

# DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING

Materials Science & Engineering Graduate Program Handbook

Date Created: July 1, 2021 Last Revised: July 1, 2021

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### Welcome to Materials Science & Engineering

The purpose of this manual is to provide information to students who are considering enrolling or have enrolled in the graduate program of the Department of Materials Science & Engineering, so that they may better plan their studies and research during their stay at this University. As such, it is intended to supplement information found in *The University of Utah General Catalog*. In addition to the Departmental requirements listed in this manual, all the University requirements specified in the Graduate Information section of *The University of Utah General Catalog* must be satisfied. Therefore, the student should become familiar with both the Departmental and University requirements as soon as possible after they start graduate work. *The University of Utah General Catalog Catalog* contains additional useful information on areas outside the scope of the department, e.g., campus facilities and student housing.

#### Precedence of Policies

In the event there is a conflict between Department policy and University policy, the University policy shall take precedence.



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## **Contact Information**

#### Administrative Staff



Sara Wilson Administrative Manager/Graduate Academic Advisor sara.j.wilson@utah.edu 801.581.4449 Office: CME 304

The Graduate Academic Advisor assists students in all aspects relating to Materials Science and Engineering graduate degrees, including policies and procedures, graduation, tuition benefit and student health insurance. All

graduate students in the Department of Materials Science and Engineering are expected to meet regularly with the Academic Advisor as they progress towards their degree to ensure that procedures and forms are properly completed.



Angela Nelson Administrative Officer angela.nelson@utah.edu 801.585.6919 Office: CME 304



Joshua Hansen

Clerk hansen@mse.utah.edu 801.581.6863 Office: CME 304



Kay Argyle Executive Secretary kay.argyle@utah.edu 801.581.6386 Office: 412 WBB

The Executive Secretary assists students in all aspects relating to applications and admissions.



#### Faculty & Leadership Contacts



#### Dr. Dmitry Bedrov

Associate Professor Director of Graduate Studies for Materials Science and Engineering <u>*d.bedrov@utah.edu*</u> 801.585.3949 Office: 206 CME

The Director of Graduate Studies oversees policies and procedures for all graduate degrees offered through the Department of Materials Science and Engineering. The DOGS is available to answer general questions about the graduate program and to provide recommendations regarding coursework. They also serve as the default research advisor for new students who have not yet established a research advisor.



Dr. Michael Simpson

Chair, Department of Materials Science and Engineering michael.simpson@utah.edu 801.555.5555 Office: CME 304

The Department Chair oversees all research, academic, service and administrative functions of the department. The chair is responsible for setting the strategic direction for the department and ensuring that resources

are provided for its different department functions in serving the university mission.

#### Student Contacts

#### **GSAC or Student Organization Co-Presidents**



Ashwin Velraj u1350938@utah.edu Olivia Dale u0984379@utah.edu



## **Departmental Listings**

#### **Teaching Faculty**

More details on faculty research specialties, and information on research, adjunct, or other auxiliary faculty, may be found on our website.



Faculty Member & Area of Specialization

Jeff Bates Assistant Professor (Lecturer) jeff.bates@utah.edu





Faculty Member & Area of Specialization

**Dmitry Bedrov** Associate Professor d.bedrov@utah.edu

**Computational Polymers** 



**Darryl Butt** Professor & Dean of the College of Mines and Earth Sciences Office: FASB 205 Phone: 801-581-8767 darryl.butt@utah.edu





Physical metallurgy





**Richard Cohen** richard.cohen@utah.edu







Zak Fang Professor zak.fang@utah.edu

Metals for energy storage Powder metallurgy



Michael Free Professor michael.free@utah.edu

Hydrometallurgy Electrometallurgy



Faculty Member & Area of Specialization



Sivaraman Guruswamy Professor s.guruswamy@utah.ed u

Physical metallurgy Magnetic materials



Faculty Member & Area of Specialization

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Feng Liu Professor fliu@eng.utah.edu

Computational Electronic Materials



Swomitra "Bobby" Mohanty Assistant Professor swomitra.mohanty@utah.edu

Nano-technology Sensors



Michael Scarpulla Associate Professor scarpulla@eng.utah.edu

**Electronic Materials** 





#### Jan Miller Distinguished Professor & Ivor Thomas Professor of Metallurgical Engineering jan.miller@utah.edu

Mineral Processing

**Raj Rajamani** Professor raj.rajamani@utah.edu

Particle Processing

Michael Simpson Professor and Chair michael.simpson@utah.edu

Nuclear Materials Molten Salts

Hong Yong Sohn Distinguished Professor h.y.sohn@utah.edu

Chemical metallurgy









York Smith Assistant Professor york.smith@utah.edu

Chemical Metallurgy Metal Recycling

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Faculty Member & Area of Specialization



**Taylor Sparks** Associate Professor and Associate Chair sparks@eng.utah.edu

Ceramics



Ashutosh Tiwari Professor tiwari@eng.utah.edu

Nanotechnology/ Electronic Materials





Faculty Member & Area of Specialization

#### **Gerald Stringfellow**

Distinguished Professor Office: MEB 3110 Phone: 801-581-8387 stringfellow@coe.utah.edu

Anil Virkar Distinguished Professor Office: CME 316-315 Phone: 801-581-5396 anil.virkar@m.cc.utah.edu



Ling Zang Professor Izang@eng.utah.edu

Nanomaterials



## Important Deadlines

#### University Deadlines

Academic calendar deadlines

o https://registrar.utah.edu/academic-calendars

International Teaching Program deadlines

o https://gradschool.utah.edu/ita/important-dates-and-deadlines

#### Thesis Office manuscript submission deadlines

o https://gradschool.utah.edu/thesis/calendar

## University Fellowship deadlines, including Teaching Assistantship & Research Assistantship deadlines

o https://gradschool.utah.edu/tbp/graduate-fellowship-opportunities

Graduation deadlines

o <u>https://registrar.utah.edu/graduation</u>



## Program Requirements

#### Graduate Programs in Materials Science & Engineering

The Department of Materials Science and Engineering at the University of Utah offers three graduate degrees in Materials Science and Engineering: Master of Science (MS) Thesis and Non-Thesis Options, and Doctor of Philosophy (PhD). The M.S. Thesis option requires a Master's Thesis, the MS Non-Thesis option requires a Special Project, and the PhD degree requires a Doctoral Dissertation.

The Master of Science (MS) Thesis Option is a research and thesis degree.

The degree of Master of Science Non-Thesis Option recognizes achievement in which design is emphasized, in contrast to the typical MS degree that has emphasis on research. For students entering and accepted for an MS non-thesis degree and with adequate undergraduate preparation, an MS Non-Thesis degree should be completed within two years of full-time study.

The Doctoral (PhD) degree offered through the Materials Science and Engineering Department is an intensive research and doctoral dissertation degree. Students interested in a PhD. degree are encouraged to directly pursue the PhD degree without first earning an MS degree.

#### Expected Learning Outcomes

The expected learning outcomes for the Master of Science program are

- 1. Advanced knowledge of their selected area of research at a level that exceeds undergraduate expectations.
- 2. Ability to conduct supervised research.
- 3. Effective written and oral technical communication skills.
- 4. Ability to write technical reports and peer-reviewed papers.

The expected learning outcomes for the PhD program are

- 1. An ability to conduct independent research, generate novel ideas, design and execute a research program.
- 2. Made scholarly contribution to the selected area of research as evidenced by the publication of at least two peer-reviewed papers in journals, transactions, or proceedings.
- 3. Demonstrate expertise in their selected area of research that is comparable or exceeds that of the members of the supervisory committee.
- 4. An ability to effectively communicate the results of their research.



#### Admission Requirements & Procedures

For information on admission to the graduate program in Materials Science & Engineering, visit: <u>https://mse.utah.edu/graduate/admissions/</u>

#### Transfer Credits

Graduate credit may be transferred from other regionally-accredited institutions with department and advisor approval. Credits transferred from another institution may be used for only one degree. Up to six semester hours of transfer credit may be applied toward fulfillment of graduate degree requirements if

- they are of high letter grade (B or higher; 'credit only' grades are unacceptable),
- are recommended by the student's supervisory committee, and
- were taken within four years of semester of admission to the University of Utah for master's students and within seven years of semester of admission to the University of Utah for doctoral students.

#### Nonmatriculated Credits

Only nine semester hours of non-matriculated credit, taken no more than three year prior to approval, can be applied toward a graduate degree.

#### Research Advisor

If the graduate student has entered the program without an assigned thesis advisor, the Director of Graduate Studies may appoint a temporary thesis advisor. The graduate student should discuss possible research projects with all faculty members in the student's area of interest and select a topic and a thesis advisor. Graduate students are required to choose a research h thesis topic before the end of their second semester of study.

