INTRODUCTION

Welcome to the Northeastern University Chemical Engineering Graduate Program. The goals of our Graduate Program are (1) to create an effective learning environment that provides consistent, high-quality educational opportunities to all students, and (2) to promote scholarly achievement for both faculty and students. This graduate guidebook is a living document to provide guidance to students on policies designed to ensure that the Graduate Program reaches these goals. Each new graduate student is provided a hard copy of the current Chemical Engineering Graduate Guidebook, and an on-line copy is always kept up-to-date. Once a year, the document is reviewed by faculty and graduate students. Any updates are announced, and available to current graduate students through the on-line copy: http://www.northeastern.edu/che/graduate/che-graduate-student-guidebook/. Any policy changes are determined to be retroactive or not based on ensuring no negative impact on current students.

This guidebook contains college and department graduation requirements as well as department policies. Although this guidebook is intended to be a common source for all information students need, it is ultimately each student’s responsibility to verify graduation requirements and necessary deadlines with the College of Engineering (COE) Graduate Office. Questions or suggestions on the content contained in this guidebook should be directed to the Departmental Graduate Committee. Contact information for the Departmental Graduate Committee can be found in the main Chemical Engineering Department Office.

This guidebook contains forms in the appendices and referred to in the document that are the student’s responsibility to complete in a timely manner as explained in the guidebook. These forms are to be submitted to the Chemical Engineering Department Office, which will maintain files on the each student’s progress and pass on needed information to the Departmental Graduate Committee.

In pursuit of his or her research and career goals, a student may wish to follow an academic path that varies from the standard programs described in this guidebook. In such cases, a petition form, available in the COE Graduate Office, must be completed by the student, approved by the faculty research advisor, and submitted to the Departmental Graduate Committee through the Chemical Engineering Department Office. Any reference to “petition”, “petition form”, “by petition” or “through petition” in this document refers to the petition form available in the COE Graduate Office and the procedure described above. More details can be found on the COE Graduate Office website: http://www.coe.neu.edu/gse/.

Department of Chemical Engineering

The Department of Chemical Engineering offers the degrees of Master of Science (M.S.) and Doctor of Philosophy (Ph.D.). The Master of Science degree in Chemical
Engineering is offered with a thesis (full-time) or a non-thesis (full-time or part-time) option. The Doctor of Philosophy degree in Chemical Engineering may only be pursued on a full-time basis. A full-time M.S. student may apply for participation in the Cooperative Education Plan (see: http://www.coe.neu.edu/gse/academic_info/coop.html for requirements and contact information). M.S. students pursuing the thesis option must first gain the consent of their advisor prior to participating in the Cooperative Education Plan. Any deviations from the traditional programs listed above (full-time thesis master’s, full-time non-thesis master’s, part-time non-thesis master’s, full-time thesis doctorate) must be addressed through petition to the graduate committee, and will be considered on a case-by-case basis.

Both full-time Doctoral Candidates and full-time Master of Science degree students pursuing a thesis are able to select thesis topics from a diverse range of faculty research interests. New graduate students can learn about on-going research topics from individual faculty members, faculty web sites, and graduate student seminars. Graduate student seminars are held on a regular basis and provide an interactive forum for learning and exchanging research ideas. Most courses are offered in the late afternoon or early evening to make them accessible to part-time students pursuing full-time industrial careers.

Per COE rules, all students must have a cumulative QPA\(^{1}\) greater than or equal to 3.0 to graduate. To maintain Departmental or COE funding, students must maintain a QPA greater than or equal to 3.0. If necessary, provisions to repeat courses to increase the QPA may be applied for through petition to the Chemical Engineering Graduate Committee.

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\(^{1}\) QPA (Quality Point Average) is the official Northeastern University nomenclature for grades on student transcripts, and thus the nomenclature used in this document. QPA and GPA (Grade Point Average) are interchangeable.
MASTER OF SCIENCE DEGREE REQUIREMENTS

The Master of Science in Chemical Engineering is normally pursued by students with a Bachelor of Science in Chemical Engineering or a closely allied field. Students wishing to pursue the M.S. Degree with undergraduate educational backgrounds other than Chemical Engineering may be required to complete supplementary undergraduate work. These courses are in addition to the minimum course requirements. The Departmental Graduate Committee will specify any additional requirements during the admission process.

Students originally admitted to the Chemical Engineering M.S. Program may petition the Chemical Engineering Graduate Committee for admission to the Ph.D. Program. Doctoral candidacy will be effective once the student has successfully completed all four core Chemical Engineering courses with a QPA of 3.5 or higher and has successfully presented and defended a Ph.D. dissertation proposal. For further information, see the next section, THE DOCTOR OF PHILOSOPHY DEGREE.

A M.S. course-only student whose primary language is English is considered “full-time” if registered for a minimum of twelve semester hours of credit per continuous Fall and Spring semesters. A M.S. course-only student for whom English is a second language is considered “full-time” if registered for a minimum of eight semester hours of credit per continuous Fall and Spring semesters.

A M.S. thesis student whose primary language is English is considered “full-time” if registered for a minimum of twelve semester hours of credit or Thesis Continuation (0SH) per continuous Fall, Spring, and Summer semesters. A M.S. thesis student for whom English is a second language is considered “full-time” if registered for a minimum of eight semester hours of credit or Thesis Continuation (0SH) per continuous Fall, Spring, and Summer semesters.

Any student who holds a Stipended Graduate Assistantship (i.e. TA or RA or Government Stipend) is considered full-time if enrolled in a minimum of six semester hours of credit or Thesis Continuation (0SH). The COE Graduate School does not require part-time students to maintain any minimum enrollment.

NOTE: Definitions of full-time and part-time status are determined by the COE Graduate Office. It is each student’s responsibility to be aware of COE requirements. See: http://www.coe.neu.edu/gse/academic_info/academic_policies.html#1

Course Requirements
A minimum of 30 semester hours (SH) of academic work is required of all full-time students (continuous and cooperative full-time students) to qualify for the Masters in Chemical Engineering (see Table 1). IF PURSUING A THESIS OPTION, at least six semester hours of thesis credit must be included as part of these 30 credits, and more semester hours can be thesis credit upon approval of the faculty research advisor. In
addition, each student pursuing a thesis option must enroll in the Department’s seminar course for each semester (including summer semester) they are matriculating toward their degree. The faculty advisor and student establish the sequence of courses that students take to pursue the Master of Science in Chemical Engineering. Full-time Master of Science students who complete the required 6SH Thesis work (CHME 7990) are required to register for CHME 7996 Thesis Continuation (0SH) until the thesis is completed, UNLESS they are taking enough classes to be considered full time. **Note that although no credits are associated with CHME 7996 (Thesis Continuation), a student registered for this course is considered full-time.** This is especially important for international students to maintain their F1 VISA status.

