

The Department of Energy,
Environmental & Chemical Engineering

PhD Student Handbook

2019-2020



Welcome to the Department of Energy, Environmental & Chemical Engineering

The Department of Energy, Environmental & Chemical Engineering (EECE) brings together an interdisciplinary group of faculty to tackle global challenge problems related to energy, environment and health. EECE provides integrated and multidisciplinary programs of scientific education in cutting-edge areas organized through four clusters: Aerosol Science and Engineering; Engineered Aquatics Processes; Metabolic Engineering and Systems Biology; and Multiscale Engineering. Degrees granted by the Department include: BS in Chemical Engineering; BS in Applied Sciences in Chemical Engineering; Master of Engineering in Energy, Environmental & Chemical Engineering; Master of Science in Energy, Environmental & Chemical Engineering; and PhD in Energy, Environmental & Chemical Engineering. We welcome you to browse through this handbook to review the details and requirements of the PhD program.

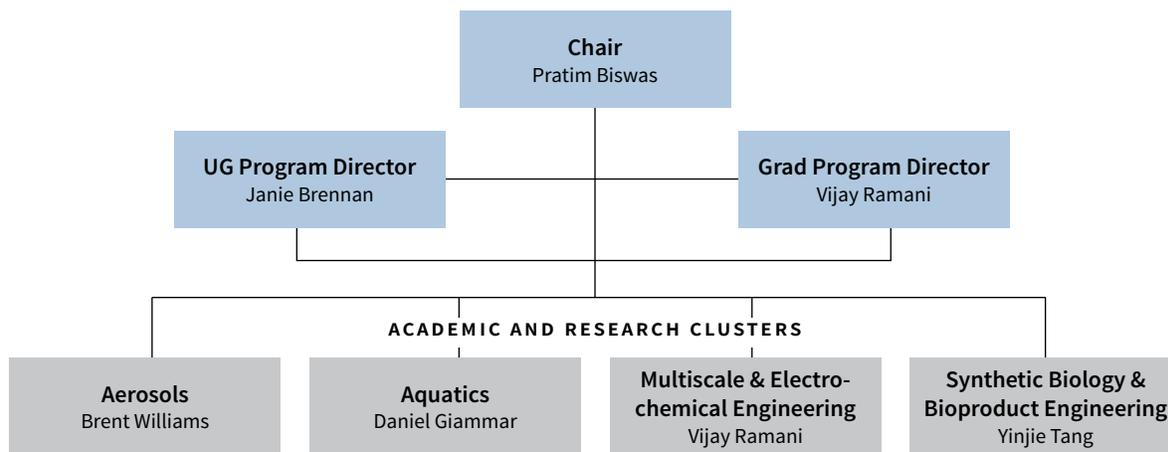
Department Facts

- » 114 undergraduate students
- » 31 Master of Engineering students
- » 85 PhD students
- » 20 tenured/tenure-track faculty
- » 2,920 alumni
- » 134 referred journal publications (2018)
- » \$7.4M in research expenditures (FY19)
- » No. 6 by the latest National Research Council Ranking of Doctoral Programs in Environmental Engineering Science

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Cover image: PhD students in Aerosol Impacts & Research (AIR) Lab



FUNDED RESEARCH CLUSTERS



Policies & Regulations

A key objective of the PhD program is to promote cutting-edge multidisciplinary research and education in the thematic areas of Energy, Environmental & Chemical Engineering. The PhD student closely interacts with his or her adviser in designing a program of study and research.

Students are admitted to the program by a competitive process, and they start in the fall semester. The student is supported in the first year by fellowships provided by the Department. All students will be expected to have mentored teaching experience in the second or third year of residency in the Department while they are collaborating with their mentor on research.

Temporary advisers will be assigned when the graduate students are admitted. On arriving at WashU, the student will be advised by the temporary adviser on all academic procedural issues. The permanent faculty adviser will be assigned in December of the first year of residency in the program.

The following is a brief summary of the requirements for PhD students:

- 1) Base competency in core subject areas demonstrated by passing the qualifying examination in first year of residency in the program
- 2) Research rotations in first semester of study prior to choosing a permanent adviser
- 3) Demonstrated teaching experience as per graduate school teaching requirement
- 4) Minimum of **36** credits for coursework and minimum of **30** credits for PhD research; total of **72** credits to earn the PhD degree
- 5) Defend a proposal within **18** months of passing the qualifying examination
- 6) Defend PhD dissertation by making an open oral seminar presentation, followed by questions from the dissertation committee members

The purposes of this handbook are to provide guidance to PhD students in EECE and to inform students of department-specific policies.

