Chemical & Petroleum Engineering

GRADUATE PROGRAM MANUAL





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Welcome to the

Chemical and Petroleum Engineering

Graduate Program

The Chemical & Petroleum Engineering Department (CPE) at The University of Kansas provides an indepth, academic understanding of chemical and petroleum engineering for graduate students who plan to have careers in academia, research and development, or in their related professional industries. We offer Master of Science Degrees (MS) in either Chemical Engineering or Petroleum Engineering and a Doctor of Philosophy (Ph.D.) in Chemical & Petroleum Engineering.

In the Master of Science programs, the primary emphasis is on formal coursework in engineering and related subjects. Students take a sequence of core courses in heat, mass and momentum transport, thermodynamics, reaction kinetics, applied mathematics, reservoir engineering, and petroleum recovery.

In the Doctoral program, the focus is on an independent research project in a significant engineering area. Specific Ph.D. course work will revolve around the student's chosen area of specialization which will reflect the combined research interests of the student and their faculty research advisor. In addition to specialized courses in the department, advanced courses in mathematics and computer science, life sciences, physical sciences, and other branches of engineering may be used to prepare the Ph.D. student for their research project.

You will be matched to a research advisor either before you arrive on campus or during the advisor matching process (see the Graduate Program Director or Graduate Program Coordinator for more information about advisor matching). Each student will be assigned an office in a shared graduate office space, which will be your personal workspace (for study, writing, etc). GTAs will hold office hours in 4160 Learned Hall. To check out any required key to access your office, please contact the department administrators located in 4132 Learned Hall. You will also be assigned a mailbox located in 4160 Learned Hall. However, when you have packages delivered to you, they come to CPE main office in 4132 Learned Hall and somebody will notify you of such arrival.

Most students experience some adjustment when they relocate and attend a school new to them. One great place to look if you have questions about transition is http://new2ku.ku.edu (it is geared more toward undergraduates but has useful information for all students). For more information about Lawrence, KS, here are two great links: https://www.lawrence.com. We have some additional resources for homesickness and culture shock https://cpe.ku.edu/resources-students-graduate. Learn about tech and resources available to you at https://howto.ku.edu

On campus, there are dozens of student organizations for you to choose to join. A couple to highlight are the Graduate Engineering Association, Engineering Newcomer Club, and Engineering Student Council; professional groups are American Institute of Chemical Engineers (AIChE), Society of Petroleum Engineers (SPE), and Society of Women Engineers (SWE). See RockChalkCentral.ku.edu for more student organizations. You may find a sense of belonging and community through becoming involved with a student organization.

This manual is filled with both academic and student life information. We hope you find it useful as you begin your exciting new graduate career at KU!

Prerequisite Courses (for students with a non-engineering background)

For the Chemical Engineering Degree:	For the Petroleum Engineering Degree:
C&PE 511: Momentum Transfer	C&PE 511: Momentum Transfer
C&PE 512: Chemical Engineering	C&PE 525: Heat & Mass Transfer
Thermodynamics	
C&PE 524: Kinetics and Reactor Design	C&PE 527: Reservoir Engineering II
C&PE 525: Heat & Mass Transport	C&PE 618: Improved Oil Recovery

Regular Graduate Courses

(Note: Not all classes are offered each semester/year)

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C&PE 701*** Methods of Chemical and Petroleum Calculations (3) {Fall Only}
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C&PE 715 {Topics in C&PE: this class changes each semester and has multiple sections/topics}

C&PE 721* Chemical Engineering Thermodynamics (3) {Fall Only}

C&PE 722* Kinetics and Catalysis (3) {Spring Only}

C&PE 725 Cellular & Molecular Pharmaceutics (3)

C&PE 731* Convective Heat & Momentum Transfer (3) {Spring Only}

C&PE 732* Advanced Transport Phenomena II (3) {Fall Only}

C&PE 751 Basic Rheology (3)

C&PE 752 Tissue Engineering (3)

C&PE 755 Semiconductor Processing (3) {Spring Only}

C&PE 765 Corrosion Engineering (3)

C&PE 771** Advanced Reservoir Engineering (3) {Spring Only}

C&PE 778 Applied Optimization Methods (3)

C&PE 790** Introduction to Flow in Porous Media (3) {Spring Only}

C&PE 795** Enhanced Petroleum Recovery (3) {every other Fall}

C&PE 798** Phase equilibrium {every other Fall}

C&PE 800 Seminar (1)

C&PE 802 CEBC Colloquium (0.5 - 1)

C&PE 803 MS Research (1-6)

C&PE 804 Petroleum Management Seminar (1)

C&PE 825 Graduate Problems (1-5)

C&PE 902 Preparation for Ph.D. Comprehensive Exam (3)

C&PE 904 Ph.D. Research (1 - 12)

C&PE 910 Industrial Development of Catalytic Processes (3) {Every other Spring}

^{*} Chemical Engineering Core Course

^{**}Petroleum Engineering Core Course

^{***} Core Course for both Chem Engineering and Petroleum Engineering majors

	GENERAL GRADUATE PROGRAM OVERVIEW		
MS: Items 1–3 and 8 –10; Ph.D.: All Items 1–10			
	Item	When	Who
1	Advisor Selection	During first or second semester	Student and Graduate Director
Attend faculty presentations, meet with faculty, and submit selections requests			uests
2	Plan of Study	End of second semester	Student and Research Advisor
Meet with Advisor to plan degree path and select elective			
3	Selection of Committee Members	End of second or third semester	Student and Research Advisor
	MS: 3 members, no special requirements Ph.D.: 5 members, at least 1 must be from another department		
4	Preliminary Research Exam	End of first calendar year	Research Advisor
	Passing Preliminary Research Exam is required to be a Ph.D. aspirant status.		
5	Residency Requirement for Ph.D.	Before completing the comprehensive exam	Student
	At least two semester	s as full-time students at KU	
	Responsible Scholarship and Research Skills Requirement	After the relevant courses are completed and as a requirement for taking the comprehensive exam	Research Advisor
	Responsible Scholarship: Must complete a minimum of 3 credit hours of CPE 800. Research Skills: A letter to be sent to Graduate Studies from your Advisor explaining a coherent research theme		
	Comprehensive Examination	After all course work and at least 15 credit hours research are completed	Thesis Committee
_ /	Written Part: Research problem presented in a proposal form. Oral Part: Only after Written Part is approved. {Note: The Research Advisor will prepare the problem, and the Exam must be completed at least 5 months before graduation.}		
8	Final Defense of Ph.D. Dissertation or Master's Thesis	When the advisor and student decide it is ready {for Ph.D. all post-comp hours must be met}	Thesis Committee
9	Submit Dissertation or Thesis	When all corrections are made	Student
10	Graduate!!	When all above items are complete	Student

Master of Science

The following guidelines incorporate departmental and university requirements for the Master of Science degree program. The purpose is to assist each student, their research advisor, and their advisory committee in preparing a Plan of Study: your individualized, detailed path to a graduate degree.