**IF PURSING A NON-THESIS OPTION, students must complete a minimum of 32 SH of course work, and no enrollment in Seminar is required. Required Core Courses and example elective courses for all graduate students are provided in Table 2.**

Table 1: Course Requirements for Master of Science Degree (Thesis and Non-Thesis)

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Thesis Options</th>
<th>Non-Thesis Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Core Courses</td>
<td>16 SH</td>
<td>16 SH</td>
</tr>
<tr>
<td>Master of Science Thesis</td>
<td>6 SH</td>
<td>N/A</td>
</tr>
<tr>
<td>Seminar</td>
<td>0 SH</td>
<td>N/A</td>
</tr>
<tr>
<td>Elective Courses*</td>
<td>8 SH</td>
<td>16 SH</td>
</tr>
<tr>
<td>Minimum Semester Hours Required**</td>
<td><strong>30 SH</strong></td>
<td><strong>32 SH</strong></td>
</tr>
</tbody>
</table>

* students may complete a maximum of 8 SH (Thesis Option) or 12 SH (Non-Thesis Option) of course work for credit outside of the Chemical Engineering Department under guidance of their advisor and approval of the Graduate Coordinator.

** exclusive of any preparatory undergraduate courses
Table 2: Chemical Engineering Course Offerings

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHME 7320</td>
<td>Chemical Engineering Mathematics</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7330</td>
<td>Chemical Engineering Thermodynamics</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7340</td>
<td>Chemical Engineering Kinetics</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7350</td>
<td>Transport Phenomena</td>
<td>4SH</td>
</tr>
</tbody>
</table>

**Required Core Courses (M.S. Thesis Option Only)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHME 7990</td>
<td>Master of Science Thesis</td>
<td>6SH</td>
</tr>
<tr>
<td>CHME 7996</td>
<td>Master of Science Thesis Continuation</td>
<td>0SH</td>
</tr>
<tr>
<td></td>
<td>Seminar CHME 7390</td>
<td>0SH</td>
</tr>
</tbody>
</table>

**Elective Courses***

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHME 7201</td>
<td>Fluid Mechanics</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7202</td>
<td>Chemical Process Heat Transfer</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7203</td>
<td>Separation Processes</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7204</td>
<td>Heterogeneous Catalysis</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7205</td>
<td>Numerical Techniques in Chemical Engineering</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7210</td>
<td>Advanced Chemical Engineering Calculations</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7220</td>
<td>Electronic Materials Processing</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7221</td>
<td>Thin Film Technology</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7222</td>
<td>Principles of Membrane Processes</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7223</td>
<td>Biochemical Engineering</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7231</td>
<td>Chemical Process Dynamics and Control</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7240</td>
<td>Polymer Science</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7241</td>
<td>Principles of Polymerization</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7260</td>
<td>Special Topics in Chemical Engineering</td>
<td>4SH</td>
</tr>
<tr>
<td>CHME 7261</td>
<td>Special Topics in Chemical Engineering</td>
<td>2SH</td>
</tr>
<tr>
<td>ENGR 5670</td>
<td>Sustainable Energy: Materials, Conversion, Storage, and Usage</td>
<td>4SH</td>
</tr>
<tr>
<td>ENGR 6150</td>
<td>Nanotechnology in Engineering</td>
<td>4SH</td>
</tr>
</tbody>
</table>

* Any CHME or ENGR course at level 5000 or higher is automatically counted toward degree requirements. Any student wishing to take a 5000 level or higher course in another engineering discipline or in another College must get permission from their advisor and a petition form signed by the Graduate Coordinator and approved by the Graduate School of Engineering for the course to count toward their degree. While approval for a course can be gain by petition at any time, a student risks taking a course that will not count toward graduation if the petition form is not submitted and approved prior to the start of the course.

**Thesis Requirements**

Students pursing a Master of Science in Chemical Engineering with thesis must submit to the graduate school of engineering a written thesis that is approved by the
thesis committee and department head. The required format for the thesis body is supplied in Appendix A. The graduate school requirements and electronic submittal instructions can be found on the web: http://www.coe.neu.edu/gse. Students are responsible for contacting the Graduate School of Engineering for any updates to thesis requirements and appropriate deadlines. It is recommended that each M.S. candidate authors, from their thesis work, one or two papers for publication. Full-time M.S. students must also complete an oral Master’s Thesis Defense in order to successfully complete the program. The student will be expected to form a Master’s Thesis Committee, composed of a minimum of three members, one who is the advisor, one other faculty member from the Chemical Engineering Department, and one member from outside of the department of chemical engineering. The primary thesis advisor must be a faculty member in the Chemical Engineering Department. A Thesis Committee Approval form is provided in the Appendix, and must be submitted to the Chemical Engineering Department Office at any time, but no later than one month before the thesis defense. A departmental quorum, consisting of 6 faculty members with primary or secondary appointments in the chemical engineering department, must be present for the oral master thesis defense. The oral presentation will be open to the public, including students, faculty, and the candidate’s committee. The thesis committee and any interested faculty may stay after the public is dismissed to further examine the candidate’s work. The committee gives the final approval on the candidate’s oral defense, and the committee decision must be unanimous to approve.

It is the candidate’s responsibility to schedule the oral defense one month ahead of time to ensure departmental quorum attendance, and full committee attendance. Two weeks prior to the thesis defense and oral examination, the candidate must submit copies of a complete thesis draft to each thesis committee member. One week prior to the oral defense, the candidate must submit to all Chemical Engineering faculty members and graduate students an abstract that summarizes the original work. The signatures of the committee members, the Department Chair, and the Dean of the Graduate School on the signature page of the final written thesis signifies that the student has passed the thesis defense and final oral examination. An example signature page (called by COE the “Approval Form”) can be found in the appendix, but official signature pages, along with COE thesis requirements, are found on the COE Graduate Office website: http://www.coe.neu.edu/gse/academic_info/thesis.html.

In order to walk in the Spring graduation ceremony prior to defending the thesis, the student must submit a complete draft of the thesis to their advisor and obtain their advisor’s signature on the “Permission to Walk without Defense” form in the Appendix.
Part-time Students

Part-time students may progress according to their abilities within the seven-year time limit. A minimum of 32 semester hours of academic course work is required for part-time students. The thesis and seminar course are not required for part-time students pursuing a course masters.

Master of Science students wishing to switch their status from part-time to full-time must notify the Chemical Engineering Department and make a formal petition to the Graduate School of Engineering. Refer to the regulations of the Graduate School of Engineering for further information on academic administrative policies.

