Appendix A. Descriptions of Graduate Degree Programs from the University Graduate Catalog
Master of Science in Engineering (Chemical)

Advisor: Andrew Kline
Room A-221 Parkview Campus

The Master of Science in Engineering (Chemical) is designed to provide theoretical and laboratory experiences which are basic to the development of professional competence. A Thesis Option and a Non-thesis Option are available. While the program requirements for each option differ, the admission requirements for both options are identical.

For those students selecting the non-thesis option, a design experience (not an industrial internship experience) resulting in the student producing a major written report is required. This requirement is fulfilled by successfully completing CHEG 6500.

- **Thesis Option**: 30 total credit hours are required for graduation. This includes 24 credits of coursework and six credits of research (CHEG 7000).
- **Non-Thesis Option**: 33 total credit hours are required for graduation. All the credits are acquired through coursework, and will include CHEG 6500.

Students must have at least one-half of their earned credit hours to be used towards a graduate degree at the 6000 level or higher. Students are responsible for completing any needed prerequisites before taking a course for graduate credit. A maximum of six credit hours of graduate course credits may be transferred from another institution.

Admission Requirements

A Bachelor of Science in Chemical Engineering or a related discipline from an accredited college or university is required. If an applicant does not have sufficient background in Chemical Engineering, the applicant would need to minimally take or have taken prerequisite courses noted below, and depending on the area of focus, additional courses as determined by the department graduate committee in their case. Prospective graduate students must take the GRE general exam.

International students must successfully complete the Test of English as a Foreign Language (TOEFL). Acceptable scores will be according to the Western Michigan University standard for admission to a graduate-level program.

As noted above, prospective graduate students without a sufficient background in chemical engineering will at a minimum need to have completed or must complete while in the MS in Engineering (Chemical) degree program at WMU the following courses or their equivalent, with a cumulative GPA of 3.00 or higher:

- CHEG 2960 - Material and Energy Balance  Credits: 4 hours
- CHEG 3110 - Unit Operations in Chemical Engineering I  Credits: 3 hours
- CHEG 3120 - Unit Operations in Chemical Engineering II  Credits: 3 hours
- CHEG 4100 - Chemical Reaction Engineering  Credits: 3 hours
- MATH 3740 - Differential Equations and Linear Algebra  Credits: 4 hours

And either
CHEG 3200 - Chemical Engineering Thermodynamics Credits: 3 hours
OR
CHEM 4300 - Physical Chemistry I Credits: 3 hours.

Core Courses

All Chemical Engineering graduate students must complete the Core courses:

- CHEG 6100 - Chemical Engineering Thermodynamics Credits: 3 hours
- CHEG 6200 - Advanced Transport Processes Credits: 3 hours
- CHEG 6300 - Chemical Reaction Engineering Credits: 3 hours

In addition

To fulfill the mathematics requirement for the Core courses, students must select one of the following:

- CHEG 6800 - Chemical Engineering Mathematics Credits: 3 hours
- MATH 5740 - Advanced Differential Equations Credits: 3 hours
- ME 5600 - Engineering Analysis Credits: 3 hours
- ME 5610 - Finite Element Method Credits: 3 hours
- ME 5620 - Application of Numerical Methods in Engineering Credits: 3 hours

Note:

Students, with permission of the departmental graduate committee, may replace one of the Core courses with an additional course from the list of Electives.

Elective Courses

Thesis option students will select a minimum of six credit hours of Electives from the list below. Non-thesis option students will select a minimum of nine credit hours of Elective courses (including CHEG 6500) from the list below.

- CHEG 6400 - Pollution Prevention Engineering Credits: 3 hours
- CHEG 6500 - Chemical Process Design and Analysis I Credits: 3 hours
- CHEG 6510 - Chemical Process Design and Analysis II Credits: 3 hours
- CHEG 6600 - Methods of Research and Engineering Communication Credits: 3 hours
- CHEG 6940 - Graduate Topics in Chemical Engineering Credits: 3 hours
- OR
- ECE 6720 - Fuzzy Control Systems Credits: 3 hours

Cognate Courses
Depending on a student's personal interests, and with permission of the department graduate committee, students will select six credit hours of academic courses (not internships) at the 5000 or 6000 level. These courses are intended to give a student necessary tools to succeed as a chemical engineering professional, and to broaden their academic background. Courses should be of a type that could be taken by any graduate student enrolled at WMU, and do not necessarily have to be scientific or engineering based. Examples of cognate courses are found below.

- Any CS course at 5300 or higher level
- Any MATH course at 5070 or higher level
- Any STAT course at 5610 or higher level

- OR
- IEE 5160 - Design of Experiments and Regression Analysis Credits: 3 hours
- PADM 6080 - Organization Theory and Behavior Credits: 3 hours
- PHIL 5440 - Practical Ethics Credits: 3 hours
- OR
- PHIL 6320 - Theory of Knowledge Credits: 2 to 4 hours
- EM 6140 - Project Management Credits: 3 hours

Return to: Departments and Programs
Master of Science in Paper and Printing Science

Advisor: Paul D. Fleming
Room A-233 Parkview Campus

The Master of Science in Paper and Printing Science is designed to provide theoretical, laboratory, and pilot plant experiences which are basic to the development of professional competence in pulp, paper, and printing science. The department has leadership in the areas of flexo, offset and gravure printing, recycling and deinking, papermaking, computational fluid dynamics, and coating. It is internationally recognized in the fields of gravure, printing, printed electronics, paper coating and barrier coating. Its laboratories and equipment are the most complete of any similar academic institution featuring a complete recycled fiber pilot plant, paper machine, high speed puddle and metered size press coater, cylindrical laboratory blade and rod coater and gravure, flexo, offset, screen, and digital printing presses.

Thesis Option and a Non-thesis Option are available. While the program requirements for each option differ, the admission requirements for both options are identical. Students without a sufficient background will be required to take PAPR 5000.

Admission Requirements

1. Applicants with science and related baccalaureate degrees may qualify for admission based upon demonstrated competence at an accredited college or university.
2. At least one semester of college chemistry and one semester of calculus are required.
3. After admission, the student’s graduate advisor will approve a plan of study, which may include courses not eligible for graduate credit.
4. Applicants are encouraged to submit results of the Graduate Record Examination to support their application for admission.

Program Options and Requirements

Thesis Option

1. A minimum of 30 semester hours of credit.

2. A minimum of 15 semester hours of:

Paper and Printing Science courses excluding the thesis research credits, of which the following core courses are required:

- GPS 5201 - Color Printing and Substrates Credits: 3 hours
- PAPR 5301 - Material Instrumental Analysis Credits: 2 hours
- PAPR 5501 - Advanced Paper Processes Credits: 3 hours
- PAPR 7250 - Doctoral Research Seminar Credits: 1 hour
• Credits: 1 hour needed.

Note:

A minimum of one-half of the credit hours earned towards the master’s degree must be at the 6000 course level or higher.

3. Students must satisfactorily complete

A statistics or design of experiments course at the 5000 course level or higher.

4. A minimum of three semester hours of course work

Outside the Department of Chemical and Paper Engineering.

5. Satisfactory completion of six semester hours of the following course

Based on either an experimental or theoretical topic, under the guidance of a Thesis Committee.