#### International Students

The Department of Materials Science and Engineering values the global community we enjoy, and we welcome students from all countries. We recognize that there are unique advantages and challenges to being an international student, especially as you adjust to your studies alongside a new country and new culture. We encourage all our international students to make use of the resources available to them (such as International Student and Scholar Services; see the section on International Student Resources) and to seek involvement in departmental, campus, and civic communities.

#### Master of Science (Both Thesis and Non-Thesis Option)

#### Specific Degree Requirements – Overview

Complete a minimum of 30 credit hours in courses level 6000 or above:



- 20 hours of MSE coursework (which include 1.5 hours of MSE Graduate Seminar MSE 7800/7801 and 12 out of the 20 hours must be MSE courses). Exceptions to this rule are at the discretion of the student's Supervisory Committee.
- A minimum of 10 hours of Thesis Research (MSE 6970)

Students will also be required to complete the following requirements during the course of the program:

- Supervisory Committee
- Program of Study
- Thesis and Defense (Thesis Option) *OR* Project Presentation (Non-Thesis Option)

#### Required Courses

All entering MS students are required to take the following MSE core courses within their first two semesters.\* These courses will count towards the hours of MSE coursework hours.

- MSE 6032 Advanced Thermodynamics (3 credits)
- MSE 6034 Kinetics (3 credits)\*
- MSE 6011 Advanced Materials Techniques: Experiment, Theory, and Characterization (3 credits)
- MSE 6001 Engineering Materials (3 credits)

The remaining credit hours of required MSE course work will be determined by a student's faculty advisor.

\*EXCEPTION: Students who received a BS from the Department of Materials Science and Engineering at the University of Utah and received a B or better in the MSE 5034/6034 course will not be required to retake this course. These students are also allowed to substituted MSE 6001 course with any other 6000/7000 level MSE or MET E course.

#### Graduate Seminar

Students are required to take 3 semesters (0.5 credit hours each semester) of MSE Graduate Seminar.

- MSE 7800 Graduate Seminar I (0.5 credits) Fall Semesters
- MSE 7801 Graduate Seminar II (0.5 credits) Spring Semesters

#### Thesis or Special Project Hours

M.S. students must complete at least 10 hours of either Thesis Research: Master of Science (MSE 6970) for the M.S. thesis option, or Special Project (MSE 6590) for the non-thesis option. The candidate must also be regularly enrolled at the University and registered for at least one



course during the semester in which the final oral examination (thesis defense) is taken or the project presented.

#### Doctoral Degree

#### *Specific Degree Requirements – Overview*

Doctoral students must complete a minimum of 54 credit hours in level 6000 or above:

- 30 hours of course work (that include 3 hours of MSE Graduate Seminar MSE 7800/7801, and 15 out of the 30 hours must be MSE/MET E courses). Exceptions to this rule are at the discretion of the student's Supervisory Committee
- A minimum of 24 hours of Thesis Research (MSE 7970)

Students will also be required to complete the following requirements during the course of the program:

- Qualifying Examination
- Supervisory Committee
- Program of Study
- Dissertation Proposal
- Dissertation

#### Required Courses

All entering PhD students are required to take the following MSE core courses within their first two semesters.\* These courses will count towards the hours of MSE coursework hours.

- MSE 6032 Advanced Thermodynamics (3 credits)
- MSE 6034 Kinetics (3 credits)
- MSE 6011 Advanced Materials Techniques: Experiment, Theory, and Characterization (3 credits)
- MSE 6001 Engineering Materials (3 credits)

The remaining credit hours of required MSE course work will be determined by a student's faculty advisor.

\*EXCEPTION: Students who received a B.S. or M.S. degree from the Department of Materials Science and Engineering at the University of Utah and received a B or better in MSE core courses (MSE 6032, MSE 5034/6034, 6011) will not be required to retake these courses.



#### Graduate Seminar

Doctoral students are required to take 6 semesters (0.5 credit hours each semester) of MSE Graduate Seminar.

- MSE 7800 Graduate Seminar I (0.5 credits) Fall Semesters
- MSE <u>7801</u> Graduate Seminar II (0.5 credits) Spring Semesters

#### Thesis Hours

Doctoral students must complete at least **24 hours of Thesis Research** (MSE 7970, Thesis Research: Ph.D.). The candidate must also be regularly enrolled at the University and registered for at least one course during the semester in which the final oral examination (dissertation defense) is taken.

#### Registration Restrictions, All Degrees

No candidate for a graduate degree is permitted to register for more than 16 credit hours in any single semester. A schedule of nine credit hours is considered a full load for graduate degree candidates.

MSE 6980\_Faculty Consultation does not count towards fulfillment of M.S. non-thesis degree requirements. Only 3 hours of MSE 6980 Faculty Consultation can be counted towards either the M.S. thesis degree or the Ph.D. degree provided there is proper documentation. This can take the place of 3 MSE coursework hours on the Program of Study.

Only 1 hour of MSE 6950 Independent Study can be used towards the degree.

Students in the College of Engineering cannot simultaneously be candidates for an MS or PhD in one department and a ME, MS or PhD candidate in the same or in another department.

#### Language Requirements

The graduate program in Materials Science and Engineering has no language requirements.

#### Mandatory Exams and Milestones

See the appropriate sections on the Final Oral Examination or Project Presentation.

#### Masters Degree (Thesis and Non-Thesis)

The qualifying exam for the M.S. degree is waived/

#### Doctoral Degree Qualifying Examination

Following the first academic year of the PhD program, students must advance to candidacy in order to continue in the program. Advance to candidacy must occur before the PhD Dissertation



Proposal Exam can be scheduled. Students will be evaluated on the following criteria in order to advance to candidacy:

- Performance in the MSE core courses
- Performance in their research as assessed by the research advisor by grades for thesis credit hours
- Overall GPA
- Passing the Qualifying Examination

Based on the evaluation by the MSE faculty, students will either be approved to advance to candidacy in the PhD program, be removed from the PhD program and asked to pursue a terminal MS degree, or be granted a conditional pass with required remediation actions at the discretion of the faculty. A student not passing the qualification exam portion of the candidacy evaluation may be required by the committee to re-take the prelim exam one time. If two failures occur the student will not be allowed to advance to candidacy.

The qualifying examination will be schedule for one day each after Spring semester. The exam will test students on their understanding and ability to apply core themes and topics in Materials Science and Engineering to the selected materials or application topic. Student will write a report and prepare an oral presentation for a topic of scientific area which is not directly related to their ongoing Ph.D. research. The presentation and report will cover: current state of the art in the area, key challenges related to materials design, future directions. Students will be expected to get comprehensive understanding of the topic and be prepared to apply/discuss the basic MSE principles (covered by the core courses) relevant to the selected topic.

Each student will suggest two topics of interest with a short (one/two paragraph) description of what the overview will cover. Then MSE committee will choose one of those topics and students will have one month to prepare report and presentation. Report (written portion) should be concise and not exceeding 10 pages. Oral presentation (a power point presentation) for no more than 20 minutes followed by another 20 minutes for questions from the committee will be scheduled within one week after report is due.

**Scoring.** The committee will assign a "Pass," "Conditional Pass," or "Fail" for the whole of the prelim exam. If a "Conditional Pass" or "Fail" is given, the committee can require remediation including but not limited to retaking the preliminary exam, taking courses, or complete other assignments.

**Preparation.** Doctoral students should prepare for the Qualifying Examination by taking the core MSE graduate courses and by studying individually over the year leading up to the exam. It is also suggested that students conduct mock examinations together. Students should be prepared to respond to the oral exam questions with organized, logical arguments using a whiteboard or similar device and drawing upon fundamental concepts in Materials Science and Engineering, especially from the core MSE courses.



#### Supervisory Committee Formation

#### Master of Science (Thesis or Non-Thesis)

Each M.S. supervisory committee consists of three faculty members.

The committee chair and the majority of the committee must be tenure-line faculty in the MSE department. In compliance with The Graduate School's policy, the supervisory committee chair must be a regular faculty at the University of Utah with at least an adjunct appointment in the Materials Science and Engineering Department and the committee members must meet the approval of the Director of Graduate Studies. If the advisor is an adjunct faculty member in Materials Science and Engineering the other two members of the committee must be tenure-track Materials Science and Engineering faculty members.

If agreed by the advisor, one member of the committee can be chosen from outside the Department providing the advisor is a tenure-track faculty member in Materials Science and Engineering.

#### Doctoral Degree

After successfully passing the Candidacy Evaluation, PhD students must make an appointment with the MSE Academic Advisor to start building a supervisory committee.