Departure Prior to Thesis Completion

Occasionally, full-time graduate students have left the Department prior to completion of all their degree requirements. In such instances, long time intervals have often elapsed before theses or manuscript submission. Accordingly, the Department has adopted the guideline that an M.S. thesis cannot be submitted for a degree beyond three years after the student is no longer actively pursuing the research. Exceptions may be granted only upon petition to the Departmental Graduate Committee. The petition must demonstrate extenuating circumstances.

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2 See COE Graduate Office Website http://www.coe.neu.edu/gse/academic_info/academic_policies.html for updated details on the time limit between active enrollment periods.
THE DOCTOR OF PHILOSOPHY DEGREE

The Chemical Engineering Department offers the degree of Doctor of Philosophy. A doctoral student (i.e. Ph.D. student) becomes a Doctoral Candidate (i.e. Ph.D. Candidate) upon meeting the Qualifications for Doctoral Candidacy. After becoming a Doctoral Candidate, a student must complete the required academic course work, and a dissertation under the direction of a Dissertation Advisor. To be granted the degree of Doctor of Philosophy in Chemical Engineering, a candidate must pass a Dissertation Defense and Final Oral Examination.

Doctoral candidacy will be effective once the student has successfully completed all four core Chemical Engineering courses with a QPA of 3.5 or higher and has successfully presented and defended a Ph.D. dissertation proposal. If a student does not meet the 3.5 GPA requirement and wishes to be re-considered for Ph.D. Candidacy, then the student must produce and submit a paper (journal article) on which he/she is the first author by the semester following his/her completion of the four core Chemical Engineering courses. The student must also request permission from the faculty (through their research advisor) for the opportunity to defend a dissertation proposal within 1 year of their completion of the four core Chemical Engineering courses. If the student fails to meet the deadline for paper submission or proposal defense due to extenuating circumstances, he/she must consult with the advisor (for RAs) or the advisor and graduate committee (for TAs) to determine their eligibility for an extension. The maximum extension is one year, and only one extension will be provided. Doctoral candidacy will be effective once the paper is accepted and a Ph.D. dissertation proposal has been successfully presented and defended. Students failing to meet these requirements for Ph.D. Candidacy and can opt to complete a M.S. degree.

To maintain full-time status, funded Ph.D. students and candidates (i.e. TAs or RAs or students on Government Stipends) must be registered for a minimum of six semester hours of credit or Dissertation (0SH) or Dissertation Continuation (0SH) per continuous Fall, Spring, and Summer semesters.

An unfunded Ph.D. student or candidate whose primary language is English is considered “full-time” if registered for a minimum of twelve semester hours of credit or Dissertation (0SH) or Dissertation Continuation (0SH) per continuous Fall, Spring, and Summer semesters. An unfunded Ph.D. student or candidate for whom English is a second language is considered “full-time” if registered for a minimum of eight semester hours of credit or Dissertation (0SH) or Dissertation Continuation (0SH) per continuous Fall, Spring, and Summer semesters.

Course Requirements
A minimum of 24 semester hours (SH) of academic course work, not including any independent study credits, beyond the Bachelor Degree is required. The 24 semester hours must include at least 16 semester hours of academic course work (exclusive of thesis or dissertation) taken at Northeastern University. All four of the core courses must
be included in the student’s academic graduate course work. See Table 3 for a summary of course requirements.

Table 3: Ph.D. Course Requirements

<table>
<thead>
<tr>
<th>Course Requirements</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Core Courses</td>
<td></td>
</tr>
<tr>
<td>CHME 7320  ChE Mathematics (4 SH)</td>
<td></td>
</tr>
<tr>
<td>CHME 7330  ChE Thermodynamics (4 SH)</td>
<td></td>
</tr>
<tr>
<td>CHME 7340  ChE Kinetics (4 SH)</td>
<td></td>
</tr>
<tr>
<td>CHME 7350 Transport Phenomena (4 SH)</td>
<td></td>
</tr>
<tr>
<td>CHME 7390 Seminar</td>
<td>0 SH</td>
</tr>
<tr>
<td>Elective Courses*</td>
<td>8 SH</td>
</tr>
<tr>
<td>CHME 9990 Dissertation</td>
<td>0 SH</td>
</tr>
<tr>
<td>CHME 9996 Dissertation Continuation</td>
<td>0 SH</td>
</tr>
</tbody>
</table>

Minimum Semester Hours Required** 24 SH

* See Table 2

** exclusive of any preparatory undergraduate courses, or independent study courses

Once a student is no longer taking a full-time course load, the student is required to register for CHME 9990 Dissertation followed by CHME 9996 Dissertation Continuation. Note that he or she must register for two (2) consecutive semesters of Dissertation (CHME 9990) before registering for Dissertation Continuation (CHME 9996). Students then register for Dissertation Continuation every semester until the dissertation is defended, and approved by the Dean of the Graduate School. Students successfully making progress toward their degree will earn a grade of “I/P” (In-Progress) for CHME 9990 Dissertation until the dissertation is defended and the grade is changed to “S” or “U” prior to graduation. CHME 9996 Dissertation Continuation is graded with either an “S” or a “U” and is not changed prior to graduation. Note: no course credits are awarded for CHME 9990 (Dissertation) or CHME 9996 (Dissertation Continuation), however a student is considered full-time if registered for this course. This is especially important for international students to maintain their F1 VISA status. All students pursuing a Doctoral Degree must enroll in the Department’s seminar course (CHME 7390) for each Fall and Spring semester they are matriculating toward their degree.

If a student who was working on a Masters Thesis is pursuing a Ph.D. without first completing their Masters Thesis, the masters thesis credit earned during the first years of study (up to 6SH) can be transferred to independent study credits, but not counted toward the 24 SH minimum course requirements for the Ph.D. degree. If a student completes the M.S. degree, then the credits stay as recorded for their M.S. degree requirements, but the thesis credits do not count toward the Ph.D. degree.

Students will be advised on their courses for the first semester by the Graduate Coordinator during orientation. After the first semester, students will work with their faculty research advisor to determine appropriate courses and course schedule to meet their educational needs and aspirations. Upon consultation with the advisor, a student
may take any number of course credits without additional financial penalty. Students and Advisors should keep in mind that the requirements for Doctoral Candidacy include all four core courses and the proposal defense, and that the residency requirement requires a minimum of 1 full year of academic studies after becoming a Doctoral Candidate.

Language Requirement

There is no foreign language requirement for the Doctor of Philosophy Degree. The candidate must be proficient in technical writing and oral presentation in the English language. The Departmental Graduate Committee may require additional course work to increase a student’s English proficiency.

Residence Requirement

The residence requirement is satisfied by completing 1 academic year of full-time graduate studies after successfully becoming a doctoral candidate (see next section). Additional academic course work (exclusive of thesis and seminars) may be required during this period.

