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- Stanford Bulletin
- Libraries
- Wellness Network
- Graduate Life Office
- Office of Accessible Education
- Bechtel International Center
- Counseling and Psychological Services
- Career Education & Development (BEAM)
- Vice Provost for Teaching and Learning

## Instructions for Completing RA and CA forms

[End of Document]
September 2018
Dear Student in Materials Science and Engineering:

Welcome to the 2018-19 academic year at Stanford University and the Department of Materials Science and Engineering.

The faculty and staff are here to support you as you develop the technical background and perspective for a productive and rewarding professional career. Along the way, we hope you will establish relationships and make lifelong friends with many of the individuals who make up Stanford's culturally-diverse and talented community.

During your first year, we encourage you to try a variety of classes and explore new areas related to materials science. As you experience the various topics of study, you should identify particular areas of research you find most interesting, as these may become the ultimate focus for your degree. You should also make an effort to become acquainted with the department's faculty, their research interests and group styles. Although you have each been assigned an academic advisor, these assignments are not final and you may change to a different advisor once you select a faculty group with which you would like to study. Determining your ultimate course of study and research should be one of your highest priorities.

It is our hope that your experiences at Stanford will contribute appreciably not only to your technical excellence, but also to your understanding of what it means to relate personally and professionally to a variety of other individuals. Our faculty and staff are ready to be of service to you in this pursuit.


Paul McIntyre
Chair

Shan Wang
Associate Chair
Dear Students,

The Student Services Department exists to guide you through Stanford’s degree policies and procedures, so we have prepared this handbook for that purpose. It discusses the various rules and procedures for satisfying the University, the School of Engineering, and this department’s requirements for earning your degree. The Materials Science faculty and the student services staff are responsible for making sure that a Stanford graduate degree is meaningful and significant. These policies and procedures are designed to insure that goal is met, as well as to meet the various University rules that apply to all students at Stanford.

The information given in this handbook should be considered supplementary to - but not in lieu of - that which is contained in the official University publications, particularly the Stanford Bulletin (http://exploredegrees.stanford.edu/#text). In event of significant differences between this handbook and the bulletin, the Stanford Bulletin takes precedence unless explicitly noted otherwise in this handbook.

Obviously, your first stop when you have questions should be to consult our homepage/links at Materials Science & Engineering (http://mse.stanford.edu/); however, other useful links for graduate students can be found in this handbook.

You should always feel free to contact the Materials Science Student Services Office with any questions. We will help you in any way we can, while still allowing you to maintain responsibility for your academic progress and direction.

On behalf of the staff, we appreciate having you among us and wish you success in your studies at Stanford. We look forward to helping you achieve academic success.

Mara Violanti
Student Services Manager

Jacob Wilson
Student Services Specialist

Anjani Varma
Student Services Specialist
<table>
<thead>
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Faculty and Their Research


(650) 498-9155, Durand Building 135, E-Mail: eappel@stanford.edu
URL: [http://www.stanford.edu/people/eappel](http://www.stanford.edu/people/eappel)


(650) 726-2152, McCullough Building, Room 349, E-Mail: brongersma@stanford.edu
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**William C. Chueh**, Assistant Professor – Materials Science and Engineering; Center Fellow at the Precourt Institute for Energy; [Ph.D. (Materials Science), California Institute of Technology, 2010.] Fundamental and applied electrochemistry; solar fuels, fuel cells and batteries.

(650) 725-7515, Durand Building, Room 137, E-Mail: wchueh@stanford.edu
URL: [http://chuehlab.stanford.edu/](http://chuehlab.stanford.edu/)


(650) 725-7455, McCullough Building, Room 357, E-Mail: bmc.stanford.edu
URL: [http://web.stanford.edu/group/clemensgroup/cgi-bin/wordpress/](http://web.stanford.edu/group/clemensgroup/cgi-bin/wordpress/)

**Yi Cui**, Associate Professor – Materials Science and Engineering, and of Photon Science; [Ph.D. (Chemistry), Harvard University, 2002.] Nanoscale phenomena; Nanocrystal and nanowire synthesis and self-assembly; electron transport in nanomaterials and at the nanointerfaces; electronic devices and sensors.