Each supervisory committee consists of **five** faculty members. The committee chair and the majority of the committee must be tenure-line faculty in the MSE department.

One member of the committee must be appointed from outside the student's major department. The outside member is normally from another University of Utah department. However, the dean of The Graduate School may approve requests to appoint a committee member from another university where appropriate justification and supporting documentation is provided.

The supervisory committee is responsible for approving the student's academic program, preparing and judging the qualifying examinations, approving the dissertation subject and final dissertation, and administering and judging the final oral examination (dissertation defense).

#### Changing Committee Chair & Committee Members

When a member of the student's Supervisory Committee becomes unavailable, the student should file a request for replacement of the Supervisory Committee member.

A student who wants to leave a research group or change to a new research group is obligated to give the thesis advisor, the Department and the Director of Graduate Studies 30 days' written, signed, and dated notice outlining the reasons for leaving the group.

During the 30 days, the research task(s) should be brought to a point where it could be easily passed on to a new person. All notebooks, computer files, and data should be returned to the thesis advisor before the student is put on another faculty member's payroll. It is the student's responsibility to identify a new thesis advisor if the student wishes to continue in the Program. Failure to identify a new advisor by the end of the 30-day period may result in dismissal from the Program. Failure to obtain written approval from the supervisory committee within six months of switching advisors may result in dismissal from the Program.



The student should also reconstitute her/his supervisory committee. If the student has already presented a research proposal to the initial supervisory committee, the student must prepare a new research proposal outlining the new thesis project within five months of joining the new research group and present it to the new supervisory committee.

See also the section Student and Faculty Code for conflict resolution resources provided by the University.

#### Program of Study

During the second year of graduate study for a Masters or the third year for a PhD, students are required to complete a Program of Study. This form is not a selection of courses that satisfies the minimum requirements, but will be a list of all course work and research hours proposed for the degree that will be approved by the Supervisory Committee. It is important that students understand that the Supervisory Committee makes the final decision for the courses that will appear on the Program of Study.

#### *Procedure to Complete*

The procedure to complete the Program of Study form is as follows:

- Students must arrange a meeting with their Supervisory Committee Chair to present the proposed course for the Program of Study form. At the meeting, the Supervisory Committee Chair will review and approve the student's courses for their degree.
- In some cases, the Supervisory Committee Chair may require extra course work that exceeds the minimum requirements for a degree based on the project, thesis, or dissertation topic.
- As stated in the Graduate School's policy requirements: coursework used to complete requirements for one graduate program may not be used to meet the requirement of another.
- All course work for a doctoral degree must be completed in the first two years of graduate study.

#### Doctoral Degree Dissertation Proposal

#### Overview

After advancing to candidacy, but before the end of the third year (6th semester) in the program, students must complete the written and oral portions of the Dissertation Proposal Exam. An exception can be granted by a student's Supervisory Committee Chair for extenuating circumstances.

The Dissertation Proposal must occur before the Dissertation Defense and the two many not be completed within the same semester. The Dissertation Proposal Exam (written, oral, or both parts) may be repeated once if a "Fail" or "Conditional Pass" is received the first time.



#### Written Proposal

Students must independently prepare a written proposal for the research they will complete for their dissertation. It must be given to their Supervisory Committee at least **two weeks** prior to the date of the oral exam. Students must propose their own original research which will form the basis of their publications and PhD dissertation. The proposal should detail the prior work in the field, detail any results already obtained by the student, and lay out the research objectives and plan for meeting those objectives before completing the dissertation. The proposal should follow the NSF proposal format (or other federal agency if approved by the committee). A copy of the Dissertation Proposal will be provided to the Academic Advisor to be retained in the student's file.

#### Oral Proposal

Students must arrange with their Supervisory Committee to present and defend their proposal. A common format is to prepare a talk lasting 40 minutes if uninterrupted based on the same ideas and research plan contained in the Written Proposal.

The committee will ask questions, evaluate the proposal, and give feedback and suggestions to the student on the proposed research. The committee will sign the Dissertation Proposal from, which has separate "Pass," "Conditional Pass" and "Fail" marks. Again, the committee may require remedial actions for "Conditional Pass" or "Fail" marks.

#### **Expectations for Participation**

#### Graduate Seminar

One oral presentation at MSE 7800/7801 Graduate Seminar is required for Masters students, and two oral presentations are required for Doctoral students. Graduate Seminar credit hours cannot be used to satisfy the 22 credit hours of MSE coursework for Masters or the 25 credit hours of MSE coursework for doctoral.

Students are encouraged to attend professional society conferences and to present their research at them. While expectations for scholarly output and rate thereof are left to the judgement of the advisor and supervisory committee, a general guideline is that PhD students in the MSE department are encouraged to present at conferences and workshops and should have at least three first-authored papers accepted to reputable peer-reviewed journals before graduation, and multiple conference presentations and papers.

#### Town Hall Meetings

#### Professional Development

Material Advantage, a joint student chapter of several professional societies, is available for students to join.

Students may make use of the Career & Professional Development Center for career coaching:

https://utah.craniumcafe.com/group/graduate-student-career-coaching

#### Special Project, Master of Science (Non-Thesis Option)

**Overview.** The Special Project must be written in the form of a report that is submitted to the student's Supervisory Committee. Students are then required to present the results of their project in an oral presentation to the Supervisory Committee and other designated audience.

Both the report and presentation are required for completion of the M.S. Non-Thesis. A copy of the final written Special Project is provided to the Academic Advisor to be retained in the student's file, once it has been approved by the Supervisory Committee and been presented in the oral presentation.

To graduate, the "Report of the Final Examination for the Master's Degree" form needs to be completed and signed. This form is processed by the Materials Science and Engineering Academic Advisor after the completion of the oral presentation of the special project.

**Registration.** Students must be registered for at least 3 credit hours of **MSE 6590** during the semester of their presentation. International Students should check with the International Center once they have defended to make sure that they do not go out of status while completing requested rewrites.

Thesis or Dissertation, and Final Oral Defense, Master of Science (Thesis) and Ph.D.

#### Formatting and Policies.

Doctoral and Master of Science Thesis Option students should become familiar with the information on the Thesis Office website. The Thesis Office is part of the Graduate School.

Detailed policies and procedures concerning publication requirements, use of restricted data, and other matters pertaining to the preparation and acceptance of the thesis dissertation are contained in *A Handbook for Theses and Dissertations*, published by The Graduate School and available on the Thesis Office website.

The style and format for the thesis (M.S.) or dissertation (Ph.D.) are determined by departmental policy and registered with the Thesis Editor, who approves individual theses in accordance with departmental and Graduate School policy. The approved style guides can be found on Thesis Office website, http://gradschool.utah.edu/thesis/department-approved-style-guides-2/.

Doctoral students in particular must submit a dissertation embodying the results of scientific or scholarly research. The dissertation must provide evidence of originality and the ability to do independent investigation and it must contribute to knowledge. The dissertation must show a mastery of the relevant literature and be presented in an acceptable style.

The draft or final document will serve as the written basis for the presentation. Students should discuss with their supervisor/advisor the expectation regarding timeliness of thesis or dissertation submission for their approval. After review, revision, and approval by the supervisor/advisor, the final draft should be sent to the supervisory committee. The defense should be scheduled no sooner than 2 weeks after the final version of the dissertation is sent to the supervisory committee.



The Supervisory Committee will examine in detail the contents, results, conclusions and contribution made by the student's research and written dissertation.

#### Registration

Students must be registered for at least 3 credit hours of MSE 6970 (for M.S.) or MSE 7970 (for Ph.D.) during the semester of their defense. Once the student defends and the thesis or dissertation has been accepted by the supervisory committee, the student is not required to register for another semester. International Students should check with International Student and Scholar Services, once they have defended, to make sure that they do not go out of status while completing requested rewrites.

#### Final Oral Defense

The date of the oral defense is set by the supervisory committee. The student should prepare two forms and take them with him/her to the defense: 'Report of the Final Oral Exam,' (available on the department website) and "The Supervisory Committee Approval" (on the Thesis Office website).

Students must orally defend the significant contents, results, and conclusions associated with their doctoral research before the entire Supervisory Committee. The defense is open to the public.

After the oral presentation, a question and answer period must be allowed.

At the conclusion of the public participation, the committee may excuse the public and conduct further questioning on the thesis and related topics.

The outcome of the defense is reported on the form 'Report of the Final Oral Exam,' which should be signed and turned in to the Graduate Academic Advisor.

The "Supervisory Committee Approval" and "Final Reading Approval" forms must be completed and the appropriate signatures obtained before the final thesis or dissertation can be submitted to the Thesis Editor for final approval and release. These forms are the responsibility of the student and can be found on The Graduate School's website.