Registration

Registration takes place each semester on dates announced by WashU. Detailed instructions for registration plus necessary materials are mailed directly to all graduate students enrolled during the previous semester.

All graduate students in the department must register each semester until all degree requirements are completed. The maximum time period for completing all PhD degree requirements is seven years.

There are three categories of registration:

Active: Normally, students register in this category for a minimum of nine credits each semester until they have earned the total number of credit hours required for their degree. Near the end of the student's program, or after 72 credits are on the student's record, he or she can register for less than nine credits but must enroll in EECE 884.

Inactive: Students who have not completed their course requirements but who, because of personal reasons, must suspend their studies temporarily, may register as inactive students with the approval of their adviser and the Department Chair. The School of Engineering & Applied Science sets the registration fee for inactive status.

Special: Students who have earned the required number of credit hours and who have only to complete the writing of a dissertation may register as special students (register for EECE 884, as per details above). This status is not appropriate for students who are still actively engaged in the performance of research.

Students who fail to register in one of the previously mentioned categories will automatically have their graduate standing revoked. Students whose graduate standing has been revoked may apply for reinstatement. There is an application fee for reinstatement (\$100). Students seeking reinstatement may be required to take a special reinstatement examination and to repeat any previously met requirements that fails to meet contemporary standards. Candidates for the PhD degree who apply for reinstatement may be required to repeat the qualifying examination.

Helpful website — Graduate School:
graduateschool.wustl.edu

First-year Advising

Academic Adviser

Each entering PhD student will be assigned a temporary academic advisor by the Department Chair. This advisor is a full time faculty member in EECE and will be responsible for acquainting the student with first year procedures, research rotations, procedures to select permanent advisor, and initial choice of classes as per guidelines in the PhD Handbook. For Fall 2019, the assigned temporary advisor is Dr. Marcus Foston.

There are three important steps for the student to follow in the first semester:

1) Orientation Week 2) Laboratory Rotations, and 3) Assignment of Permanent Adviser.

1. EECE Orientation Week (August 19 to 23, 2019, mandatory for all students)

- a. During a five day period immediately prior to the start of the semester, each student will attend all sessions wherein they will be introduced to faculty research. The objective would be for faculty to describe their research group and the projects that are available to first year students. They will clearly communicate to the group of students how many first year students they would like to choose as permanent advisees.
- b. During this period, each day four to five research groups will give 20 min lab tours. Students will be required to attend tours of each of the faculty laboratories.
- c. First year PhD students are also encouraged to set up additional individual meetings with the faculty and learn more about their research groups.
- d. Students will also have a few social events and other activities organized during Orientation Week.

2. Laboratory Rotation (complete Research Rotation Preference Form by August 27 and October 1, 2019)

After the Orientation Week has concluded, students submit by Tuesday, August 27 a list of four rank-ordered faculty with whom to spend the first rotation. They should submit by October 1 a second list of four rank-ordered faculty with whom to spend the second rotation. This second list of preferences should not include the first rotation mentor, so that the student has an opportunity to rotate with two different faculty. The assignments will be done at a faculty meeting organized

by the Graduate Director; and the students will be informed by August 30, 2019 of their first rotation assignment, and by October 10, 2019 of their second rotation assignment. Students should note that they may not receive their first choices of research rotation, and are encouraged to discuss with faculty prior to submission of the Research Rotation Preference Form.

The first rotation period will be from September 3 to October 11, 2019. The second rotation period will be October 14 to November 22, 2019. Students will register for EECE 508 for research rotation.

3. Final Assignments of Permanent Advisors (complete Permanent Adviser Choice Form by November 27, 2019)

The students are encouraged to communicate with faculty and determine mutual interest to work together. Students could explore opportunities with any faculty member, even if they did not rotate with them. It is the responsibility of the student to meet the faculty and convince them to select the student as an advisee. By November 27, 2019 based on student discussion with faculty they are to submit a list of four rank-ordered choices for their permanent advisor selection. These ranked choices are distributed to the faculty prior to permanent advisor assignments. All attempts will be made to assign the student one of their choices for permanent advisor; and the students will be informed of their permanent advisor assignment by the Graduate Director before the end of the Fall semester. Students should begin research with their assigned permanent advisor soon after and follow other guidelines as outlined in the Handbook.