(650) 723-4613, McCullough Building, Room 343, E-Mail: yicui@stanford.edu
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**Reinhold H. Dauskardt**, Professor – Materials Science and Engineering and; by courtesy, of Mechanical Engineering, and of Surgery; Ruth G. and William K. Bowes Professor in the School of Engineering; [Ph.D. (Materials Science), Combined: UC-Berkeley & Wits University (South Africa), 1988.] Microstructure and mechanical behavior of materials, fracture, fatigue, and environmentally-assisted failure in metals, ceramics, composites, and soft tissue biomechanics and biomaterials.

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Aaron Lindenberg, Associate Professor – Materials Science and Engineering, and of Photon Science; [Ph.D. (Physics), University of California, Berkeley, 2001.] Ultrafast dynamics of materials and devices, optical control of nanoscale structural and electronic properties, materials for energy and information storage technologies. (650) 725-2640, McCullough Building, Room 219, E-Mail: aaronl@stanford.edu URL: http://www.stanford.edu/group/lindenberg

Paul McIntyre, Chair, Professor – Materials Science and Engineering; Senior Fellow at the Precourt Institute for Energy; [Sc.D. (Ceramics) Massachusetts Institute of Technology, 1993.] Metal oxide/semiconductor interfaces; semiconductor nanowire growth and structure-property relations; nanocomposite materials for photo electrochemical energy transformation. (650) 725-9806, McCullough Building, Room 362, E-Mail: pcm1@stanford.edu URL: http://www.stanford.edu/group/mcintyre

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Friedrich B. Prinz, Professor – Mechanical Engineering, and of Materials Science and Engineering, Finmeccanica Professor, and Senior Fellow at the Precourt Institute for Energy; [Ph.D. (Physics), University of Vienna - Austria, 1975.] Rapid prototyping via thermal spray deposition, geometric modeling, manufacturing systems. 
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URL: http://www.stanford.edu/~evanreed/

Alberto Salleo, Associate Professor – Materials Science and Engineering; [Ph.D. (Materials Science), UC Berkeley, 2001.] Novel materials and processing techniques for large-area and flexible electronic/photonic devices, ultra-fast laser processing for electronics, photonics and biotechnology.
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URL: http://sinclair.stanford.edu/

Andrew Spakowitz, Associate Professor – Chemical Engineering, and of Materials Science and Engineering, and courtesy of Applied Physics; [Ph.D., Caltech, 2004.] Theory and computation of biological processes and complex materials. E-Mail: ajspakow@stanford.edu

Shan X. Wang, Vice Chair, Professor - Materials Science and Engineering and Electrical Engineering; by courtesy, of Radiology; Director - Center for Magnetic Nanotechnology; [Ph.D. (Electrical and Computer Engineering), Carnegie-Mellon University, 1993.] Magnetic nanotechnology, biosensors, nanofabrication, spintronics, power management and information storage. (650) 723-8671, McCullough Building, Room 351, E-Mail: sxwang@ee.stanford.edu
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Lecturer

TBD
Professors by Courtesy

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Stacey Bent, Chair; Professor – Chemical Engineering and, by courtesy, of Materials Science and Engineering, of Chemistry, and of Electrical Engineering; Senior Fellow at the Precourt Institute for Energy; Jagdeep & Roshni Singh Professor in the School of Engineering; [Ph.D. (Chemistry), Stanford University, 1992.] Semiconductor Processing and surface reactivity, modification of semiconductor surfaces, scanning tunneling microscopy of organic monolayers, amorphous semiconductors, probing radicals in materials processing, microcontact printing for retinal implantation.  
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Wei Cai, Associate Professor – Mechanical Engineering and, by courtesy, of Materials Science and Engineering; [Ph.D. (Nuclear Engineering), Massachusetts Institute of Technology, 2001.] Predicting mechanical strength of materials through theory and simulations of defect microstructures across atomic, mesoscopic and continuum scales. Developing new atomistic simulation methods for long time-scale processes, such as crystal growth and self-assembly. Introducing magnetic field in quantum simulations of electronic structure and transport.  
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Matteo Cagnello, Assistant Professor of Chemical Engineering and by courtesy, of Materials Science and Engineering; [Ph.D. (Nanotechnology) University of Trieste, 2012] Preparation and use of uniform and tailored materials for heterogeneous catalysis and photo catalysis and the technological exploitation of nanoparticles and nanocrystals  
(650) 724-6422, Shriram Room 389, E-Mail: mcargn@stanford.edu