The earlier in a given semester you defend, the more likely you are to be able to graduate that same semester. Check the Thesis Calendar (http://gradschool.utah.edu/thesis/calendar/) for the submission deadline. You need to defend far enough ahead of that deadline that you can make any changes to the text required by your committee and ensure that the manuscript adheres to your chosen style guide and Thesis Office requirements by the deadline. Be aware that if you submit your manuscript on the deadline and there are any formatting errors you will not graduate that semester. The sooner you turn your manuscript in the more likely you are to graduate in that semester. *As a general rule of thumb, plan to defend in the first two months of the semester if you want to graduate that semester.* 



#### Publication

Please be sure to check the Thesis Office manuscript tracking system to see that your thesis has been uploaded to ProQuest.

The doctoral dissertation is expected to be available to other scholars and to the general public. It is the responsibility of all doctoral candidates to arrange for the publication of their dissertations. The University accepts two alternatives for complying with the publication requirements:

The entire dissertation is submitted to UMI Dissertation Publishing, ProQuest Information and Learning, and copies are made available for public sale. The abstract only is published if the entire dissertation has been previously published and distributed, exclusive of vanity publishing. The doctoral candidate may elect to microfilm the entire previously published work. Regardless of the option used for meeting the publication requirement, an abstract of each dissertation is published in UMI Dissertation Publishing, ProQuest Information and Learning, Dissertation Abstracts International.

#### Applying for Graduation, All Degrees

The student must apply for graduation the semester prior to the semester s/he expects to finish. This can be done online at https://registrar.utah.edu/handbook/graduategraduation.php.

The following process is recommended to help students prepare for graduation:

- During the semester before your graduation date, students should check their Electronic Graduate Record File in CIS.
- If students have questions or issues surrounding graduation, they should make an appointment with the MSE Academic Advisor. It is important that you communicate with the Academic Advisor about your intended graduation date and progress.

In order to graduate, students must meet all of the University of Utah requirements as well as the department requirements for graduation.

For graduation deadlines and how to apply, see

https://registrar.utah.edu/handbook/graduategraduation.php

#### M.S. Advancing to Ph.D.

MS students that have successfully completed an MS degree and would like to pursue a PhD degree in the same program should petition the Materials Science and Engineering faculty for approval of advancement to the PhD program. A letter from the PhD advisor must accompany the petition from the student, committing the research project for this student. A copy of the thesis release for the MS must accompany the petition.

Students who have completed their MS degrees, but do not have a PhD advisor, may not petition the faculty for advancement to PhD until they have secured a project and advisor. Approved petitions will become part of the student's PhD file. A Change of Graduate Status will not be filed with The Graduate School until the petition has been approved by the faculty.



#### Doctoral Degree, Optional Practical Training for F-1 Students

Optional Practical Training (OPT) is the opportunity to apply knowledge gained in the classroom and/or research lab experience to a practical work experience off-campus after graduation. Optional Practical Training is authorized by Immigration Service. This authorization can take several months to obtain so students need to apply well in advance of graduation. The maximum amount of time granted to work in F-1 Optional Practical Training is 12 months.

Working before practical training has been authorized by the Immigration Service constitutes illegal employment that will jeopardize your legal status in the United States. So it is important that students coordinate their OPT request with International Student and Scholar Services.



## Academic Requirements and Policies

#### Minimum GPA

All coursework listed on the Program of Study must be completed at a cumulative **3.0 GPA** or higher (B grade average). **All courses must be passed with a B- or better.** 

#### Credit/No Credit

The only courses that will be graded with a Credit/No-Credit (CR/NC) Grade are MSE 7800 and MSE 7801 (Graduate Seminar) and thesis or project (MSE 6970 for MS thesis, MSE 6590 for MS non-thesis, and MS 7970 for Ph.D.). All other courses on the student's program of study must be taken for a letter grade.

Students will receive Credit (CR) in MSE 6590/6970/7970 for satisfactory research progress. If the student is not showing satisfactory progress for their research a grade of No Credit (NC) will be given.

#### Adding, Dropping, and Withdrawal Procedures (All Degrees)

Check the academic calendar for specific add, drop, and withdrawal dates.

#### Adding Classes

All classes must be added within two weeks of the beginning of the semester. Adding classes after the deadline is not permitted in the College of Engineering and requires a petition letter.

#### Dropping Classes

A drop implies that the student will not be held financially responsible and a "W" will not be listed on the transcript. Student may drop any class without penalty or permission during the first ten calendar days of the term.

#### Withdrawing from Classes

Withdrawal means that a "W" will appear on the student's transcript and tuition will be charged. Withdrawal from Full Term Length –Beginning the eleventh calendar day and continuing through the midpoint of the term, students may withdraw from a class or the University without instructor/department permission. After midpoint of the term, students may petition the deadline for withdrawal if they have a nonacademic emergency. For more information about the petition process, please contact your Academic Advisor.

#### Degree Residency Requirements, MS

At least 24 credit hours must be in resident study at the University of Utah. The Graduate Council may approve departmental or programmatic exceptions to the minimum residency requirements and proposals for new programs or academic offerings using distance learning technologies and/or off-campus sites, as provided by Graduate School policy.



#### Degree Residency Requirements, PhD

According to the University of Utah Graduate School regulation, "At least one year (i.e., two consecutive semesters) of a doctoral program must be spent in full-time academic work at the University of Utah. When a student proceeds directly from a master's degree to a PhD degree with no break in the program of study (except for authorized leaves of absence), the residency requirement may be fulfilled at any time during the course of study. A full load is 9 credit hours. Three hours of Thesis Research: PhD <u>MSE 7970</u> also is considered a full load **after** the residency requirement is fulfilled."

Students registered for 9 hours of Thesis Research: PhD for two consecutive semesters will be allowed to fulfill the residency requirement. Students that are not continually registered will have to reapply to the University of Utah before continuing.

#### Full-Time Status

For full time-status, graduate students at the University of Utah must register for 9 credit hours and up to 11 credit hours of approved graduate study courses. Some of these credit hours may be thesis research for PhD (MSE 7970) or MS Thesis students (MSE 6970), or special project (MSE 6590) for MS Non-thesis students.

#### Part-Time Status

Domestic graduate students are allowed to attend graduate school on a part-time basis; however, it is necessary that a part-time student be registered for a minimum of 3 credit hours each semester. A letter must be submitted to the Materials Science and Engineering Administrative Office and must be received at the beginning of the student's first semester advising the Academic Advisor that the student will be part-time. This student will remain a part-time student until the Materials Science and Engineering Administrative Office is notified otherwise. Part-time students still need to satisfy the residency requirement for their perspective degrees.

#### Continuous Registration

All graduate students must be registered for at least one course from the time of formal admission through completion of all requirements for the degree they are seeking, unless granted an official leave of absence. See the section on Leaves of Absence, below.

Students not on campus and not using University facilities are not expected to register for summer term. Students must, however, be registered during summer term if they are taking examinations or defending theses/dissertations.

If students do not comply with this continuous registration policy and do not obtain an official leave of absence, they will be automatically discontinued from graduate study. In this case, students will be required to reapply for admission to the University through Graduate Admissions upon approval of the home department.



Students should be registered for graduate level courses (5000-6000 level for masters; 6000-7000 level for doctoral) until they have completed all requirements for the degree, including the defense of the project, thesis, or dissertation.

MSE 7990 *Continuing Registration: PhD* is only allowed if the student is not using faculty time or University facilities except the library. Upon successfully defending the PhD dissertation, students no longer are required to register; however, those who wish to check out books from the library must register for MSE 7990. MSE 7990 is not allowed to fulfill degree requirements and is limited to four (4) semesters. Students are still responsible for the tuition and fees for MSE 7990.

#### Vacation Semester, International Students

Please visit the International Student & Scholar Services website for more information: http://isss.utah.edu/news.php

#### Leave of Absence, Domestic Students

Domestic students who wish to take a leave of absence for a semester must complete a Request for Leave of Absence form and have it approved by their supervisory committee. The form must then be submitted to the Academic Advisor for further processing. The form must be filled out prior to the semester that will be missed. Leave of absences can be granted for up to one year. International students are not allowed to take a leave of absence.

For more information, see https://gradschool.utah.edu/graduate-catalog/registration.

#### Health Insurance

Graduate students have an option to obtain affordable health insurance coverage through the Graduate School as part of the Tuition Benefit Program. TAs and RAs are generally eligible. If a student prefers a different insurance policy, reimbursement can be obtained up to the cost of the plan available through the Graduate School.