• PAPR 7000 - Master's Thesis Credits: 1 - 6 hours

Non-Thesis Option

1. A minimum of 30 semester hours of credit.

2. A minimum of 18 semester hours of:

Paper and Printing Science courses, of which the following core courses are required:

• GPS 5201 - Color Printing and Substrates Credits: 3 hours
• PAPR 5301 - Material Instrumental Analysis Credits: 2 hours
• PAPR 5301 - Advanced Paper Processes Credits: 3 hours
• PAPR 7250 - Doctoral Research Seminar Credits: 1 hour

3. A minimum of six semester hours of course work

Outside the department approved by the department’s graduate advisor.
Doctor of Philosophy in Paper and Printing Science

Advisor: Paul D. Fleming
Room A-233 Parkview Campus

The Doctor of Philosophy in Paper and Printing Science is designed to prepare scientists for performing advanced research or for teaching at the university level. The emphasis of the program is on paper making processes, paper coating, paper recycling, and graphic and printing science technologies.

This is a research-intensive degree, based on fundamental scientific and chemical principles; the emphasis is on learning techniques for advanced research, the production of such advanced research, and the reporting of the research. Close supervision of the research will be maintained by the student's Dissertation Advisory Committee and, particularly, by the chair of that committee. Some formal coursework, much of it possibly accepted from course work completed to achieve a master's degree, is required to prepare for and support an original research problem chosen by the student in consultation with the Dissertation Advisory Committee. However, the degree is awarded for the attainment of knowledge of the paper and printing science disciplines and for original research; the degree is not awarded for accumulation of course credits. Thus, the key component of the program is the Dissertation Advisory Committee's careful and continuous mentoring of the student to develop necessary skills and knowledge to support advanced research.

Admission Requirements

Application materials may be obtained from the Office of Admissions, Graduate Admissions or from the Department of Chemical and Paper Engineering (ChP). International students should contact the Office of International Services and Student Affairs for the appropriate materials and information.

All applicants must meet the general admissions requirements for the Ph.D. specified by the Graduate College. In addition, the applicant is strongly encouraged to have completed a master's degree in a discipline relevant to paper and printing science with a minimum 3.25 grade point average. The Graduate Record Examination, General Test, is required of all applicants, as are at least three letters of recommendation and a letter describing the applicant's research interest. International students must also submit the TOEFL scores.

Admission determinations will be made by the department's Graduate Committee and will take into consideration the student's previous academic training and record of achievement, the GRE score, the recommendations provided in letters from three referees, and the information about the proposed area of study described in the letter of interest.

Financial Assistance

The Department of Chemical and Paper Engineering offers opportunities for financial assistance of doctoral students through graduate assistantships and fellowships. Information concerning these opportunities is available from the department's graduate advisor or from the Graduate College.

Program Requirements

Following a student's admission to the program, the ChP department's graduate advisor will be the student's temporary advisor until the dissertation advisory committee is formed, typically within one year of the student's commencement of the program. With the assistance of the graduate advisor, the student will select a chair of the dissertation advisory committee and, in consultation with the chair, the student will form an entire dissertation advisory committee, comprising at least three members. After the chair of the dissertation advisory committee is chosen, primary responsibility for the student will be
transferred from the graduate advisor to the chair. The graduate advisor, however, will continue to monitor the student's progress and assist the chair of the dissertation advisory committee to ensure prompt compliance with all University and program requirements.

After admission to the doctoral program, a student must complete a total of 60 graduate-level credit hours, excluding the dissertation, beyond the bachelor's degree, or a total of 30 graduate-level credit hours, excluding the dissertation, beyond the master's degree. Graduate College policy requires that all doctoral students complete at least 30 hours of course work, exclusive of the dissertation, at WMU after admission to the doctoral program. However, in this research-based degree program, if an exceptionally well prepared student enters the program having satisfied one or more of the research tools and/or has completed PAPR 5301, the student may be able to satisfy all the requirements and competencies with fewer than 30 hours. Upon formal petition by the chair of the dissertation advisory committee and the graduate advisor and with the chair's submission of a program of study that indicates the student's satisfaction of all requirements and competencies, the dean of the Graduate College may waive that requirement. Such waivers must be sought and approved on a case-by-case basis.

In addition to the requirements of the Graduate College, the following requirements for the Doctor of Philosophy in Paper and Printing Science must be fulfilled:

30 hours of course work beyond the master's degree

Since applicants are encouraged to have a master's degree, it is expected that applicants will have finished at least 24 hours of foundation course work at the graduate level, and six hours of thesis research. At the discretion of the department's graduate committee and with approval of the Graduate College, applicants who have earned a master's degree may receive credit toward the 60 credit hours of doctoral course requirements beyond the bachelor's degree and excluding the dissertation, for up to 24 hours of foundation course work germane to paper and printing science at the time of admission to the program, and credit for up to six hours of thesis research. Such graduate-level foundation course work may include, as examples, mechanics and optics of paper and fibers (PAPR 6600), pulping and bleaching (PAPR 6980), and nonimpact printing (GPS 6210).

Students must also complete the following:

These courses may already be included in the 24 hours of foundation course work from a master's degree program.

- GPS 5201 - Color Printing and Substrates Credits: 3 hours
- PAPR 5301 - Material Instrumental Analysis Credits: 2 hours
- PAPR 5501 - Advanced Paper Processes Credits: 3 hours

And one of the following courses:

The selected course can be counted as one of the required research tools, and may already be included in the 24 hours of foundation course work from a master's degree program.

- IEE 5160 - Design of Experiments and Regression Analysis Credits: 3 hours
- STAT 5650 - Design of Experiments for Quality Improvement Credits: 3 hours
- STAT 5670 - Statistical Design and Analysis of Experiments Credits: 4 hours
- STAT 5680 - Regression Analysis Credits: 3 hours

Additional Program Information
The required courses must be completed with at least a grade of “B,” if not previously elected in a master’s program as described above.

Additional course work required will be determined at the time of admission by the department’s graduate committee to ensure readiness for graduate level course work or the research program. Additional course work may also be required to remedy deficiencies revealed by the Level I qualifying exams. These courses would be determined by the department’s graduate committee in cooperation with the student’s dissertation advisory committee.

Qualifying Examinations

All students seeking a doctoral degree in paper and printing sciences from Western Michigan University must successfully complete the Level I and Level II qualifying exams, following the qualifying exam guidelines developed by the Department of Chemical and Paper Engineering. In preparation for the qualifying exams, students without a sufficient background will be required to take PAPR 5000. The Level I qualifying exam is a written exam that will test a doctoral student’s general knowledge of paper and printing science at the level of a person who has completed a master’s degree in paper and printing science. The Level I qualifying exam will include information and topics related to paper chemistry and processing, inks and imaging, and experimental design. A student must successfully complete the Level I qualifying exam by the end of their first year of enrollment in the doctoral program. A student who does not successfully complete the Level I qualifying exam after two attempts will be dismissed from the doctoral degree program.

The Level II qualifying exam is an oral defense on the proposed dissertation research topic area, the dissertation proposal itself, and questions on graduate-level course materials. During the Level II qualifying exam, the student will demonstrate through oral discussion that they possess an acceptable knowledge of their area of chosen research and other graduate-level topics, in addition to defending their dissertation proposal. A student must complete the Level II qualifying exam within twelve calendar months of their successful completion of the Level I qualifying exam. A student must complete the Level II qualifying exam within two attempts or the student will be dismissed from the doctoral degree program. In preparation for the Level II qualifying exam, students will register for their first three credit hours of PAPR 7300. Successful completion of the Level II qualifying exam will allow the student to continue with research needed to fulfill the remaining 12 credit hours of PAPR 7300, as will be discussed.

Full-time enrollment

Full-time enrollment on campus for at least four semesters.