Qualifying Examination

The EECE PhD qualifying examination is to be taken in May of the first year of study in the program. It is administered by the EECE Graduate Committee and department faculty as appointed by the Chair. Details of the examination and other requirements are provided:

1) Students should take the core EECE classes:

- a) Transport Phenomena in EECE (EECE 501, fall)
- b) Mathematical Methods in EECE (EECE 503, fall)
- c) Students should take elective classes in at least two cluster areas
- d) Do two independent research rotations in their first semester (EECE 508)
- e) The seminar (EECE 509) is required for all semesters of residency in the PhD program.
- f) Students must obtain a cumulative GPA of 3.25 to appear for the written examination. Only rigorous engineering or science courses will be counted in the cumulative GPA requirement calculations. Research course or independent study courses will not be considered.

2) Students should take two written tests selected from a menu of four: aerosols, aquatics, metabolic engineering or multi-scale engineering. The students are expected to be familiar with content covered in the following anchor courses of each cluster, respectively:

- a) Aerosol Science & Engineering (EECE 504 Aerosol Science and Technology, fall)
- b) Aquatics (EECE 505 Aquatic Chemistry, fall)
- c) Metabolic & Systems Biology (EECE 506 Bioprocess Engineering I, spring)
- d) Multi-scale Engineering (EECE 501 Transport Phenomena, fall; and EECE 507 Kinetics and Reaction Engineering Principles, spring)

Each cluster-specific test question will be prepared and graded by at least two faculty members. The questions will be comprehensive and an in-depth evaluation of the students' skill sets in the proposed area. Scores for each group will be normalized by the PhD committee to ensure grading is uniform across the clusters.

The student should choose the two areas based on the research cluster that he or she want to eventually do research in (e.g., if a student is interested in researching with faculty in the aerosols cluster, he or she should answer test a); and choose one other area for breadth). The qualifying exam guideline will be provided in the EECE Orientation Package.

3) Do two independent research rotations (not with the same faculty). The faculty mentor will assign a Pass or Fail.

A Pass from two different faculty members is needed to Pass the qualifying examination. This will be based faculty mentors assessment of the student's engagement in the research rotation.

4) Students will need to pass an oral examination. Questioning in the oral exam will not rehash the performance in written exams but instead will evaluate the student's knowledge in core disciplinary areas, independent thinking, and communication skills. The student should start the session with a five-minute (verbal with two slides) presentation of his or her research accomplishments to date. Following this, the oral examination committee will ask questions to access the capabilities of the student.

The final outcome of the EECE PhD qualifying examination will be determined by the EECE faculty based on the recommendation of the EECE Graduate Committee. The student can receive a Pass/Conditional/Fail grade for the examination.

If the student fails the EECE PhD Qualifying Examination, he or she can petition to obtain a master's degree. The requirements for the master's degree have to be met, and no financial aid is guaranteed to failed students after the first year of study. Failed students may request to re-take the Qualifying Examination based on a petition. This petition should be submitted in writing to the Department Chair within a week of receiving notification. The decision to re-take will be based on the student's performance (e.g., GPA, written and oral qualifying examinations, research rotations, and feedback from the faculty and the student's adviser) and will be made by the Department Chair and the Graduate Program Director. It should be noted that the student has no guarantee of financial support from the Department in the interim period (until the EECE PhD qualifying exam is passed).

Regarding Conditional, if students fail to satisfy the condition from the decision letter of the qualifying exam within one year, the students will be advised to withdraw from the PhD program and financial support will be terminated.

Requirements for PhD Degree

Academic Requirements

Candidates for this degree must complete a total of 72 credits beyond the bachelor's degree. Of these, a minimum of 36 must be graduate coursework and a minimum of 30 must be doctoral thesis research units. To be admitted to candidacy, students must have completed at least 18 credits at WashU, have an overall GPA equal or greater than 3.25 and pass the qualifying examination. The student must also have completed the research rotations and have selected a permanent adviser.

Transfer Credits: At most, nine graduate credits in a master's program from another university may be counted as transfer credits toward the required 36 units of coursework. PhD students can apply for transfer credit only after they have passed the PhD qualifying exam by submitting a formal petition to the department.

Maximum Research Units per Semester: At most, nine units of research may be taken in a semester.