#### Family & Medical Leave

The Department supports graduate students seeking family medical leave and/or reasonable accommodation as outlined generally under *Policy 5-200 Leaves of Absence (health related)* of the University of Utah Regulations that cover family medical leave and/or reasonable accommodation for conditions such as illness, pregnancy leave, military leave, foster care, adoption, hardship leave, care for elderly parents, or care for children.

Graduate students in the MSE graduate programs and employed by the MSE Department as either an R.A. or T.A. are entitled to up to 12 weeks for a family medical leave of absence beginning within the time of employment. A leave will not extend beyond the time of the thesis defense or other final date marking the completion of examinations needed for the program.

University policy prohibits discrimination against sex/gender which includes pregnant and parenting students and employees. State and federal laws, including Title IX of the Education Act, also prohibit discrimination based upon sex, including pregnancy and pregnancy-related



conditions. If you believe you have been subject to discrimination, including having been denied an accommodation for a pregnancy or pregnancy-related condition, please discuss this with the Director of Graduate Studies and/or the Deputy Title IX Coordinator for your college. You may file a complaint with the OEO/AA, https://oeo.utah.edu/.

#### Leaving the Program Early

If a student withdraws from courses and falls below the required nine hours, receives less than the minimum required compensation for a semester, fails to provide evidence of acceptable SPEAK test scores as applicable, or in any way fails to meet the requirements and restrictions associated with any of the supported graduate student roles or Graduate School policy, the tuition benefit will be revoked and the student billed at the end of a semester for the full tuition for that semester at the applicable resident or nonresident rate. A petition for an exception for a personal emergency such as illness may be made to the Dean of the Graduate School with a letter of support from the student's Department Chair.

#### Time Limits to Degrees

#### Master of Science

All work for the master's degree must be completed within four consecutive calendar years. On recommendation of the student's supervisory committee, the Dean of The Graduate School can modify or waive this requirement. If the student exceeds the time limit and is not granted a modification or waiver, the department has the option to discontinue the student. Students whose studies have been interrupted for long periods of time and who have been granted extended time to complete their degrees may be required to complete additional courses, to pass examinations, or otherwise to demonstrate that they are current in their field.

#### Doctoral Degree

A PhD student is eligible for 5 years (10 semesters) of tuition benefit, providing the students did not come in with a M.S. degree from another institution or department at the University of Utah. Students entering the Ph.D. program with a MS degree from another institution are only eligible for 4 years (8 semesters) of tuition benefit. Students, who completed a MS degree in another department at the University of Utah, will only be eligible for the number of tuition benefits they did not use towards their MS degree. In compliance with the Tuition Benefit Program, PhD students should in all practical purposes complete their degrees in 5 years.

In accordance with the Graduate School time limit requirements: "Students whose studies have been interrupted for long periods and who have been granted an extension to complete their degrees may be required to complete additional courses, pass examination, or otherwise demonstrate that they are current in their field."



#### Petitioning the Time Limits

A petition for an extension of a Graduate student career beyond the established time limits will consist of a formal letter of request to the Graduate Dean. The letter will demonstrate that the student is in good standing. Good standing requires that the student has a satisfactory GPA for graduation, formed a supervisory committee, that a program of study has been completed and approved by the faculty and directors of graduate studies/department chair, and that they have taken all required preliminary exams and thesis proposal exams required by the department. These must be fully updated in Grad Tracking. The letter must demonstrate a firm commitment by the department, research supervisor, and the student to complete the agreement, including any commitments for financial support, and must provide a demonstration that the proposed path to graduation is feasible. The letter will be accompanied by a written completion plan that is signed by the student, the research supervisor, and the director of graduate studies or department chair.

The completion plan lays out specific milestones leading to completion, and dates for completion of the milestones. The milestones must include formal evaluation meetings with the supervisory committee at least once per semester (if a thesis defense does not occur within the semester). Failure to complete the milestones by the specified deadline may result in the dismissal from the program (the supervisory committee would review such a situation and make a recommendation). The petition may request an extension of either one semester or two. Further extensions will be considered for single semester extensions only, and any such request must provide a written update and a revised completion plan with updated milestones, dates, and signatures.

Formal letters of petition should be sent to dean@gradschool.utah.edu.

#### **Dismissal Policies & Procedures**

In some cases, a student may not satisfy the requirements and expectations of the MSE Ph.D. program, triggering an assessment of the student's status in the program. These include reasonable rate of progress towards completing the requirements of the degree program. See the sections on Requirements and on Expectations of Participation. The student's supervisory committee (or a majority thereof) will be the deciding body.

The maximum sanction for unacceptable academic performance is dismissal from the Program (see *Student Code, University Policy 6-400;* http://www.regulations.utah.edu/academics/6-400. html). In cases requiring dismissal from the Program, a "Recommendation for Change of Graduate Classification" form will be filed with the Graduate Records Office. The student may appeal the decision, following the procedure outline in the Student Code (*University Policy 6-400*).

## If any of the criteria listed below are not met, the advisory committee will have discretion to either:

- 1. Dismiss the student from the program immediately.
- 2. Place the student on academic probation for 1 semester. In this case, the student's committee will provide a list of specific milestones which the student must accomplish in order to be reinstated to good standing. If these milestone are not accomplished within 1 semester, the student will be dismissed from the program.



#### The criteria that graduate students must meet are

- 1. Maintain a minimum cumulative GPA of 3.0
- 2. Passing all required examinations within specified times limits (e.g. for PhD students the candidacy exam, dissertation proposal, and thesis defense).
- 3. Continuously maintain an official advisor and supervisory committee from the 3rd semester through completion of the program.
- 4. Continually make acceptable progress toward the degree as determined by the supervisory committee + thesis advisor.



### **Financial Support**

#### Teaching Assistant Responsibilities & Policies

#### Grading Assistant Responsibilities & Policies

A Grading Assistant must have a thorough understanding of the material being covered and cannot simultaneously be registered and act as the GA for the same course (with the exception of the Graduate Seminar MSE 7800/7801). The position must be assigned by the MSE Academic Advisor. GA will be assigned to lectures with more than 20 students enrolled, course labs, or the graduate seminar.

All PhD students are required to be a Grading Assistant (GA) for one semester without compensation during their graduate studies in order to receive their degree.

The responsibilities of the Grading Assistant are as follows:

- 1. Must complete FERPA training and GA contract
- 2. Adhere to all responsibilities stated in the GA contract

Grading Assistant responsibilities DO NOT include:

- 1. Lecturing
- 2. Tutoring
- 3. Substituting for absent faculty

Graduate Research Assistant Responsibilities & Policies

#### Graduate Fellow Responsibilities & Policies

#### **Tuition Waivers**

#### Qualifying for the Tuition Benefit

Teaching assistants, research assistants, and graduate fellows who meet minimum financial support requirements through the university for the academic year receive tuition benefit support from the university. Please see the department office for the current amounts and for the availability of tuition benefit support for Summer term. The Tuition Benefit does not cover course fees or differential tuition.

Students receiving a full tuition benefit are required to work on their funded project for twenty hours per week in order to receive the benefit. Three-quarter and half tuition benefits are available for students working fewer hours. Additional work hours each week are typically needed in order for the student to meet the objectives of their thesis research.



The tuition benefit is not provided to students compensated for their work through organizations other than the University, such as internships or fellowships paid directly through another institution or agency.

All students receiving the tuition benefit from the university must be full-time matriculated graduate students. Full-time status for this purpose is defined as registration for at least nine credit hours per semester during the regular academic year. Benefits are valid for a minimum of nine and a maximum as specified by the tuition benefit guidelines. Students whose necessary coursework is less than nine hours should make up the nine hours by registering for Thesis Research (MET E 6970 or 7970).

Students who drop and/or add courses after the published university deadline are responsible for paying any fees incurred, including the tuition charges for the dropped classes. Students are responsible for paying late fees.

If a student withdraws from courses and falls below the required nine hours, receives less than the minimum required compensation for a semester, fails to provide evidence of acceptable SPEAK test scores as applicable, or in any way fails to meet the requirements and restrictions associated with any of the supported graduate student roles or Graduate School policy, the tuition benefit will be revoked and the student billed at the end of a semester for the full tuition for that semester at the applicable resident or nonresident rate. A petition for an exception for a personal emergency such as illness may be made to the Dean of the Graduate School with a letter of support from the student's Department Chair.

Current minimum financial support requirements can be found at https://gradschool.utah.edu/ tbp/tuition-benefit-program-guidelines/#financial-support-requirements. If your stipend is below these amounts, you should immediately discuss with your thesis advisor, director of graduate studies, and/or department chair.

For more information, see the webpage for the Tuition Benefit Program at https://gradschool. utah.edu/tbp/.

