

## PME PhD Graduate Handbook (rev. 19 December 2024)

**Degree Programs:** Pritzker School of Molecular Engineering (PME) PhD students are enrolled in one of two degree programs: the PhD in Molecular Engineering (ME PhD) or the PhD in Quantum Science and Engineering (QSE PhD). The requirements for the two degree programs are identical, except for the fact that the QSE PhD students must pursue the Quantum Engineering thematic area for their coursework.

**Course Requirements:** PME PhD students are expected to complete a total of nine (9) courses as part of their degree requirements: (i) three (3) core courses within one of the three thematic cores (i.e., Immunoengineering, Materials for Sustainability and Health, or Quantum Engineering), (ii) four (4) in-depth courses in the research field of choice (i.e., any graduate-level STEM course, unless otherwise specified in the Graduate Announcements), and (iii) two (2) broad elective courses (free choice). The core and in-depth courses should typically be selected in consultation with the Primary Academic Advisor(s) and, if applicable, the Primary PhD Program Advisor, or – prior to a student matching into a research group – their assigned PME faculty advisor (see **Advising**).

Courses used to meet degree requirements must be completed with a B grade or better.

*Core Courses* are designed specifically for students in each of the three PME research themes, teach fundamental principles, methodologies, and/or systems. These courses aim to provide a foundation for advanced coursework and research in the thematic areas. A list of the core courses for each theme is provided in **Appendix A**. Students are expected to complete the core sequence for the thematic area to which they were admitted. Students may request permission to switch thematic core areas by petitioning the Vice Dean for Education and Outreach. Students may request permission, with the support of their Primary Academic Advisor(s) and, if applicable, the Primary PhD Program Advisor, to swap a core course from one core sequence for a core course in another core sequence by petitioning the Vice Dean for Education and Outreach. Authorization must be sought and granted proactively prior to enrollment in the intended substitute course; retroactive petitions will not be considered.

*In-Depth Courses* give students specialized knowledge in their research field of choice. In-depth courses are expected to be graduate-level STEM courses in areas such as, but not limited to, physics, chemistry, biophysics, computer science, mathematics, statistics, data science, cancer biology, immunology, biochemistry and molecular biophysics, and ecology and evolution, which are offered within PME, Physical Sciences Division (PSD), Biological Sciences Division (BSD), or the Toyota Technological Institute of Chicago (TTIC). Courses from other schools and divisions may be permitted to satisfy in-depth course requirements by petitioning the Director of Graduate Studies for the applicable academic program. Authorization must be sought and granted proactively prior to enrollment in the intended course; retroactive petitions will not be considered.

*Broad Elective Courses* may be satisfied by any course at the University of Chicago. Students may opt to use their Broad Electives to take additional technical courses at any level to help them acquire or renew basic understanding in STEM subject areas. Courses may also be selected to help students develop skills in leadership, communication, technology development, and product design. As such, students may consider taking courses in the Harris School of Public Policy, Booth School of Business, Social Sciences Division, or Division of the Humanities.

The three core and four in-depth courses must be completed by the end of the winter quarter of the second year in order to be admitted to candidacy. If these seven courses are not completed by the end of the winter quarter of the second year, the student will be placed on probation for the spring quarter of their second year. If these seven courses are not completed by the end of the spring quarter of their second year, the student will be asked to leave the PhD program.

It is not unusual for students to complete their core and in-depth courses by end of the spring quarter of the first year. Students who feel they may benefit from taking preparatory courses in advance of the core and in-depth courses (e.g., undergraduate-level courses) may choose to do so in their first year but must complete the core and in-depth courses on schedule by the end of the winter quarter of the second year.

The two broad elective courses must be completed prior to graduation. Typically, students choose to fulfill this requirement along with their thematic core and in-depth course requirements during the first and second years.

**First-Year Seminar:** All first-year PME PhD students are required to register for and attend MENG 40300 – PME Research Professionalization Seminar. This course provides an overview of the types of competencies and non-academic knowledge associated with successful graduate research careers. Students who receive a failing grade and/or who do not complete the Responsible Conduct of Research must retake the course (see **Course Performance**).

**Course Load:** PME PhD students are required to maintain full-time enrollment of at least 300 units of credit and no more than 400 units of credit in all four quarters, including summer quarter, to remain in good academic standing. This can be satisfied by a combination of formal instructional courses and MENG 49900 – Research: Molecular Engineering (see **MENG 49900**). In general, students will satisfy the course load requirement in their first year largely through instructional courses and in later years through MENG 49900.