The MS degree program requires a minimum of 30 credit hours including: Graduate Core, electives, research hours, and the submission and successful oral defense of a research thesis. Students in this program may be considered for research assistantships, teaching assistantships, and fellowships. A 3.0 grade-point average at the end of each semester of residence is required to maintain regular student status and for graduation. Only the first 6 hours of enrollment in C&PE 803 meet degree requirements.

The following are summaries of the degree requirements for a Master of Science in the CPE department. Only in rare occasions are exceptions from the C&PE course work allowed. It is recommended that part of the elective hours (3 - 6) credit hours, depending on an advisor's recommendations) be from other departments. For petroleum engineering, if a student has not completed an advanced-level, reservoir-related course in geology as an undergraduate, such a course must be taken as one of the electives: GEOL 535 Petroleum and Subsurface Geology is recommended.

Master of Science in Chemical Engineering - thesis option	Credit Hours
ChE Graduate Core Courses (15 hours)	
C&PE 701 Methods of Chemical and Petroleum Calculations	3
C&PE 721 Chemical Engineering Thermodynamics	3
C&PE 722 Kinetics and Catalysis	3
C&PE 731 Convective Heat and Momentum Transfer	3 3
C&PE 732 Advanced Transport Phenomena II	3
Electives (6 hours)	6
Research (9 hours)	
C&PE 800 Seminar	3
C&PE 803 Research	6
Thesis	
Oral Examination (presentation of the thesis to your committee)	
Master of Science in Petroleum Engineering - thesis option	
PE Graduate Core Courses (15 hours)	
C&PE 701 Methods of Chemical and Petroleum Calculations	3
C&PE 771 Advanced Reservoir Engineering	3 3 3 3
C&PE 790 Introduction to Flow in Porous Media	3
C&PE 795 Enhanced Petroleum Recovery	3
C&PE 798 Phase Equilibrium	3
Electives (6 hours)	6
Research (9 hours)	
C&PE 800 Seminar	3
C&PE 803 Research	6
Thesis	
Oral Examination (presentation of the thesis to your committee)	

Basic Four-Term Enrollment Plan for Chemical Engineering MS:

Fall Term 1: C&PE 701, 721, and seminar/C&PE 800 (elective course optional)
Spring Term 1: C&PE 722, 731, and seminar/C&PE 800 (elective course optional)

Summer Term 1: C&PE 803 Research (with your advisor) (1-3 credits) Fall Term 2: C&PE 732, elective course(s), and seminar/C&PE 800

Spring Term 2: Final Research as needed (C&PE 803)

Basic Four-Term Enrollment Plan for Petroleum Engineering MS:

Fall Term 1: C&PE 701, (795 or 798), and seminar/C&PE 800 (elective course optional)

Spring Term 1: C&PE 771, 790, and seminar/C&PE 800 (elective course optional)

Summer Term 1: C&PE 803 Research (with your advisor) (1-3 credits)

Fall Term 2: C&PE (795 or 798), elective course(s), and seminar/C&PE 800

Spring Term 2: Final Research as needed (C&PE 803)

Enrollment: 9 credit hours per semester is considered full time enrollment for a graduate student. Students working as a GTA or a GRA will be considered full time with enrollment in 6 credit hours. Continuing students working at GRAs over the summer do not have to enroll over the summer semester. Exceptions include first and final semesters in the program. One of the most notable differences between graduate and undergraduate education is the lower enrollment. Taking more than 12 credit hours per semester is not recommended as courses of level 700 and above are significantly more challenging and demanding of your time than courses level 600 and lower. GTA or GRA students in their final semester may request to have this enrollment requirement reduced with the successful filing of a Petition for Reduced Enrollment (see Program Coordinator for details). International students must also have a reduced course load approved through ISS: https://iss.ku.edu/fl-reduced-course-load

Master of Science - Non-thesis Options

Project-only

In Project-only option, students do not need to write a thesis. Only those who are admitted directly into this option at initial application process are qualified to start and maintain on this track. Students on the project-only track will replace 3 of the 9 Research hours with <u>an elective</u> plus <u>C&PE 825 (3)</u>. In the final semester, a project will be assigned under the guidance of a Masters Advisory Committee. The student will plan to present the completed project to their full committee who must unanimously agree that the project has been completed to their satisfaction. This serves as your final project.

Coursework-only

In Coursework-only option, students do not need to write a thesis. Only those who are admitted directly into this option at initial application process are qualified to start and maintain on this track. Please work with your faculty advisor (s) to determine course selection and path to meeting graduate requirements.

Plan of Study

Before the end of the second semester, each student on the MS programs, with the help of their advisor, should create and submit a Plan of Study to the School of Engineering via their website: https://gradplan.engr.ku.edu/ The Plan of Study is a tool which is used to help keep you on track throughout the degree program. When you create your plan, you will decide your estimated term of

graduation and it will help you pace your class choices. Depending on a student's academic background and proposed Plan of Study, additional undergraduate prerequisite courses may be required. Up to 3 credit hours of the undergraduate prerequisite courses (numbers 500 or above) may be counted toward the MS degree as elective hours.

Course Completion

Finish all required core courses and electives. If there is ever any question as to which courses to take, there are many people available to assist, such as: your advisor, the Graduate Program Coordinator, or the Graduate Program Director.

Thesis Writing

Once the core courses have been completed and research is fully underway, it will be time to start writing a thesis about your research. The title and topic will be decided by the student with the help of their advisor and committee. This committee should have three faculty members minimum; your research advisor normally serves as chair of this committee. For more information about writing a thesis, ask other students, read previously published thesis, check-in with the Writing Center, and/or attend a thesis writing workshop through Graduate Studies.

Thesis Defense (also known as Oral Examination)

While your committee is reading through the final draft of your thesis, it will be time to plan your defense. Ideally, the Thesis Defense should be scheduled one month before your target graduation deadline. You'll decide on a day and time when you and your entire committee are available to meet for at least 2 hours, then reserve a conference room through the C&PE administrator. When you inform the Graduate Program Coordinator about the time of your defense, also include an abstract of your thesis and the title; that information will be used to create your defense announcement flyer and for the paperwork required to make this important milestone official through the Progress to Degree system. The defense itself will usually take 30-45 minutes during which time you will present your research findings to an audience of your committee and peers. After your presentation, your committee chair will open the floor to questions from the audience which will take another 10-20 minutes. Once the Q&A is complete, the audience will leave, and your committee will discuss your performance and outcome with you in private. Attending other students' final defenses can also help you prepare to go through the process yourself. Defenses are listed on the departmental website at https://cpe.ku.edu/graduate-defenses.

