MATERIALS SCIENCE AND ENGINEERING, PHD

Meeting many of the most critical challenges facing modern society requires advances in the materials that underpin new technologies. Examples include providing carbon-free and renewable energy, clean water, advanced medical treatments and devices, and sustainable materials manufacturing. New materials are also required for continued economic growth in areas as diverse as aerospace, computing, and sensors.

Materials scientists and engineers at UW–Madison work toward solutions to these problems via research in a wide variety of areas. Research areas include ceramics, computational material science; composites; corrosion; electrical, optical, magnetic materials; growth and synthesis; joining; materials for energy; metals; materials characterization and microscopy; nanomaterials; phase transformations; photonics; polymers and biomaterials; materials for nuclear energy; quantum computing; self-assembly; semiconductors; structural materials and mechanical properties; surfaces and interfaces; sustainability; thin films; and wear.

More broadly, the field of materials science and engineering is in the middle of a revolution in how we design and deploy new materials. The old way is by trial and error, which involves laboratory testing of hundreds or thousands of candidate materials, which is costly and can take decades to develop new materials and deploy them in practical technologies. The emerging new method leverages advances in computational materials science; materials databases, data science, and machine learning; and high throughput materials synthesis and characterization to achieve true design of materials. The goal is to develop and deploy new materials much more quickly and at a much lower cost than ever before. Materials design is a major theme of materials research on campus, organized around the areas of materials design via atomically controlled thin film systems, modular design of nanomaterials, and integrated experimental and computational materials engineering. Materials design and these themes cut across the research and application areas listed above.

Materials research extends across campus, well beyond the boundaries of the Department of Materials Science and Engineering, so graduate students in materials can pursue research with a large number of affiliate faculty. Faculty emphasize the cross-cutting, interdisciplinary nature of materials research, which is also reflected by the diverse undergraduate backgrounds of the student body, many of whom do not have undergraduate degrees in materials.

Materials research benefits from major campus facilities, including the Materials Science Center, the Wisconsin Microscopy and Characterization Center, Wisconsin Center for Applied Microelectronics, and the Soft Materials Laboratory. Research is supported by major centers, including the National Science Foundation Materials Research Science and Engineering Center and the Grainger Institute for Engineering.

Materials graduates from Wisconsin find long-term success in careers in private industry, national laboratories, and academia in the U.S. and around the world.

ADMISSIONS

ADMISSIONS

Please consult the table below for key information about this degree program's admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program's website.

Graduate admissions is a two-step process between academic programs and the Graduate School. ***Applicants must meet* the minimum requirements *(*https://grad.wisc.edu/apply/requirements/*) of the Graduate School as well as the program(s).*** Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/apply/).

Requirements	Detail
Fall Deadline	December 15
Spring Deadline	September 1
Summer Deadline	December 15
GRE (Graduate Record Examinations)	Not required.
English Proficiency Test	Every applicant whose native language is not English, or whose undergraduate instruction was not exclusively in English, must provide an English proficiency test score earned within two years of the anticipated term of enrollment. Refer to the Graduate School: Minimum Requirements for Admission policy: https://policy.wisc.edu/library/UW-1241 (https://policy.wisc.edu/library/UW-1241/).
Other Test(s) (e.g., GMAT, MCAT)	n/a
Letters of Recommendation Required	3

Applicants normally are expected to have a BS in the physical sciences or engineering. Undergraduate studies normally would include mathematics through differential equations, at least one year each of general physics and chemistry, a course in physical chemistry or modern physics, and an elementary course in properties of materials. Applicants may be admitted with deficiencies. These must be made up as soon as possible after entering the program.

APPLICATION

Required application materials:

- Academic transcripts (unofficial)
- English proficiency scores (https://grad.wisc.edu/apply/requirements/#english-proficiency), if applicable
- Three letters of recommendation
- Statement of purpose (https://grad.wisc.edu/apply/prepare/)
- Resume

A minimum GPA of 3.0/4.0 is required. Admission is highly selective. Most admitted applicants have an undergraduate GPA above 3.5. However, full consideration will be given to all applicants meeting the UW–Madison Graduate School requirements.

Use the online application (https://grad.wisc.edu/apply/) to begin your application. To be considered for fellowships, all application materials are due by the fall deadline.