Chris Chidsey, Associate Professor of Chemistry and by courtesy, of Materials Science and Engineering; [Ph.D. (Physical Chemistry) Stanford University, 1983.] Synthesize the molecular and nanoscopic systems, build the analytical tools and develop the theoretical understanding with which to study electron transfer between electrodes and among redox species through insulating molecular bridges  
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Ian Fisher, Director of the Geballe Laboratory for Advanced Materials, Professor – Applied Physics and, by Courtesy, of Materials Science and Engineering; [Ph.D. (Physics), University of Cambridge, UK, 1996.] Magnetism and correlated electrons in new or exotic materials. Focus on the design, growth and characterization of single crystals and quasicrystals to enable the study of various magnetic and electronic ground states and phase transitions. Particular interest in designing systems that preserve at least some magnetic entropy to low temperatures.  
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Curtis W. Frank, Professor – Chemical Engineering and, by courtesy, of Materials Science and Engineering, and of Chemistry; W. M. Keck, Sr. Professor in the School of Engineering [Ph.D. (Chemical Engineering), University of Illinois, 1972.] Polymer physics and interface science, ultrathin organic films, polymer photo physics.  
(650) 723-4573, E-Mail: curt@chemeng.stanford.edu
Sanjiv Gambhir, Professor – Radiology and, by courtesy, of Bioengineering and of Materials Science and Engineering; Virginia and D.K. Ludwig Professor for Clinical Investigation in Cancer Research [Ph.D. (Biomathematics), UCLA, 1990.] Imaging assays to monitor fundamental cellular/molecular events in living subjects including patients. Investigating micro positron emission tomography (microPET), bioluminescence optical imaging, fluorescence optical imaging, micro computerized axial tomography (microCAT), ultrasound, photoacoustics, Raman imaging in small animal models.
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David Goldhaber-Gordon, Professor of Physics and, by courtesy, of Applied Physics and Materials Science and Engineering; [Ph.D.(Physics), MIT, 1999.] Specializing in condensed-matter experiment, particularly spins of electrons confined to submicron semiconductor structures.
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Arun Majumdar, Professor – Mechanical Engineering, and by Courtesy, Materials Science and Engineering; Jay Precourt Professor of Mechanical Engineering; Senior Fellow, Precourt Institute for Energy.
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Yoshio Nishi, Professor (Research) – Electrical Engineering and by Courtesy, Materials Science and Engineering, Director of Research, Center for Integrated Systems, Director, Stanford Nanofabrication Facility [Ph.D. (Electrical Engineering), University of Tokyo, 1973.] Nanoelectronic Devices and Materials.
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James D. Plummer, Professor – Electrical Engineering and by Courtesy to Materials Science and Engineering; John M. Fluke Professor, Director - Stanford Nanofabrication Facility; [Ph.D. (Electrical Engineering), Stanford University, 1971.] Semi-conductor materials and devices, primarily silicon, Computer modeling of fabrication technology and device physics.
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Krishna Saraswat, Professor - Electrical Engineering and by Courtesy, of Materials Science & Engineering; Rickey/Nielsen Professor in the School of Engineering; [Ph.D. (Electrical Engineering) Stanford University, 1974.] New and innovative materials, structures, and process technology of silicon, germanium and III-V devices and interconnects for nanoelectronics.
(650) 725-3610, CISX Room 326, E-Mail: saraswat@stanford.edu