Demonstrate competency in two research tools

Two research tools chosen in consultation with the dissertation advisory committee. All students will select a statistics or experimental design course (item 1) plus at least one other research tool from the remaining options:

1. Statistics and experimental design at the level of STAT 5650, STAT 5670, STAT 5680, or IEE 5160 (with a grade of “B” or better).
2. Reading proficiency in one foreign language other than English at the course level of 4010 (with a grade of “B” or better).
3. Computer modeling and simulation expertise at the level of CS 5810 (with a grade of “B” or better).
4. One or more courses in biology, physics, chemistry, packaging, or engineering at the 5000 level or above and approved by the student’s dissertation committee.

If some or all of the research tools credit hours are included in the 24 hours of foundation course work, students will select up to six credit hours of graduate-level elective courses, not including PAPR 7300, in consultation with the dissertation advisory committee.
Teaching Practicum (3 hours)

Completion of at least one University-sponsored TA training workshop and completion of PAPR 7131 and PAPR 7132. The PAPR 7131 course will be completed by observing a faculty member teach a class and by preparing to teach that course under the guidance of a graduate faculty member. PAPR 7132 credits will be earned by having primary responsibility for teaching one course under the guidance and supervision of a member of the department’s graduate faculty. In consultation with their dissertation advisory committee, students may substitute up to six credit hours of graduate-level elective courses, not including PAPR 7300, in place of PAPR 7131 and PAPR 7132.

- PAPR 7131 - Teaching Practicum Observation Credits: 1 to 3 hours
- PAPR 7132 - Teaching in the Discipline Credits: 1 to 3 hours

Research Seminar (3 hours)

Completion of at least three hours of PAPR 7250. The objective of this requirement is to participate in discussion of recent research findings that may be used in the student’s research and to gain practice in the presentation of research results.

- PAPR 7250 - Doctoral Research Seminar Credits: 1 hour

Complete and successfully defend a dissertation (15 hours)

Completion of at least 15 hours of PAPR 7300. The objective of this requirement is to ensure that the student carries out the research and prepares the dissertation under the guidance of the dissertation advisory committee. The student must successfully defend the dissertation and have the dissertation approved by the dissertation advisory committee and by the graduate dean. In order to receive credit for the first three hours of PAPR 7300 for which they register, the student must successfully complete the Level II qualifying exam. The student, with approval of the dissertation advisory committee, may choose between two dissertation options.

1. Option 1: The student will present a traditional comprehensive dissertation and two journal papers based on the doctoral research and judged by the dissertation advisory committee to be ready for submission to an identified, refereed journal. These must be submitted with an introduction, review of relevant literature, and a summary explaining the significance of the research.
2. Option 2: The student will present at least three journal papers and at least one conference paper based on the doctoral research and judged by the dissertation advisory committee as ready for submission to an identified, refereed journal and a refereed conference. These must be submitted with an introduction, review of relevant literature, and a summary explaining the significance of the research.

- PAPR 7300 - Doctoral Dissertation Credits: 1 to 6 hours

Return to: Departments and Programs
Doctor of Philosophy in Engineering and Applied Sciences

The Doctor of Philosophy in Engineering and Applied Sciences is designed to provide a flexible vehicle to tackle new and emerging areas of research that cut across multiple disciplines or are of interest to and within the expertise of the college faculty. The program requires the selection of a Ph.D. champion before admission is granted. The role of the champion is to oversee the process from admissions to graduation to ensure compliance with all program requirements. This early intervention will serve to strengthen the student’s program and reduce the time to graduation. The champion will provide guidance to the student throughout the program and will serve as the chair of the dissertation committee.

Admission Requirements

The Ph.D. in Engineering and Applied Sciences is offered in two tracks: (1) Engineering; and (2) Applied Sciences. In addition to the University minimum Ph.D. requirements for admission as outlined in the Graduate Catalog, all applicants are expected to meet the following minimum requirements for admission to the Ph.D. in Engineering and Applied Sciences:

1. The student must contact a faculty member who agrees to champion the application and who will serve as the chair of the Ph.D. dissertation committee.
2. A minimum of a bachelor’s degree (master’s preferred) from an accredited institution:
   - In an engineering discipline relevant to the intended field of study as determined by the Ph.D. champion is required for admission to the Engineering Track, or
   - In applied sciences, or a closely related discipline, relevant to the intended field of study as determined by the Ph.D. champion is required for admission to the Applied Sciences Track.
3. Two official transcripts from each institution attended since high school.
4. An overall minimum grade point average of 3.25.
5. The General GRE test scores.
6. Statement of purpose describing the applicant’s research interests and professional goals.
7. Three letters of recommendation.

The admission process is competitive and is administered by the department of the champion.

Admission Policy

A student who has been dismissed from another PhD program in the College of Engineering and Applied Sciences is not immediately admissible in the PhD in Engineering and Applied Sciences (EAS) program. There will be a waiting period of five years after which the student can apply for this program with a set of improved credentials.

Program Requirements

In addition to the minimum University requirements listed in the graduate catalog, the following must be fulfilled for the Ph.D. in the Engineering and Applied Sciences program:

1. **Minimum Credit Hours:** After admission into this Ph.D. program, the majority of credits taken at Western Michigan University must be from the College of Engineering and Applied Sciences (excluding thesis and dissertation credits).
   - **Students admitted after bachelor’s degree:** A minimum of 60 graduate-level credit hours, excluding the dissertation, beyond the bachelor’s is required, of which 30 hours must be at Western Michigan University in an approved program of study. No more than 15 credit hours can be at the 5000 level and at least 30 credit hours of regularly
offered courses, excluding independent study, independent research, seminars, doctoral research, professional field experience and internship courses.

- **Students admitted after master's degree:** A minimum of 30 graduate-level credit hours, excluding dissertation, beyond the master’s is required at Western Michigan University in an approved program of study.

2. **Program of Study:** A program of study in the student’s field of interest must be completed in the first year of enrollment. This program of study is uniquely defined and approved by the Ph.D. committee chair; the student, the department chair of the Ph.D. committee chair, the dean of the College of Engineering and Applied Sciences or his/her designee, and the dean of the Graduate College. The exact distribution of courses, seminars, and research will depend upon the program and may vary from one student to another. Each student is required to complete a dissertation.

3. **Doctoral Dissertation:** Fifteen (15) credit hours of Doctoral Dissertation (ENGR 7300 or similar) are required.

4. **Research Tools:** Two appropriate research tools are required. Such research tools may include but are not limited to statistics, numerical analysis, mathematics, research methodology, and computer programming. These are determined by the Ph.D. committee chair and the student.

5. **Candidacy and Examination Requirements:** Passing the following three examinations in the intended specialty area is required. These exams are designed and administered by the dissertation committee.

- **Qualifying Exam:** Before admission to candidacy for the doctoral degree, the student must pass a written qualifying examination. The exam must be completed before the completion of 45 credit hours for students admitted after the bachelor’s degree, and before the completion of 15 credit hours for students admitted after the master’s degree.

- **Comprehensive Exam:** Each doctoral candidate must obtain approval from his or her dissertation committee for a dissertation topic and research plan through the comprehensive exam. The exam requires a written proposal and oral presentation, and is typically taken near the end of the course work outlined in the doctoral program of study. The comprehensive exam must be completed within one year after passing the qualifying exam. Upon passing the comprehensive exam, the student is advanced to the Ph.D. candidate status.

- **Dissertation Defense:** The defense takes place at the conclusion of the dissertation research with the approval of the committee. Upon a successful defense outcome, as determined by the dissertation, the student earns the Ph.D. in Engineering and Applied Sciences degree.

If a student fails any of the above exams, the student can apply to retake the exam in the next semester. A second failure will result in dismissal from the program.

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### Doctoral Dissertation Committee

A doctoral dissertation committee shall be appointed for each student during the first year of enrollment. The purpose of the dissertation committee is:

1. Develop, with the student, the program of study for the intended specialty field under the Ph.D. in Engineering and Applied Sciences program;
2. Design and administer the required Ph.D. examinations;
3. Provide the technical guidance to the student during the dissertation portion of the doctoral program.