Graduation

During your final semester, while finishing your thesis and planning your defense, it will be time to plan for graduation as well. It's a good idea to be familiar with the <u>graduation deadlines</u> so you can plan accordingly. Every item on the <u>graduation checklist</u> must be complete before the graduation deadline, including edits to your thesis after your defense. Your thesis must be uploaded to https://graduate.ku.edu/submitting. You must have "Applied for Graduation" via Enroll and Pay. If you plan to graduate in the summer or fall but want to be included in the large spring graduation recognition ceremony, you must apply for graduation by March 1st before the applicable commencement ceremony. You can then rescind your application for graduation after the recognition ceremony and then must reapply during the semester you are actually ready to finish. The School of Engineering posts information to help students prepare for graduation at https://engr.ku.edu/graduate-graduation. Read more and find links to the checklists in Addendum V.

Doctor of Philosophy Path

Admissions and summary of milestones

Students admitted with a completed MS degree are automatically considered Ph.D. students. If the MS was completed at KU, they will start as Ph.D. Aspirants. If the MS was earned elsewhere, then the student will complete the Preliminary Exam of Research before becoming a Ph.D. Aspirant. Students admitted to the Ph.D. program with only a BS degree will be considered as on MS/PhD path until the Preliminary Exam of Research is complete. To qualify to take the exam, the student must a) achieve a grade point average/GPA of 3.2 or higher in the Graduate Core (or 3.25 GPA or higher for Petroleum), and b) earn no more than one 'C' grade in the Graduate Core. Students who start on the MS/Ph.D. path and successfully change to a 'Ph.D. Aspirant' status without earning a Masters degree along the way are called 'Direct Ph.D." students. Students joining the graduate program who do not meet the Direct Ph.D. criteria will need to complete the MS degree before continuing on, with the support of their research advisor, for the Ph.D. For all Ph.D. Aspirants, completion of the Comprehensive Exam advances the student to Doctoral Candidate status.

Enrollment: Students are expected to complete the full Graduate Core courses. If a student joins the Ph.D. program after completing a MS degree, then course waiver petitions can be requested on an asneeded basis. Course and elective waiver petitions are evaluated and approved by the Graduate Standards Committee (GSC). Each petition must include a syllabus for each equivalent course in addition to a copy of the MS degree transcript (can be taken from original application by request to Grad Coordinator). If approved, the student will receive a waiver for the correlating core course(s), but this is not a credit transfer. No outside credit hours can be counted toward the total credit hour requirements for the PhD. Instead, the student will take alternative courses or research hours as decided by the student and their research advisor or receive a course load reduction. The total course load for the Ph.D. can be reduced to as few as 45 credit hours for students who join the program with a completed MS degree in either chemical or petroleum engineering respectively.

<u>Fulltime Enrollment</u>: 9 credit hours per semester is considered full time enrollment for a graduate student. Students working as a GTA or a GRA will be considered full time with enrollment in 6 credit hours. Taking more than 12 credit hours per semester is not recommended as courses of 700 and above are significantly more challenging and time consuming. GTA or GRA students in their final semester can request to have this enrollment requirement reduced even further with the successful filing of a Petition for Reduced Enrollment (see Graduate Studies policies for details). For international students, please consult with advisors from International Support Services if interested in Reduced Course Load.

Continuing students working as GRAs over the summer do not have to enroll in the summer term. Exceptions include first and final semesters in the program. Enrollment policies are available at https://policy.ku.edu/graduate-studies/enrollment

Credit hours for the Ph.D. degree normally consist of 15 credit hours of courses beyond the Graduate Core and 30-34 credit hours of research work totaling at least 60 credit hours. The average Ph.D. student will complete about 63 credit hours, with an average per semester enrollment of 7 credit hours (approximate minimum of 9 total full-time semesters) as specified in the following table:

Ph.D. in Chemical & Petroleum Engineering

Courses: 30 credit hours as follows:

- C&PE Core Courses (5 courses = 15 hours)
- C&PE Inside Electives (3 courses = 9 hours)
- Outside Electives (700+ level; 2 courses = 6 hours)

Research: 30+ total cumulative credit hours fulfilled by a combination of the following:

- o C&PE 800 Graduate Seminar (and/or C&PE 802 CEBC Colloquium)
- o C&PE 902 Preparation for the Ph.D. Comprehensive Examination (optional)
- O C&PE 904 Research (MS research C&PE 803 hours will count toward Ph.D. research hours)

 Note: there are additional courses which may count toward the total number of research hours

Enrollment Requirements and Guidelines

The following regulations apply to all Ph.D. students in the selection of course work:

- 1. Enrollment in the C&PE Graduate Seminar (C&PE 800) every semester in residence for 1.0 credit. Students who are required to attend another seminar to satisfy a fellowship or research program requirement may enroll in both seminars. Any schedule conflicts should be discussed with both seminar coordinators. (Exception: in a student's final semester, if all research hours and post comp hours have been achieved, a student may request not to enroll in seminar with the permission of that semester's seminar faculty member or the graduate director.)
- 2. Each semester, students should enroll in a minimum of three graduate-level courses either in the C&PE department or in an advisor-approved outside course(s)/elective(s), or a total of nine credit hours including research (CPE 904 for Ph.D. Aspirants). Note: Students on a GTA or GRA contract will have a lower enrollment requirement of a minimum of six credit hours per semester
- 3. All courses in the C&PE department that count toward the Ph.D. degree must be numbered 700 or above although one (1) 500-level course taken as a prerequisite can count as an elective.

*Note: Adherence to these regulations is essential when preparing the plan of study. In rare cases there may be exceptions arising from the student's academic background; in such cases, the student's plan of study must have the written approval of the C&PE Graduate Standards Committee (GSC).

Detailed Explanations of each major step

Plan of Study

Before the end of the second semester, each student on the Ph.D. track, with the help of their advisor, should create and submit a *Plan of Study* to the School of Engineering office via the website: https://gradplan.engr.ku.edu/. The Plan of Study is a tool which is used to help keep students on track throughout their degree program. When a student creates their plan, they will decide their estimated term of graduation and it will help pace their class choices. Students will work with their research advisor to select elective course which will most benefit their research.

Ph.D. Advisory Committee

An advisory committee of <u>five</u> faculty members with dissertation status will be formed for each student once the student has been designated a Ph.D. aspirant. The committee works with the aspirant to develop an appropriate overall path toward graduation and monitors the research progress of the student throughout the remainder of the Ph.D. program.

On the Committee are:

1st The Chair - usually is the student's research advisor (co-chair options are also available).
2nd The Graduate Studies Representative_- cannot be from the CPE department and should NOT have a vested interest in the student's research (aka. No Conflict of Interest).
3rd, 4th, & 5th members - are typically faculty members in the department or researchers working in their respective labs.

{For information, see Graduate Faculty Appointments at KU Policy Library}

Preliminary Examination of Research

This exam is an important milestone for each graduate student on their way to becoming a Doctoral Candidate in the Chemical & Petroleum Engineering department. Other departments call this the Qualifier or Qualifying exam. The CPE Preliminary Exam is given to determine the student's aptitudes for 1) Independent, original critical thinking; 2) Planning and organizing a research program; 3) Use of previous work and background literature to demonstrate a) Understanding of the planned research within the scope of the larger project and b) Ability to conduct that research; 4) Application of fundamental theory (e.g. equations) to the proposed work; 5) Effective communication of technical work.