Seminar Credits: The one-unit EECE seminar course may be taken for graduate coursework credit in up to six semesters for a total of 6 units.

Independent Study Credits: At most, three credits of coursework may be taken as graduate independent study. An independent study must be entirely separate from study done as part of the graduate thesis research. The student should prepare a proposed plan of study to be completed, and this plan must be described on the Independent Study Petition Form approved by the independent study instructor, student's adviser, Graduate Program Director and Department Chair for the independent study credits to count toward the 36 required units of coursework. This credit will not be counted toward the cumulative GPA for the qualification exam requirement.

400-level Courses: Courses must be 500-level graduate courses, except for up to three 400-level courses, provided that they are approved by the Graduate Program Director and Department Chair.

Thesis Proposal

(must be completed within 18 months after qualifying exam)

Following successful completion of the qualifying examination, the student and adviser will decide on a suitable research problem whereupon the student will prepare a comprehensive written research proposal that includes a thorough survey of the literature relevant to the field, a discussion of those areas needing further research, and a clear definition of the proposed research. Results of preliminary studies or feasibility studies should be included. The format and guidelines of the PhD thesis proposal are included in

the last portion of this section. This proposal should be submitted to the Thesis Committee at least one week prior to a Thesis Proposal Examination consisting of an oral presentation to the student's committee followed by a Q&A. Regarding the student's Thesis Committee, to be put in place prior to the proposal, four of the five must be tenured or tenure-track Washington University faculty; one of these four may be an emeritus faculty member. The fifth member must have a doctoral degree and an active research program, whether at Washington University, at another university, in government, or in industry. Three of the five must come from the student's degree program; at least one of the five must not. The committee is appointed by the Dean of the Graduate School upon the request of the Department Chair or Graduate Program Director. Any exceptions to the normal composition of the committee should be discussed with the Graduate Program Director and be approved by the Dean of the Graduate School. The thesis proposal should be successfully presented within 18 months of passing the Qualifying Examination and at least 12 months prior to graduation.

The student must meet with the thesis committee (either as a group or individually) annually or submit an annual report to the thesis committee. The annual report can consist a 1-2 page research progress summary.

A student who has passed the Thesis Proposal Examination, completed 30 units of required coursework toward the PhD degree, and published or submitted at least one first author peer-reviewed manuscript arising from their thesis research is eligible to receive an MS along the way degree. No independent study credits can be counted towards the MS along the way degree. The publication and submission of the manuscript must be with the approval of the research adviser. Students must submit their request to receive the MS degree at least one year before the thesis defense. The granting of the MS degree along the way is by approval of the Advisor and Graduate Program Director.

The following guidelines are recommended for the PhD Thesis Proposal:

1) The main body of the proposal should include

- Executive summary (no more than one page)
- Introduction (no more than five pages)
- Research objectives (no more than two pages)
- Preliminary work (no more than five pages in the body of the proposal; additional preliminary data or papers can be included in the Appendices)
- Research plan (no more than 15 pages)
- Timeline (no more than one page)
- References (as needed)

2) The following Appendices should be included at the end of the proposal:

- List of courses taken and to be taken with grades
- Mentored teaching experience
- A short CV of the student highlighting conference presentations and journal papers (published/submitted/to be submitted)
- Copies of papers (optional)

3) Font: Times New Roman

Font size: no less than 11 points

Line spacing: single-spaced

Page margin: one-inch margin around the pages

PhD Students are referred to the National Science Foundation (NSF) Guidelines for Proposal Writing Document as a reference.

Mentored Teaching Experience

All students must have mentored teaching experience or assist in some teaching activity in the Department for at least two semesters prior to graduation; in some cases, a student may be required to have mentored teaching experience in more than two semesters. The Department has in place a fair process to assign students for mentored teaching experience. This will normally be done after the first year and after having passed the Qualifying Examination. In having mentored teaching experience, students should meet the Graduate School-wide Teaching Requirement for PhD Candidates; details of fulfilling teaching requirements are described in the Teaching Requirement Form with Policy Statement on graduateschool.wustl.edu.