**MENG 49900 – Research: Molecular Engineering:** Students may elect to satisfy some or all of their course load each quarter by registering for MENG 49900 – Research: Molecular Engineering with their Primary Academic Research Advisor, or, if the Primary Academic Research Advisor is not a PME faculty member, their Primary PhD Program Advisor. In rare cases, it is possible for students to register for MENG 49900 with the Director of Graduate Studies for the applicable academic program. Students are not typically eligible to register for MENG 49900 in the first quarter of their first year. In general, students beyond the first year of the PhD program will satisfy their enrollment requirements through MENG 49900.

The MENG 49900 faculty advisor is responsible for submitting grades for this course at the end of each quarter. Missing grades affect a student's academic progress and eligibility for admission to

candidacy and graduation. Students receiving a failing grade in MENG 49900 (F or letter grade below C) will be placed on quarterly Academic Progress Reviews (see **Academic Progress Review**). A second unfavorable Academic Progress Review may result in the Primary Academic Research Advisor(s) choosing to stop serving in that capacity and the student ultimately being asked to leave the program (see **Advising**).

**Course Performance:** Students must pass 300 units at C grade or better each quarter to remain in good academic standing. For MENG 49900, a P grade is interpreted as a C or better. Failure to pass 300 units at C grade or better **and/or** receiving less than a passing grade (defined as a C grade or better for letter graded courses) for one or more courses will result in a student being placed on academic probation. With the exception of MENG 49900, courses without letter grades cannot be used to satisfy this requirement.

To return to good academic standing, the student must successfully pass 300 units at C grade or better in the following quarter. MENG 49900 can be used to satisfy this requirement, for which a P grade will be interpreted as a C or better. With the exception of MENG 49900, courses without letter grades cannot be used to satisfy this requirement. Students on probation who fail to return to good academic standing in the following quarter will be asked to leave the program.

Students are not typically permitted to accrue more than two quarters of probation over the course of their academic career. Students who fall out of good academic standing for a third quarter will be asked to leave the program.

**Incidental Master's Degree:** Students are eligible to petition the Dean of Students for an incidental Master of Science (MS) degree on the way to completing their PhD degree if they are in good academic standing, have been registered full time within the PME for a minimum of three quarters, and completed at a grade of C or above (i) the three core and four in-depth courses and (ii) at least 200 units of MENG 49900 – Research: Molecular Engineering, for a total of 900 units.

**Advising:** The PME's highly interdisciplinary environment provides opportunities for students to pursue their PhD research in conjunction with multiple faculty members within PME as well as faculty throughout the University of Chicago. Students may also match with Primary Academic Research Advisors who are not UChicago faculty members but are members of the Consortium for Advanced Science and Engineering (CASE) and are affiliated with PME (e.g., scientists and engineers with this status at Argonne National Laboratory). It is not uncommon for students to be co-advised more than one Primary Academic Research Advisor. Research Professors with appointments in PME may serve as a Primary Academic Research Advisor, typically in conjunction with a Primary PhD Program Advisor, with the approval of the Vice Dean for Education and Outreach. If none of the student's Primary Academic Research Advisor(s) are PME faculty members, the student and Primary Academic Research Advisor(s) must also secure a PME faculty member to serve as a Primary PhD Program Advisor.

Incoming PME PhD students identify potential Primary Academic Research Advisor(s) through a variety of mechanisms: one-on-one interactions during PhD admitted students visits; meetings and interactions during orientation week; attending scheduled PhD match talks; email exchanges; individual meetings; and – by direct arrangement with, and at the discretion of, the potential advisor

– attending research group meetings and participating in a research rotation during the summer prior to, or autumn/winter quarters of, the first year.

First year PME PhD students are required to secure a Primary Academic Research Advisor(s) before the end of the second quarter of their first year. Students formally join the lab of the Primary Academic Research Advisor(s) on the first day of the quarter following that in which they match. Failure to match to a Primary Academic Research Advisor(s) by the end of the second quarter of their first year will result in the student falling out of good academic standing. Students will be centrally supported by PME through the end of the third quarter of their first year to provide additional time to secure a Primary Academic Research Advisor(s). Students who fail to secure a Primary Academic Research Advisor(s) by the end of the third quarter of their first year will be asked to leave the program.