#### Tuition Benefit Limits

Students receiving the tuition benefit have the nonresident portion of tuition waived until they have reached 84 credit hours. The Graduate School benefit then covers the remaining full, three-quarter, or half tuition costs at the in-state (resident) rate. After eighty-four credit hours, students are responsible for the nonresident portion of tuition. Domestic out-of-state graduate students who receive the tuition benefit must apply for state residency at the end of their first year of study.

Students who enter their graduate programs with a baccalaureate degree are limited to two years (or four semesters) of tuition benefit support for the completion of the master's degree, to five years (or ten semesters) for the completion of the doctorate if bypassing the master's, and to five years (or ten semesters) if continuing in the doctoral program after receiving a Master's degree from the University of Utah (two years for a master's degree plus three additional years for a doctorate).

Students who enter a doctoral program holding a master's degree may receive up to four years (or eight semesters) of tuition benefit support.



These restrictions do not limit the number of years or semesters a program, department, or college may choose to support a student in addition to this tuition benefit program. Since this benefit is provided by the university rather than the department, semesters used in a previous major count against the total. A student who receives more semesters of tuition benefit than s/he is eligible for will be billed for the tuition retroactively.

#### Student Health Insurance

Graduate students that are receiving a 100% tuition benefit may be eligible for the University of Utah's Graduate Subsidized Health Insurance Program (GSHIP). GSHIP includes health insurance through United HealthCare Student Resources, and dental and vision insurance through Educators Mutual. Coverage for dependents is not subsidized. Qualifying students are billed for 20% of the premium through Income Accounting. The Graduate School pays the remaining 80% at the start of the semester. See https://gradschool.utah.edu/tbp/insurance-information.

#### Residency

To maintain TBP eligibility, all domestic nonresident students must apply for Utah residency upon completion of forty graduate-level semester credit hours at the University of Utah. Domestic outof-state graduate students who receive the tuition benefit must apply for state residency at the end of their first year of study.

Go to www.admissions.utah.edu for details on how to qualify and how to apply for residency reclassifications.

#### **Differential Tuition**

#### Residency

To maintain TBP eligibility, all domestic nonresident students must apply for Utah residency upon completion of 40 graduate level semester credit hours at the University of Utah. Go to www.admissions.utah.edu for details on how to qualify and how to apply for residency reclassification.

#### **Financial Resources**

#### Personal Money Management Center

o <u>https://personal-money-management.utah.edu</u>

#### Pivot

o <u>https://osp.utah.edu/news/pivot.php</u>

#### Feed-U Pantry

o https://union.utah.edu/resources-spaces/feed-u-pantry/hours-about-us



## Student Awards

Department-Specific Awards

College/University Fellowships and Awards

External Fellowship & Award Opportunities

#### Student Travel Assistance

Conference travel assistance may be available through the department, college, ASUU, the Graduate Student Travel Assistance Award (GSTAA), and the Early Career Professional Development Program (ECPDP). More information on these awards is at https://gradschool. utah.edu/current-students/graduate-student-travel-assistance-award.



## Student & Faculty Code

#### Code of Conduct

The Graduate School is committed to fostering excellence in our community of scholars and leaders. We recognize that diverse and inclusive teams are most likely to produce creative and impactful scholarship and are eager to ensure that each member of our academic community is respected and valued for their unique contributions. This Code of Conduct upholds the Graduate School's commitment to conduct graduate and postdoctoral education according to the highest ethical and professional standard in compliance with all applicable University, state, and federal regulations.

The Graduate School is committed to providing a safe, harassment-free and discrimination-free environment for everyone. Harassment includes offensive comments or denigrating jokes related to nationality, gender, sexual orientation, disability, age, physical appearance, body size, race, religion, or veterans status, sexual images in public spaces, deliberate intimidation, stalking, following, harassing photography or recording, inappropriate physical contact, unwelcome sexual attention, and harassment through social media.

All University faculty, staff, and students are expected to comply with the applicable antiharassment, anti-discrimination, and scientific and professional ethics laws and policies in effect at the University of Utah and at the institutions where they may be visiting.

Members of the University of Utah community who wish to report a violation of this Code of Conduct are encouraged to speak to or contact the appropriate administrator or Dean, including the Department Chair or Director of Graduate Studies of their academic program, the Dean of the Graduate School (David Kieda) and/or Associate/Assistant Deans of the Graduate School (Katie Ullman, Amy Barrios, Araceli Frias), or the University's Title IX coordinator (Sherrie Hayashi).

Visitors, including participants at any University or Graduate School sponsored events, are expected to comply with these same standards, as well as to policies at their place of employment. In addition to any applicable reporting requirements at their home site, visitors are encouraged to report violations here as above.

#### Informal Dispute Resolution

[[This section describes the procedure whereby students can work with department leadership & faculty to resolve difficulties.

Students should be encouraged to go to the departmental DoGS for conflict resolution, if appropriate. Students are also welcome to make an appointment with one of the Graduate School deans to voice complaints or concerns (can be requested through <u>info@gradschool.utah.edu</u> or by calling 801.585.5529).

This section may also want to mention the University Ombudsman's Office, which provides dispute resolution, resources, and the potential for mediation. More information: <u>https://academic-affairs.utah.edu/office-for-faculty/facultyombudsman</u>.

Some departments also have their own Ombudsman or Ombuds Committee, which can also be listed in this section.]]



#### Formal Dispute Resolution

If a student believes that an academic action is arbitrary or capricious he/she should discuss the action with the involved faculty member and attempt to resolve. If unable to resolve, the student may appeal the action in accordance with the following procedure.

- 1. Appeal to the Department Chair (in writing) within 40 working days; chairs must notify student of a decision with 15 days. If the faculty member or student disagrees with decision then,
- 2. Appeal to Academic Committee; see II Section D, Code of Student Rights and Responsibilities for details on Academic Appeal Committee hearing.

#### Title IX

The Office of Equal Opportunity and Affirmative Action (OEO/AA) is dedicated to providing a fair and equitable environment for all to pursue their academic and professional endeavors and to equally access University programs. You may contact the Title IX Coordinator for the University at https://oeo.utah.edu/contact-us. Information on Title IX can be found at https://sexualassault. utah.edu/reporting/title-ix-on-campus-reporting.

#### Americans with Disabilities Act

The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in classes, reasonable prior notice needs to be given to the instructor and to the Center for Disability and Access.



## Safety and Wellness

Your safety is our top priority. In an emergency, dial 911 or seek a nearby emergency phone (throughout campus). Report any crimes or suspicious people to 801-585-COPS; this number will get you to a dispatch officer at the University of Utah Department of Public Safety (DPS; dps.utah.edu). If at any time, you would like to be escorted by a security officer to or from areas on campus, DPS will help — just give a call.

The University of Utah seeks to provide a safe and healthy experience for students, employees, and others who make use of campus facilities. In support of this goal, the University has established confidential resources and support services to assist students who may have been affected by harassment, abusive relationships, or sexual misconduct.

A detailed listing of University Resources for campus safety can be found at https://registrar.utah. edu/handbook/campussafety.php.

Your well-being is key to your personal safety. If you are in crisis, call 801-587-3000; help is close.

The university has additional excellent resources to promote emotional and physical wellness, including the Counseling Center (https://counselingcenter.utah.edu), the Wellness Center (https://wellness.utah.edu), and the Women's Resource Center (https://womenscenter.utah.edu). Counselors and advocates in these centers can help guide you to other resources to address a range of issues, including substance abuse and addiction.

#### Laboratory Safety and Work-Related Injuries

Anyone working in a university laboratory must take Chemical Hygiene Training annually.

Chemical Hygiene Training: https://education.research.utah.edu/class\_details.jsp?offeringId=106

The preferred provider for work-related injuries is

Monday through Friday 8:00 a.m. to 5:00 p.m. OccMed Clinic at Redwood Health Center 1525 West 2100 South Salt Lake City UT 84119 (801) 213-9777

After hours:

Urgent Care at the Redwood Health Center (801) 213-9700 or University of Utah Emergency (801) 581-2291

#### **Occupational Safety**

The Office of Environmental Health & Safety is responsible for environmental health and safety on the U's campus. Please see https://oehs.utah.edu for policies and procedures.



#### Radiation Safety

Information on radiation safety is at https://rso.utah.edu.

#### **Reporting Safety Issues**

Report safety issues in laboratories and offices to your faculty advisor or to the Safety Chair for the department, Dr. Guruswamy. Safety issues in the \_ Building may be reported to \_, \_. Information on reporting issues of personal safety or maintenance anywhere on campus is available at https://safeu.utah.edu/how-do-i-report/.