Jonathan F. Stebbins, Professor - Geological and Environmental Sciences and by Courtesy, Materials Science and Engineering, Associate Dean for Academic Affairs - School of Earth Sciences; [Ph.D. (Geology), University of California - Berkeley, 1983.] Nuclear magnetic resonance, structure and dynamics of oxide liquids, glasses, and crystals.
Yunzhi Peter Yang, Associate Professor – Orthopaedic Surgery and, by courtesy, of Materials Science and Engineering and of Bioengineering; [Ph.D. (Biomedical Engineering), Sichuan University, 1997.] biomaterials, implant devices, drug delivery, and musculoskeletal tissue engineering. E-mail: ypyang@stanford.edu

Active Emeritus Professors

Robert A. Huggins, Professor Emeritus – Materials Science and Engineering; [Sc.D. (Metallurgy), Massachusetts Institute of Technology, 1954.] Solid-state ionics, solid electrolytes, mixed ionic-electronic conducting materials, materials and phenomena related to energy storage, particularly advanced batteries. (650) 843-0613, Durand Building, Room 127, E-Mail: rhuggins@stanford.edu

William D. Nix, Professor Emeritus – Materials Science and Engineering, Lee Otterson Professor of Engineering; [Ph.D. (Materials Science), Stanford University, 1963.] Dislocation mechanics, mechanical behavior of solids in bulk and thin film form. (650) 725-2605, Durand Building, Room 117, E-Mail: nix@stanford.edu
Facilities
The Durand Building contains labs with equipment for optics and scanning, electron microscopy, metallography, wet chemistry, mechanical testing of bulk and thin film materials, UHV sputter deposition, vacuum annealing treatments and the nanomaterials teaching laboratory. The Stanford Nano Shared Facilities (SNSF) in McCullough Building houses equipment for electrical, magnetic and optical measurements, fabrication of metal-organic chemical vapor disposition, bulk crystal growth, scanning probe microscopy, scanning electron microscopy, transmission electron microscopy, electron microprobe, x-ray photoelectron spectroscopy, and x-ray diffraction. The Geballe Laboratory for Advanced Materials (GLAM) in McCullough and Moore Buildings is an Independent Laboratory that reports to the Dean of Research. GLAM supports the research activities of more than 30 faculty members from the departments of Applied Physics, Chemistry, Electrical Engineering, Materials Science and Engineering, and Physics. The Stanford Center for Magnetic Nano technology (SCMN) and the Stanford Institute for Materials and Energy Sciences (SIMES) are also located in the McCullough Building. Students frequently use the Stanford Synchrotron Laboratory (SSRL) at SLAC, the cleanroom facilities in the Center of Integrated Systems (CIS) and the labs of other departments at Stanford University with whom they are collaborating.

Maintenance
Too hot? Too cold? Lights out? Window or door problems? Report any general building problems to your Administrative Associate or to the GLAM building manager if in McCullough and Moore Buildings. Don't assume that someone has already reported the problem.

Periodically, we will have fire drills, sprinkler system tests, chilled water or fume hood shutdowns, carpet or floor cleaning, etc. You will be notified when these are scheduled. It is important to take the appropriate actions when you are notified or when an alarm sounds.

Security
McCullough and Moore operations are managed separately from the Durand Building. Durand is under the School of Engineering management while McCullough and Moore Buildings is under GLAM. Ten MSE faculty and their students are located in McCullough and with labs in the Moore Building. These MSE groups operate under the GLAM management.

The Durand and McCullough Buildings are both locked after 5:00 pm and on weekends and unlock again at 7:30 am each work day. Moore Building is a locked building and accessed only by authorized card from the outside. Administrative offices close at 5:00 pm. Please make sure all doors are closed and do NOT prop open the doors. Remember your keys. Try to make sure your office is also locked when you leave for the day or for long periods of time. Many people roam around the campus and it is very easy for people to wander into the building. It is also important to close and lock your windows at the end of the day and over the weekend. Unfortunately, things are occasionally taken from offices in many buildings on campus, including ours.
**Campus Emergency Information**