Qualifications for Doctoral Candidacy

To qualify for doctoral candidacy, the student must demonstrate mastery of the four core areas of chemical engineering (Thermodynamics, Kinetics, Transport, and Mathematics) through course performance, and demonstrate critical thinking, analysis, and experimental planning skills related to their dissertation research topic through an Oral Proposal Defense. To become a Doctoral Candidate, the student must earn a 3.5 QPA, typically at the end of the first year, as an average considering all four core courses (see Table 2): Thermodynamics, Kinetics, Transport, and Mathematics. In addition, the student must pass, as determined by the student’s dissertation committee, an oral defense of the dissertation research proposal. The student earns the classification of Doctoral Candidate upon successful completion of these requirements.

If a student does not meet the 3.5 GPA requirement and wishes to be re-considered for Ph.D. Candidacy, then the student must produce and submit a paper (journal article) on which he/she is the first author by the semester following his/her completion of the four core Chemical Engineering courses. The student must also request permission from the faculty (through their research advisor) for the opportunity to defend a dissertation proposal within 1 year of their completion of the four core Chemical Engineering courses. If the student fails to meet the deadline for paper submission or proposal defense due to extenuating circumstances, he/she must consult with the advisor (for RAs) or the advisor and graduate committee (for TAs) to determine their eligibility for an extension. The maximum extension is one year, and only one extension will be provided. Doctoral candidacy will be effective once the paper is accepted and a Ph.D. dissertation proposal has been successfully presented and defended. Students failing to meet these requirements for Ph.D. Candidacy and can opt to complete a M.S. degree.

The Proposal Defense consists of a written dissertation proposal and an oral defense of that proposal, usually presented in the summer of the first year or Fall of the second year. The student wishing to pursue a doctoral degree must prepare a Dissertation
Proposal. This will include the problem definition, a critical review of the literature, the research goals, a proposed experimental plan, and a methodology for analysis of results. Note that the Dissertation Proposal DOES NOT REQUIRE ANY RESULTS collected by the student. So, a student’s proposal may or may not include preliminary results. The format of the document should match the format (Appendix A) of the final dissertation as much as feasible. One month prior to the Oral Proposal Defense, the student must arrange for the time and location of the defense in order to ensure that a quorum of faculty, consisting of 6 faculty members with primary or secondary appointments in the chemical engineering department, as well as the full committee (see definition below), will attend. Two weeks prior to the Oral Proposal Defense, the student must:

1. submit to all Chemical Engineering faculty a 25-page Dissertation Proposal Digest that summarizes the proposed work,
2. place 3 copies of the full Dissertation Proposal in the Chemical Engineering main office to be available to faculty, and
3. submit the full Dissertation Proposal to the dissertation committee.

The oral presentation will be open to students, faculty, and the student’s committee. The dissertation committee and any interested faculty may stay after the general audience is dismissed to further examine the student’s proposed work. In the oral presentation the student must present a clear argument for the proposed work, present a critical literature analysis, defend an experimental plan, and show knowledge of the research topic. The committee gives the final approval on the student’s oral defense, and will sign a proposal approval sheet (Appendix B) upon successful completion of the Oral Proposal Defense. This indicates approval of the dissertation topic and its plan of execution. The student thus earns the classification of Doctoral Candidate. The signed approval form will be kept in the main Chemical Engineering office.

In the event that a student does not pass the oral proposal defense, he or she can choose to petition the faculty, through the graduate coordinator, to redo the proposal document and oral defense. Or, the student can choose to graduate with Masters Degree.

Dissertation Committee Selection

The student is responsible for proposing a dissertation committee to be approved by the dissertation advisor at least one month prior to the Oral Proposal Defense. The committee must have a minimum of 3 members, in addition to the primary advisor. The primary dissertation advisor must be a faculty member in the Chemical Engineering Department. Additionally, one of these committee members must be external to the department of chemical engineering. Committee membership is not limited to faculty at Northeastern University, nor to engineering faculty. The student is encouraged to consider experts in the dissertation topic, and to work with the dissertation advisor to create a meaningful and helpful committee. The committee approval form is given in Appendix C. The form will be filed in the Chemical Engineering Office. Committee membership may be changed, with approval of the dissertation advisor, up to 1 semester prior to the dissertation defense. The dissertation committee shall be kept informed of the progress of the student and meetings will be held as needed and as determined by the student and the advisor. The committee is required to attend the dissertation defense (virtual participation is acceptable as determined by the primary advisor) and will
approve the dissertation in its final form. As much as is feasible, the full committee should attend the Oral Proposal Presentation and all must sign the prospectus approval sheet declaring the student a Doctoral Candidate.

**Change in Dissertation Topic or Advisor**

Typically, students choose research topics and primary advisors in the first semester as a graduate student. In the unlikely event that circumstances require a change of dissertation advisor, the consequences likely include an extended stay for the student and additional funding, and may impact department resources. Thus, all advisor changes must be approved by the advisor of record, the Graduate Coordinator and the Department Chair.

**Dissertation**

After degree candidacy has been established, a candidate must complete original, publishable research. In order to be granted the Ph.D., a candidate must complete a written dissertation, which embodies the results of original research and includes material suitable for publication. Required dissertation format is the same as for the thesis (Appendix A) and the graduate school requirements and electronic submittal instructions can be found on the web: http://www.coe.neu.edu/gse. Students are responsible for contacting the Graduate School of Engineering for any updates to dissertation requirements and appropriate deadlines. It is recommended that each Doctoral Candidate author 4-6 archival papers from their dissertation research.

**Dissertation Defense and Final Oral Examination**

This comprehensive examination includes the oral public dissertation defense as well as a final oral examination to include the subject matter of the doctoral dissertation and significant developments in the field of the dissertation work. The oral presentation will be open to the public, including students, faculty, and the student’s committee. The final oral examination is open only to faculty and the student’s dissertation committee. A quorum, consisting of 6 faculty members with primary or secondary appointments in the chemical engineering department, is required for a doctoral defense. One month prior to the Dissertation Defense, the candidate must arrange for the time and location of the defense in order to ensure a quorum of faculty, as well as the full committee will be present. Two weeks prior to the Dissertation Defense and oral examination, the candidate must:

1. submit to all Chemical Engineering faculty a 25-page dissertation digest that summarizes the original work,
2. place 3 copies of the full dissertation (after dissertation is approved by the primary advisor) in the Chemical Engineering main office to be available to faculty,
3. submit copies of the full dissertation to each dissertation committee member, and
4. announce the agreed upon defense date and time to the public. The announcement to the public (including all faculty, students, and committee members) must include a 1-page abstract of the dissertation.