The doctoral dissertation committee shall consist of at least three College of Engineering and Applied Sciences full members of the graduate faculty, including the chair of the Ph.D. committee. Additional members of the committee must either be full members or associate members of the graduate faculty.
Appendix B. Form for Requesting Keys or Swipe Access to University Facilities
### ChP Room Access & Key Request - PLEASE PRINT

**To be completed by the student:**

First Name: ___________________________ Last Name: ___________________________

WIN (Western Identification Number): ___________________________ Phone: ___________________________

WMU Email: _____________________________________________________________

Room: ___________________________ Reason (check): □ Research □ Teaching □ Other (explain)

Student’s Signature: ___________________________ Date: ___________________________

**To be completed by the supervisor and/or department Chair:**

Supervisor’s Name: _____________________________________________________________

Please grant the student named above: □ Swipe Access □ Key Access □ After Hours Building Access □ Access

Supervisor’s Signature: ___________________________ Date: ___________________________

Chair’s Signature (when needed): ___________________________ Date: ___________________________

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Keys are an integral part of the ChP lab’s security system. Therefore, you are responsible for your keys at all times. If you lose your keys, you will be responsible for all charges associated with replacing the key core and replacement keys. A minimum of 6 keys will be needed and the replacement core fee is $75.00. The total charge of **$50.00** per lost key will be charged to the student if not returned when requested.
Appendix C. Department of Chemical and Paper Engineering Laboratory Safety Policy
Chemical and Paper Engineering (ChP)
Laboratory Safety Policy

1. All individuals must comply with WMU’s Policies as referenced on WMU’s
   Environmental Safety and Emergency Management website:
   http://www.esem.wmich.edu/policies.htm

2. Students must have written permission from their responsible faculty/staff
   advisor to work in the laboratory alone. The nature and breadth of the
   laboratory work must be specified in that written permission and must be
   appropriate for working alone. This may be granted via email.

3. Long hair (shoulder length or longer) must be tied-up (e.g. bun....). Loose
   clothing (examples are loose scarves, ties, long necklaces, bracelets, etc.)
   must be completely contained or removed prior to entering the lab
   to minimize entanglement with equipment that could cause injuries such
   as strangulation or lacerations, burns from combustion, etc. Upper legs
   (knee and above) must be covered with clothing (shorts are
   unacceptable), otherwise a lab coat must be worn.

4. Absolutely no open toed shoes, flip-flops or sandals are allowed.

5. No smoking, food or beverages in any lab at any time, unless the lab is
   posted with signage indicating otherwise.

6. Eye protection must be worn effectively in all labs so designated. It is
   REQUIRED at all times. The only exception is when there are no
   experiments and no processes in progress in the laboratory.

7. Know the location of the first aid kits, fire extinguishers, eye wash and
   safety shower stations before entering a laboratory or working in it.

8. Report accidents to appropriate faculty or staff IMMEDIATELY. Any
   accident resulting in surface contamination with blood should be clearly
   labeled for janitorial cleanup.

9. Report the use of any emergency related equipment (fire extinguishers...)
   to appropriate faculty or staff IMMEDIATELY.
10. Review where fire extinguishers are located prior to handling highly flammable solvents.

11. Equipment shall be cleaned after use.

12. All hazardous and waste chemicals must be properly disposed of.

13. Report breakage and equipment disorder to faculty, instructor or lab assistant.

14. Clean all oil, solvent or water spills to floor as soon as possible.

15. Observe all warning and caution tags on equipment.

16. Standing or climbing on equipment not intended for such is not permitted.

17. Horseplay of any kind is not permitted.

18. You are responsible for cleaning the work area at various stages in your study and **promptly and completely at the end of your study** as designated by the advisor.

19. All liquid and liquid containers (including beakers, test tubes, bottles, vials, ink containers, etc) must be properly labeled with your name, name of compound, concentration of compound, and date.

   **Any unsafe practices can be stopped immediately by any WMU faculty or staff. Failure to leave the laboratory and equipment in proper condition or horseplay may result in suspension or termination of lab privileges. Violations will be brought to the attention of Advisor and ChP Safety Committee for further consideration/action!**

Sign and date that you have read, comprehended and will comply with this procedure. This record should be kept with your advisor.

Date:________________________

Name (print):____________________________________________________

Signature:__________________________________________
Appendix D. Expected ChP Graduate Courses in the Next Two Years
ChP Courses offered for Fall 2016 (tentative):
- GPS 6210, Nonimpact Printing, Fleming
- PAPR 5000, Intro to Papermaking, Stoops
- PAPR 5301, Material Instrumental Analysis
- PAPR 5501, Advanced Paper Processes, Stoops
- CHEG 6100, Chemical Engineering Thermodynamics, Pingali
- CHEG 5950, Concepts in Biomolecular Engrg, Springstead
- PAPR 5990, 6990, 7000, 7100, 7120, 7131, 7132, 7300; CHEG 7000, 7100, 7300

ChP Courses offered for Spring 2017 (tentative):
- GPS 5100, Printability Analysis
- CHEG 5950 Pharma Process & Product Design
- CHEG 6300, Chemical Reaction Kinetics
- CHEG 6950, Graduate Topics Course - Modelling with Dr. Qi
- PAPR 5990, 6990, 7000, 7100, 7120, 7131, 7132, 7250, 7300; CHEG 7000, 7100, 7300

ChP Courses offered for Fall 2017 (tentative)
- GPS 5201, Color Printing and Substrates
- PAPR 5000, Intro to Papermaking
- PAPR 5301, Material Instrumental Analysis
- CHEG 5950, Graduate Topics in CHEG, Young
- CHEG 6200, Advanced Transport Processes, Springstead
- CHEG 6600, Methods of Research and Engrg. Comm, Pingali
- PAPR 5990, 6990, 7000, 7100, 7120, 7131, 7132, 7300; CHEG 7000, 7100, 7300

ChP Courses offered for Spring 2018 (tentative):
- GPS 5100, Printability Analysis
- PAPR 6000, Surface and Colloid Chemistry
- PAPR 6410, Coating Formulations
- CHEG 5950, Sustainable Earth Resource Eng, Mondada
- CHEG 6500/6510, Advanced process Design/Analysis, Kline
- PAPR 5990, 6990, 7000, 7100, 7120, 7131, 7132, 7250, 7300; CHEG 7000, 7100, 7300
Appendix E. Example Forms for the Review of Graduate Students
Biannual Graduate Student Review - TA and RA Funding Support

Required for all graduate students receiving support during the Fall 2015 semester.
Department of Chemical and Paper Engineering (ChP)
Due: Friday, November 6, 2015 (Hardcopy only) to Dr. William Rantz, Interim Department Chair

Student's Name: ________________________

Faculty Supervisor Completing this Review: ________________________

Course(s) where student was a TA:___________________________ OR Student was (circle one): RA DA hourly

Please make comments below, or state as "Non-applicable" (N/A).