**For Emergency Assistance:**
- 911
- 9-911 from campus phones

**Emergency Information Hotlines:**
- (650) 725-5555
- 844-ALERTSU (844-253-7878)

**Hospital Information:**
- (650) 498-8888

**SLAC Emergency Hotline:**
- 1-877-447-SLAC (7522)

**Stanford University’s Department of Public Safety**
If there were a disaster or emergency affecting the Stanford community, you would be able to obtain updates and important instructions through this website [http://emergency.stanford.edu/](http://emergency.stanford.edu/)

**Treatment of Students Sustaining Injuries**
Students sustaining the following injuries should be directed to, Stanford University Hospital during all hours:
- Cyanide poisoning
- Ingestion of or skin contact with chemicals; inhalation of hazardous chemicals
- Head injuries that affect vision
- Significant burns, chemical or thermal (e.g., extensive, involving face)
- Significant lacerations (e.g., if more than just skin deep; over joints; possibly involving tendons)
- Significant fractures (e.g., long bones; open fractures)
- Significant dislocations (e.g., ankle, elbow, wrist, shoulder, hip)
- Significant crush injuries to bones, musculature, or abdomen
- Significant penetration injuries

Students sustaining most other work-related injuries should seek care at Vaden Student Health Center. Injuries for which care is available at Vaden include, but are not limited to:
- Limited abrasions
- Limited contusions
- Superficial lacerations (skin only)
- Limited thermal and chemical burns
- Possible fracture

For occupational exposures to blood, body fluids, or other potentially infectious material (resulting from needle sticks, lacerations, etc.) immediately consult the Vaden Student Health Center or the Stanford University Hospital Emergency Department.

*Stanford University Hospital Emergency Department is open 24 hours a day.*
Getting Started

Axess (Registration and Enrollment)
Axess is a student information system available via the web [https://axess.sahr.stanford.edu/]. It is generally available 24 hours a day, 7 days a week. You will need your SUNetID and password to login.

Using Axess, you can:
- File your quarterly registration commitments
- File or adjust your study list and elect grading options
- Review your grades
- Request an official transcript
- Print a history of your courses and grades (i.e., unofficial transcript)
- Apply to graduate
- Update your address (e.g., mailing, permanent, campus P.O. Box), and personal email address.
- Apply for housing
- View financial aid information
- Pay your university bill
- View advisor information

Important Reminders:

- Students are also strongly encouraged to bookmark or print a copy of Stanford’s Academic Calendar [https://registrar.stanford.edu/academic-calendar] in order to meet the university’s enrollment deadlines (e.g., study list deadline, change of grading basis deadline, withdrawal deadline, etc.)

Calendar

The Registrar’s Office sets and publishes the Academic Calendar following policies and guidelines established by the Academic Senate.

More Information: https://registrar.stanford.edu/academic-calendar
Food

There is a microwave in the lounge area on the third floor of the McCullough Building and the first floor of Durand for those who have offices there. There is a soda/snack machine in the basement of Durand building as well as several other places on campus.

There are several places to obtain a wide variety of food on campus, especially for lunch. Snack bars exist in several buildings such as Yang and Yamazaki Building (Y2E2), Huang Engineering Center, Clark Center, Tresidder Union, Cubberley Education Building, and the Packard Building. Options for dinner are considerably more limited. Check out Campus Activities [https://visit.stanford.edu/activities/dining.html] for a great list of options, or have some students who know the area show you to the best places to eat.

Health Insurance - Cardinal Care Overview

Cardinal Care [https://vaden.stanford.edu/insurance/cardinal-care-overview-and-benefits], the University sponsored health insurance option, is a comprehensive plan specifically designed for Stanford students. Medical benefits are administered by Health Net of California, mental health benefits are administered by Managed Health Network (MHN), a Health Net company, and dental benefits, administered by Delta Dental of California, are included.

Cardinal Care offers robust coverage at school, at home, and while traveling or studying abroad. This is important for Stanford students, many of whom are on the move. Cardinal Care also provides coverage for enrollees during leaves of absence, school breaks, immediately following graduation, and in quarters when students might not be registered for classes, such as Summer.

