrication** is making up data or results and recording or reporting them.
2. **Falsification** is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.
3. **Plagiarism** is the appropriation of another person’s ideas, processes, results, or words as if they were one’s own without giving appropriate credit to the originator as is commonly practiced in the community of one’s discipline. Plagiarism also includes self-plagiarism, for example publishing the same work in multiple refereed scholarly journals without receiving permission to do so.
4. Misconduct does not include honest error or differences in opinion. For example, if former collaborators on a research project or proposal make independent use of jointly-developed concepts, ideas, methods, descriptive language or the product of the joint work, or if one of the collaborators subsequently fails to credit the other(s), this is an example of an authorship or credit dispute.

Although not an exhaustive list of what constitutes misconduct, this can serve as an initial guide for the student.

5.2. Responsibilities

Students, faculty and the Graduate School have distinct responsibilities in ensuring that the thesis or dissertation submitted has been completed following the appropriate codes of conduct. This section details these responsibilities.

5.2.1. Students

Students must:

- Understand what constitutes misconduct. This includes reading the academic integrity and misconduct policies and any codes of conduct for their fields. Not understanding what constitutes misconduct does not excuse any student from infringements of the policies.
• Prepare their documents with adequate time for faculty to provide useful comments and assist them with their writing.

• Seek assistance from university staff such as an advisor, a Graduate School staff member, or a Writing Center coach if what constitutes misconduct is unclear.

• Review their work for possible plagiarism. This can be done manually by carefully examining the sources cited and the student’s work or by using the turnitin.com software available on the Graduate School Blackboard course. See the online instructions for how to use this service and how to interpret the results. Graduate School staff are also available to assist.

5.2.2. Faculty

Faculty must:

• Ensure that students have access to appropriate codes of conduct for their field and assist them in identifying these resources.

• Encourage students to seek out professional development opportunities that will aid them in their careers as researchers. These opportunities may include seminars or on-campus workshops.

• Read drafts of student work and provide useful comments that will assist students with their writing. Students who need additional help with writing should be directed to the Writing Center for weekly appointments with writing coaches or to an editor.

• Sign the signature page of the thesis or dissertation to approve the final document. This signature is the faculty assurance that the document has been prepared in a manner consistent with Michigan Tech policies and codes of conduct for their field. It is also their assurance that, to the best of their knowledge, the work included in the thesis or dissertation was carried out by the student.

5.2.3. Graduate School

The Graduate School is responsible for awarding graduate degrees and ensuring that these degrees are completed with integrity. The form TD-Publishing includes an originality statement that will be signed by the student and advisor. Students will certify that they, along with their advisor, have submitted an original document that has been verified by them using any procedures they choose. Students may also request that the Graduate School submit their document to a plagiarism detection service. Regardless of the choice, the Graduate School strongly recommends the use of plagiarism detection software to quickly and accurately search for common instances of plagiarism. Students may submit their own documents, and view their own originality reports, at any time on the Blackboard course. Log into http://courses.mtu.edu, navigate to the Graduate School course and access turnitin.com from the “Writing Tools” page.
If students choose to ask the Graduate School to submit their document to a plagiarism detection service, or their document has been randomly selected for screening at the draft stage, several important facts must be kept in mind.

- Plagiarism detection software is a tool to determine if text in the thesis or dissertation matches sources from internet and archived materials, such as books or journal articles. It does not assign blame or make students plagiarists. **At the draft stage, there are no penalties if a submitted document contains plagiarized material.** Graduate School staff will work with the student to identify appropriate resources to assist the student in revising their document.

- Students will be able to view their originality reports on Blackboard. Graduate School staff are available to assist in the interpretation of these results.

- Documents will be submitted in such a way that they will not be stored on the turnitin.com server in order to protect the intellectual property of the student.

- Documents will have the preliminary pages (title page, signature page, dedication page, preface, etc.) and reference list removed from the document prior to submission. This minimizes false matches and reduces the amount of identifying information present in the document. If students have additional material that identifies them in the document that they wish to have removed, please notify the Graduate School at the time of the request for review.