The mentored teaching experience may include, but is not limited to: giving an actual lecture in an undergraduate class with the instructor in attendance, introducing/interpreting laboratory exercises, or conducting formal help sessions before exams. The student who conducts mentored teaching experience will also be expected to hold one-on-one office hours and participate in grading homework assignments and exams. Both the students and the instructor will evaluate each performance, and the Graduate Studies Committee will use these evaluations to determine whether the teaching requirement has been fulfilled for that semester. All PhD candidates are required to attend one of the teaching workshops offered by Teaching Center for the formal pedagogical training prior to or during their first semester of the mentored teaching experience in EECE.

PhD candidates shall also accumulate teaching experience at the advanced level. Presenting one's research in formal settings to other graduate students and faculty is the best way to fulfill the requirement at this level. Therefore, all PhD candidates shall give at least two formal presentations at the departmental or university-

wide, or local level or at a national or international conference. Among the presentations, at least one presentation should be oral at a national or international conference (this last requirement may be waived upon approval of the Graduate Studies Committee).

During the semester, PhD students will have mentored teaching experience in addition to the normal coursework and research that are expected by the research adviser.

Thesis Defense

Upon completion of the thesis, candidates must present the thesis in a public forum and successfully defend the thesis before their Thesis Committee. Students must submit their completed thesis to the Committee at least two weeks prior to the defense. Without the approval of the committee members two weeks in advance, the defense process cannot proceed and the room will not be reserved. The student should also have submitted at least one paper to a peer-reviewed journal prior to defending his or her thesis. Normally students are expected to have at least one paper accepted in a peer-reviewed journal, and at least another paper submitted prior to graduation. Presentation at national conferences is also encouraged. At least four committee members must be present at the defense (including the committee chair). Members of the Dissertation Defense Committee normally attend in person, but one of the five (or, in case of an emergency, one of the four) members may attend virtually instead. Otherwise, the student must reschedule the proposal/thesis defense.

Financial Assistance

All full-time PhD students in good standing will receive financial assistance. Students are expected to discuss their financial aid needs before finalizing their choice of an adviser. Academic achievements and satisfactory performance in research and other educational requirements while at WashU are the primary factors governing continuation of financial aid.

Students who are placed on academic suspension will automatically have their financial assistance cancelled, effective with the date of suspension.

Research assistants receive a regular monthly stipend. A research assistant is normally not permitted to register for more than nine hours of graduate credit per semester after the first year. To derive the maximum educational benefit of research, a minimum of 20 hours per week is required by research assistants.

However, graduate assistants whose thesis research coincides or overlaps with their other research are expected to devote more than this minimum effort to research. The student's diligence and devotion will be important factors to determine if the student is making satisfactory progress toward the completion of his or her degree.

Research assistantships are continued during the summer. Summer appointments receive the same stipend as the academic year, but full-time effort (minimum of 40 hours per week) is expected.

Tax Liability

The taxability of the various types of awards described above is determined by current policy of the U.S. Internal Revenue Service (IRS). It is prudent to assume that all stipends are fully taxable and that tax will be withheld. Questions concerning any individual's tax liability must be referred to the IRS.

Outside Employment

Holders of fellowships, traineeships and assistantships are required to devote their full effort to graduate studies. They are not permitted to engage in any outside employment without special permission of the adviser and Department Chair.

Time Off

Graduate students receiving financial support are expected to commit themselves fully to their studies and research. Intersession periods listed in the university Academic Calendar denote times when classes are not in session, and graduate students are expected to devote themselves full-time to their research during these periods.

Students on full support are permitted to take off a **maximum of two weeks** during the calendar year for holidays, interview trips, etc. Additional time off can be arranged in discussion with the research adviser, but may result in a reduction of the student's stipend. During the first year in the program when students do not have a permanent adviser, they should consult their first-year advisers to schedule any time off. Absence of research assistants must be scheduled so as not to impede the progress of an ongoing research project and should be approved by the research adviser.

Other Policies

Seminars

Each year the department sponsors or participates in a series of seminars by visiting lecturers and WashU faculty and students. All full-time graduate students are required to enroll in EECE 509-Graduate Seminar, which is an S/F course carrying one unit of coursework credit. Full-time graduate students may receive up to six units of coursework for EECE 509. A passing grade (S) is required for each semester for all full-time students and is earned by regular attendance at these events.

If a student plans to miss or misses a seminar, they are required to notify Ms. Monique Spears with a reason for the same. Missing more than a certain number of seminars may require the student to make up work to obtain a passing grade. If a student misses more than three seminars in a given semester without a legitimate excuse, the student will obtain an "F" grade.