1. Did the student show-up prepared and on-time?

2. Did the student check-in on a regular basis?

3. Did the student respond to requests of the instructor/research supervisor in a timely manner?

4. Did the student post and hold regular office hours?

5. Was the student helpful and sympathetic to the students needs?

6. Was the student an effective communicator for your class purposes?

7. Did the student maintain the lab to your satisfaction?

8. Did the student enforce safety awareness?

9. Rank the student's work ethic:
   1 = below minimum standard   2 = met minimum standard   3 = put in required time   4 = exceeded minimum standard   5 = outstanding

10. How much supervision did this student require per week (circle one):
    less than 2 hours   3 to 5 hours   more than 5 hours   way too much

Other comments:
To be completed by the program's Graduate Advisor

Student has completed the Committee Appointment Form in a timely manner.  Yes  No

Student has completed the Permanent Program of Study Form in a timely manner.  Yes  No

Student has completed their Research Proposal Defense in a timely manner.  Yes  No

PhD Students: Completed Level I Qualifying Exams by end of Year 1 of enrollment in the PhD degree program.  Yes  No

Student has a graduate GPA of at least 3.00.  Yes  No

Student has been completing courses in a timely manner.  Yes  No

Student is making progress towards completing their degree program on schedule.  Yes  No

Student is eligible to be considered to receive funding from Fund 11 next semester.  Yes  No

Other comments:

Criteria for awarding future TA/GA/RA funding (in order of ranking importance)

1. Availability of funds
2. Departmental needs
3. Graduate Student Review Report and Progress to Degree
4. Background and expertise
5. GPA or GRE scores (applies for new students only)
6. Seniority in the ChP Graduate Program
ANNUAL GRADUATE STUDENT ACTIVITY REPORT

This form is to cover activities and accomplishments during the reporting period from September 1 to August 31, and is to be delivered to your thesis or dissertation faculty advisor by the deadline of September 15. Non-thesis students will deliver this review to their program’s Graduate Advisor. You will receive feedback from your faculty advisor or the appropriate Program Committee by October 15.

Name: 

Date Completed: 

Review for the 12-month period of: to 

Date of entrance into program: 

Advisor: 

Committee Members: , , , 

Respond to all sections of this activity report that apply to you. You may type information directly into the gray text boxes provided in this document. Please return 2 COPIES of your completed activity report, your current vita, and any additional relevant materials. You may refer to your vita in relevant sections of this activity report. Be sure, however, to complete all sections of the form that are not covered by your vita. If you fail to return this form by the due date, faculty who review your activities will assume that none of these activities took place. The feedback from your review will reflect this assumption.

Please check your primary emphasis in the graduate program.

- Research Thesis or Dissertation □
- Non-Thesis □

I. Academic Performance

A. Provide completion dates of activities of an academic nature, and state the outcomes of those activities (pass/fail). List activity titles, and indicate whether the academic activities were completed in the timeline dictated in the training handbook (where relevant).

Thesis Title:

Thesis Proposal Defense:

Final Thesis Defense:
Comprehensive Exam:
Dissertation Title:
Dissertation Proposal Defense:
Final Dissertation Defense:
B. List each graduate-level course you took during the reporting period, along with its grade.

II. Applied Activities
A. Describe practicum and other applied activities performed during this period of review. List the practicum site, your supervisor’s name, and the types of duties you performed. Please also provide a phone number or e-mail address for each supervisor.

B. Provide an estimate of your total applied hours for the current period of review.

III. Research and Other Scholarly Activities

List only those activities that occurred during the current period of review. If an activity was listed last year, indicate its status at this time (submitted, in progress, etc.) Use APA style throughout this section of the activity report.

A. List articles published or in press. Use the following headings:
i) journal articles; ii) book chapters; iii) book reviews; iv) abstracts and proceedings (e.g., ERIC, JSAS, NAPS); v) letters to the editor and comments.

B. Conference presentations: List i) papers/posters presented, ii) papers/posters submitted for presentation.

C. List manuscripts in preparation and works in progress. Indicate probable authorship and the anticipated date of completion. Specify the current state of progress (e.g., data collection, analysis of data, design stage).
D. List other research and other scholarly activities that do not fit the aforementioned categories (e.g., graduate student research or travel grants).

E. Provide an estimate of your total research hours for the current period of review.

IV. Teaching

A. List courses, classes, workshops, guest lectures, etc. taught. Specify the course name, number, and semester. Include formal evaluation summaries. Also indicate if this was an activity that you performed for an assistantship or if it was additional work performed outside of assistantship duties.

V. Professional and Personal Development

A. List the regional and national organizations of which you are a member. Include your affiliation status and divisions or interest groups to which you belong, and any elected or appointed positions you hold within these organizations.

B. List conferences and workshops attended.

C. List committees on which you are a member. These can range from department committees to national organization committees.

D. List services provided to the department, the university, the community, or the profession (e.g., editing journal manuscripts, organizing workshops, organizing symposia for conferences, hosting students while interviewing at WMU)

E. List all departmental or university colloquia attended.
F. List last year’s goals and describe how you have met or made progress toward meeting those goals. Please indicate what goals from last year were not met, and why.

G. Describe your current goals for professional development and your plans for achieving these goals (e.g., acquisition of knowledge, growth in research or practice skills).

H. Describe any other experiences that you’ve had in the past year that have contributed to your personal growth and maturity.
Appendix F. Forms to Document Graduate Student Progress to Degree Completion
NOTIFICATION OF APPOINTMENT TO A DISSERTATION, THESIS OR SPECIALIST PROJECT COMMITTEE

CURRENT DATE: mm/dd/yyyy

STUDENT'S NAME: ___________________________ WIN

ADDRESS:

Street
City
State
ZIP

DEPARTMENT/PROGRAM: Select from Drop-Down List

PROGRAM: (Type here if not listed above)

Check one:  □ Initial appointment  □ Revised appointment (attach rationale for request)

PROPOSED COMMITTEE MEMBERS

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Department</th>
<th>Date (mm/dd/yyyy)</th>
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</thead>
<tbody>
<tr>
<td>Committee Chair</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Type name here and sign above

Committee Members

Type name here and sign above

Type name here and sign above

Type name here and sign above

Type name here and sign above

Type name here and sign above

Chairperson, Department

Date Requested

Graduate Program Advisor

Dean or Associate Dean of the academic college (required for dissertation only)

Dean, Graduate College

Date Approved

Approved Copies to: Committee Chair, Department Chair, Graduate Program Advisor

Notification of Appointment jbk/MDP

Revised 7/30/2009
WESTERN MICHIGAN UNIVERSITY
APPLICATION FOR PERMISSION TO ELECT

Please circle one course (use a separate form to elect each course):

* 7000 Master's Thesis 6 hours
7100 Independent Research 2-6 hours
7120 Professional Field Experience 2-12 hours
* 7200 Specialist Project 6 hours
7250 Doctoral Research Seminar 2-6 hours
* 7300 Doctoral Dissertation 15 hours
7350 Doctoral Research 15 hours

*(These courses are subject to a continuous enrollment requirement. This form is only filled out the first time you wish to enroll in 7000, 7200, or 7300 hours.)*

Please indicate your plan for enrolling in the course:

<table>
<thead>
<tr>
<th>1st Enrollment</th>
<th>Semester/Session</th>
<th>Year</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>2nd Enrollment</td>
<td>Semester/Session</td>
<td>Year</td>
<td>Hours</td>
</tr>
<tr>
<td>3rd Enrollment</td>
<td>Semester/Session</td>
<td>Year</td>
<td>Hours</td>
</tr>
</tbody>
</table>

Name ___________________________________________
Address ________________________________________
Email Address __________________________________
Phone _________________________________________
Department _____________________________________
Degree _________________________________________

Description of Study (including methodology, if research or description of field experience [including name of site and supervisor]):

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

I understand that research involving human or animal subjects, recombinant DNA, chemical hazards, or radioactive material must have prior approval of the research proposal by the appropriate University review body, thus assuring compliance with the regulations for the protection of such subjects or for the use of such materials. (See the reverse side of this form for the specific requirements.) In addition, I understand that The Graduate College will not approve any master's thesis, special project, or doctoral dissertation which does not comply with these requirements, and in that event no credit will be granted for the course.