The Dissertation Committee makes the decision on approval of the Dissertation Defense, and approval requires a unanimous decision. The signatures of the committee members...
and the Department Head on the signature page of the final written dissertation signifies that the student has passed the dissertation defense and final oral examination.

In order to walk in the Spring graduation ceremony prior to defending the dissertation, the student must submit a complete draft of the dissertation to their advisor and obtain their advisor’s signature on the “Permission to Walk without Defense” form in the Appendix.

**Departure Prior to Dissertation Completion**

Occasionally, graduate students have left the Department prior to completion of all their degree requirements. In such instances, long time intervals have often elapsed before theses or manuscript submission. Accordingly, the Department has adopted the guideline that a Ph.D. dissertation cannot be submitted for a degree beyond three years after the student is no longer actively pursuing the research. Exceptions may be granted only upon petition to the Department Graduate Committee which a) demonstrates extenuating circumstances, and b) proves that the research is still of value to the profession.
STUDENT/ADVISOR ASSIGNMENTS (Full-Time)

Student Responsibilities

In order to equitably distribute graduate students to faculty members conducting research, the Chemical Engineering Department has established a policy regarding research advisor selection. New or currently unassigned students are required to follow the procedure described below in choosing an advisor. No thesis students will be accepted by the faculty unless they abide by the Department rules for advisor selection. (Note: Students entering the program after accepting a direct Research Assistant (RA) offer from a thesis advisor have already made their commitment and are exempt from this procedure.) In addition to satisfying equitable student distribution, this procedure is designed to allow students to become familiar with department faculty members and their research interests and for faculty to meet new students.

1. The faculty will create a forum that provides the students with the opportunity to learn about research in the department. Each student must attend this event and make an appointment to discuss research interests with up to 4 of the Chemical Engineering Faculty on the interview list provided by the department on the Faculty Interview Form (example in Appendix).

2. Following the interview, faculty should initial the form next to their name.

3. After seeing up to 4 of the faculty on the list, students must submit the Faculty Interview form to the Chemical Engineering Office with the name of the professor with whom they would most like to work, and a second and third choice.

4. This procedure, including notification of official advisor assignments, will be completed early in the first semester (typically by October 1).

5. If a student wishes to change advisors (such as between completion of the M.S. Degree and start of the Ph.D. Degree), the same procedure must be followed.
Financial Support for Graduate Students

It is the goal of the Chemical Engineering Department and its faculty to provide financial support for full-time graduate students maintaining satisfactory progress for the duration of their degree program. However, this goal can never be fully guaranteed. The maintenance of this funding is complex and variable. Sources of funding change, and the responsibilities associated with different funding sources are different. The Department has, therefore, established some guidelines for the most common situations.

I. Students Pursuing Master’s Degrees

1. Full-time students who are receiving support from faculty external research grants are required to complete an M.S. Degree with a thesis.

2. Students pursuing the Course M.S. Degree (non-thesis option) cannot receive departmental or COE financial support.

II. Students Pursuing the Ph.D. Degree

Candidates for the Ph.D. Degree funded from external sources may see this funding source end prior to completion of the degree. In order to provide for this event, the Department has adopted the following policies:

1. Students who have successfully earned Doctoral Candidate Status and have their external funding source terminated will be considered for a teaching assistantship. The level of this funding shall be determined by the Graduate Committee and Department Chair based upon the following:
   a. The availability of departmental funds.
   b. The student’s progress toward degree.
   c. The recommendations of departmental faculty familiar with the student’s work.
   d. The Ph.D. advisor making a continuing effort to secure funding for that student from external sources.

2. Departmental support for the Ph.D. is generally for 3 years beyond the Master’s Degree, or 5 years beyond the Bachelor’s Degree, and is subject to annual approval by the Graduate Committee and Department Chair. Extension of the general time period must be justified to the Graduate Committee and the Department Chair.
IV. Departmentally Supported Students

First year graduate student support will be determined by their admissions letter. Continuation of departmental support is not automatic. To provide for equity in its distribution, the Department has adopted the following policy:

All department-supported (TA) and non-supported students will be reviewed near the end of each academic year (review procedure to be established by the faculty). The Graduate Committee will then recommend support or not, and the level of support, to the Department Chair. If the Graduate Committee and the Department Chair have a difference of opinion they will bring the issue before the entire Chemical Engineering Department. The faculty will be informed of funding decisions prior to student notification. The advisor of a student who has lost department support has the right to appeal the decision to the faculty.
Courses Acceptable for Graduate Credit

The following procedure should be followed when seeking graduate credit for courses other than graduate courses offered by the Northeastern University Chemical Engineering Department (CHME prefix) or the College Interdisciplinary Engineering Courses (ENGR prefix).

1. All course credit rules of the College of Engineering must be met in addition to policies described in this Guidebook. College of Engineering requirements can be found on the Graduate School website: http://www.coe.neu.edu/gse/apandp.html.

2. Generally, all courses at the 5000-7000 level, taken under graduate student status, are acceptable for graduate credit by the Chemical Engineering Department. It is recommended that students discuss such course options with their advisor prior to course registration. Note: It is still required by the College of Engineering Graduate Office to file a petition in order for courses taken outside the elective list in Table 2 to count toward a degree.

3. While undergraduate courses may be required for effective matriculation toward a graduate degree, undergraduate courses do not count toward graduate course requirements per University rules.

4. If a graduate student wishes to count a graduate course taken under undergraduate status, a petition should again be filed with the Graduate Committee. In this case, the petition may be made after the course was taken.
Guidelines for Supported Students

I. Teaching Assistants (TAs)

1. TAs will be assigned to specific undergraduate courses on a semester-by-semester basis. The TA should report to the professor in charge of their assigned course one week before the course begins.

2. TA duties will include such tasks as: assisting the faculty in the conduction of laboratory courses; grading laboratory reports, homework assignments, and exams; and running recitation sessions. Occasionally, TA’s may be asked to conduct a lecture in the absence of the faculty member in charge. It is a Department practice that TA’s will not be used on a regular basis to teach classes.

3. It is the responsibility of the TA to be familiar with the course material and with the operation of the course. This will, at a minimum, require close communication with the professor in charge, and may require that the TA attend some or all of the lectures/problem sessions. It is the responsibility of the faculty to inform the TA of their specific duties in a timely fashion so that they may be adequately prepared.

4. All TAs are expected to be available to students of the class to which they are assigned as a TA. Establishing office hours is recommended.

5. A TAs load is 20 hours/week on average over the course of the semester spent assisting classroom learning. Some courses will require significant preparation when school is not in session. All TA’s are expected to work on their thesis research during semester breaks unless given the time off by their research advisors.
II. Research Assistants (RAs)

1. RAs will report to their faculty advisors on the first day of their assignment.

2. RAs will be responsible for conducting research related to the project to which they are assigned. The specifics of these duties will be communicated to the student by the faculty advisor.