- A final draft will be submitted to the same plagiarism detection software to ensure that all changes were made. Students may re-submit their own intermediate drafts at any time via the Blackboard course.

If plagiarism is found in a final document submitted in partial fulfillment of degree requirements, this will be considered misconduct, and the actions described below will be taken.

**5.3. Misconduct procedures**

When misconduct is suspected in a final thesis or dissertation submitted in partial fulfillment of degree requirements, it will be forwarded to the director of research integrity and compliance in accordance with University misconduct procedures. These procedures are found at:


An inquiry committee will determine if there is sufficient evidence of misconduct to warrant an investigation. Allegations that are considered research misconduct are sent to an investigation committee who determines, based on a preponderance of the evidence, if misconduct occurred and, if so, what type, to what extent, who was responsible, and its seriousness. A draft of the
investigation report is sent to the student and the student is given the opportunity to respond. The student response becomes a part of the investigation report. The investigation report, findings, and the recommended actions regarding the student are submitted to the dean of the Graduate School for the dean’s recommendation before submitting to the deciding official. Possible sanctions include, but are not limited to, expulsion or withdrawal of a previously awarded degree. If federal funds are involved, additional sanctions determined by the deciding official may be applied. Appeals may be made to the provost and vice president for academic affairs in accordance with section XI of the misconduct procedures.

If it is determined that the allegations have merit, but are considered an academic integrity violation rather than misconduct, the procedures in support of Michigan Tech’s academic integrity policy will be followed:

http://www.studentaffairs.mtu.edu/dean/judicial/policies/academic_integrity.html

An academic integrity hearing will result in sanctions that can be appealed to the dean of the Graduate School.

6. Degree programs and degree types

The title page and signature page both require the listing of the degree type (Master of Science, Doctor of Philosophy, etc.) and the degree program. The signature page also lists the administrative home department or school for each student. It is important to identify these correctly on the title and signature page because this information is used to properly catalog the document in the Library. Some programs are housed within departments, such as the PhD in Electrical Engineering. This degree program (Electrical Engineering) is housed within a department (Electrical and Computer Engineering). Note that the program and department do not necessarily share the same name.

Students pursuing degree programs overseen by a school will list the school and obtain the signature of the school’s dean.

Some degree programs, such as atmospheric sciences, are non-departmental, and are overseen by the Graduate School. Students in these programs will list the department or school assigned as their administrative home. This department or school is generally assigned based on the primary appointment of the advisor.

A current listing of degree types, degree programs, and units responsible for program oversight is shown in Table 6.1 for master’s programs, and Table 6.2 for doctoral programs.
Table 6.1.
Listing of master’s programs. The degree program name is placed on the title and signature page. The administrative home department or school is placed on the signature page. For all programs listed in this table, the degree type is “Master of Science” and the document type is a thesis.