Signature ______________________________________ Date __________
Signature of Faculty Member under whom study is to be completed Date __________

Signature of Department Chairperson __________ Date __________

*Signature of The Graduate College Representative (needed for 7000, 7200, and 7300 only) Date __________

Distribution: Department Chairperson, Faculty Advisor, Student, Records Office, *Graduate College

Revised 4/06
Instructions And Information Related To This Form
1. The Registrar's Office checks this program for credits and grades and for all requirements for graduation. Changes in the program must have the signed approval of the advisor on a Graduate Program Change form; an approved undergraduate course used in the program must have the signed approval of the advisor and the graduate dean on a Permission to Elect A 3000 or 4000 Level Course For Inclusion In A Graduate Program form.
2. Send this program form, signed by the graduate advisor, to the Registrar's Office before the student completes the final 15 hours.
3. This form is not an application for graduation. A separate form for that purpose may be obtained from the Registrar's Office and returned to that office approximately two semesters before the student's graduation date.

# Graduate Student Permanent Program-Master's Level

<table>
<thead>
<tr>
<th>Name (Last, First Middle):</th>
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</thead>
<tbody>
<tr>
<td>Western Student ID Number (WIN):</td>
</tr>
<tr>
<td>Permanent Address:</td>
</tr>
<tr>
<td>Field of Graduate Study:</td>
</tr>
<tr>
<td>Concentration Area:</td>
</tr>
<tr>
<td>Additional Requirements (e.g., prerequisites, comprehensive exam, portfolio review) to be met before graduation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Dept Course No</th>
<th>Term Elected</th>
<th>Credit Hrs.</th>
<th>Grade</th>
<th>Transfer</th>
</tr>
</thead>
</table>

To expand this table, use the Tab key in the last cell of the table to add another row.

Graduate Advisor Signature X .................................................. Date Program Outlined: ............................................

Student Signature X ................................................................. Date Received: ............................................................

Final Exam Completed: .............................................................. Thesis Approved: .......................................................

Date of Graduation: ................................................................. Hours: ...........................................................................

G.P.A. .........................................................................................

Copies to Registrar's Office, Graduate Advisor, Student, Department
## Required Courses

<table>
<thead>
<tr>
<th>COURSE NO</th>
<th>COURSE NAME</th>
<th>HRS</th>
<th>GRADE</th>
<th>SEM/yr</th>
<th>INSTITUTION</th>
</tr>
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</table>

## Master/Transfer Courses

<table>
<thead>
<tr>
<th>COURSE NO</th>
<th>COURSE NAME</th>
<th>HRS</th>
<th>GRADE</th>
<th>SEM/yr</th>
<th>INSTITUTION</th>
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</table>

## Research

<table>
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<tr>
<th>COURSE NO</th>
<th>COURSE NAME</th>
<th>HRS</th>
<th>GRADE</th>
<th>SEM/yr</th>
<th>INSTITUTION</th>
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## Electives

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<tr>
<th>COURSE NO</th>
<th>COURSE NAME</th>
<th>HRS</th>
<th>GRADE</th>
<th>SEM/yr</th>
<th>INSTITUTION</th>
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</table>

## Dissertation Hours

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<tr>
<th>COURSE NO</th>
<th>COURSE NAME</th>
<th>HRS</th>
<th>GRADE</th>
<th>SEM/yr</th>
<th>INSTITUTION</th>
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</table>

## TOTAL CREDIT HOURS:
Identify Research Tools:

<table>
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<tr>
<th>List Exams Scheduled/Passed</th>
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</thead>
</table>

Other Requirements (foreign language, DGE's, prelims, etc.

### Required Signatures

<table>
<thead>
<tr>
<th>Student Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Advisor</td>
<td>Date</td>
</tr>
<tr>
<td>Department Chair</td>
<td>Date</td>
</tr>
</tbody>
</table>

For office use only

<table>
<thead>
<tr>
<th>Graduate College Dean</th>
<th>Date</th>
</tr>
</thead>
</table>

Original copy to Auditing, copies to student, advisors and department
DOCTORAL DISSERTATION, THESIS OR SPECIALIST PROJECT
PROPOSAL APPROVAL FORM

1. **This form is interactive.** Please type all information directly in the form before printing out.

2. Gather signatures from your Committee Chair and Members

3. Submit one copy to the Department Chair and to the Graduate Program Advisor and one copy to the Graduate College at the following address: 260 W Walwood Hall, Kalamazoo, MI 49008-5242.

4. Please submit this completed form to the Graduate College only after receiving IRB approval. (Forms should reflect an abstract, committee signatures, IRB approval information, and student's signature.) However, students who require approval of a proposal to compete for a grant or award are welcome to submit a copy of the form with only their committee signatures. Students should wait for IRB authorization before providing the Graduate College with the completed form that includes all elements.
**Western Michigan University**

**The Graduate College**

**Doctoral Dissertation, Thesis or Specialist Project Proposal Approval Form**

**WIN:**

**DEPARTMENT/PROGRAM:**

**PROGRAM:** (Type here if not listed)

<table>
<thead>
<tr>
<th>STUDENT INFORMATION</th>
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<tbody>
<tr>
<td><strong>STUDENT NAME:</strong></td>
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<tr>
<td>Last</td>
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<tr>
<td><strong>PRESENT ADDRESS:</strong></td>
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<td>Street</td>
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<tr>
<td><strong>PERMANENT ADDRESS</strong></td>
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<tr>
<td>Street</td>
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<tr>
<td><strong>Phone Number:</strong></td>
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<tr>
<td>Email Address:</td>
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<tr>
<td><strong>Type of Project:</strong> Select from Drop-Down List</td>
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<tr>
<td><strong>Proposed Title:</strong></td>
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<tr>
<td><strong>Date of Proposal Defense:</strong></td>
</tr>
<tr>
<td><strong>Abstract (Optional) - length not to exceed 350 words</strong></td>
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<td>(Type or copy and paste your abstract here)</td>
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<tr>
<th>PROSPECTUS</th>
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</thead>
<tbody>
<tr>
<td><strong>Approval Date:</strong></td>
</tr>
<tr>
<td><strong>Signature of Dissertation Chair:</strong></td>
</tr>
<tr>
<td>Which elements comprise a proposal in your department?</td>
</tr>
<tr>
<td>☐ Concept Paper</td>
</tr>
<tr>
<td>☐ Other (Please indicate)</td>
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</table>

Revised 4/27/2012
The committee hereby approves the proposal

COMMITTEE CHAIR

<table>
<thead>
<tr>
<th>Type name here and sign above</th>
<th>Institution</th>
<th>Department</th>
<th>DATE (mm/dd/yyyy)</th>
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</table>

COMMITTEE MEMBERS

<table>
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<tr>
<th>Type name here and sign above</th>
<th>Institution</th>
<th>Department</th>
<th>DATE (mm/dd/yyyy)</th>
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Your research may require regulatory oversight. Approval from a regulatory oversight committee may be necessary before any research is conducted.

Does the proposal involve research with any human/animal subjects, bio-hazardous materials or recombinant DNA?

 ☐ YES  ☐ NO

If "YES": Indicate date approved and PROJECT NUMBER.
If "NO": If the Research Compliance Office determines that your project DOES NOT NEED approval, please submit a Letter of Determination from that office.
If you are uncertain if your project requires HSIRB approval, contact the Research Compliance Coordinator at 713.8293.