All PME PhD students are required to be continuously engaged with a Primary Academic Research Advisor after the second quarter of their first year. If at any time and for any reason a student is not being advised and financially supported by a Primary Academic Research Advisor, the student and Primary Academic Research Advisor must immediately inform the Director of Graduate Studies for the applicable academic program and the Vice Dean for Education and Outreach. The student will be centrally supported by the PME through the end of the quarter in which they leave the group, and the following quarter, to provide an opportunity to match with a new Primary Academic Research Advisor. Failure to do so by that time will result in the student being asked to leave the PhD program. Students will be eligible to leave the program with a terminal Master of Science (MS) degree if they have been registered full time within the PME for a minimum of three quarters and completed at a grade of C or above (i) the three core and four in-depth courses and (ii) at least 200 units of MENG 49900 – Research: Molecular Engineering, for a total of 900 units.

A student can elect to discontinue pursuing their PhD research project with their Primary Academic Research Advisor at any time. A Primary Academic Research Advisor may choose to discontinue advising a student for poor academic progress (see **Academic Progress Review**).

Questions about identifying a Primary Academic Research Advisor should be directed to the Director of Graduate Studies for the applicable academic program, Vice Dean for Education and Outreach, and/or Dean of Students.

**Candidacy:** Admission to doctoral candidacy within PME is an acknowledgement of a student's potential both to successfully carry out independent research and to make a meaningful contribution to the field of engineering. In addition to completing the three core and four in-depth courses by the end of winter quarter of their second year, in order to pass into candidacy, students will also develop, present, and defend a research proposal describing the objectives, approaches, and expected outcomes of their PhD thesis research to their Candidacy Committee.

The Candidacy Committee is typically composed of three to four faculty members including the student's Primary Academic Research Advisor(s) and, if the Primary Academic Research Advisor(s) is not a PME faculty member, the Primary PhD Program Advisor. At least three members of the committee must be University of Chicago faculty members and at least two members of the committee must be PME faculty members. CASE affiliates of PME may not be counted towards the required headcount of University of Chicago or PME faculty members. The committee must

comprise at least two members who are not the student's Primary Academic Research Advisor(s) or Primary PhD Program Advisor. The chair of the Candidacy Committee must be a PME faculty member and cannot be the Primary Academic Research Advisor(s) or Primary PhD Program Advisor. The Candidacy Committee should be composed in consultation with and approved by the Primary Academic Research Advisor(s) and, if applicable, the Primary PhD Program Advisor. The Candidacy Committee is a standing committee that follows the student through the course of their PhD, reviews the student's Academic Progress Reviews (see **Academic Progress Review**), and serves as a resource to the student. Changes to the composition of the committee may be made in consultation with the Primary Academic Advisor(s) and, if applicable, the Primary PhD Program Advisor, and must be approved by the Director of Graduate Studies for the applicable academic program.

The written proposal should be prepared in consultation with the Primary Academic Research Advisor(s). An abstract of the proposal, list of Candidacy Committee members, and time and place of the Candidacy Exam must be submitted to the Director of Academic Programs by December 1 in the autumn quarter of the second year. The full proposal must be submitted to the Candidacy Committee by January 31 – or two weeks prior to the candidacy exam date, whichever is earlier – in the winter quarter of the student's second year. An oral exam presenting and defending their proposal to their Candidacy Committee must be completed between February 1 and the end of winter quarter in the student's second year.

The written proposal should clearly state the specific objectives of the proposed research, a contextualization of the proposed research within the field, the methods that will be employed, and the expected outcomes and impacts. Sufficient detail should be provided for evaluation of the research proposal independent of the presentation or any other documentation. Proposals should be submitted single-column and single-spaced on standard 8.5×11" size paper, possess at least 1" margins, and employ black Arial, Helvetica, Palatino Linotype, or Georgia font at a size of 11 points or larger, with smaller font sizes permissible for mathematical formulae and captions. The proposal should comprise (i) an executive summary and list of specific aims not to exceed one (1) page and not to contain any figures or bibliographic citations, (ii) a research proposal detailing the objectives, background, accomplished and proposed work, methods, outcomes, and impact not to exceed six (6) pages, or approximately 4000 words, excluding figures, charts, tables, captions, and other visual elements, and (iii) a list of bibliographic references cited within the research proposal text with no word or page limit.