Students taking this exam will have a) completed the five C&PE core classes with a 3.2 GPA or higher (or 3.25 GPA or higher for Petroleum-focus) without having earned more than one 'C' or lower grade or b) have met the same criteria for equivalent courses during their Master's degree program at another accredited university and maintained a KU cumulative GPA above 3.25.

The two main components of this exam are the Written Report and the Oral Presentation. The topic for the exam will be a proposal of the research the student plans on performing for their final dissertation. The written portion should utilize standard formatting: 12pt font, 3-5 pages, single line spaced, 1-inch margins, a title, and name and date on top-left corner. Once the written portion has been submitted to the research advisor, it will be time to schedule the oral presentation. Students will work with their advisor, the graduate director, and the graduate program coordinator to schedule the presentation to ensure all department procedures and policies are correctly followed. The Oral presentation should take between 15 to 20 minutes. This exam in general is an excellent opportunity to make sure your full committee is arranged and for them to give you initial feedback as your dissertation writing begins in earnest. Read more in Addendum I.

Successful completion of the preliminary exam of research admits the student into the Ph.D. program and earns the student 'Ph.D. Aspirant' status.

Comprehensive Examination

The Ph.D. aspirant will take the comprehensive examination after completion of all course work. Before this exam can be taken, there are three additional requirements set by the School of Engineering:

- 1. **Residency Requirements:** Must have been enrolled full time for at least 2 semesters.
- 2. Research Skills: Per a letter from the student's advisor clearly explaining how they've been met.
- **3. Responsible Scholarship:** All students must complete at least 3 credit hours of CPE 800 before scheduling the comprehensive exam.

The examination itself consists of two parts: a written proposal for research and an oral examination based on, but not limited to, the research proposal.

For the research proposal, the student is assigned a topic of current interest to the chemical and/or petroleum engineering profession. This assignment is made by an examining committee consisting of at least five persons, including the advisory committee and at least one person outside the department. The aspirant identifies a research problem within the assigned topic area and prepares a written proposal for research on this problem. Normally, the written proposal must be prepared over a specified time period of 30 consecutive days. Except in unusual circumstances, the problem must be distinctly different from the dissertation problem. For formatting, the student can choose between NSF or NIH formats.

The examining committee evaluates the research proposal upon completion. If the committee determines it to be satisfactory, the oral examination part of the comprehensive examination is held. The oral examination is based on the research proposal but also may cover areas peripheral to the proposal.

A student must pass both parts of the examination. Failure of either part constitutes an unsatisfactory grade on the entire examination. An aspirant who receives a grade of Unsatisfactory may repeat the examination upon the recommendation of the examining committee, but under no circumstances may it be taken more than twice. The examination may not be repeated until at least 90 days have elapsed since the unsuccessful attempt. To prepare the aspirant for the comprehensive examination, the advisory committee may require enrollment in C&PE 902 (Preparation for the Ph.D. Comprehensive Examination) during the first year of the Ph.D. program. On receipt of a grade of Honors or Satisfactory on the comprehensive examination, the aspirant is admitted to candidacy for the degree of Doctor of Philosophy. {For more about the School of Engineering comprehensive exam requirements and full university policy wording: https://policy.ku.edu/graduate-studies/doctoral-oral-exams. Read more in Addendum II}

Successful completion of the Comprehensive Exam earns the student Doctoral Candidate Status.

Dissertation Writing

Once the core courses have been completed and research is fully underway, it will be time to start writing a Doctoral Dissertation about your research. The title and topic will be decided by the student with the help of their advisor and committee. For more information about writing a dissertation, ask other students, check-in with the <u>Writing Center</u>, and/or attend a thesis/dissertation writing workshop through <u>Graduate Studies</u>. Attending other students' final defenses can also help you prepare to go through the process yourself. Keep your eye on the Graduate Posting outside of 4132 Learned Hall. For formatting guidelines, see https://graduate.ku.edu/electronic-thesis-and-dissertation.

Final Dissertation Defense

While your committee is reading through the draft of your dissertation, it will be time to plan your defense. Ideally, the Dissertation Defense should be scheduled one month before your target graduation deadline.

You'll decide on a day and time when you and your entire committee are available to meet for at least 2 hours, then reserve a conference room through the C&PE administrator. When you inform the Graduate Program Coordinator about the time of your defense, also include an abstract of your dissertation title; that information will be used to create your defense announcement flyer and for the paperwork required to make this important milestone official through the Progress to Degree system. The defense itself will usually take 30-45 minutes during which time you will present your research findings to an audience of your committee and peers. After your presentation, your committee chair will open the floor to questions from the audience which will take another 10 - 20 minutes. Once the Q&A is complete, the audience will leave, and your committee will discuss your performance and outcome with you in private.

Graduation

During your final semester, while finishing your dissertation and planning your defense, it will be time to plan for graduation as well. It's a good idea to be familiar with the graduation deadlines so you can plan accordingly. Every item on the graduation checklist must be complete before the graduation deadline, including edits to your thesis after your defense. Your thesis must be uploaded: https://graduate.ku.edu/submitting. You must have "Applied for Graduation" via Enroll and Pay. If you plan to graduate in the summer or fall but want to be included in the large spring graduation recognition ceremony, you must apply for graduation by March 1st before the applicable commencement ceremony. You can then rescind your application for graduation after the recognition ceremony and then must reapply during the semester you are actually ready to finish. The School of Engineering has several checklists and information available to help students prepare for graduation, detailed information about applying for graduation, and information about the graduation ceremony itself. Read more and find links to the checklists in Addendum V. The Doctoral Hooding Ceremony is run by the Office of Graduate Studies; learn more at https://doctoral-hooding.drupal.ku.edu/.



When the timeline is broken (Leave of Absence)

Sometimes life gets in the way of completing your degree under the typical timeline. When this happens, it's time to consider a **Leave of Absence**. If you think you might need to take a leave of absence, the first step is to speak to your advisor, the Graduate Program Coordinator, or the Director of Graduate Program. For more information about the Leave of Absence policy, see https://policy.ku.edu/graduate-studies/leave-of-absence

Additional Information for students on a GRA/GTA/GA Appointment:

These are sometimes referred to as 3G appointments. These appointments are the most common way that graduate students are funded. Appointment percentages vary. A full appointment is 50% FTE. Any student with an appointment over 40% will be considered an employee of the university and will qualify for instate tuition rates. The appointments of 40%+ will also qualify for 100% tuition coverage via a third party sponsorship; for GTAs, this means the university will waive the tuition and the first 3 credit hours worth of fees. For GRAs this means that the grant/funding you are working under will cover 100% of your tuition and up to all of your campus fees (as determined by your research advisor). Students on a 3G appointment will still have some fees each semester such as medical insurance and international student fees (if applicable).