3. In addition, as with TAs, the RAs load is up to 20 hours/week on average of responsibilities not directly related to their dissertation research.

IV. General

1. All students are entitled to 10 days of vacation a year. Planned vacation must be approved 1 month in advance by the research advisor for RAs, and by the research advisor and Department Chair/Graduate Coordinator for TAs. Any decisions about when vacation is taken and if more vacation is allowed for extenuating circumstances are made by the research advisor for RAs, and by the research advisor and Department Chair/Graduate Coordinator for TAs.

2. All funded students (TA, RA, fellowship, etc.) are expected to be present during undergraduate school vacations and semester breaks to work on their research. Absences will be handled by the Department Chair and Graduate Coordinator for unassigned TAs and by the specific research advisor for RAs and TAs.

3. Continuation of support for all funded students is dependent upon the satisfactory progression toward their degree, as determined by their research advisor and Department Chair.

4. Continuation of support for all funded students additionally depends upon the satisfactory performance of their assigned duties as well as their academic work. TAs are evaluated on a semester basis via a form completed by the professor to whom they are assigned. (Also, see section IV under Rules Governing Financial Support for Graduate Students). RA’s are evaluated by their research advisor.

5. All graduate students are required to attend safety-training and waste management sessions as required by University regulations. Training information may be found on the Office of Environmental Health and Safety website: http://www.ehs.neu.edu/training/.
6. Graduate students are expected to do their part in creating a community of scholars where the environment enhances effective learning and professional growth. Example actions include but are not limited to:
   a) taking responsibility for laboratory safety, maintenance, and training of new personnel
   b) academically challenging and stretching fellow graduate students and faculty by sharing their own work and questioning other’s work for the personal growth of themselves and others
   c) seeking expertise within and beyond the Department to achieve research goals
   d) continuously pursuing research goals and a deep understanding of both general chemical engineering principles and their specific research area
   e) writing conference papers and archival publications. For the M.S. candidate at least one publication is expected. For a Doctoral Candidate, a minimum of 4 to 6 archival papers are expected.

V. Expectations of Faculty

Students should expect the faculty to be committed to creating a community of scholars where the environment enhances effective learning and professional growth. Actions toward this goal include but are not limited to the following:

1. providing opportunities in core courses for students to develop a graduate-level understanding of chemical engineering principles,

2. challenging and stretching students and each other to achieve high standards of excellence,

3. encouraging students to broaden their knowledge of chemical engineering as well as to develop expertise in an area of research, and

4. including new technology areas in elective and core courses.
Guidelines for Graduate Seminars

Participation in Chemical Engineering Graduate Seminars is a degree requirement for all thesis students. Graduate Seminar is designed to provide students with an opportunity to develop and refine their ability to make professional presentations, as well as to develop their ability to listen, assess, and (where appropriate) question research presented by fellow professionals. All thesis/dissertation students must register for the seminar course each semester while enrolled in their degree program, are expected to attend all departmental seminars, and are expected to present a departmental seminar at least once a year. Thesis, dissertation, and dissertation prospectus defenses, when scheduled, are considered part of the seminar course and therefore all students are required to attend.
Patents and Confidentiality of Research

New and innovative research may result in patent and secrecy issues. Students should discuss with their faculty advisor issues of confidentiality related to their research area in accordance with the policies of the University. The official Northeastern University patent and intellectual property policy is available in a separate document, which may be obtained from the Office of Research Management (http://www.research.neu.edu/policies_forms/).
Appendices

Appendix A: Format for Thesis and Dissertation……………… Page 24
Appendix B: Thesis Committee Approval Form………………… Page 43
Appendix C: Dissertation Committee Approval Form………… Page 45
Appendix D: Dissertation Proposal Approval Form……………. Page 47
Appendix E: Sample Faculty Interview Form………………….. Page 49
Appendix F: TA Evaluation Form…………………………… Page 51
Appendix G: Permission to Walk without Defense Form…… Page 53
Appendix H: New Student Arrival Checklist………………….. Page 55
Appendix A
Thesis and Dissertation Format

NOTE: Student is responsible for checking with COE Graduate Office for any additional or new format and submittal requirements.
Title
of Thesis
(single spaced, Times New Roman 14 pt)

A Thesis Presented

By

(full name including middle name of author)

to

The Department of Chemical Engineering

In partial fulfillment of the requirements
For the degree of

Master of Science (Doctor of Philosophy)

In the field of

Chemical Engineering

Northeastern University
Boston, Massachusetts

(Month day, year of thesis submission)
ACKNOWLEDGEMENT (Centered, Times New Roman, bold, 14pt)

This section is to acknowledge those groups or individuals who helped you with your thesis. It should be double-spaced, Times New Roman (TNR) size 12 font, justified, and paragraphs should be indented 0.5 inches.

Page numbers should be small Roman numerals centered at the bottom of the page beginning with page 2 (ii, iii,…).
ABSTRACT (Centered, TNR, bold, 14pt)

The margins for the entire document are to be 1.5 inches on the left and 1 inch everywhere else (top, bottom, right). The abstract, and the entire document, should be double-spaced, TNR size 12 font, full justified, and paragraphs should be indented 0.5 inches. Page numbers should continue with small Roman numerals (iii, iv, v,…).

This section should be no more than 350 words with specific details on what you accomplished. Your abstract should indicate why you did what you did, how you did what you did, what your results were (be specific, give numbers), and indicate what you recommend for future work. This section should be able to stand-alone.
TABLE OF CONTENTS (Centered, TNR, bold, 14pt)

LIST OF FIGURES (TOC1, TNR 12) ................................................................. v
LIST OF TABLES ......................................................................................... vi

1.0 INTRODUCTION .................................................................................. 1

2.0 CRITICAL LITERATURE REVIEW ......................................................... 2

2.1 TITLE OF SUBSECTION (LEFT JUSTIFIED, TNR, BOLD, 12PT) ...................... 2
2.2 TITLE OF SUBSECTION ......................................................................... 2

2.2.1 Title of Next Subsection (Left justified, TNR, bold, 12 pt) ....................... 2
2.2.2 Title of Subsection ........................................................................... 2

2.2.1.2 Title of Subsection (Left justified, TNR, bold-italic, 12 pt) .................... 2
2.2.2.2 Title of Subsection ........................................................................ 3

3.0 EXPERIMENTAL .................................................................................. 5

4.0 RESULTS AND DISCUSSION ............................................................. 6

5.0 CONCLUSIONS .................................................................................. 7

6.0 RECOMMENDATIONS ....................................................................... 8

7.0 NOMENCLATURE .............................................................................. 9

8.0 REFERENCES ..................................................................................... 11

9.0 APPENDICES .................................................................................... 12

Appendix A .............................................................................................. 13
Appendix B .............................................................................................. 15
LIST OF FIGURES

Figure 1: Titles of Figures should be Descriptive, Left Justified under figure. If titles are more than one line, they should line up with the first word of the title in the first line, Bold, TNR, 12 pt.