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>Administrative Home Department or School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Ecology</td>
<td>School of Forest Resources and Environmental Science</td>
</tr>
<tr>
<td>Applied Natural Resource Economics</td>
<td>School of Business and Economics</td>
</tr>
<tr>
<td>Applied Science Education</td>
<td>Department of Cognitive and Learning Sciences</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>Department of Biological Sciences</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>Department of Chemical Engineering</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Department of Chemistry</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>Department of Civil and Environmental Engineering</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Department of Computer Science</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>Department of Electrical and Computer Engineering</td>
</tr>
<tr>
<td>Engineering Mechanics</td>
<td>Department of Mechanical Engineering-Engineering Mechanics</td>
</tr>
<tr>
<td>Environmental Engineering</td>
<td>Department of Civil and Environmental Engineering</td>
</tr>
<tr>
<td>Environmental Engineering Science</td>
<td>Department of Civil and Environmental Engineering</td>
</tr>
<tr>
<td>Environmental Policy</td>
<td>Department of Social Sciences</td>
</tr>
<tr>
<td>Forest Ecology &amp; Management</td>
<td>School of Forest Resources and Environmental Science</td>
</tr>
<tr>
<td>Forest Molecular Genetics &amp; Biotechnology</td>
<td>School of Forest Resources and Environmental Science</td>
</tr>
<tr>
<td>Forestry</td>
<td>School of Forest Resources and Environmental Science</td>
</tr>
<tr>
<td>Geological Engineering</td>
<td>Department of Geological and Mining Engineering and Sciences</td>
</tr>
<tr>
<td>Geology</td>
<td>Department of Geological and Mining Engineering and Sciences</td>
</tr>
<tr>
<td>Geophysics</td>
<td>Department of Geological and Mining Engineering and Sciences</td>
</tr>
<tr>
<td>Industrial Archaeology</td>
<td>Department of Social Sciences</td>
</tr>
<tr>
<td>Materials Science and Engineering</td>
<td>Department of Materials Science and Engineering</td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td>Department of Mathematical Sciences</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>Department of Mechanical Engineering-Engineering Mechanics</td>
</tr>
<tr>
<td>Mining Engineering</td>
<td>Department of Geological and Mining Engineering and Sciences</td>
</tr>
<tr>
<td>Physics</td>
<td>Department of Physics</td>
</tr>
<tr>
<td>Rhetoric &amp; Technical Communications</td>
<td>Department of Humanities</td>
</tr>
</tbody>
</table>
Table 6.2.
Listing of doctoral programs. The degree program name is placed on the title and signature page. The administrative home department or school is placed on the signature page. Note that students in non-departmental programs will be assigned an administrative home which is typically the department or school where the advisor has an academic appointment. For all programs listed in this table, the degree type is “Doctor of Philosophy” and the document type is a dissertation.

<table>
<thead>
<tr>
<th>Degree Program</th>
<th>Administrative Home Department or School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atmospheric Sciences</td>
<td>Varies for each student</td>
</tr>
<tr>
<td>Biological Sciences</td>
<td>Department of Biological Sciences</td>
</tr>
<tr>
<td>Biomedical Engineering</td>
<td>Department of Biomedical Engineering</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>Department of Chemical Engineering</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Department of Chemistry</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>Department of Civil and Environmental Engineering</td>
</tr>
<tr>
<td>Computational Science &amp; Engineering</td>
<td>Varies for each student</td>
</tr>
<tr>
<td>Computer Science</td>
<td>Department of Computer Science</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>Department of Electrical and Computer Engineering</td>
</tr>
<tr>
<td>Engineering Physics</td>
<td>Department of Physics</td>
</tr>
<tr>
<td>Environmental Engineering</td>
<td>Varies for each student</td>
</tr>
<tr>
<td>Forest Molecular Genetics &amp; Biotechnology</td>
<td>School of Forest Resources and Environmental Science</td>
</tr>
<tr>
<td>Forest Science</td>
<td>School of Forest Resources and Environmental Science</td>
</tr>
<tr>
<td>Geological Engineering</td>
<td>Department of Geological and Mining Engineering and Sciences</td>
</tr>
<tr>
<td>Geology</td>
<td>Department of Geological and Mining Engineering and Sciences</td>
</tr>
<tr>
<td>Industrial Heritage &amp; Archaeology</td>
<td>Department of Social Sciences</td>
</tr>
<tr>
<td>Materials Science and Engineering</td>
<td>Department of Materials Science and Engineering</td>
</tr>
<tr>
<td>Mathematical Sciences</td>
<td>Department of Mathematical Sciences</td>
</tr>
<tr>
<td>Mining Engineering</td>
<td>Department of Geological and Mining Engineering and Sciences</td>
</tr>
<tr>
<td>Physics</td>
<td>Department of Physics</td>
</tr>
<tr>
<td>Rhetoric &amp; Technical Communications</td>
<td>Department of Humanities</td>
</tr>
</tbody>
</table>
7. Sample pages

The pages that follow show sample layouts for title and signature pages. The description of a title page can be found in Section 3.6.1, page 9 and the description of a signature page can be found in Section 3.6.2, page 11. Note that the degree program, degree type and administrative home department or school can be found in Table 6.1 (page 36) for master’s programs and Table 6.2 (page 37) for doctoral programs.
TITLE OF THESIS