PROJECT NUMBER:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Date of Review</th>
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<tbody>
<tr>
<td>Human Subjects (HSIRB)</td>
<td></td>
</tr>
<tr>
<td>Animal Subjects (IACUC)</td>
<td></td>
</tr>
<tr>
<td>Radioactive Materials (RSC)</td>
<td></td>
</tr>
<tr>
<td>Recombinant DNA (RDBC)</td>
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</table>

I, ________________________________, affirm that the research for my graduate degree will be conducted in agreement with ethical standards at Western Michigan University and that my work (dissertation, thesis, or specialist project) will be original. I will provide unambiguous attribution for the thought and the words of other scholars eventually appearing in the work. I understand that failure to provide clear credit in this way can result in severe penalties, including separation from the university and revocation of a degree. I also understand that regulatory oversight for my research may be required and that I should contact the Coordinator, Research Compliance office at 269.387.8293 for assistance.

Student Signature ___________________________ Date ____________
WESTERN MICHIGAN UNIVERSITY
The Graduate College

ADMISSION TO DOCTORAL CANDIDACY

Current Date (select from drop down): __________

Degree sought (check one):  □ EdD  □ Ph.D.

Candidate's Name: __________________________________________

Student WIN: ________________________

Current Mailing Address

Street  City/Town  State  ZIP Code

Department: __________________________________________

Program: __________________________________________

Anticipated Date of Graduation (select from drop down): __________

Date the dissertation proposal was approved by the student's committee (select from drop down): __________

Does this research require regulatory oversight?* (HSIRB/IACUC/RSC/RDBC) (check one):  □ YES  □ NO

Title of approved dissertation proposal: __________________________________________

The student named above has earned or satisfactorily completed the following requirements for admission to Doctoral Candidacy and has received approval by the academic program unit to continue study toward a doctoral degree:

□ A degree program grade point average of 3.0 or better

□ Appointment of a doctoral dissertation committee and approval of the dissertation proposal by the committee

□ All courses (excluding dissertation credit) and program requirements

□ All research tool requirements

□ Residence Requirement


□ PASSED  Date the first Exam was TAKEN: __________  Date the last Exam was PASSED: __________

* Dissertations that require approval for data collection from human or animal subjects, radioactive materials or recombinant DNA and that have NOT received prior institutional board approval will not be accepted by the Graduate College.
SIGNATURES:

I hereby apply for admission to doctoral candidacy. I am aware that if my study requires approval to collect data from human or animal subjects, radioactive materials or recombinant DNA that I must secure regulatory approval prior to collecting any data and must submit the approval letter along with this candidacy form. If I am uncertain that my research requires approval, I will contact the Coordinator, Research Compliance for assistance at 269.387.8293. Data collected without approval, when approval is required, will not be accepted by the Graduate College and cannot be used in my dissertation.

Student Signature:  ________________________________ ________________________________  Date

Committee Chair:  ________________________________________________________________  Date

Committee Member:  ________________________________________________________________  Date

Committee Member:  ________________________________________________________________  Date

Committee Member:  ________________________________________________________________  Date

Committee Member:  ________________________________________________________________  Date

Committee Member:  ________________________________________________________________  Date

External to WMU:  ________________________________________________________________  Date

GRADUATE DEAN  ________________________________________________________________  Date
In order to schedule the public dissertation defense, the following procedures must be observed:

1. The doctoral candidate must have applied for graduation, be currently listed in an active graduation class, and the candidate's graduation audit must show that all requirements except the defense and submission of the dissertation have been met.
2. This completed form along with the dissertation abstract (email abstract to: jennifer.holm@wmich.edu) must be submitted to The Graduate College at least 2 weeks prior to the proposed defense.
3. A two-hour block of time must be reserved for the defense.

To notify The Graduate College of the candidate's defense, please provide the following information:

Doctoral Oral Examination of

For the degree of

Department/Academic Unit

Date

Time ________ to ________

Place (including room number)

Dissertation Title

Committee Chairperson

Committee Members

DOCT. ORAL
4/05
WE HEREBY APPROVE THE THESIS SUBMITTED BY

____________________________________________________

ENTITLED ____________________________________________

____________________________________________________

AS PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF __________________________________________

____________________________________________________

(Section)               Thesis Committee Chair

____________________________________________________

(Section)               Thesis Committee Member

____________________________________________________

(Section)               Thesis Committee Member

____________________________________________________

(Section)               Thesis Committee Member

APPROVED

____________________________________________________

Dean of The Graduate College

Date _______________________________
THE GRADUATE COLLEGE  
WESTERN MICHIGAN UNIVERSITY  
KALAMAZOO, MICHIGAN

Date __________________________

WE HEREBY APPROVE THE DISSERTATION SUBMITTED BY

________________________________________________________________________

ENTITLED ___________________________________________________________________

________________________________________________________________________

AS PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF __________________________________________________________________

________________________________________________________________________

(Department)  Dissertation Review Committee Chair

(Program)    Dissertation Review Committee Member

                              Dissertation Review Committee Member

                              Dissertation Review Committee Member

APPROVED

________________________________________________________________________

Dean of The Graduate College

Date __________________________
Enrollment by graduate appointees that is less than full-time is approved in limited circumstances, including 1) when all course work has been completed and the only requirement left is thesis, dissertation, or an officially recognized capstone course (a capstone course is not the last course you take—check with your advisor for clarification); or 2) when the graduate appointee is at the end of the program and needs less than full-time enrollment to complete the degree. This form must be completed for each semester or session a student requests permission to underenroll.

Name of Graduate Appointee

Degree Program

Student's WIN

Name of Graduate Advisor

Appointment Information:

Circle the appointment funding level:

Full 3/4 2/3 1/2

Hiring Unit

Indicate the year and circle the semester/session in which you are requesting permission to underenroll (use a separate form for each term):

Year Fall Spring Summer I Summer II

List course number(s) of enrollment and number of hours for this semester/session:

Explain briefly your reason(s) for not meeting the enrollment requirement this semester/session.

Have you been previously underenrolled while on appointment? Which semester(s) and/or sessions(s)?

Student signature Date

Advisor signature Date

Graduate College Action: □ Approved □ Not Approved

Graduate College Date

Please note: FICA regulations and some federal loan deferment regulations require at least half-time enrollment, which for graduate students at WMU is three credit hours during the Fall/Spring semesters and two credit hours during the Summer I/Summer II sessions. Graduate students, even those enrolled for thesis or dissertation hours, must be enrolled at least half-time in order to qualify for the FICA tax exemption or to be eligible for loan deferments.

If you are an international student, U.S. immigration regulations require that you obtain separate permission to enroll less than full-time from an international student advisor in the Office of International Admissions and Services (IAS). Unless you report to IAS by the second week of each semester for this reason, you might jeopardize your immigration status in the U.S. For more information, please contact IAS at oiss-info@wmich.edu or (269) 387-5865.

Revised January 2012
Appendix G. PhD Qualifying Exams Requirements and Timelines
PhD in Paper and Printing Science

Qualifying Exams

Department of Chemical and Paper Engineering (ChP)
4601 Campus Drive, A-217 Parkview
Western Michigan University
Kalamazoo, MI 49008-5462

The following are the qualifying exams for students pursuing a PhD in Paper and Printing Science.

Effective date is for students with initial enrollment in the doctoral program as of the Fall 2013 semester. This document has been approved by a vote of the ChP Graduate Faculty at the October 17, 2013 faculty meeting.

All students seeking a doctoral degree in paper and printing sciences from Western Michigan University (WMU) must successfully complete the Level I and Level II qualifying exams.