#### Safety Resources

University of Utah Department of Public Safety (DPS), a.k.a. University Police: https://dps.utah.edu
Phone: 911 or 801-585-COPS (801.585.2677)
Escort by a security officer to or from areas on campus is provided upon request.

Campus safety resources: https://safeu.utah.edu/ A comprehensive website for all safety-related information, reporting and support resources, training and more at the University of Utah

Chemical Hygiene Training: https://education.research.utah.edu/class\_details.jsp?offeringId=106

Office of Environmental Health & Safety: https://oehs.utah.edu

College of Mines and Earth Sciences Safety Committee, https://cmes.utah.edu/safety/

Campus safety resources: https://registrar.utah.edu/handbook/campussafety.php

The Office of the Dean of Students: http://deanofstudents.utah.edu Room 270, Olpin Union Building

#### Health, Wellness, and Recreation Services

Student Health Center: https://studenthealth.utah.edu

Madsen Health Center, 555 Foothill Drive, Phone: 801.581.6431

Workplace Injury: https://www.hr.utah.edu/absenceMgt/workerscomp.php

Center for Student Wellness: https://wellness.utah.edu

University Counseling Center (including Mindfulness Center): https://counselingcenter.utah.edu

Room 246, Student Services Building (SSB), Phone: 801.581.6826

Campus Recreation Services: https://campusrec.utah.edu



#### Crisis or Emergency Services

Crisis Line (24/7): https://healthcare.utah.edu/uni/programs/crisis-diversion.php Phone: 801.587.300

For crisis intervention, emotional support, and mental health needs

Suicide Prevention Hotline – Utah: http://www.suicide.org/hotlines/utah-suicide-hotlines.html

Crisis Prevention – SafeUT Smartphone App: https://www.uofuhealth.org/safeut Free 24/7 access to counselors for crisis prevention and emotional support

Sexual misconduct or assault. Crisis, reporting, counseling, medical resources, or definitions: https://sexualassault.utah.edu/

Title IX: https://sexualassault.utah.edu/reporting/title-ix-on-campus-reporting.

Sexual Assault Victim Advocacy: https://advocate.wellness.utah.edu Room 328, Student Services Building (SSB), Phone: 801.581.7779

Women's Resource Center: https://womenscenter.utah.edu Room 411, Olpin Union Building.



## Research Policies & Training

See the section on Student Safety and Well-Being for information on laboratory safety.

#### Student Access to Physical Resources

Upon entering the department, a student is entitled to a key or card entry to her/his laboratory space and to a key or card entry to the building entrance. Access to other laboratory space may be obtained as the student's research necessitates. The student's advisor will determine what access the student requires.

See https://mse.utah.edu/building-access-key-requisition/ for information on acquiring keys or card access. If the laboratory a student is assigned has a keypad lock, the student should see his/her advisor for the combination. The student is required to pay a deposit with the first key request. If the student requires access only to rooms with keypad or card access locks, no deposit is required.

Lending keys is grounds for termination from the university. Keys may be transferred to another person; see the department office to do this.

Prior to leaving the university, keys must be returned to the department office. The deposit is refunded when the keys are returned. A hold may be placed if keys are not returned.

#### **RATS** Courses

The University provides Research Administration Training Series on a variety of research subjects which may be interesting or important to students. Information about RATS courses can be found at https://fbs.admin.utah.edu/training/training-rats.

#### Institutional Review Board

The Institutional Review Board (IRB) is charged with the review of all research projects that involve humans to ensure compliance with local, state, and federal laws, as well as the high ethical standards set forth in University policy. If students are working with human subjects in their research, they should be familiar with and compliant to IRB rules. More information is at https://irb.utah.edu.

#### **Export Controls**

A number of United States export laws directly affect University research, specifically:

- The Export Administration Regulations (EAR), controlled by the Department of Commerce,
- The International Traffic in Arms Regulations (ITAR), managed by the State Department, and
- The sanction regulations governing the transfer of assets governed by the U.S. Department of Treasury through its Office of Foreign Assets Control (OFAC).



If research involves technological, biological, and chemical and military-related technologies, the government may exert control and supervision of the research and require the University to obtain a license or find and record an exception to the law before allowing foreign nationals to participate in the research, before partnering with a foreign company, or before sharing research results in any manner (including by publication or presentation at conferences) with persons who are not U.S. citizens or permanent resident aliens. Licenses are not easily obtained and require careful preparation and an inordinate amount of lead-time.

See https://osp.utah.edu/policies/export-controls.php.

#### **Research Misconduct**

The Office of Sponsored Projects provides a handbook on research policies at https://osp. utah. edu/policies/handbook/. See https://integrity.research.utah.edu/ for parameters and consequences of research misconduct.

#### **Intellectual Property Policies**

See https://tvc.utah.edu/inventor-resources/inventors-guide for intellectual property policies guiding student work and ethical behavior.



## Student Access to Physical Resources

#### Departmental Resources

The departmental website, http://www.mse.utah.edu, offers much necessary information.

A copier is available in the departmental office.

#### University Resources

University ID Card University card information: https://ucard.utah.edu

#### TRAX Pass

UTA University pass: <u>https://commuterservices.utah.edu/mass-transit</u> TRAX Schedules & Maps: <u>https://www.rideuta.com/Rider-Tools/Schedules-and-Maps</u>

#### Wireless Connections

Onboard to Utah wireless: https://onboard.utah.edu/enroll/uofu/prod\_3/process

#### Software

Grammarly Access: <u>https://gradschool.utah.edu/grammarly</u> New Student Guide to Digital Resources: <u>https://it.utah.edu/help/it\_guides/new\_student\_guide.php</u>

#### Hardware

University Bookstore: <u>https://www.campusstore.utah.edu/utah/home</u> Surplus &^ Salvage: <u>https://fbs.admin.utah.edu/surplus/</u>

#### Paychecks & Direct Deposit

HR Paycheck Information: https://www.hr.utah.edu/payroll/paycheck.php

Housing Graduate Student Housing Resources & Options: https://housingoptions.utah.edu/graduate-housing/

Meals & Food Utah Meal Plans: https://housing.utah.edu/dining

Arts & Entertainment Arts Pass: <u>https://www.finearts.utah.edu/arts-pass</u>



## Student Resources: General

Take advantage of the numerous resources and services created to help students of all kinds prosper during their time at the U.

See the following sections of this handbook for information on specific types of resources:

Section	<u>Resources</u>
Important Deadlines	calendar and deadline
Financial Support, Employment, Tuition Benefit, and Awards	support, employment, and other financial resources
Student Safety and Well-Being	health and safety, including laboratory safety and on-the-job injuries
Research Policies and Training	research, including access to university space
Communication Resources	email and postal mail
Student and Faculty Code	Title IX and disabilities

#### **Departmental Resources**

Department: http://www.mse.utah.edu

#### Graduate School Resources

Graduate School: http://www.utah.edu/graduate\_school/

#### University ID Card

University card information: https://ucard.utah.edu

#### **Communication Resources**

#### Email

All university students are assigned a university email in the form *unid@utah.edu*.

This account will be used for all official university and departmental business. The student should get in a habit of checking it regularly.

The student may set up a more easily remembered pseudonym address for the account in the form *given name dot last name @utah.edu*, and/or set the account to forward to a personal account.



The student may wish to be on informational listservs such as notices of utility shutdowns affecting the student's laboratory.

#### Postal Mail

Graduate students are assigned a mail slot, usually shared with one or more other students. By University policy, the university address is for university business only. All personal mail must be sent to the student's home address, including magazine subscriptions and financial or utility statements. Student mailboxes are in \_\_.

#### **Computing Resources**

The student will receive card access to the department's computer laboratory at 212 WBB, which has a printer. Special software used in particular classes may be available on the lab computers. The student may also have access to a computer and printer in his/her lab.

A copier/scanner is available for use in the department office, normally open during office hours.