The oral exam will be scheduled for two (2) hours. The oral presentation should be expected to last approximately 45 minutes (excluding time for questions) and should typically make use of slides or other visual aids. The student will have the first 25 minutes of the examination to present without interruptions. It is the student's responsibility to schedule the examination, make room reservations, ensure any required projection equipment is available, and bring the necessary paperwork to be completed by the Candidacy Committee. The written proposal and oral presentation will serve as a starting point for questions from the Candidacy Committee, but students can expect the discussion to be wide ranging and cover any material deemed germane by the committee members, including background and context of the project, project aims, progress to date, course material, and general science and engineering knowledge.

Altogether, admission to candidacy will depend on an evaluation of academic performance, research performance, and the research proposal. There are three possible outcomes for candidacy review:

(1) *Pass.*

(2) *Deficient with Opportunity to Retake.* Students in this category will have the opportunity to retake the exam by the end of the spring quarter of the second year. The retake exam must be taken under the same Primary Academic Research Advisor(s) and the same Candidacy Committee. The conditions of the retake are at the discretion of the Candidacy Committee. Options include, but are not limited to, a full retake of the oral exam, a partial retake of one or more components of the oral exam, and no oral retake but submission to the committee of a written paper addressing deficiencies identified in the exam. If the student fails the retake, they will be asked to leave the PhD program. Students will be eligible to leave the program with a terminal Master of Science (MS) degree if they have been registered full time within the PME for a minimum of three quarters and completed at a grade of C or above (i) the three core and four in-depth courses and (ii) at least 200 units of MENG 49900 – Research: Molecular Engineering, for a total of 900 units.

(3) *Fail.* Students in this category will not be given the option to re-sit the exam and will be asked to leave the PhD program. Students will be eligible to leave the program with a terminal Master of Science (MS) degree if they have been registered full time within the PME for a minimum of three quarters and completed at a grade of C or above (i) the three core and four in-depth courses and (ii) at least 200 units of MENG 49900 – Research: Molecular Engineering, for a total of 900 units.

A candidacy timeline is provided in **Appendix B**.

**Doctoral Dissertation:** After passing into candidacy, the student will develop a doctoral dissertation representing an original contribution to the scholarship in their field. Every student in the PME PhD program is required to prepare, submit and defend an original dissertation thesis project. The Primary Academic Research Advisor(s) are responsible for guiding and supervising the student in this process.

The doctoral dissertation should typically be completed, and the doctoral thesis defense held, by the end of the student's sixth year of study (see **Maximum Residency Time**). The scheduling of the defense date must be done in coordination with, and with the approval of, the Primary Academic Research Advisor(s) and, if applicable, the Primary PhD Program Advisor.

The Dissertation Defense Committee is typically composed of three to four faculty members including the student's Primary Academic Research Advisor(s) and, if the Primary Academic Research Advisor(s) is not a PME faculty member, the Primary PhD Program Advisor. The composition requirements of the Dissertation Defense Committee are identical to that of the Candidacy Committee and, in general, the Candidacy Committee will be converted into the Dissertation Defense Committee. At least three members of the committee must be University of Chicago faculty members and at least two members of the committee must be PME faculty members. CASE affiliates of PME may not be counted towards the required headcount of University of Chicago or PME faculty members. The committee must comprise at least two members who are not the student's Primary Academic Research Advisor(s) or Primary PhD Program Advisor. The chair

of the Dissertation Defense Committee must be a PME faculty member and cannot be the Primary Academic Research Advisor(s) or Primary PhD Program Advisor. Changes to the composition of the committee may be made in consultation with the Primary Academic Advisor(s) and, if applicable, the Primary PhD Program Advisor, and must be approved by the Director of Graduate Studies for the applicable academic program.

Students must present the research accomplishments that will constitute the subject of their dissertation defense to the Dissertation Defense Committee four (4) to six (6) months prior to the proposed defense date in order to receive authorization from the committee to schedule the defense. The presentation to the committee should be scheduled for 60 minutes and the oral presentation is expected to last no longer than 20 minutes (excluding time for questions). It is the student's responsibility to schedule this convening of their committee, make room reservations, and ensure any required projection equipment is available.