By
Mary A. Doe

A THESIS
Submitted in partial fulfillment of the requirements for the degree of
MASTER OF SCIENCE
(Insert your degree program from Table 6.1)

MICHIGAN TECHNOLOGICAL UNIVERSITY
2009

© 2009 Mary A. Doe
TITLE OF DISSERTATION

By

Mary A. Doe

A DISSERTATION

Submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

(Insert your degree program from Table 6.2)

MICHIGAN TECHNOLOGICAL UNIVERSITY

2009

© 2009 Mary A. Doe
Sample Signature Page for Master’s Program

This thesis, “Title of Thesis,” is hereby approved in partial fulfillment of the requirements for the Degree of MASTER OF SCIENCE IN DEGREE PROGRAM. (Replace DEGREE PROGRAM with your degree program from Table 6.1)

Enter administrative home department or school from Table 6.1

Signatures:

Thesis Advisor _________________________________________
Type name of advisor

Thesis Co-Advisor _________________________________________
(if applicable, required) Type name of co-advisor

Committee Member _________________________________________
(include all or none) Type name of committee member

Department Chair _________________________________________
(Dean for Schools) Type name of department chair or dean

Date _________________________________________
This dissertation, “Title of Dissertation,” is hereby approved in partial fulfillment of the requirements for the Degree of DOCTOR OF PHILOSOPHY IN DEGREE PROGRAM. (Replace DEGREE PROGRAM with your degree program from Table 6.2)

Enter administrative home department or school from Table 6.2

Signatures:

Dissertation Advisor _________________________________________ Type name of advisor

Dissertation Co-Advisor _________________________________________ Type name of co-advisor
(if applicable, required)

Committee Member _________________________________________ Type name of committee member
(include all or none)

Department Chair _________________________________________ Type name of department chair or dean
(Replace with Dean for Schools)

Date _________________________________________
8. Suggested resources for students

The following books may assist students in preparing their documents. When the most current edition is available in the University library, a call number is provided.

8.1. Style guides


8.2. Writing guides

Previous editions of some of these books are available in the University library. The call number listed is the most recent edition of the book in the University library.


Michigan Technological University
Graduate School

Commencement Application (Walk) Form

Students must have permission of their advisor and graduate program director or department chair if they plan to participate in commencement prior to completing all requirements for their degree. This form is due in the Graduate School by 4:00 p.m. Friday TEN WEEKS prior to the date of the ceremony.

Fall commencement may be attended by students who finish that Fall or who will finish the following Spring semester. Spring commencement may be attended by students who finish that Spring or who will finish the following Summer semester. See the WebCal for dates: http://www.admin.mtu.edu/ure/Events2/ or the Academic Calendar: http://www.admin.mtu.edu/em/services/calendar/

Name_________________________________________ Student ID number_________________________________________

To avoid mispronunciation, please enter the phonetic pronunciation of your name in English - use "sounds like" words if that is helpful, e.g., "Wilderman" WEED-a-mun -or- "Taaffe" sounds like safe.

E-mail ___________________________ Department _____________________________________________

requests permission to walk in ________________________commencement.

Term (e.g., Fall 2008)

Graduation Semester________________________(e.g., Spring 2009) and Degree ______________________(e.g., MS, PhD)
(or Expected Graduation)

The student and the student's primary advisor agree that all materials, including the revised and approved thesis/report/dissertation, have been or will be completed and turned in to the Graduate School by the end of the current or following semester.

PhD Candidates ONLY:

Name of faculty member who will attend commencement and hood student.
(323,662),(676,754)

Advisor or Advisor Alternate Name PRINTED

Advisor or Advisor Alternate SIGNATURE

Approval Signatures (please print name next to signature):
Do Not sign if you are not confident that the student will finish during the current or following semester

Advisor (or 1st co-advisor) ___________________________ Date ________________

Department Chair (or Graduate Program Director) ___________________________ Date ________________

Assistant to the Dean of the Graduate School ___________________________ Date ________________

ALL Students:

Remind your advisor of your plan to walk closer to the ceremony date as (s)he might need to order academic garb to attend.