INTERNATIONAL APPLICANTS

International degree-seeking applicants must prove English proficiency using the Graduate School's requirements (https://grad.wisc.edu/apply/requirements/).

FEE GRANTS

The Graduate School offers a limited number of application fee grants (covers of all or part of the application fee) that are available in a few specific circumstances. Further information is available here. (https://grad.wisc.edu/admissions/feegrants/)

QUESTIONS

If you have questions about the application or admissions process, contact msaegradadmission@engr.wisc.edu.

FUNDING

FUNDING

GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

PROGRAM RESOURCES

Financial Assistance

Various types of financial assistance are available for entering graduate students, including research assistantships, teaching assistantships, fellowships, and special grants. Decisions regarding financial support are made on the basis of letters of recommendation, grades, GRE general test scores, and, for research assistantships, the matching of the interests or experience of the applicant to the research programs of individual faculty members. December 15th is the deadline for receipt of fellowship applications. International students are generally not eligible for university fellowships. Applications for other types of support are accepted until mid-February.

Research and Teaching Assistantships

Research assistantships (RAs) are available in any materials science area. These appointments are under the supervision of the major professor directing the research. Students interested in research assistantships in a particular area are encouraged to contact professors whose work is of special interest. The faculty's research interests are given in the Department of Materials Science And Engineering faculty section. An RA permits the most rapid progress toward a degree. Research assistantships in materials science graduate students are comparable to similar stipends from other institutions. Information about stipends can be obtained from the Associate Chair of Graduate Studies, acgs@mse.wisc.edu.

Teaching assistantships involve teaching rather than research experience. They pay approximately the same as research assistantships. Teaching experience is especially desirable for students considering an academic career. The Department of Materials Science and Engineering supports a limited number of teaching assistantships, which are allocated after admissions.

Fellowships

Herb Fellowships in Materials Science are given out each year. The Herb Fellowship is a one-year full-ride fellowship for incoming graduate students. It is intended to provide especially strong students extra flexibility and independence in formulating their graduate research program.

Fellowships supporting graduate education are also offered on a competitive basis by organizations such as the National Science Foundation (http://www.nsf.gov/), the Hertz Foundation (http://www.hertzfndn.org/), UW-Madison Graduate School (http://www.wisc.edu/grad/), the U.S. Department of Defense, and a number of industries and foundations. Because some of these fellowships have fall application deadlines, early application is necessary. GRE scores for the General Test are required for fellowship applications.

Other Funding Information

If you choose to attend UW–Madison and plan to pursue funding on your own, the following sites could be very helpful:

- Graduate School Funding Resources (https://grad.wisc.edu/studentfunding/prospective/)
- Graduate School Costs and Funding (https://grad.wisc.edu/studentfunding/currentstudents/)

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	No

Mode of Instruction Definitions

Accelerated: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.

Evening/Weekend: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.

Face-to-Face: Courses typically meet during weekdays on the UW-Madison Campus.

Hybrid: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

Online: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

CURRICULAR REQUIREMENTS

Requirements	Detail
Minimum Credit Requirement	51 credits
Minimum Residence Credit Requirement	32 credits
Minimum Graduate Coursework Requirement	26 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).
Other Grade Requirements	n/a
Assessments and Examinations	Qualifying Exam • Students must pass a qualifying exam in Materials Science and Engineering. The exam is an assessment of whether students have sufficient background in the areas of materials science and engineering relevant to their research to undertake graduate research. The exam consists of an oral examination covering two subjects, each with a committee of two faculty members. The exam must be attempted within 13 months of the start of the student's first semester enrolled. If the first attempt is not passed, a second attempt is required within four months. Preliminary Exam • Students must pass a preliminary exam / thesis proposal exam. The exam consists of a written document, a presentation, and an oral defense with the student's doctoral committee. The written document is a forward-looking proposal for a plan of research that merits awarding of a PhD. The presentation should mimic the report, focusing on proposing new research and summarizing research to date. This exam is typically undertaken by the end of the fourth semester enrolled and must be undertaken by the end of the fifth semester. If the first attempt is not passed, a second attempt is required within three months. Students may earn the Materials Science and Engineering master's degree the semester they pass their preliminary exam. Doctoral Dissertation • Students must prepare a doctoral dissertation, present it in a public seminar, defend it in closed examination by their doctoral committee, and deposit it with the Graduate School. The seminar describes the student's research resulting in significant new contributions to human knowledge in both a technical (science and engineering) and a broader societal context. It should be modeled after the hour-long departmental research seminars. In the closed session, the committee will question the student about the student's research, both as presented in the seminar and in the thesis, including topics such as technical details about past work, implications for the field and society as a whole, and possible future directions. The committee may pass the student, require revisions to the thesis, or not pass the student on the exam.
Language Requirements	None.