After receiving authorization from their Dissertation Defense Committee, the student may proceed to schedule their defense. The doctoral dissertation must be submitted to the Dissertation Defense Committee no less than two (2) weeks prior to the defense date. Failure to submit on time a complete and final version of the doctoral dissertation may result in cancelation of the exam. The oral exam will be scheduled for two (2) hours. The oral presentation should be expected to last approximately 45 minutes (excluding time for questions) and should typically make use of slides or other visual aids. Following the conclusion of the presentation, the audience will be given the opportunity to ask questions before being excused and the exam proceeding to a closed session between the Dissertation Defense Committee and the candidate. Following the closed session, the candidate will be excused, and the Dissertation Defense Committee will deliberate on the result of the examination. It is the student's responsibility to schedule the examination, make room reservations, ensure any required projection equipment is available, and bring the necessary paperwork to be completed by the Dissertation Defense Committee.

Detailed instructions and guidelines on how to meet requirements for University of Chicago dissertations are available in the [University's student manual](#), in the [University-Wide Requirements for the PhD Dissertation](#), and on the [Dissertation Office website](#). Students are urged to review these resources early in the writing process. The final copy of the dissertation must be uploaded to the Dissertation Office site by the deadline specified by the Dissertation Office each quarter.

Deadlines for a particular quarter may vary slightly. Be sure to check with the Dean of Students Office for the quarter in which you plan to graduate. Helpful information can be found at the following links: [PME Defense and Graduation Information Sheet](#), [Dissertation Checklist](#), [Dissertation Deadlines](#), [Degree Conferral & Convocation Dates](#), and [University Registrar Financial Obligations](#). A degree application is valid only for the quarter in which it is made. Currently, a fee of \$65 will be charged for each degree application that is canceled after the end of the fifth week of the quarter in which it is filed.

**Academic Progress Review:** Academic progress will be reviewed annually, typically at the end of the spring quarter of each year, although the Primary Academic Research Advisor(s) can choose to trigger Academic Progress Reviews at any time. The student will have the opportunity to meet formally with the Primary Academic Research Advisor(s) and, if applicable, the Primary PhD

Program Advisor to discuss their academic progress prior to submission of the Academic Progress Review.

Students receiving an unfavorable Academic Progress Review and/or a failing grade in MENG 49900 – Research: Molecular Engineering will be placed on quarterly academic reviews. For MENG 49900, a failing grade is a C- or below, or an F on a pass/fail basis. A second unfavorable Academic Progress Review may result in the Primary Academic Research Advisor(s) choosing to stop serving in that capacity and the student ultimately being asked to leave the program (see **Advising**).

**Teaching Requirement:** In addition to coursework and research, pedagogical training is an important component of the doctoral training provided within PME. Teaching assignments are determined based on department need, although consideration is also given to student and faculty preferences whenever possible. Students must complete at least two (2) quarters as a Teaching Assistant for a PME course. Students may petition to replace a TAship credit with an approved alternative activity with the approval of the Vice Dean for Education and Outreach, but at least one (1) TA credit must come from serving as a Teaching Assistant for a PME course. The availability of approved alternatives is limited, and the list of approved alternatives is subject to change. Most students fulfill this requirement with two TAships in PME courses. The teaching requirement must be completed before graduation.

Occasionally students receive TA credit for TAing a course outside of the PME. These appointments are made by the department administering the course, not by the PME. Students interested in receiving TA credit for a future TAship outside of the PME should first discuss with their Primary Academic Research Advisor(s) and, if applicable, the Primary PhD Program Advisor, and then send their request to the Assistant Director of Academic Programs for the applicable academic program. These requests are considered on a case-by-case basis, and decided primarily on the appropriateness of the course and the ability of PME to meet its own TAing needs. Not every request can be accommodated, and retroactive requests will not be considered.

During the quarters that a student is serving as a Teaching Assistant for a PME parented course as part of the PME Teaching Requirements, the student will be appointed as a TA and receive salary and tuition equivalent to their standard financial package supported centrally by PME.

**Deviations from Timeline:** Deviations from the standard timeline and deadlines for academic progress delineated above may be approved by petitioning the Director of Graduate Studies for the applicable academic program. Examples of common deviations for which individualized timelines and deadlines are formulated by the Director of Graduate Studies in consultation with the Primary Academic Research Advisor(s) and the student are:

- *Leaves of absence.* A leave of absence almost always results in individualized timelines and deadlines for a student if taken in the first or second year. Primary Academic Research Advisor(s) are also subject to timelines, deliverables, milestones, and other constraints related to grants and resources, so although taking a leave does not impact academic standing, it is not always possible for students to take a leave and return to the same Primary Academic Research Advisor(s) and academic research project. The circumstances surrounding taking a leave and returning from leave should be delineated in as much detail as possible as early as possible. After discussing with the Primary Academic Research Advisor(s) and the Director of Graduate Studies for the applicable



academic program, the student may file a formal leave of absence request with the Dean of Students.