Copying Service

Graduate students may not charge copying work to the department or a research project without prior authorization. Personal copies can be charged to a student's personal account. The cost of copying and binding dissertations beyond the three copies required by the department is considered a personal obligation.

Annual Reviews

All graduate students should meet with their advisers on a routine basis. Every summer, the student will undergo a formal review of his or her progress by the adviser. A standard form given by the EECE department will be used. The faculty member is responsible for completing the review; and it is the student's responsibility to remind the adviser to ensure that these reviews must be completed annually by the end of the summer every year.

Opportunities for PhD Students

Students are encouraged to avail of the various opportunities the department, school and university offer. It is important that the Advisor is kept informed and permission sought for participating in these activities. Some of the EECE related activities are outlined here:

- A. PhD Internship Program** — Opportunity to work in Industry during your PhD program.
- B. Global PhD Pathway** — A pathway program is available to students interested in working collaboratively on challenging problems of global impact involving a faculty member from another leading global university. Students will earn a Pathway Certificate on completion of the Program.
- C. Resume Book** — Avail of this opportunity as you get close to graduation. Primarily circulated to various Industry partners
- D. EECE Graduate Student Group** – An informal group organized by PhD students to help in various professional training and social activities.
- E. Innovation and Entrepreneurship Activities** – The department organizes a discussion group and promotes interaction with a Professor of Practice and other individuals.

Core Courses

Students formulate their course program in consultation with their adviser. The student is expected to be proficient in the following core courses. PhD students are strongly urged to take at least three graduate-level classes (400-level or higher) outside the Department during his/her PhD program. These courses can be selected based on discussion with their adviser and research interest areas.

Courses are offered to PhD students in two required core areas.

The courses corresponding to these areas are:

- a) EECE 501* Transport Phenomena in EECE
- b) EECE 503 Mathematical Methods in EECE

These courses will provide the base knowledge that is expected of all PhD students in the Department. These classes will provide the fundamentals and the foundation in the topical areas that are essential for successful study and conduct of research in energy, environmental and chemical engineering.

First-year students will also register for EECE 508 Research Rotation (zero credits, S/F grade, first semester). During every semester of residency, students should register for EECE 509 Seminar in EECE (one credit, S/F grade).

Students can avail themselves of course sequences in areas of specialization in the Department. Students are encouraged to review the same on the Department website (eece.wustl.edu), discuss with their advisers and are encouraged to avail themselves of these opportunities. **In the first year of the PhD program, students must take courses offered by the EECE department.**

Suggested Course Selections for the First-year PhD Students

Fall Semester (10 credits)

- 1) EECE 501* Transport Phenomena in EECE
- 2) EECE 503 Mathematical Methods in EECE
- 3) Elective Classes (select from one or more Graduate Level Elective Classes below based on discussions with temporary adviser, noting needs for PhD qualifying exam)
- 4) EECE 508 Research Rotations (zero credits)
- 5) EECE 509 Seminar in EECE (one credit, Pass / Fail)

Spring Semester (10 credits)

- 1) Three or four Elective Classes (select from Graduate-level Elective Classes below based on discussions with permanent adviser, noting needs for PhD qualifying exam)
- 2) EECE 509 Seminar in EECE (one credit, Pass/Fail)

Menu of Graduate-level Elective Classes

(Please review list of exact offerings each year — current listings of courses are maintained at eece.wustl.edu.)

Aerosol Science & Engineering

- 1) EECE 504* Aerosol Science & Technology (fall)
- 2) EECE 502 Advanced Thermodynamics in EECE (fall)
- 3) EECE 512 Combustion Phenomena (fall)
- 4) EECE 514 Atmospheric Science & Climate (spring)
- 5) EECE 510 Advanced Topics in Aerosol Science & Engineering (spring)

Engineered Aquatic Processes

- 1) EECE 505* Aquatic Chemistry (fall)
- 2) EECE 425 Environmental Engineering Laboratory (fall)
- 3) EECE 531 Environmental Organic Chemistry (fall)
- 4) EECE 533 Physical & Chemical Processes for Water Treatment (spring)
- 5) EECE 534 Environmental NanoChemistry

Metabolic Engineering

- 1) EECE 506* Bioprocess Engineering 1 (spring)
- 2) EECE 554 Molecular Biochemical Engineering (spring)
- 3) EECE 552 Biomass Energy Systems & Engineering (spring)
- 4) EECE 551 Metabolic Engineering & Synthetic Biology (fall)

Multi-scale Engineering

- 1) EECE 507* Kinetics & Reaction Engineering Principles (spring)
- 2) EECE 572 Advanced Transport Phenomena (spring)
- 3) EECE 574 Electrochemical Engineering (spring)
- 4) EECE 576 Chemical Kinetics and Catalysis (spring)

Taking other graduate classes from Chemistry, Physics, Biology and other departments in his/her first year must be approved by the adviser and the Director of Graduate Studies through submitting a petition letter.