Graduate School Breadth Requirement	All doctoral students are required to complete a doctoral minor or graduate/professional certificate. Refer to the Graduate School: Breadth Requirement in Doctoral Training policy: https://policy.wisc.edu/library/UW-1200 (https://policy.wisc.edu/library/UW-1200/). If students choose a distributed minor (Option B), they must select a topic or theme and three courses around that theme. At least one course must be graduate level (numbered 700 or above or has graduate course attribute). There are no other restrictions on the course department or topic.

REQUIRED COURSES

All course requirements are subject to modification or substitution to better serve the research needs of the student. Refer to the "Policies (p. 5)" tab for information on course substitutions.

Before registering for the second semester, students must submit an advisor approved course plan to the graduate coordinator. Students are not restricted to this plan. Students and advisors are encouraged to update the plan. Updated versions are not required to be submitted.

Code	Title	Credits
Materials Research Seminar		**2**
Students must complete at least 2 credits of the following course for two consecutive semesters.		
M S & E 900	Materials Research Seminar	
Materials Core Courses		**9**
Students must complete three core courses (9 credits) from the following list:		
M S & E 521	Advanced Polymeric Materials	
M S & E 530	Thermodynamics of Solids	
M S & E 551	Structure of Materials	
M S & E 752	Advanced Materials Science: Phase Transformations	
Graduate level math course (students may only count one of the following as materials core course)		
E P/E M A 547	Engineering Analysis I	
CBE 660	Intermediate Problems in Chemical Engineering	
MATH 703	Methods of Applied Mathematics 1	
MATH 704	Methods of Applied Mathematics-2	
PHYSICS 721	Theoretical Physics-Electrodynamics	
Materials Elective Courses		**6**
Students must complete at least 6 credits from the "Materials Elective Courses" list.		
Additional Coursework and/or Research (see below table)		**25**
Breadth		**9**
Total Credits		**51**

Additional Coursework and/or Research Requirement

- Before earning the master's degree, students should register for M S & E 790 Master's Research or Thesis.
- After earning the master's degree, students should register for M S & E 890 Pre-Dissertator's Research.
- Once in dissertator status, students should register for M S & E 990 Research and Thesis.

Materials Elective Courses

The same course may not satisfy more than one requirement. For example, if M S & E 530 Thermodynamics of Solids is taken as a "Materials Core Course", it could not be used as a "Materials Elective Course". Only one mathematics course may fulfill a "Materials Core Course" or "Materials Elective Course". Refer to the "Policies" tab for information on how to enroll in a course outside of the list below.

Code	Title	Credits
M S & E 401	Special Topics in Materials Science and Engineering	1-3
M S & E/CHEM 421	Polymeric Materials	3
M S & E/N E 423	Nuclear Engineering Materials	3
M S & E/N E 433	Principles of Corrosion	3
M S & E 434	Introduction to Thin-Film Deposition Processes	3
M S & E 441	Deformation of Solids	3
M S & E 448	Crystallography and X-Ray Diffraction	3
M S & E 451	Introduction to Ceramic Materials	3
M S & E 456	Electronic, Optical, and Magnetic Properties of Materials	3
M S & E 460	Introduction to Computational Materials Science and Engineering	3
M S & E 461	Advanced Metal Casting	3
M S & E/M E 462	Welding Metallurgy	3
M S & E 463	Materials for Elevated Temperature Service	3
M S & E 465	Fundamentals of Heat Treatment	3
M S & E/CIV ENGR/G L E/GEOSCI 474	Rock Mechanics	3
M S & E 521	Advanced Polymeric Materials	3
M S & E 530	Thermodynamics of Solids	3
M S & E/E M A 541	Heterogeneous and Multiphase Materials	3
M S & E 550	Materials Fundamentals	3
M S & E 551	Structure of Materials	3
M S & E 553	Nanomaterials & Nanotechnology	3
M S & E 560	Fundamentals of Atomistic Modeling	3
M S & E 570	Properties of Solid Surfaces	3
M S & E 648	Advanced X-ray Scattering Methods in Materials Science and Engineering	3
M S & E 660	Mesoscale Modeling of Materials	3
M S & E 748	Structural Analysis of Materials	3
M S & E 750	Imperfections and Mechanical Properties	3
M S & E 752	Advanced Materials Science: Phase Transformations	3
M S & E 756	Structure and Properties of Advanced Electronic Materials	3