- *Mid-year start to the PhD program.* In some instances, such as a delay in obtaining a visa, students start mid-year instead at the beginning of autumn quarter. Due to the schedule of course offerings and other constraints, individualized programming is often required.
- *Students with non-traditional backgrounds.* The PME encourages students with non-traditional academic preparations to apply to and pursue our PhD programs. Through the admissions process, student advising (starting soon after the students accepts the offer from one of the PME's PhD programs), and self-identification, students may discuss with their Primary Academic Advisor(s) and, if applicable, the Primary PhD Program Advisor, or – prior to a student matching into a research group – their assigned PME faculty advisor to explore individualized course programming to enable success in the PhD program, especially with respect to the graduate-level course requirements. Plans can be made, for example, for a student to take key foundational undergraduate courses as electives in the first year to be on track to complete the thematic core and in-depth courses by the end of the winter quarter of the second year and perhaps emphasize research earlier on in the first year in preparation for candidacy.

**Maximum Residency Time:** If a student completes six (6) years in the PhD program excluding time on leave without graduating, then the student and the Primary Academic Research Advisor(s) must submit a petition to the Vice Dean for Education and Outreach to request permission to stay for one (1) additional year, with a detailed timeline to meet all graduation requirements. Only under extremely rare circumstances will a student be allowed to stay more than seven (7) years in total.

**Appointments:** Appointments as a research assistant (RA) or teaching assistant (TA) are made on a quarterly basis to track correct allocation to specific funding sources and to facilitate and avoid mistakes in transferring back and forth between research and teaching appointments. Reappointment is typically routine except under the conditions described above in which the student is not meeting academic program milestones or making satisfactory academic progress (see **Academic Progress Review**).

**Ethics and Safety Training:** All PME PhD students, regardless of funding source, are required to obtain research, ethics, compliance, and safety certification through the Collaborative Institutional Training Initiative (CITI). An official notice of certification will be posted on UChicago transcripts.

Although codes, policies, and principles are important and useful, like any set of rules, they do not cover every situation, can conflict, and require interpretation. It is therefore important for researchers to learn how to interpret, assess, and apply various research rules and how to make decisions and act ethically in various situations. Overall, graduate researchers are expected to create and support a collaborative climate, so as to minimize concerns that ideas may be appropriated by others; be honest and realistic in stating claims or estimates based on available data and understand the limitations of your knowledge; be honest and professional in interactions which includes being cognizant of, and vigilant against, the negative consequences of conscious or unconscious bias; and welcome constructive criticism of personal scientific research and offer the same to colleagues in a manner that fosters mutual respect and objective scientific debate.

**Career Planning Resources:** PME PhD students can engage in purposeful and structured career development and professional skill-building across a range of competencies – all aimed to position them for success in a dynamic and global work environment. The PME fosters these competencies in targeted workshops and supplemental programming, individualized advising appointments, as well as in coursework and in laboratory training.

Whether preparing for a career path in academia, industry, nonprofits, or government, meeting individually with a professional career advisor can be instrumental in a career journey. Advising conversations can focus on a range of topics, including but not limited to: exploring skills and interests as it relates to identifying career options, connections to alumni and external partners, job search and networking best practices, crafting effective job documents, and negotiating job offers.

PME PhD students have several career advising support options. All graduate students are welcome to meet individually with the PME's Director of Career Development who can provide engineering-specific advising and career development support. In addition, the office of [UChicagoGRAD](#) offers career support that is more general in nature. Graduate students can schedule career advising appointments directly with an advisor in this office through the [GRAD Gargoyle](#) platform.