Grad School Use Only
Copies to: Student, Advisor, Department
Attach original to M4/D5

Rev. 2/3/2009
Doctoral Finishing Fellowships

Each semester, the Graduate School will award Finishing Fellowships that provide support to PhD candidates who expect to finish during the following semester. These fellowships are available through the generosity of alumni and friends of the University. They are intended to recognize outstanding PhD candidates who are making positive contributions that support the University's efforts to attain goals outlined in The Michigan Tech Plan. The Graduate School anticipates funding up to ten fellowships per semester with support ranging from $2000 to full support (stipend + tuition). Students who receive full support through a Finishing Fellowship may not accept any other employment. For example, students cannot be fully supported by a Finishing Fellowship and accept support as a GTA or GRA.

Previous Recipients

- **Spring 2009**—Ganesh Kumar Arumugam (Chemistry), Moe (Robert) Folk (Rhetoric and Technical Communication), Stacie Holmes (Forest Science), Kateryna Lapina (Environmental Engineering), Jialiang Li (Electrical Engineering), Jason Makela (Mechanical Engineering - Engineering Mechanics), Jason Moscatello (Engineering Physics), Puspamitra Panigrahi (Physics), Soumyashree Sreehari (Chemistry), Cynthia Weber (Rhetoric and Technical Communication)
- **Fall 2008**—Clara Anton Fernandez (Forest Science), Justin Keske (Mechanical Engineering - Engineering Mechanics), Diane Miller (Rhetoric and Technical Communications), Laura Walz (Biomedical Engineering)
- **Summer 2008**—Christopher Anton (Mechanical Engineering-Engineering Mechanics), Rodrick Barton (Chemical Engineering), Joseph Bump (Forest Science), Haiying He (Physics), Maria Matiello Novak (Geology), Bharat Pokharel (Forestry), Jason Sommerville (Mechanical Engineering-Engineering Mechanics), Natee Tangtrakarn (Materials Science and Engineering), Pavan Valavala (Mechanical Engineering-Engineering Mechanics), Diego Villegas-Bermudez (Mechanical Engineering-Engineering Mechanics)
- **Spring 2008**
- **Fall 2007**

Eligibility

Students are eligible if all of the following criteria are met:

1. Must be a PhD student.
2. Must expect to finish in the next semester (or fall if applying in spring).
3. Must have submitted a Petition to Enter Full-Time Research Only Mode. No Finishing Fellowships will be awarded to students who fail to receive approval of their petition.

Application Procedure

- Nominations for Finishing Fellowships will be accepted each fall semester, spring semester, and summer session. Nominations for spring semester support will be accepted each fall. Nominations for fall semester and summer session support will be accepted each spring. There will be an additional competition for fall semester support during the summer, but only those students who have no other source of support for fall semester are eligible for nomination during the summer.
- Nominations for Fall Finishing Fellowships are closed. Nominations for fall and summer 2009 will be announced in mid-spring 2009.
- Applicants must complete an application form.
- The application package must also include:

Changing degree programs

There are three cases in which a student might consider changing programs. The procedures for each case are outlined below.

Changing to a program in a new academic area

Students who wish to pursue a degree in a program not administered by their current administrative home department or school must submit a new application to the Graduate School. The new program will consider the application as part of its regular admissions process. Students currently in a non-departmental program (e.g., PhD programs in Atmospheric Sciences, Environmental Engineering, or Computational Science and Engineering) or wishing to enter a non-departmental program must submit a new application to the Graduate School for the new program’s consideration.

Changing from a master’s to a doctoral program in the same academic area

Students who wish to change from a master’s to a doctoral program in their current academic area should first check with their department or school on whether or not they are required to submit a new application or if submission of their D4 form, “Acceptance into the Doctoral Program from a Michigan Tech Master’s Program” form is adequate. This D4 form may be accepted by some departments or schools in lieu of a new application. Non-departmental PhD programs may or may not accept this form, and students are advised to check with their program director for the appropriate non-departmental PhD program to determine if a new application is required. When a new application is required, the graduate program will consider the application as part of the regular admissions process.