Students must be enrolled correctly and maintain good academic standing to continue employment via a 3G appointment. Full time enrollment for 3G students consists of 6 credit hours during spring and fall and 3 hours during the summer. GTA appointments are rarely offered during the summer, and summer enrollment is not required for any non-GRA funded student. There are many policies governing the 3G appointments, especially for the GTA appointments. For example, all GTAs must attend the annual training conference before beginning their contract and non-native English speakers must provide additional English Proficiency beyond what is required for admissions.

Some useful links for 3G appointments are:

- http://policy.ku.edu/graduate-studies/benefits-for-GRAs-GTAs-GAs
- http://graduate.ku.edu/gta-and-gra
- http://graduate.ku.edu/resources-graduate-teaching-assistants http://aec.ku.edu/speak-test

Useful Links and Other Information

CPE Main Website: http://cpe.ku.edu/

CPE Faculty: https://cpe.ku.edu/faculty

CPE Research Labs: https://cpe.ku.edu/research-areas

CPE Forms & Resources: https://cpe.ku.edu/resources-students-graduate

School of Engineering Main Site: http://engr.ku.edu/
Graduate Studies Main Site: http://graduate.ku.edu/

Engineering Grad Events Calendar: https://calendar.ku.edu/engineering

Engineering Career Center: http://ecc.ku.edu/

Engineering Graduate Ambassadors (GEA): https://gea.ku.edu/

GEA Resource Page: https://gea.ku.edu/resources

Rock Chalk Central: https://rockchalkcentral.ku.edu/

Student Involvement: https://silc.ku.edu/

Information for GTAs and GRAs: http://graduate.ku.edu/gta-and-gra

Funding Information: http://graduate.ku.edu/funding

http://engr.ku.edu/graduate-funding

http://engr.ku.edu/funding-opportunities

Travel Award Applications (for travel to conferences):

GEA - Go to https://gea.ku.edu/, then bottom of page

Grad Studies - https://graduate.ku.edu/graduate-scholarly-presentation-travel-fund-0

Deadlines and award dates change from semester to semester based on the availability of funds

Campus Maps: Parking Map (pdf) http://places.ku.edu/map

Bus System, SafeRide and SafeBus:

- http://lawrencetransit.org/trip-planner (the MyBusLawrence app is very helpful)
- https://safebus.ku.edu/safebus-map
- https://saferide.ku.edu/ or call 785-864-7233 (SafeRide operates 10:30 p.m. 2:30 a.m., 7 days a week, except during class breaks and holidays.)

^{*}MORE RESOURCES IN THE NEXT TWO PAGES AND ADDENDUM IV*

Campus Resources

Libraries

There are several libraries available to you on campus. Here in the Engineering Complex, we have the <u>Spahr Engineering Library</u> where you can find resource materials, computers, scanners, printers, and study/meeting spaces available for your personal and academic use. If the study spaces are not being used or reserved, then feel free to take a room. To reserve a room for a meeting, go to https://calendar.lib.ku.edu/. The Libraries website is for more than just finding a library book. It contains links to thousands of articles and hundreds of journals and e-journal databases. https://lib.ku.edu/find-resources is a useful search tool. Any journal article you should ever need can be found through InterLibrary loans (ILL): https://lib.ku.edu/services/request/interlibrary

Computer Labs - The Fishbowl & 3108 Learned

In Eaton Hall, there is a large computer lab specifically for engineering students. There are dozens of computers available at all hours of the day with printing resources. A full list of computer labs, https://engr.ku.edu/computer-labs (our department computer lab in 3108 Learned Hall is listed there). Commonly used engineering software is preloaded onto these computers, and the back room, 3108A, can be used to hold classes if you are a GTA looking for about 20 computers for you discussion/study session.

Printing

270 Slawson has a network printer, and G414 LEEP2 has a small local printer.

If you have a large poster that needs to be printed for a presentation, go to http://engr.ku.edu/printing-request. If there is not a specific course number related to the print job, just use your C&PE 803 or 904 research hour class as the course number. There is a cost related to having these posters printed, so check with your research advisor first to see if they will cover it.

For printing directly relating to performing your GTA duties and responsibilities, please come to the main office (4132 Learned Hall) to get those items printed.

Facilities

If you are having issues with your office or any of the buildings (cleanliness, trash, broken items, heating/cooling not working, etc.) contact facilities at 785-864-4770. Their website is: http://facilities.ku.edu/, plus they have a really helpful employee's page with many useful links: http://facilities.ku.edu/employee-links

Legal Services for Students

This office can help with many legal issues and provide either assistance or advice on most legal matters depending on the situation. For International Students they can provide help setting up your Glacier account and figuring out your tax rate. For all students, they can help you prepare your annual tax forms, represent you in landlord-tenant disputes, provide Notary Public services, and many more. The vast majority of services provided through the Legal Services for Students office are no charge. They also offer several workshops. Contacting Legal Services: 785-864-5665 | 212 Green Hall | legals@ku.edu

Student Accounts & Receivables

This office deals with a variety of student issues such as paying tuition, tuition refunds, 1098-T forms, account holds, setting up direct deposit, and more. Contact Information: 785-864-3322 | Room 20, Carruth O'Leary | stu.accounting@ku.edu

Counseling and Psychological Services/CAPS

CAPS can help students with issues related to adjusting to college and other psychological, interpersonal, and family problems. Individual, couple, and group sessions are available.

Contacting CAPS: 785-864-2277 | Watkins Memorial Health Center | caps.ku.edu

Student Involvement & Leadership Center/SILC

Prepares students to become contributing members of society by providing meaningful co-curricular experiences. SILC is responsible for coordinating registered university organizations and providing leadership education experiences for students in addition to providing programs and services to specific target populations including fraternity/sorority members, non-traditional students, and students of all gender identities, gender expressions and sexual orientations. A Student Affairs department, SILC has six full-time professionals and a number of graduate/undergraduate student employees.

Academic Achievement and Access Center/AAAC

The AAAC offers many services and programs to assist students in their academic success and to enhance their collegiate experience at KU. Choose from learning strategy consultations, group workshops or general or course-specific academic assistance, by appointment or on a walk-in basis. Feel free to talk with us and ask for information or direction about academic and personal issues.

[AAAC helps with issues like special test accommodations, tutoring services, and injury related accommodations. They offer workshops and individual consultations.]

Contacting AAAC: 785-864-4064 | achieve@ku.edu | Strong Hall, Room 22 | achievement.ku.edu

The University Ombudsman Office/Ombuds

The University Ombuds office is a safe place where members of the University of Kansas community can seek informal, independent, confidential and impartial assistance in addressing conflicts, disputes, or complaints on an informal basis without fear of retaliation or judgment. The University Ombuds office adheres to the International Ombudsman Association (IOA) Standards of Practice and Code of Ethics.