**Grievance Policy:** The University of Chicago is a community of scholars dedicated to research, academic excellence, and the pursuit and cultivation of learning. Every member of the University – students, faculty, and staff – makes a commitment to strive for personal and academic integrity; to treat others with dignity and respect; to honor the rights and property of others; to take responsibility for individual and group behavior; and to act as a responsible citizen in a free academic community and in the larger society. In this context, complaints, concerns, and allegations of abuse of authority are taken seriously and PME is dedicated to supporting students' academic journeys. If there are concerns or inquiries related to academic progress, advisors, or research groups, students are encouraged to reach out to the Academic Program Team, Dean of Students Office, Director of Graduate Studies for the applicable academic program, or Vice Dean for Education and Outreach. Confidentiality will be preserved when possible and appropriate. The [PME Grievance Policy and Procedures](#) provides a full accounting of the options available and processes to be followed.

**Time Off:** During the autumn, winter, and spring quarters, students who are performing research or teaching services for the University are generally expected to schedule their vacation or personal time off during academic breaks (i.e., Winter Recess and Spring Break), as outlined in the University's Academic Calendar. Students may also be able to take personal time over summer quarter as approved by their supervisor at least two weeks in advance of the requested time off, or as soon as possible if two weeks' notice is impractical under the circumstances.

In general, over the course of a calendar year, students are expected to take a reasonable amount of vacation and personal time off, with the majority of time off expected to be taken during Winter Recess and Spring Break. Students holding a research position may opt to take the majority of their time off in the summer instead of over Winter Recess and Spring Break, with the approval of their supervisor.

Vacation and personal time while a student is holding a teaching position for the University is ordinarily not permitted, and if required for an exceptional reason for a brief period should be

requested of a supervisor well in advance and alternate arrangements for teaching obligations to be met should be agreed upon. Remote work while a student is holding a teaching or research position for the University is not permitted.

**Personnel:** A list of names, contact information, and roles of personnel involved in administration of PME Academic Programs and the PME Dean of Students Office is provided in **Appendix C**.

**Checklist:** A checklist of academic program requirements is provided in **Appendix D**.

## Appendix A – Thematic Core Courses

### Materials Systems for Sustainability and Health Core Theme

#### Core Courses (3):

MENG 31100                      Math Method in Molecular Engineering

*Choose two of the following:*

1. MENG 31200                      Thermodynamics and Statistical Mechanics

2. MENG 31300                      Transport Phenomena

3. MENG 35100                      Introduction to Polymer Science

OR

CHEM 39000                      Solids, Materials, and Surfaces

### Immunoengineering Theme

#### Core Courses (3):

MENG 33200                      Principles of Immunology

MENG 33330                      Data Science in Systems Immunology

*Choose one of the following:*

MENG 31300                      Transport Phenomena

OR

MENG 32200                      Cellular Engineering

OR

MENG 33300                      Quantitative Immunobiology

#### Recommended In-Depth Courses (4):

MENG 31100                      Math Methods in Molecular Engineering

MENG 31300                      Transport Phenomena

MENG 32200                      Cellular Engineering

MENG 32300                      Quantitative Systems Biology

MENG 32400                      Bioengineering Kinetics

MENG 33100                      Biological Materials

MENG 33110                      Stem Cell Biology, Regeneration and Disease Modeling

MENG 33120                      The Structural Basis of Biomolecular Engineering

MENG 33130                      Omics Technologies and Applications in Biological Systems

MENG 33210                      Fundamentals and Applications of the Human Microbiota

MENG 33300                      Quantitative Immunobiology

MENG 33310                      Immunoengineering Laboratory

MENG 33340                      Engineering Immunotherapeutics

MENG 33500                      Synthetic Biology

MENG 33510                      Microfluidics and its Applications

### Quantum Engineering Theme

#### Core Courses (3):

MENG 31400                      Advanced Quantum Engineering

PHYS 34100                      Graduate Quantum Mechanics 1\*

PHYS 34200

Graduate Quantum Mechanics 2

*\*Students who have already taken and advanced quantum class can replace PHYS 34100 with either MENG 37400 Advanced Quantum Information or MENG 37200 Quantum Dissipation and Quantum Measurement.*

## Appendix B – Candidacy Timeline.

### Candidacy Timeline for PME Students in their Second Year of Study

December 1	Deadline for students to submit the following materials: <ol style="list-style-type: none"><li>1. title,</li><li>2. short abstract of proposed research,</li><li>3. list of the Candidacy Committee members,</li><li>4. confirmed date, time, and place for the review.</li></ol>
January 31, or at least 2 weeks before the exam, whichever is earlier	Deadline for students to submit the full research proposal to their Candidacy Committee.
Between Feb 1 and end of winter quarter	Deadline for completion of the candidacy review.