M S & E 760	Molecular Modeling of Materials	3
M S & E 803	Special Topics in Materials Science	1-3
B M E/PHM SCI 430	Biological Interactions with Materials	3
B M E/M E 615	Tissue Mechanics	3
BIOCHEM/ CHEM 704	Chemical Biology	3
CBE 540	Polymer Science and Technology	3
CBE 747	Advanced Colloid and Interface Science	3
CHEM 652	Chemistry of Inorganic Materials	3
CHEM 653	Chemistry of Nanoscale Materials	3
CHEM 654	Materials Chemistry of Polymers	2-3
CHEM 664	Physical Chemistry of Macromolecules	2-3
CHEM 721	Instrumental Analysis	3-4
E C E 745	Solid State Electronics	3
GEOSCI 765	Crystal Chemistry	3
PHYSICS 415	Thermal Physics	3
PHYSICS 551	Solid State Physics	3
PHYSICS 715	Statistical Mechanics	3
PHYSICS 751	Advanced Solid State Physics	3

POLICIES

GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy/) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

MAJOR-SPECIFIC POLICIES

PRIOR COURSEWORK

Graduate Credits Earned at Other Institutions

With program approval, students may transfer up to 9 credits of graduate coursework from other institutions in fulfillment of the minimum graduate degree credit requirement and the minimum graduate coursework (50%) requirement. No credits from other institutions can be transferred for the minimum graduate residence credit requirement.

To request graduate credits from other institutions be allowed to transfer in fulfillment of degree requirements, the student should submit a request to the department graduate coordinator describing (1) the course from a previous institution; (2) the UW-Madison course equivalent; (3) the Materials Science and Engineering course requirement that will be satisfied. The request must include sufficient information to determine if the course(s) are equivalent. Typically, a syllabus listing the course textbook and lecture topics is sufficient. A course catalog description is typically insufficient.

Undergraduate Credits Earned at Other Institutions or UW-Madison

Typically, no UW-Madison undergraduate credits may transfer in fulfillment of degree requirements. For questions about exceptions, contact the graduate coordinator.

Courses taken while enrolled as an undergraduate student at other institutions will not be considered for substitution. This includes courses at the graduate level taken while the student is enrolled as an undergraduate.

Credits Earned as a Professional Student at UW-Madison (Law, Medicine, Pharmacy, and Veterinary careers)

Typically, no professional student credits may transfer in fulfillment of degree requirements. For questions about exceptions, contact the graduate coordinator.

Credits Earned as a University Special Student at UW–Madison

Typically, no University Special student credits may transfer in fulfillment of degree requirements. For questions about exceptions, contact the graduate coordinator.

PROBATION

Refer to the Graduate School: Probation (https://policy.wisc.edu/library/UW-1217/) policy.

The Materials Science and Engineering graduate program is guided by expectations for the conduct of students and faculty that help to establish a safe, collegial, and productive environment facilitating scientific discovery and professional development. These expectations reflect professional guidelines provided by the UW-Madison College of Engineering and the UW-Madison Graduate School.

The specific expectations of the program are:

1. Intellectual and professional integrity
    a. Materials Science and Engineering graduate students and their faculty mentors are expected to show respect for the profession and for those working in it. Research activities will be conducted without plagiarism, with proper attribution of work with collaborators, and with respect for applicable professional ethical considerations, such as those associated with the involvement of human subjects.
2. Safe and environmentally responsible conduct of research
    a. Research in the Materials Science and Engineering graduate program is expected to be conducted with a high level of respect for the safety of the students, faculty, and other participants. Students and faculty must observe the requirements defined at the research group, department, college, and university for safe and environmentally responsible research. Faculty are expected to develop and maintain lab safety plans, to appoint a safety coordinator within their labs, and to advise students of the safety training required for work in their groups. Students are expected to seek and to obtain the required safety training, to remain up-to-date with required recurrent training, and to follow the safety guidelines at all times.
3. Professional research environment
    a. Students and faculty are expected to contribute to a collegial professional research environment, practicing mutual respect for all students, faculty, and staff. The Materials Science and Engineering department strives to create an environment free from harassment, bias, and hostile and intimidating behavior. Students supported by teaching assistant appointments are expected to balance the time commitments to research and teaching after consultation with their advisor and the faculty member responsible for the course to which they are assigned.