(This section should be single spaced, Left justified, TNR, 12pt. If titles are more than one line, they should line up with the first word of the title in the first line and wrap text prior to the number column.)
LIST OF TABLES

Table 1: Titles of Tables should be Descriptive, Left Justified at the top of the Table. If titles are more than one line, they should line up with the first word of the title in the first line, Bold, TNR, 12 pt.

(This section should be single spaced, Left justified, TNR, 12pt. If titles are more than one line, they should line up with the first word of the title in the first line and wrap text prior to the number column.)
1.0 Introduction

All main section titles should be at the top of a NEW page, centered, bold, TNR, and 14-point font. The text under the title should be indented 0.5 inches for each paragraph, double-spaced, TNR, 12 font and all paragraphs justified. The must be at least a paragraph of text under every title, three sentences minimum. No title should stand-alone. Each new main section should start at the top of a new page. Subsections should not be started at the top of a new page. This page number should be 1, with subsequent numbers 2, 3, etc.
2.0 Critical Literature Review

All sections should have at least a paragraph under the section. If a section has subsections, there should be at least two sub sections and the format should be as follows:

2.1 **Title of Subsection (Left justified, underlined, TNR, bold, 12pt)**

In the text, references should be made as Smith et. al., 1 reported that the following results. You may also reference information by this format [1].

2.2 **Title of Subsection**

At least one paragraph of text….

2.2.1 **Title of Next Subsection (Left justified, TNR, bold, 12 pt)**

Text.

2.2.2 **Title of Subsection**

Text.

2.2.1.2 **Title of Subsection (Left justified, TNR, bold-italic, 12 pt)**

Text.
2.2.2.2 Title of Subsection

Equations in the text should be formatted as follows:

\[
\Delta P = 2 \gamma \cos \theta / r \tag{1}
\]

where: \( \Delta P \) = Pressure difference (psi)

\[
\gamma = \\
\theta = \\
r =
\]

All variables should be defined with units for every equation presented.

Figures and tables should be in the following format. The numbers are sequential throughout the whole document.

**Table 1: Titles of Tables Should be Descriptive, Centered over Table. If titles are more than one line, they should line up with the first word of the title in the first line, Bold, TNR, 12 pt**

<table>
<thead>
<tr>
<th>Operating Conditions</th>
<th>Metal 1</th>
<th>Metal 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slit Width (nm)</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Wavelength (nm)</td>
<td>357.9</td>
<td>324.7</td>
</tr>
<tr>
<td>Fuel Flow Rate (ml/min, STP)</td>
<td>45</td>
<td>43</td>
</tr>
<tr>
<td>Air Flow Rate (ml/min, STP)</td>
<td>55</td>
<td>60</td>
</tr>
<tr>
<td>Flame</td>
<td>Rich yellow, air-acetylene</td>
<td>Blue, air-acetylene</td>
</tr>
</tbody>
</table>
Figure 1: Titles of Figures Should be Descriptive, Centered under Figure (that is, not extending beyond the size of the Figure). If titles are more than one line, they should line up with the first word of the title in the first line, Bold, TNR, 12 pt. If appropriate figures can be rotated 90 degrees with the top of the figure aligned with the top side (make sure margins are maintained around the figure!).
3.0 EXPERIMENTAL
4.0 RESULTS AND DISCUSSION
5.0 CONCLUSIONS
6.0 RECOMMENDATIONS
7.0 NOMENCLATURE

\( a_j \) Activity of species, \( j \)

\( A \) Area, \( \text{cm}^2 \)

\( C_j \) Concentration of species \( j \), moles/\( \text{cm}^3 \)

\( k_r(t) \) Specific rate constant for surface reaction forming product \( t \), cm/s

\( K_e(t) \) Equilibrium constants for s/t equilibrium

\( \frac{P_{CO_2}}{P_{CO}} \bigg|_{eq} \)

Greek

\( \beta \) Defined as COS \( \beta_N = \beta_N (2DS/K_M, J/L) \)

\( \mu_i \) Viscosity of component \( i \), g/cm s

\( \mu_{mix} \) Viscosity of mixture, g/cm s

Superscripts

\( B \) Associates principle symbol with the bulk gas phase

\( FE \) Associates principle symbol with the iron phase

\( t \) Associates principle symbol with the product phase in a given reduction step, \( S \rightarrow T \)

Subscripts

\( A \) Designates reactant gas, H\(_2\) or CO

\( B \) Designates product gas, H\(_2\)O or CO\(_2\)

\( j,k \) Designates chemical species \( j, k \)

\( S \) Associates principle symbol with a shell layer reaction product – associates principle symbol with solid phase
(The nomenclature section should follow as shown: alphabetical order and normal characters first followed by Greek characters, Superscript and finally Subscript characters. There is a double space between each new or different character and within a characters definition, it is single spaced.)
8.0 REFERENCES

1. Smith, A. B. and C. D., Jones, *Title of the Paper (italics)*, Full Journal Name, Volume, pp. 1-10, Year.

2. Smith, A. B., C. D. Jones, E. F. Alexander, and G. H. James, Extended Abstract Title, Where it was held, Publisher, Volume, pp. 1-10, Year.

3. Smith, A. B. and C. D., Jones, *Title of Book (underline)*, Publisher, Where Published, Volume, pp. 1-10, Year.

(Please note that the first authors name is **Last Name, First Initial. Middle Initial.**, the second authors name is **First Initial. Middle Initial., Last Name,**)
9.0 APPENDICES
(This title should be vertically and horizontally centered.)
Appendix A
Title of Appendix (bold, centered, TNR 12 pt font, do not center it vertically)
Nothing else should be written on this page.
This is where the appendix information begins. All tables and figures in the appendix need to have titles, but they do NOT need figure and table numbers.
The subsection titles within an appendix should be centered, bold, TNR, and 12-point font. The text under the title should be indented 0.5 inches for each paragraph, double-spaced, TNR, 12 font and all paragraphs justified. The must be at least a paragraph of text under every title, three sentences minimum. No title should stand-alone. Subsections should not be started at the top of a new page.
Appendix B

Title of Appendix (bold, centered, TNR 12 pt font, do not center it vertically)
Nothing else should be written on this page.
Appendix B