Level I Qualifying Exam: Written Exam

This written exam will test a doctoral student’s general knowledge of paper and printing science at the level of a person who has completed a master’s degree in Paper and Imaging Science and Engineering or a master’s degree in Paper and Printing Science. This exam will include information and topics related to two required areas:

1. Inks and Imaging
2. Advanced Paper Processes

Students will select two additional Level I Qualifying exam topic areas from among the four topic areas shown below:

1. Design of Experiments
2. Coatings and Rheology
3. Printability
4. Surface Science and Paper Physics

Students will inform the ChP Graduate Advisor by November 1 which two of the four additional exam topic areas they wish to take in the following Level I Qualifying Exam period, which is held in the Summer I session. Students cannot change their topic areas once they have selected them. Students must pass the two topic areas they select and cannot change to a different topic area if they fail on their first attempt to successfully complete a selected topic area exam.

Students must successfully complete the Level I qualifying exam by the end of their first year of enrollment in the doctoral program, assuming that their initial enrollment is Fall semester. Students
initially enrolling in the Spring semester must complete the Level I qualifying exam by the end of the next year’s subsequent exam schedule (the student’s second spring semester). Students currently enrolled in the master’s degree program may take the Level I qualifying exam if they so desire. Successfully completing the Level I qualifying exam while enrolled as a master’s candidate would fulfill the Level I qualifying exam requirement if the student enrolls in the doctoral program after completing the master’s degree.

Students that do not successfully pass the Level I qualifying exam after two attempts will be removed from the doctoral degree program.

**Structure and Grading of the Level I Qualifying Exam**

1. Students will be provided with a list of topic areas and recommended texts or reading materials during the Fall semester graduate student orientation sessions.
2. The Level I qualifying exam will be prepared by graduate faculty members from the ChP department, as organized by the chair of the department graduate committee.
3. The Level I qualifying exam will be administered in four parts, one part to be completed in each 2-hour exam period.
4. The Level I qualifying exam will be held the second week of the Summer I session, as defined by the University calendar.
5. The graduate committee will work with students taking the Level I qualifying exam to schedule exam time periods. All students will take the same exam during each of the four examination periods.
6. Students taking the Level I qualifying exam will be assigned a number by the chair of the department graduate committee, and will use that number in place of their name when submitting their exam solutions. Other than informing the ChP department faculty which students are taking the Level I qualifying exam, the chair of the department graduate committee will not reveal the identity of any student until after the Level I qualifying exam is graded.
7. The faculty member writing a topic area exam and an additional member of the ChP graduate faculty will grade each of the exams. An average score using the results from both graders in each of the four topic areas will be calculated. The average score will be used as the basis for determining the student’s success in completing the Level I qualifying exam.
8. An average score of 75% in each of the four topic area exams is required to pass the Level I qualifying exam.
9. Students not achieving a score of 75% in one or more of the four topic areas must retake an examination only in those topic areas where a score of 75% was not achieved.
10. Students that do not successfully complete the Level I qualifying exam during the second week of the Summer I session may retake the exam during the first week of the Summer II session, as defined by the University calendar. If the student chooses to wait until the following Summer I Level I qualifying exam time period, the student will not receive any funding during that academic year from general University funds (Fund 11 sources). The student may still be offered funding from a research contract administered by a faculty member.
11. Students will receive written notice from the department graduate committee within one week of their completion of the four topic area exams, as to whether or not they have successfully completed the Level I qualifying exam.

**Alternative Activities to Supplant the Level I Qualifying Exams**

Students who receive a course grade of "A" in the courses listed in Table 1 are not required to take the Level I qualifying exam in that topic area. Graduate students who wish to be eligible to receive general University funds (Fund 11 sources) during the second year of their doctoral program must successfully complete all four topic area exams by the end of their first year of enrollment in the PhD program (see item 10).

<table>
<thead>
<tr>
<th>Topic Area</th>
<th>WMU Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Paper Processes</td>
<td>PAPR 5501</td>
</tr>
<tr>
<td>Inks and Imaging</td>
<td>GPS 5201</td>
</tr>
</tbody>
</table>

**Additional Topic Areas for Students to Select Two Exams**

<table>
<thead>
<tr>
<th>Topic Area</th>
<th>WMU Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Design</td>
<td>IME 5160 or STAT 5650 or STAT 5670 or STAT 5680</td>
</tr>
<tr>
<td>Coatings and Rheology</td>
<td>PAPR 6400 or PAPR 6410</td>
</tr>
<tr>
<td>Printability</td>
<td>GPS 5100 or GPS 6210</td>
</tr>
<tr>
<td>Surface Science and Paper Physics</td>
<td>PAPR 6000 or PAPR 6600</td>
</tr>
</tbody>
</table>

Students who have completed their MS in Paper and Imaging Science and Engineering or MS in Paper and Printing Science degrees from WMU and are admitted to the doctoral program may use courses completed as part of their MS degree program to fulfill the requirements for the Level I qualifying exams.
Level II Qualifying Exam: Oral Defense of Dissertation Research Proposal, Research Topic Area, and Graduate-level Topics

The Level II qualifier will be an oral defense on the proposed dissertation research topic area, the dissertation proposal itself, and questions on graduate-level course materials. During this Level II qualifying exam, the students will demonstrate through oral discussion that they possess an acceptable knowledge of their area of chosen research and other graduate-level topics, in addition to defending their dissertation proposal.

1. The Level II qualifying exam will consist of a 40-minute oral presentation by the student on the dissertation proposal topic, followed by questions from the general public.

2. After completing the public session, the student and the student’s dissertation advisory committee will initiate a closed session for general questions from the committee on the student’s research topic area, additional questions on the dissertation proposal itself, and questions on graduate-level course material. Any member of the graduate faculty may participate in the closed session discussion.

3. The Level II qualifying exam will not exceed 3-hours in length, including the presentation by the student, public questions, and the closed session.

4. The student’s dissertation advisory committee will decide whether the student has passed or failed the Level II qualifying exam.

5. Students have two attempts to successfully complete the Level II qualifying exam. Students must complete the Level II qualifying exam within twelve calendar months of their successful completion of the Level I qualifying exam or present a compelling reason for the need of an extension to their dissertation committee who may appeal to the graduate committee to grant an extension.

6. Students are responsible for working with their dissertation advisory committee to set a schedule and test dates for meeting the deadline for successfully completing the Level II qualifying exam.

7. Students must complete the Level II qualifying exam within two attempts and within the specified time limit or they will be removed from the doctoral program.

Appeals of Results for Level I and Level II Qualifying Exams

All appeals of the results from the Level I and Level II qualifying exams are to be made to the department chair. The department chair will then review the results of the Level I and Level II qualifying exams, and determine a remedy, if any is warranted.
Appendix H.  Academic Honesty and Writing a Thesis or Dissertation
TO: Said AbuBakr, Ph.D.
Chair, PCI Department

FROM: Andrew Kline, Ph.D.
Chair, PCI Graduate Committee

DATE: June 15, 2007

RE: New Policy on Graduate Student Research and Thesis or Dissertation Writing

Per discussions at the Graduate Committee meeting held on June 11, 2007, the following recommendations are made as the new policy for the PCI department regarding graduate students' research efforts and thesis or dissertation writing:

1. The PCI department supports following the university and graduate college guidelines in regards to plagiarism within graduate student research efforts, theses, dissertations, or other published scholarly works arising from the same.

2. The PCI department believes that each graduate student should have independently collected original data and completed an independent analysis of the data to answer separate and unique thesis or dissertation questions. These research activities are in cooperation with, and under the supervision of the student's main research advisor and his or her faculty research committee.

3. Graduate students need to properly cite all previous work, or data taken from other sources, that are used as part of their own thesis or dissertation. This includes past work by another student in an earlier thesis or dissertation.

4. Data that are collected in a joint effort by more than one student must be cited as shared data in each thesis or dissertation where the data appear. Analysis of the shared data should be used to support independent and unique thesis or dissertation questions, as stated in Item 2 above.