Contacting Ombuds: 785-864-7261 | Carruth O'Leary Hall Room 36 | ombuds@ku.edu

Institutional Opportunity and Access/IOA

As a premier international research university, the University of Kansas is committed to an open, diverse and inclusive learning and working environment that nurtures growth and development of all. KU holds steadfast in the belief that an array of values, interests, experiences, and intellectual and cultural viewpoints enrich learning and our workplace. The promotion of and support for a diverse and inclusive community of mutual respect requires the engagement of the entire University. The office of IOA has an institutional responsibility to enhance and strengthen diversity and inclusion at the University of Kansas.

Contacting IOA: 785-864-641 | Carruth O'Leary Room 153A | ioa@ku.edu

Office of Multicultural Affairs/OMA

The Office of Multicultural Affairs provides direction and services for current and prospective students from underrepresented populations. In addition, through collaborative partnerships we offer diversity education programs that foster inclusive learning environments for all students. Our programs and services enhance the retention of successful matriculation of students, while supporting their academic and personal development.

Contacting OMA: 785-864-4350 | 1299 Oread Ave (connected to the main Union) | oma@ku.edu

Lawrence Community Resources

<u>Center for Community Outreach</u> - search for local volunteer opportunities and more.

Explore Lawrence - lists many fun things to do around the Lawrence Area, shopping, and restaurants.

Lawrence.com - a great place to find out about local events, nightlife, and live music.

<u>Bert Nash Community Mental Health Center</u> – (785-843-9192) an off-campus resource for any and all mental health concerns. No referrals needed, they have emergency walk-in hours, and somebody is there 24 hours/day.

Further resources specific to living in Lawrence are available in Addendum IV of this manual.

Staff for Graduate Students to Know

Staff in the Department of Chemical & Petroleum Engineering

Prof. Susan M. Williams, Department Chair

4132 G Learned Hall | smwilliams@ku.edu | Profile Link | 785-864-2919

Karen Lane Christilles, Executive Assistant to the Chair

(room reservation in Slawson, package shipment, and more) 4132 Learned Hall | klchrist@ku.edu | Profile Link | 785-864-4965

Prof. Prajna Dhar, Graduate Program Director

(recruiting, matching research advisors, pre-arrival issues, progress toward degree, and more) 4132E Learned Hall | prajnadhar@ku.edu | Profile Link | 785-864-4969

Eve Bonner, Graduate Program Coordinator

(manages policies, desk/office assignments, records, deadlines, posts exam notices and milestone achievements, employment assignments, and more)
4132A Learned Hall | evejorge@ku.edu | Profile Link | 785-864-2394

Staff in the School of Engineering

Suzanne Shontz, Associate Dean for Research and Graduate Programs

1D Eaton Hall | shontz@ku.edu | 785-864-8816

Tracy Rockers, Graduate Academic Services

(Helps with graduation preparation, plan of study, workshops, and so much more)

1H Eaton Hall

Nikki Hammond, Graduate Recruiting and Research

(Grad recruiter, giving advice on finding funding and attending conferences)

1G Eaton Hall

Staff in the University level

Jennifer Roberts, Vice Provost for Academic Affairs and Graduate Studies

(also Professor in Geology Department)

170C Slawson Hall | jaroberts@ku.edu | Profile Link | 785-864-1960

Addendum I

Preliminary Exam Procedures

When a Doctoral student is ready for the preliminary exam, as outlined earlier in this manual, they will work with their research advisor(s) to finalize their Doctoral Committee of five total people (policy: https://policy.ku.edu/graduate-studies/doctoral-student-oral-exam-committee-composition). The Chair of the dissertation committee is their main research advisor. If the student has co-advisors, they will be two of the five total members and listed as equal co-chairs. One committee member must be from outside the CPE department, and they will be designated the Graduate Studies Representative/GSR (policy: https://policy.ku.edu/graduate-studies-representative-on-doctoral-exam-committees).

If a student wants to add an industry mentor or somebody else from outside of KU to serve as one of the regular committee members (cannot be Chair or GSR), then they must request to have this person added to the Graduate Faculty Database (policy: https://policy.ku.edu/graduate-studies/graduate-faculty-appointments).

Once the full committee is confirmed, then the student will complete the written portion of the Prelim Exam (see below). After that is complete and approved by the advisor(s), the student will submit the written exam to the full committee and schedule the oral defense. A copy of the scorecard committee members will use on the day of the defense is available on the next page.

Evaluation:

Evidence of each aptitude will be measured by the composite performance on the written, oral and question portions of the exam. Each aptitude will be graded on a scale of 1 to 3, with definitions of each level similar to ABET evaluation of skills. Specifically, a grade of

- 1 = Does not demonstrate the aptitude
- 2 = Shows demonstrable evidence of acquiring the aptitude
- 3 = Shows ability to utilize aptitude to further research goals

To pass the prelim, the student must achieve a score of 2.0 or higher on all five aptitudes. The committee assessment is the average of the individual committee member scores on each criterion and will be rounded to the nearest 0.05. Thus, an average score of 1.974 would be rounded to 1.95 (failing), and a score of 1.976 would be rounded to 2.00 (passing). The evaluation will be recorded on the single sheet Prelim Evaluation Form [sample on page following this document] and signed by the advisor. All prelim evaluation forms will be submitted to the GSC and the external prelim committee member. Following approval and signature by that group, copies are made for the advisor and the student within two weeks of exam completion. The original form is retained in the student's academic file. Any required remedial action will be taken within the same semester.

Outcomes:

PASS, PASS with Restriction [PWR] (specific deficiency -- one aptitude score is below 2.0); FAIL (two or more scores below 2.0). The PWR status must be corrected by actions set and documented by the examining committee within the same academic semester. Remedial action taken for PWR status will be documented on the second page of the Prelim Evaluation Form and signed/dated by the research advisor. If the deficiency is not corrected and documented, a grade of FAIL is assigned. FAIL status requires the student to retake the prelim within four months of the initial exam. This examination can be repeated once. A second failure automatically transfers the student to the MS degree program.

C&PE Preliminary Exam of Graduate Research Committee Evaluation

Student Name:	Date:	Time:
	e the aptitude evidence of acquiring the aptitude the aptitude to further research goals	Overall Grade:PASS / PWR / FAIL
Evaluators: Enter average committee graresponses to questions	de and supporting observations from v	vritten report, oral presentation and/or
Aptitude 1 - Independent, original crit	tical thinking	Committee Member Grade $[1-3]$
Comments:		[1-3]
Aptitude 2 - Planning and organizing a Comments:	a research project	Committee Member Grade
Aptitude 3 - Use of previous work and a) Understanding of the planned resear Comments:	_	Committee Member Grade[1-3]
b) Ability to conduct that research Comments:		
Aptitude 4 - Application of fundamental Comments:	tal theory (e.g. equations) to the proposed work	Committee Member Grade[1-3]
<u>Aptitude 5</u> - Effective communication Comments:	of technical work	Committee Member Grade
Evaluator's Name:	Signature:	