Courses from the Engineering Continuing Studies (T courses) cannot be counted toward doctoral degree course requirements. The courses counted for the doctoral degree should be credit-based rather than pass/fail option.

** indicates anchor courses for each cluster which students should be familiar with preparing qualifying exam according to the cluster the student have chosen*

Forms

List of Forms to be Completed by Students during Period of Study

Form	Date Due	Receive from & Submit to
HRMS Personal Information	Upon arrival	Christine Tilley Brauer Hall, Room 1015
Research Rotation Form	Aug. 27 & Oct. 1 (2 p.m.)	Monique Spears Brauer Hall, Room 1002
Permanent Adviser Choice	Nov. 27 (2 p.m.)	Monique Spears
Thesis Information Form (used to start proposal process)	Two weeks before Thesis Proposal Exam	Monique Spears Brauer Hall, Room 1002
Teaching Requirement Fulfillment	Before thesis defense	Monique Spears
Notice of Title, Scope & Procedure of Dissertation (Thesis)	Six months before degree conferral	Monique Spears
Exit Document	Last day at WashU	Monique Spears
Post-graduation Job Survey	Last day at WashU	Monique Spears

List of Forms Completed by Department Faculty or Staff

Form	Date Due
PhD Qualifying Examination Result	May of first year
Thesis Proposal Result	Upon Completion of Exam
Annual Student Review (section for student response submitted to adviser)	By end of summer (every year)
Final Program Form (student will receive form for confirmation)	Three weeks before Thesis Defense

EECE Staff

Christine Tilley

Senior Department Administrator
935-6170 • christin@wustl.edu

Contact for:

- Proposal submissions
- Grant, contract management
- Budget/financial inquiries
- Payroll for employees and paid visitors

Monique Spears

Academic Program Coordinator
935-6070 • moniquespears@wustl.edu

Contact for:

- Graduate student administration
- Department course listing maintenance
- Building access
- PhD room assignments (Green 0150)
- Conference room defense scheduling

Kim Coleman

Assistant to the Chair
935-5548 • kcole@wustl.edu

Contact for:

- Appointments with Chair
- Student room assignments
- Key distribution

Patty Kofron

Administrative Assistant
935-5645 • pkofron@wustl.edu

Contact for:

- Coordination of department events
- Conference room reservations
- Paycheck distribution
- Processing of shipments
- Brauer Hall key deposits

Ady Haas

Accounting Specialist
935-6548 • ady.haas@wustl.edu

Contact for:

- Travel reimbursements/advances
- Local reimbursements (check requests)
- Purchase orders
- Processing of shipments (back-up)

Trisha Sutton

Office & Accounting Coordinator
935-6082 • suttont@wustl.edu

Contact for:

- Proposal submissions
- Purchase Orders (back-up)
- Compliance Issues – ePARS, COI, FCOI, PERCSS and RCR training

Katy Bay

Administrative Coordinator
935-6154 • k.bay@wustl.edu

Contact for:

- PhD student payroll
- Conference room reservations (back-up)
- Admin Support for Summer Intern Program

Faculty

AEROSOL SCIENCE & ENGINEERING



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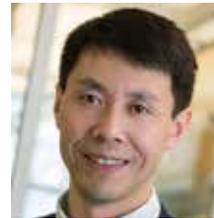
AQUATIC PROCESSES



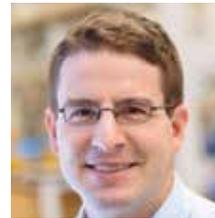
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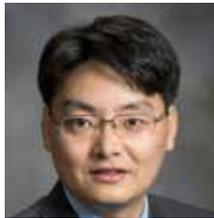
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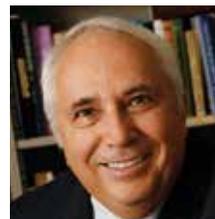
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