Changing from a doctoral to a master’s program in the same department

Students who wish to change from a doctoral to a master’s program in their current academic area must formally request the change by writing a letter to their advisor(s) and the graduate program director of their current graduate program. The advisor(s) and graduate program director will review the request and will make a recommendation to the chair or dean of the student’s academic home department or school regarding the proposed change in status. The department chair or school dean will review the issue and make a recommendation to the dean of the Graduate School. The dean of the Graduate School will make the final decision regarding the student’s proposed change in status and will notify the student, department chair or school dean, graduate program director, and the student’s advisor(s) of the decision once it has been made. All credits and courses are transferable to the new program as allowed by the requirements of the individual master’s program. Students who wish to change from a non-departmental PhD program into a master’s program must first notify their advisor(s) and the graduate program director for their non-departmental program. They must then submit a new application for admission into the master’s program. This application will be considered as part of the regular admissions process.
Master's Path - Current Policy with Proposed Policy Shown using Track Changes

(from http://www.gradschool.mtu.edu/catalog/masters_path.html)

Master’s Path Program

For students who have completed a three-year bachelor’s program outside the US. See our brochure for more information.

Background

Some colleges and universities outside the US are moving to a three-year bachelor’s degree and a five-year master’s degree. After obtaining the three-year degree in their home country, many students would like to go abroad to pursue a high-quality master’s degree, gain international experience, and perfect their English. The Michigan Tech Master’s Path Program allows students to pursue a master’s degree directly, rather than requiring they first complete a bachelor’s program at a US institution. The Master’s Path Program is offered in twenty-three disciplines in the sciences, engineering, forestry, communications, social sciences, and business.

Application Process

Students apply for graduate admission using the international forms, specifying "Master’s Path." Applications must be approved by both the department chair and by the Graduate School.

Suggested minimum admissions criteria:

- Completion of recognized three-year degree in appropriate area
- Statement of purpose, official transcripts
- Three letters of reference
- Adequate academic achievement in pursuit of the three-year degree
- GRE/general test results, if required by graduate program,
- Proof of English proficiency TOEFL (at least 550 written, 213 computer-based, or 79 internet based) or ILETS (a score comparable to TOEFL requirements)

Master’s Path Curriculum

Students who hold a 4-year bachelor’s degree are required to take at least 30 semester credits beyond the bachelor’s for their master’s degree. Students entering the Master’s Path Program with a 3-year bachelor’s degree will may be required to take additional credits depending on their preparation in the chosen field of study. The transcript of each accepted student is reviewed by the graduate program’s graduate committee, which delineates the specific course requirements needed for completion of the master’s degree.

Based on the specific Michigan Tech degree program, the student’s focus, and the transcript review, a set of bridge courses, required in addition to the 30 credits, is may be defined. Courses on the student’s transcript
Graduate Dean’s List

Michigan Tech takes pride in those graduate students who, by their diligence and motivation, have achieved the Graduate Dean’s List.

Criteria which qualify students are:

- Graduate status
- 9 or more GPA credits must be completed
- GPA = 4.00

Each semester, the registrar submits to the Dean of the Graduate School the names of full-time graduate students who earn a 4.00 or higher grade point average. The Dean of the Graduate School reviews and approves the list. The names are published as the Graduate Dean’s List. When students earn a 4.00 GPA, both they and their parents receive a letter notifying them of the achievement.
Graduate Faculty Council

Agenda
February 3, 2009

1. Review minutes of 1/6/2009
2. Old Business
   a. Finishing Fellowships (Dean Huntoon) - rewrite needs final review
   b. Committee Reports (N. Auer)
   c. Policy on changing graduate programs (Dean Huntoon) - rewrite needs final review
3. New Business
   a. Master's Path Policy Change
   b. Procedures to prepare and submit a thesis or dissertation to Michigan Technological University's Graduate School (Thesis & Dissertation Committee)
   c. Proposal to instate a Graduate Dean's List