Addendum II

Comprehensive Exam Procedures

The comprehensive exam is a major milestone in a Doctoral student's academic career. Before completing this exam, students are considered Ph.D. Aspirants, afterwards they are Doctoral Candidates. When the student has completed the bulk of their coursework and electives, it is time to begin preparing for this milestone. A student must pass both parts of the examination. Failure of either part constitutes an unsatisfactory grade on the entire examination. An aspirant who receives a grade of Unsatisfactory may repeat the examination upon the recommendation of the examining committee, but under no circumstances may it be taken more than twice. The examination may not be repeated until at least 90 days have elapsed since the unsuccessful attempt. To prepare the aspirant for the comprehensive examination, the advisory committee may require enrollment in C&PE 902 (Preparation for the Ph.D. Comprehensive Examination) during the first year of the Ph.D. program. On receipt of a grade of Honors or Satisfactory on the comprehensive examination, the aspirant is then admitted to candidacy for the degree of Doctor of Philosophy. {For more about the School of Engineering comprehensive exam requirements and full university policy wording: https://policy.ku.edu/graduate-studies/doctoral-oral-exams}

Written Portion

- 1) Advisor and student notify the dissertation committee about the student's readiness to begin the comprehensive exam.
- 2) Advisor and dissertation committee design an exam problem which will challenge the student but not be directly related to their main research.
- 3) The exam problem is sent to the student via email with all committee members, the graduate program director, and the graduate program coordinator copied for record keeping purposes. *This will begin the 30-day countdown*
- 4) The student will have 30 days to write a research proposal on the assigned exam problem. The format for this proposal must be from one of the following major funding agencies: National Science Foundation (NSF) or National Institute of Health (NIH).
- 5) At the end of the 30 days, the student will submit their written comprehensive exam to their full committee via email while copying the grad director and grad coordinator for official record keeping purposes.
- 6) The committee will then review the written exam, offer comments, and inform the student if they are ready to move forward with the oral defense.

Oral Exam

When the committee has approved moving forward with the oral exam, the student will schedule the presentation.

- 1) Propose a date to all committee members that is 2-3 weeks in the future. This can be done with the help of the grad coordinator, via online survey, or through proposing multiple dates via email and asking for replies.
- 2) As soon as a date and time are arranged, the student should reserve a presentation location such as the department conference room, lab conference room, or classroom.
- 3) Once all the arrangements are made, the student must notify the graduate director and graduate coordinator by sending the following information:
 - a. The exam title (*optional* a copy of the written exam),
 - b. The date, time, and location of the exam,
 - c. Confirm names of full committee (can be done via an accurate Plan of Study)

- 4) The graduate program coordinator will then submit the official pre-approval paperwork to the university, create an oral defense announcement flyer, and post the flyer on the appropriate announcement boards. Per university policy, all doctoral oral defenses must be open to the public. The student will be asked to approve the flyer and give feedback before it is posted.
- 5) While the student is preparing for the oral defense, a Research Skills Letter must be composed, signed by the student's advisor, and submitted to the graduate program assistant. The purpose of this letter is to explain in 2-4 sentences how each course the student took at KU helped prepare them to complete Ph.D. level research.

Addendum III

Oral Exam Procedures

Please make appointment with Graduate Program Coordinator to go over important timeline and paperwork!

Addendum IV

Additional Resources: Housing & Utility Assistance Resources

Kansas Emergency Rental Assistance (KERA) program: Helps renters get the assistance they need to avoid eviction or utility shutoff. KERA 2.4 is administered by Kansas Housing Resources Corporation (KHRC). Eligibility criteria: Rent in Kansas; at least one household member has a financial hardship related to the COVID pandemic; your household's 2020 or 2021 annual income falls below 80% of the area median income for the county for where your housing unit is located; at least one member of your household is uncertain where they will stay or may become homeless without housing assistance; and provide valid proof of identification. Tenants and landlords jointly complete a separate online certification.

Kansas Homeowner Assistance Fund: Helps qualifying Kansans get current on their mortgages and property taxes and avoid foreclosure. It serves all eligible Kansans who have had difficulty paying their mortgages, property taxes, homeowner association fees, utilities, or internet/broadband payments due to financial hardships during the COVID pandemic. Eligibility criteria: Own your home; the property is your primary residence; you can provide proof of identification; you're at risk of losing your home without assistance; your recent income did not exceed 150% of your area's median income; your household has experienced financial hardship during the COVID pandemic; and your household is at least 30 days past due on mortgage or home property tax payments. Apply online. If approved, KHAF funds are sent and applied directly to homeowners' accounts.

Lawrence-Douglas County Housing Authority: Offers public housing, transitional housing and Section 8 housing vouchers for households meeting eligibility requirements, including gross annual income within 50% of the Douglas County area median income.

1600 Haskell Ave. Lawrence, KS 66046 (785) 842-8110 housing@ldcha.org

Walk-in hours: Monday-Thursday, 9 a.m.-4 p.m.

Family Promise of Lawrence: Assists families with children under 18 who are experiencing a housing crisis achieve and maintain permanent housing, including rental assistance to avoid eviction, temporary shelter, case management, stabilization supports, and more.

(785) 764-9506

City of Lawrence Utility Assistance Program (water, sewer, trash and recycling): This communityfunded program began in January. Eligibility requirements: Households earning at or below 150% of the Federal Poverty Level; assistance must guarantee at least 30 days of utility service or service restoration; and the following documentation: a. Disconnect notice or budget billing/pay arrangement due within 10 days, b. Photo ID for the person listed on the bill (they must live in the home); and c. Income verification for the past 30 days for all members of the household over 18.

<u>Catholic Charities of Northeast Kansas</u> administers the fund. Call 785-856-2694 for an appointment. (No walk-ins at this time.)

1525 W. 6th St.

Lawrence, KS 66044

Hours: Monday-Friday, 8:30 a.m.-4 p.m.

Project DESERVE (Evergy customers): Provides a one-time payment of up to \$300 for emergency assistance paying energy costs for people with a severe disability (children or adults meeting Social Security disability criteria), older adults (people 65 years or older). Income-eligible households can apply for a one-time payment of up to \$100 toward an energy bill over a rolling 12-month period. Center of Hope determines eligibility based on need and household income. If you think you might be eligible for Project DESERVE assistance, please contact Center of Hope at 316-219-2121 or Evergy at 800-383-1183.