## Appendix C – Academic Programs and Dean of Students Personnel

### Academic Programs

Prof. Andrew Ferguson	<a href="mailto:andrewferguson@uchicago.edu">andrewferguson@uchicago.edu</a>	Vice Dean for Education and Outreach; Director of Graduate Studies for the PhD in Molecular Engineering (Materials Focus)
Prof. Aash Clerk	<a href="mailto:aaclerk@uchicago.edu">aaclerk@uchicago.edu</a>	Director of Graduate Studies for the PhD in Quantum Science and Engineering and PhD in Molecular Engineering (Quantum Focus)
Prof. Cathryn Nagler	<a href="mailto:cnagler1@uchicago.edu">cnagler1@uchicago.edu</a>	Director of Graduate Studies for the PhD in Molecular Engineering (Immuno Focus)
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Prof. Mark Stoykovich	<a href="mailto:stoykovich@uchicago.edu">stoykovich@uchicago.edu</a>	Senior Instructional Professor; Director of Undergraduate Studies
Tracy Walker	<a href="mailto:twalker22@uchicago.edu">twalker22@uchicago.edu</a> 773.834.6202	Director of Academic Programs and Equity, Diversity, and Inclusion
Stella Wang	<a href="mailto:stellawang@uchicago.edu">stellawang@uchicago.edu</a> 773.834.6593	Assistant Director of Academic Programs – MEng and Undergraduate Studies
Elizabeth Brown	<a href="mailto:elizabethb1@uchicago.edu">elizabethb1@uchicago.edu</a> 773.702.1913	Assistant Director of Academic Programs – ME and QSE PhD
Academic Programs	<a href="mailto:pme-academics@uchicago.edu">pme-academics@uchicago.edu</a>	General mailbox for PME Academic Programs

### Dean of Students Office

David Taylor	<a href="mailto:davidtaylor@uchicago.edu">davidtaylor@uchicago.edu</a> 773.834.2057	Dean of Students <i>David is generally responsible for student status changes (e.g., leaves of absence and graduation), academic and behavioral disciplinary issues management, and providing/ coordinating support for students with disabilities and health difficulties. He also regularly meets with individual students to discuss academic opportunities, lab difficulties, and general well-being.</i>
Brett Stachler	<a href="mailto:bstachler@uchicago.edu">bstachler@uchicago.edu</a> 773.702.1592	Associate Dean of Students for Recruitment and Admissions

		<i>Brett collaborates with faculty to manage and organize the PME recruitment and admissions efforts and events. They also serve as a point of contact and resource for faculty and their support staff to UChicago and external stakeholders regarding the PME admissions and recruitment processes, policies, and procedures. Additionally, they provide 1:1 and group support to current students, and work with Dean of Students team members to develop a sense of community for current students in the PME.</i>
Ozge Kocak Hemmat	<a href="mailto:kocakozge@uchicago.edu">kocakozge@uchicago.edu</a> 773.834.4791	Assistant Dean of Students for Registration and Data Management <i>Ozge supports the Office of the Dean of Students at the Pritzker School of Molecular Engineering (PME). Her responsibilities include managing student records (academic progress, TA assignments), matriculation (onboarding, orientation, and training), graduation, data management, analysis, and reporting.</i>

#### Career Development

Briana Konnick	<a href="mailto:bkonnick@uchicago.edu">bkonnick@uchicago.edu</a> 773.834.7933	Director of Career Development
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## Appendix D – Checklist of Academic Program Requirements

Item	Details	Standard Timeline
Coursework	<input type="checkbox"/> Three (3) core courses <input type="checkbox"/> Four (4) in-depth courses <input type="checkbox"/> Two (2) broad electives <input type="checkbox"/> First-year seminar	Core and in-depth by end of winter quarter of second year, broad electives at any time; core, in-depth, and broad electives must be completed at B grade or better
Matching	<input type="checkbox"/> Match to Academic Advisor	End of winter quarter of first year
Candidacy	<input type="checkbox"/> Pass candidacy exam	End of winter quarter of second year
Teaching	<input type="checkbox"/> Two TAships in PME courses	Any time prior to graduation
Dissertation Defense	<input type="checkbox"/> Authorization to defend <input type="checkbox"/> Conduct defense	Hold defense before end of sixth year of PhD program; authorization from Dissertation Committee to schedule defense 4-6 months prior to intended date