These arrangements may evolve during the course of the student's PhD program.

   b. These expectations include responsiveness to communications, including (as applicable) a regular schedule of meetings and response to electronic communication during defined working hours. Students and faculty are expected (as required) to participate in group meetings and individual or small-group collaborative meetings, and lab activities such as those associated with mentoring other students and maintaining a safe working environment. Students are not expected to provide personal assistance for faculty advisors or to perform other duties outside of their university research, teaching and service commitments.
   c. Students and faculty are expected to be aware of issues in implicit bias, sexual harassment, and ethical conduct of research.
4. Professional development and achievement in research
   a. Students are expected to develop and to maintain a set of research goals with the potential to lead to outputs such as research publications, the development of intellectual property, and scientific presentations. Research goals can include original research discoveries, contributions to the scientific literature, and other outputs as mutually agreed by the student and faculty advisor. These goals must be reached in agreement with the faculty mentors. Students are expected to conduct their research within the intellectual property guidelines associated with their source of financial support (e.g. the requirements of the Bayh-Dole act for federally supported research).
5. Ongoing clear communications about expectations and feedback on student progress
   a. Students and faculty will have regular communications about the progress that students are making towards their degree requirements and expectations for the conduct of research. Students can offer feedback about faculty using the College of Engineering's annual Graduate On-Line Assessment & Achievement Learning System (GOAALS) survey or through direct communication with the Materials Science and Engineering Chair, the Materials Science and Engineering Associate Chair for Graduate Studies, or the College of Engineering Assistant Dean for Graduate Studies. The Materials Science and Engineering department will include a discussion of these expectations as part of the required student orientation activities.
   b. Students can expect clear communications from faculty about their progress in the program, feedback on research and educational issues, and the progress towards the degree.

ADVISOR / COMMITTEE

Refer to the Graduate School: Advisor (https://policy.wisc.edu/library/UW-1232/) and Graduate School: Committees (Doctoral/Master's/MFA) (https://policy.wisc.edu/library/UW-1201/) policies.

Students without an advisor at the end of their first year enrolled are in danger of failing to make adequate progress towards their degree. Students can be suspended from the Graduate School if they do not have an advisor.

The doctoral committee consists of five faculty. It must include the student's advisor, at least three members from the Materials Science and Engineering department (may include affiliate faculty), and members with tenure homes in at least two different departments. Up to one member may be from any of the following categories, as approved by the department Associate Chair of Graduate Studies: academic staff (including emeritus faculty), visiting faculty, faculty from other institutions, scientists, research associates, and other individuals deemed qualified by the Associate Chair of Graduate Studies. All members of the committee must be physically or virtually present for the exam, unless an exception is granted by the department Associate Chair for Graduate Studies.

CREDITS PER TERM ALLOWED

15 credits

TIME LIMITS

The PhD is typically completed within six years.

Qualifying Exam: Students must attempt the qualifying exam within 13 months of the start of their first semester enrolled (summer sessions do not count for this rule). The qualifying exam will be offered within one month of when the semester starts. A student who fails one or more subjects on a first attempt must retake the exam within four months of the first attempt. The student may retake the failed subjects, or may switch to a different subject or subjects. Students who fail one or more qualifying exams in the second attempt may not continue PhD-level study in Materials Science and Engineering. They may elect to complete a master's degree in Materials Science and Engineering or they may leave the Materials Science and Engineering graduate program without a degree.

Preliminary Exam: Students must complete the preliminary exam by the end of the fifth semester enrolled. If the committee feels the proposal or presentation are inadequate, they can request revisions to the document or require the student to retake the preliminary exam. The retake must occur within three months of the first exam.

PhD Defense: A candidate for a doctoral degree who fails to take the final oral examination and deposit the dissertation within five years after passing the preliminary examination may be required to take another preliminary examination and to be admitted to candidacy a second time.