Thesis Committee Approval Form

Student is required to review committee membership requirements described in the Chemical Engineering Graduate Guidebook, complete the following form, gain signature of each committee member (including research advisor), and submit to the Chemical Engineering Office. The Chemical Engineering Office will complete the approval process and provide a final signed copy to the student and his or her research advisor.
NORTHEASTERN UNIVERSITY

Department of Chemical Engineering
Thesis Committee Approval Form

Student: __________________________________________

Research Topic: ___________________________________

Committee Agreement (Minimum requirement 3 members; expand if needed.):

Committee Member: Name (typed) _______________________

Signature: ___________________________ Date: __________

Committee Member: Name (typed) _______________________

Signature: ___________________________ Date: __________

Committee Member: Name (typed) _______________________

Signature: ___________________________ Date: __________

Committee Member: Name (typed) _______________________

Signature: ___________________________ Date: __________

Thesis Advisor: Name (typed) _______________________

Signature: ___________________________ Date: __________

Received by Administrative Assistant in the Chemical Engineering Main Office:

Administrative Assistant: ___________________________ Date: __________

Chemical Engineering Main Office

Graduate Coordinator Approval: ______________________ Date: __________

An electronic copy of fully signed form to be maintained in the Chemical Engineering Main Office and provided to the student and the student’s advisor.
Appendix C

Dissertation Committee Approval Form

Student is required to review committee membership requirements described in the Chemical Engineering Graduate Guidebook, complete the following form, gain signature of each committee member (including research advisor), and submit to the Chemical Engineering Office. The Chemical Engineering Office will complete the approval process and provide a final signed copy to the student and his or her research advisor.
NORTHEASTERN UNIVERSITY

Department of Chemical Engineering
Dissertation Committee Approval Form

Student: ____________________________________________

Research Topic: ______________________________________

Committee Agreement (Minimum requirement 4 members; expand if needed.):

Committee Member: Name (typed) ________________________

Signature: __________________ Date: ____________

Committee Member: Name (typed) ________________________

Signature: __________________ Date: ____________

Committee Member: Name (typed) ________________________

Signature: __________________ Date: ____________

Committee Member: Name (typed) ________________________

Signature: __________________ Date: ____________

Dissertation Advisor: Name (typed) ________________________

Signature: __________________ Date: ____________

Received by Administrative Assistant in the Chemical Engineering Main Office:

Administrative Assistant: ____________________ Date: ________

Chemical Engineering Main Office

Graduate Coordinator Approval: ____________________ Date: ________

An electronic copy of fully signed form to be maintained in the Chemical Engineering Main Office and provided to the student and the student’s advisor.
Appendix D

Dissertation Proposal Approval Form
Dissertation Proposal Title: _____________________________________________
                                                                 _____________________________________________
                                                                 _____________________________________________

Author: ______________________________________________________________

Proposal Approval:

Committee Member: __________________________ Date: __________

Committee Member: __________________________ Date: __________

Committee Member: __________________________ Date: __________

Committee Member: __________________________ Date: __________

Committee Member: __________________________ Date: __________

Dissertation Advisor: __________________________ Date: __________

Received by Administrative Assistant in the Chemical Engineering Main Office:

Administrative Assistant: __________________________ Date: __________

Chemical Engineering Main Office

An electronic copy of fully signed form to be maintained in the Chemical Engineering Main Office and provided to the student and the student’s advisor.
Appendix E
Sample Faculty Interview Form

NOTE: you will be given the form appropriate to your incoming class during departmental orientation session.
## Faculty-Graduate Student Interview Form

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Office #</th>
<th>Interview Day and Time</th>
<th>Initial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthagiri, Anand</td>
<td>443 Snell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrier, Rebecca</td>
<td>457 Snell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goluch, Edgar</td>
<td>459 Snell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lee-Parsons, Carolyn</td>
<td>449 Snell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lewis, Laura H.</td>
<td>147 Snell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Murthy, Shashi</td>
<td>453 Snell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Podlaha-Murphy, Lisa</td>
<td>455 Snell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willey, Ronald</td>
<td>445 Snell</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ziemer, Katherine</td>
<td>451 Snell</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Student Name__________________________ Date_____________________

Faculty Advisor Choice and Project:

1. ____________________________
2. ____________________________
3. ____________________________

*Once completed, return to Chemical Engineering Office. The Administrative Assistant will get Graduate Coordinator approval.*

Received by Administrative Assistant in the Chemical Engineering Main Office:

Administrative Assistant: ____________________________ Date: __________

*Chemical Engineering Main Office*

Graduate Coordinator Approval: ____________________________ Date: __________
Appendix F
TA Evaluation Form

Filled out by supervising faculty and sent to the Chemical Engineering Office.
NORTHEASTERN UNIVERSITY

Department of Chemical Engineering
TA Evaluation Form

Student name: ________________________________

Course Assignment: ____________________________

Faculty Member: ______________________________  Semester & Year: _______

Description of Assigned Duties:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Description of TA’s/TWS’s Performance of Duties:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Recommended for continued support? Yes or No

Recommendations for Student Improvement:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Faculty email this to Administrative Assistant in Chemical Engineering Office.
Appendix G
Permission to Walk without Defense

Student is responsible to completing this form, getting research advisor approval, and submitting form to the Chemical Engineering Office.
NORTHEASTERN UNIVERSITY

Department of Chemical Engineering
Permission to Walk without Defense

Student name: ____________________________

Dissertation/Thesis Title: ____________________________

Faculty Advisor: ____________________________

Justification for Participation in Spring __________ Graduation Ceremony:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Signature of Advisor: ____________________________ Date: ____________________________

Submit signed copy to Chemical Engineering Office

Received by Administrative Assistant in the Chemical Engineering Main Office:

Administrative Assistant: ____________________________ Date: __________

Chemical Engineering Main Office

An electronic copy of fully signed form to be maintained in the Chemical Engineering Main Office and provided to the student and the student’s advisor.
Appendix H

New Student Arrival Checklist

This form is completed by the graduate coordinator and the incoming students during orientation.
NORTHEASTERN UNIVERSITY

Department of Chemical Engineering

NEW STUDENT ARRIVAL CHECKLIST

Student Information

Name: _____________________________________

Degree sought (circle one):  M.S. thesis  M.S. non-thesis  Ph.D.

NEU E-mail: __________________________________

NEU ID#: __________________________________

Phone: _______________________________________

Mailing address:  __________________________________
                    __________________________________
                    __________________________________

Orientation

Meet with graduate coordinator for orientation to the program and to discuss course registration.

Graduate Coordinator: ____________________________  Date: __________

Received by Administrative Assistant in the Chemical Engineering Main Office:

Administrative Assistant: ____________________________  Date: __________

ChE Main Office

An electronic copy of fully signed form to be maintained in the ChE Main Office and provided to the student and the Graduate Coordinator.