#### Wireless Connections

Onboard to Utah wireless: https://onboard.utah.edu/enroll/uofu/prod\_3/process

#### Software

Grammarly Access: https://gradschool.utah.edu/grammarly

New Student Guide to Digital Resources: https://it.utah.edu/help/it\_guides/new\_student\_guide.php

#### Hardware

University Bookstore: https://www.campusstore.utah.edu/utah/home

Surplus & Salvage: https://fbs.admin.utah.edu/surplus/

#### Food and Housing

#### Housing

Graduate Student Housing Resources & Options: https://housingoptions.utah.edu/ graduate-housing/

#### Meals & Food

Utah Meal Plans: https://housing.utah.edu/dining



#### Mass Transit

UTA University pass: https://commuterservices.utah.edu/mass-transit

TRAX Schedules & Maps: https://www.rideuta.com/Rider-Tools/Schedules-and-Maps

#### Events, Arts, Entertainment and Recreation

On-Campus Event & Workshop Calendar: https://gradschool.utah.edu/events-calendar Events & Workshops Description: https://gradschool.utah.edu/upcoming-events Arts Pass: https://www.finearts.utah.edu/arts-pass Campus Recreation Services: https://campusrec.utah.edu



### **Resources: Important Forms**

MSE department forms: https://mse.utah.edu/forms-resources/

#### Academic Forms

Request for Supervisory Committee:

**Proposal Presentation:** 

Program of Study for the MS:

Program of Study for the PhD:

Report of Final Oral Examination:

#### **Purchasing Forms**

Buying Request: https://mse.utah.edu/wp-content/uploads/sites/34/2020/02/Buying-Request-Form-2.pdf

Shipping Request: https://mse.utah.edu/wp-content/uploads/sites/34/2019/07/MET-E-Shipping-Request.pdf

#### **Employment Forms**

New Hire Information: https://mse.utah.edu/wp-content/uploads/sites/34/2017/06/New-Hire-Form-v.2.pdf

Teaching Assistant Training: https://mse.utah.edu/teaching-assistants/

#### Research and Other Forms

Travel Worksheet:

Moving Equipment:

Key Request: https://mse.utah.edu/building-access-key-requisition/

#### Request for Disability, Religious, or Pregnancy Accommodation

https://oeo.utah.edu/resources/forms.php



## Student Resources: Academic

#### Admissions

Graduate School admission requirements: https://gradschool.utah.edu/graduate-catalog/ admissions

University admission requirements: https://admissions.utah.edu/apply/graduate..

Admissions Office: https://admissions.utah.edu/.

The International Admissions Office: https://admissions.utah.edu/international/index.php.

#### Administrative & Records

Graduate Records Office: https://gradschool.utah.edu/graduate-catalog/graduate-records-office

Electronic Graduate Record File: https://gradschool.utah.edu/current-students/electronic-graduate-record-file-tutorial

The University of Utah General Catalog: https://www.utah.edu/students/catalog.php

Thesis Office: https://gradschool.utah.edu/thesis.

#### Graduation

https://registrar.utah.edu/handbook/graduategraduation.php

Graduation Division, Office of the Registrar: http://www.sa.utah.edu/regist/graduation/applying.htm

#### Professional Development

Career & Professional Development Center Graduate Student Career Coaching: https://utah.craniumcafe.com/group/graduate-student-career-coaching

Graduate Student Teaching Training from Center for Teaching & Learning Excellence: https://ctle.utah.edu/events/ctle\_events.php

Higher Education Teaching Specialist Program: https://ctle.utah.edu/hets

Career & Professional Development Center, https://utah.craniumcafe.com/group/graduate-student-career-coaching.

#### Training & Workshop Programs

International Teaching Assistant Program (ITAP): https://gradschool.utah.edu/ita

Three Minute Thesis Training & Competition: https://gradschool.utah.edu/3MT



Past Workshops & Trainings: https://gradschool.utah.edu/resource-library/workshops-videos

Research Communication: https://gradschool.utah.edu/science-communication

#### Writing & Manuscript Editing

Thesis Office: https://gradschool.utah.edu/thesis

Grammarly: https://gradschool.utah.edu/grammarly

#### Graduate Writing Center & Graduate Student Reading Room

Reading Room: https://writingcenter.utah.edu/grad-student-services.php. The Graduate Writing Center is located in the Marriott Library in the Graduate Student Reading Room. To access the Reading Room, students must fill out a Graduate Resources Access Form, found at https://lib.utah.edu/services/education/gradstudents.php.

eTutoring for Graduate Writing is also available. Students can sign up for this service at https://writingcenter.utah.edu/graduate-services/e-tutoring.php

#### University Libraries

In addition to research offerings, the Marriott Library has events and programs specifically for graduate students. Check https://lib.utah.edu/services/education/gradstudents.php for schedules and more information.



# Student Resources: Code of Conduct, Dispute Resolution, Diversity, Support Groups, and Leadership

"Code of Student Rights and Responsibilities": http://regulations.utah.edu/academics/6-400.php

Dean of Students Office: https://deanofstudents.utah.edu

Graduate School: https://gradschool.utah.edu/contact-us

#### Advocacy and Dispute Resolution

The University Ombudsman's Office: https://academic-affairs.utah.edu/office-for-faculty/facultyombudsman. *Provides dispute resolution, resources, and the potential for mediation* 

Faculty Ombudsman: https://academic-affairs.utah.edu/office-for-faculty/facultyombudsman

Office of Equal Opportunity and Affirmative Action, phone (801) 581-8365 or oeo@utah.edu.

Academic Appeal, Policy 6-400: https://regulations.utah.edu/academics/6-400.php

Graduate School Dean: dean@gradschool.utah.edu

#### Title IX Compliance

The Office of Equal Opportunity and Affirmative Action (OEO/AA) provides consultation concerning issues of possible discrimination, sexual misconduct, harassment or retaliation and investigation of complaints of discrimination, sexual misconduct (which includes sexual assault or sexual violence), harassment and/or retaliation. See https://oeo.utah.edu/.

## Diversity, Equal Opportunity, Affirmative Action, and Title IX; Support Groups and Services

International Student & Scholar Services: https://ic.utah.edu

The Office of Equal Opportunity and Affirmative Action (OEO/AA): https://oeo.utah.edu/

Title IX: https://sexualassault.utah.edu/reporting/title-ix-on-campus-reporting.

Women's Resource Center: https://womenscenter.utah.edu, Room 411, Olpin Union Building.

Center for Disability & Access: https://disability.utah.edu

Request for disability, religious, or pregnancy accommodation: https://oeo.utah.edu/resources/forms.php

Veteran's Support Center: https://veteranscenter.utah.edu LGBT Resource Center: https://lgbt.utah.edu Office for Equity & Diversity: https://diversity.utah.edu Graduate School Diversity Office: https://gradschool.utah.edu/diversity



## **Resources for International Students**

The Department of Materials Science and Engineering values the global community we enjoy, and we welcome students from all countries. We recognize that there are unique advantages and challenges to being an international student, especially as you adjust to your studies alongside a new country and new culture. We encourage all our international students to make use of the resources available to them, particularly International Student and Scholar Services, and to seek involvement in departmental, campus, and civic communities.

#### International Student and Scholar Services

The offices of the International Student and Scholar Services are at 410 Olpin Union, 200 S. Central Campus Dr., Salt Lake City, UT 84112. Their phone number is 801-581-8876.

For general questions, contact ISSS at international@utah.edu.

If you would like to schedule a phone or Zoom appointment to speak with an ISSS advisor, please send an email to Appointment@utah.edu with the following information:

Your full, official name
Your uNID
Your US phone number
Your specific availability (date and time, between 9:00 AM and 4:00 PM Mountain Time, Mon-Fri).
A description of what you wish to discuss (the more detail you provide, the better we can assist you)

#### Admission

Proof of English proficiency is required for international applicants.

#### Tuition and State Residency

All international students pay nonresident tuition.

#### Continuous Registration and Full-Time Status

International students are not eligible to meet the continuous registration requirement by registering for Continuing Registration (MET E 7990).

Full-time status is described in The University of Utah General Catalog. For international graduate students, compliance with current U.S. Immigration and Customs Enforcement (ICE) regulations requires that they maintain full-time student status. International students need to check with International Student and Scholar Services (ISSS) if exceptions are needed to avoid potential difficulties with Immigration.



#### Leave of Absence

International students are not eligible to take a leave of absence. U.S. Immigration and Customs Enforcement requires international students to take a vacation semester each summer.

#### **Employment**

International students on a student visa are not permitted to work off-campus.

#### **Research Restrictions**

If research involves technological, biological, and chemical and military-related technologies, the government may exert control and supervision of the research and require the University to obtain a license or find and record an exception to the law before allowing foreign nationals to participate in the research.

#### After Defense and/or during the Semester of Graduation

If an international student does not receive thesis clearance the same semester as the Final Oral Examination, s/he needs to have obtained Optional Practical Training authorization to be effective right after the semester when he/she completed the Final Oral Examination. As immigration policies are frequently changing, please consult the International Student and Scholar Services office well in advance of your graduation to ensure that you are always in status.

#### **Resources for International Students**

The International Admissions Office: https://admissions.utah.edu/international/index.php.

International Teaching Assistant Program (ITAP): https://gradschool.utah.edu/ita

International Teaching Program deadlines: https://gradschool.utah.edu/ita/important-datesand-deadlines