Refer to the Graduate School: Time Limits (https://policy.wisc.edu/library/UW-1221/) policy.

GRIEVANCES AND APPEALS

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
- Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/policies/gapp/#grievance-procedure)
- Hostile and Intimidating Behavior Policies and Procedures (https://hr.wisc.edu/hib/)
  - Office of the Provost for Faculty and Staff Affairs (https://facstaff.provost.wisc.edu/)
- Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (https://employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (https://grad.wisc.edu/) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)
- Office of Compliance (https://compliance.wisc.edu/) (for class harassment and discrimination, including sexual harassment and sexual violence)

- Office Student Assistance and Support (OSAS) (https://osas.wisc.edu/) (for all students to seek grievance assistance and support)
- Office of Student Conduct and Community Standards (https://conduct.students.wisc.edu/) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (https://compliance.wisc.edu/titleix/) (for concerns about discrimination)

MS&E Grievance Procedures

Students who feel they have been unfairly treated or otherwise have a grievance related to the policies and procedures for graduate study in the Materials Science and Engineering Department may choose to submit a formal grievance to the department. Before taking this step, however, students are encouraged to discuss their grievance directly with the person or persons involved. Respectful, professional, direct communication can often reach a more satisfactory resolution to an issue more quickly than a formal grievance procedure.

To pursue a formal grievance, the student should submit a letter describing the issue in detail to the department Associate Chair of Graduate Studies within 60 days of the precipitating incident. (Should the grievance involve the Director of Graduate Studies, the letter should be submitted to the department Chair.) The Director (or Chair) will convene a committee of not fewer than three department faculty. The committee will obtain a written response from the person or persons who are the subject of the complaint. The committee will then decide a course of action in response to the grievance. The response from the subject of the complaint and the committee course of action will be communicated in writing to the student within 15 working days of submission of the grievance. The course of action will be implemented no later than 10 working days of the communication.

If the departmental procedure does not resolve the grievance, the student may appeal to the College of Engineering or the Graduate School. The College grievance procedures are currently available at https://engineering.wisc.edu/report-an-incident/academic-grievances-and-complaints/, and the Graduate School procedures are available at http://grad.wisc.edu/acadpolicy/. (http://grad.wisc.edu/acadpolicy/)

The Assistant Dean for Graduate Affairs (engr-dean-graduateaffairs@engr.wisc.edu) provides overall leadership for graduate education in the College of Engineering (CoE), and is a point of contact for graduate students who have concerns about education, mentoring, research, or other difficulties.

OTHER

Course Substitution Request

To request an exception, submit a letter to the graduate coordinator signed by the student and advisor proposing a substitution. The letter must explain how the substitution better suits the student’s needs, especially as it pertains to their research. Course substitutions and other curriculum variances are decided by the department's director of graduate studies. These are subject to appeal to the department's Graduate Governance Committee and grievance procedure.

Materials Elective Course Request

Students or faculty may request a course be added to the "Materials Elective Courses" list by submitting a letter to the graduate coordinator. The request must include the course syllabus and explain why the course is a materials-centric course.

PROFESSIONAL DEVELOPMENT

PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School's professional development resources (https://grad.wisc.edu/pd/) to build skills, thrive academically, and launch your career.

LEARNING OUTCOMES

LEARNING OUTCOMES

1. Demonstrate an ability to synthesize knowledge from a subset of the biological, physical, and social sciences to help frame problems critical to the future of their discipline.
2. Conduct original research.
3. Demonstrate an ability to create new knowledge and communicate it to their peers.
4. Fosters ethical and professional conduct.

PEOPLE

PEOPLE

PROFESSORS

Michael Arnold, Chang-Beom Eom, Paul Evans, Padma Gopalan, Sindo Kou, Dane Morgan, John Perepezko, Kumar Sridharan, Donald Stone, Izabela Szlufarska, Dan Thoma, Paul Voyles, and Xudong Wang

ASSOCIATE PROFESSORS

Jiamian Hu, Jason Kawasaki and Yuan Ping

ASSISTANT PROFESSORS

Dawei Feng, Sebastian Kube, Fang Liu, Hyunseok Oh, Daniel Rhodes, and Jun Xiao

ASSISTANT TEACHING PROFESSORS

Franklin Hobbs

See also Materials Science and Engineering Faculty Directory (https://directory.engr.wisc.edu/mse/faculty/).