- Application in English
- Application in Spanish

Warm Hearts (Black Hills Energy customers): Applications are available at the Ballard Center, Catholic Charities of Northeast Kansas, ECKAN, Salvation Army and the Senior Resource Center for Douglas County. The administration office reviews all applications for final approval, verifying the household income reported on the application along with personal identification of all applicants before proceeding. Warm Hearts makes payments for assistance directly to the gas, electric, propane or wood provider. Payments will not exceed \$600 per household between Jan. 1-May 31. Along with an application to Warm Hearts, all applicants can apply for a Low-Income Energy Assistance Program award. info@warmheartsofdouglascounty.com

This list was complied by KU Staff Senate D & I Committee in June 2022. D & I Committee Chair and Chair-Elect: Marissa Marshall and Scott Cossel

Questions or Suggestions? Please contact D & I Communications ACTION Team: Marie Taylor, Brandy Ernzen, and Scott Cossel

Addendum V

Final Graduation Checklists

Found on https://engr.ku.edu/graduate-graduation

Doctoral Degree Requirements

- 1. "Apply to Graduate" for the correct semester in Enroll & Pay
 - Log into Enroll & Pay. After logging in, click on Degree Progress/Graduation, then click on KU Apply for Graduation.
 - If you applied for a previous semester, you must re-apply
- 2. Schedule your final examination or presentation with your department program coordinator at least three weeks in advance
 - Failing to schedule your final examination or defense three weeks prior may be grounds for delaying your graduation to a later term
- 3. Update and submit your Plan of Study for final approval at: Graduate Plan of Study
 - Please make sure all classes that count towards your degree are included and correct. Do not include coursework with a grade of "C- or below" as meeting graduate degree requirements. If you have any incomplete (I) or waiting (WG) grades from previous semesters, please contact your instructor or department assistant to get those changed.
- 4. Upon successfully passing your final exam, complete the School of Engineering graduation checklist, and attach the following:
 - KU Scholarworks Electronic Theses and Dissertations Release form (PDF)
 - The certificate of completion of the <u>Doctoral Student Completion Survey</u>
 - <u>Signed</u> Title Page and Acceptance Pages of your dissertation
 * Please note ALL committee members must sign the title page; only your chair must sign the acceptance page. You may upload multiple signed pages to your Graduation Checklist form.
- 5. Upload the unsigned PDF copy of your dissertation online (instructions)
 - Note that the Office of Graduate Studies houses the official formatting requirements for
 theses and dissertations. Although students may find the general content layout of
 previous theses or dissertations helpful, students should not use the formatting from an
 old thesis or dissertation, since formatting instructions may change from year to year.
 Current formatting guidelines for dissertations (PDF) can also be found on the Graduate
 Studies website
- 6. Complete the School of Engineering Career Center Reporting form.

Master's Degree Requirements

- 1. "Apply to Graduate" for the correct semester in Enroll & Pay
 - Log into Enroll & Pay. After logging in, click on Degree Progress/Graduation, then click on KU Apply for Graduation
 - If you applied for a previous semester, you must re-apply
- 2. Schedule your final examination or presentation with your department program coordinator at least three weeks in advance

- Failing to schedule your final examination or defense three weeks prior may be grounds for delaying your graduation to a later term
- 3. Update and submit your Plan of Study (PoS) for final approval at: Graduate Plan of Study
 - Please make sure all classes that count towards your degree are included and correct. Do not include coursework with a grade of "C- or below" as meeting graduate degree requirements. If you have any incomplete (I) or waiting grades (WG) from previous semesters, please contact your instructor or department assistant to get those changed
- 4. Upon successfully passing your final exam, complete the School of Engineering graduation checklist. If you defended a thesis, you must you attach the following:
 - KU Scholarworks Electronic Theses and Dissertations Release form (PDF)
 - Signed Title Page and Acceptance Pages of your thesis
 - 0. Please note ALL committee members must sign the title page; only your chair must sign the acceptance page. You may upload multiple signed pages to your Graduation Checklist form.
- 5. Upload the unsigned PDF copy of your dissertation online.
 - Note that the Office of Graduate Studies houses the official formatting requirements for
 theses and dissertations. Although students may find the general content layout of
 previous theses or dissertations helpful, students should not use the formatting from an
 old thesis or dissertation, since formatting instructions may change from year to year.
 Current formatting guidelines for dissertations (PDF) can also be found on the Graduate
 Studies website
- 6. Complete the School of Engineering Career Center Reporting form.

Graduate Certificate Requirements

- 1. "Apply to Graduate" for the correct semester in Enroll & Pay
 - Log into Enroll & Pay. After logging in, click on Degree Progress/Graduation, then click on KU Apply for Graduation
 - If you applied for a previous semester, you must re-apply

Chemical and Petroleum Engineering - Graduate Program

Advisor Selection, Faculty-Student Meeting Signature form

Faculty's Name:	1
Faculty's Signature:	
Note:	
Rank:	Date:
Faculty's Name:	2
ractity 5 Name.	
Faculty's Signature:	
Note:	
Rank:	Date:
Faculty's Name:	3
Faculty's Signature:	
Note:	
Rank:	Date:

Student's Name:

^{*} Please utilize the back page for additional faculty you meet with. If you plan to participate in a lab rotation with any group, be sure to mention that in the note section.

Masters of Science



Completion of Final Oral Exam
Pre-approval must be granted at least **three** weeks prior to the completion of the oral exam.

Department of Che	emical & Petroleum Engi	ineering
Student Name:		Student ID:
Current Academic Pla	an:	
	Non-thesis Options:	Project Coursework
Exam Date:	Time:	Location:
Title:		
Name of Exan	n Committee Member	Member Title
		 .
		<u>Chair</u>
		Mombor
_		<u>Member</u>
		Member
Exam Approval		
Committee Chairpers	son:	Date:
Committee Chairpers	on Signature:	
Exam Passed: Yes	s No Passed I	Exam with: Satisfactory Honors
If Honors, how did the	committee vote?	
Comments:		
1		

Completion of Comprehensive Oral Exam for Doctorate



Pre-approval must be granted at least two weeks prior to the completion of the comprehensive oral exam.

Department of Chemical & Petroleum Engineering	
Student Name:	Student ID:
Current Academic Plan (circle it): C-PEGE-PHD_Chem	E or C-PEGE-PHD_PE
Research Skills and Residency	
Research skills met in (semester/year): Letter from Ad Responsible Scholarship Requirement met (semester/year): Residency requirement met: (semester/year)	CPE 800
Comprehensive Exam	
Date of Exam: Time: Location: _	
Title:	
Exam Committee Members:	
<u>Name</u>	Member Title
	Chair
	Member
	Member
	Member
	Grad Study Rep/outside member
Exam Approval:	
Committee Chairperson Signature:	Date:
Exam Passed: Yes No Passed Exam:	Satisfactory or with Honors

Completion of Final Oral Exam for **Doctorate**Pre-approval must be granted at least **three** weeks prior to the completion of

the oral exam.



Department of Chemical & Petroleum Eng	ineering
Student Name:	Student ID:
Current Academic Plan (circle it): C-PEGE-P	HD_ChemE or C-PEGE-PHD_PE
Exam Date: Time:	Location:
Title:	
<u>Name</u>	Member Title
	<u>Chair</u>
	<u>Member</u>
	<u>Member</u>
	<u>Member</u>
<u> </u>	Grad Study Rep/outside member
Exam Approval:	
Exam Approvai.	
Committee Chairperson signature:	Date:
Grad Studies Representative signature: _	Date:
Exam Passed: Yes No	Passed Exam with: Satisfactory Honors
If Honors, how did the committee vote?	
Comments:	