Students enrolled in Cardinal Care have access to Stanford faculty specialists and hospital and emergency care at the Stanford University Medical Center.

Important Note

Enrollment in Cardinal Care OR the decision to waive Cardinal coverage is an annual commitment. This means that the decision made at the first quarter of entry for any academic year is binding for the remainder of that academic year. The only exception to the annual commitment occurs for students who graduate at the end of Autumn or Winter quarters. Autumn and Winter graduates may petition to cancel Cardinal care coverage at the end of the coverage period associated with the quarter in which they graduate.

Injuries - Treatment

Students sustaining the following injuries should be directed to, Stanford University Hospital during all hours:
- Cyanide poisoning
- Ingestion of or skin contact with chemicals; inhalation of hazardous chemicals
- Head injuries that affect vision
- Significant burns, chemical or thermal (e.g., extensive, involving face)
- Significant lacerations (e.g., if more than just skin deep; over joints; possibly involving tendons)
- Significant fractures (e.g., long bones; open fractures)
- Significant dislocations (e.g., ankle, elbow, wrist, shoulder, hip)
• Significant crush injuries to bones, musculature, or abdomen
• Significant penetration injuries

Students sustaining most other work-related injuries should seek care at Vaden Student Health Center. Injuries for which care is available at Vaden include, but are not limited to:
• Limited abrasions
• Limited contusions
• Superficial lacerations (skin only)
• Limited thermal and chemical burns
• Possible fracture

For occupational exposures to blood, body fluids, or other potentially infectious material (resulting from needle sticks, lacerations, etc.) immediately consult the Vaden Student Health Center or the Stanford University Hospital Emergency Department.

Stanford University Hospital Emergency Department is open 24 hours a day.

Keys

Students may obtain keys, codes, and/or card access for outside doors, student offices, and laboratories to which they require access. Obtain these from your faculty advisors’ administrative associate in Durand or the GLAM building manager for McCullough and Moore (Larry Candido - lhc@stanford.edu). Students must first satisfy all health & safety training requirements. If a key is required, a $20 refundable deposit is collected. All students are expected to observe and enforce respective department security policies and procedures at all times. McCullough and Moore keys are returned to the GLAM Building Manager when no longer needed or when you leave the department. Durand keys are returned to office admin Durand 102 when you leave the department.

Lists - MSE and Stanford E-mail Lists

The Materials Science & Engineering Department maintains several email lists for the use of its students, staff, and faculty. You can subscribe and unsubscribe from email lists at the following website: mailman.stanford.edu/
Students are also automatically added to the mse-students@lists.stanford.edu email list.

Do not unsubscribe from this email list – if you do, you will not receive critical information such as academic deadlines/reminders from the MSE Student Services Office.

Stanford has a plethora of resources for its students, ranging from academic and job-related services, to keeping your social lives active and your stress levels low. Information on mailing lists in general can be found here: https://itservices.stanford.edu/service/mailinglists. Some recommended mailing lists are listed below:

• The Stanford Computer Forum: The Computer Forum provides students with a unique opportunity to meet potential employers in a relaxed and focused environment through on-campus interviews, information sessions, Job Lunch, company tours, and Career Fair. For additional information, please visit http://forum.stanford.edu/careers/recruiting.php.
• Sign up here: https://mailman.stanford.edu/mailman/listinfo/recruiting

• The Free Food Alert List: This mailing list was created to serve a simple but very important purpose: to help hungry Stanford students find free food on campus. Remember that one person’s leftovers are another person’s lunch and dinner. Sign up here: https://mailman.stanford.edu/mailman/listinfo/free-food-alert

Mail

Please send your personal mail to your own private mailing address and do not have any personal mail sent to the department. With 200+ active students, plus those who are away or recent graduates, it is simply impossible for us to manage student mail. You should arrange to receive personal mail by contacting the Registrar’s Office and reserving a Post Office box at the Post Office located at White Plaza next to the bookstore. Packages for research may be delivered to: LAB NAME/STUDENT NAME, 496 Lomita Mall, MSE Suite 102, Stanford, CA 94305.

Photocopying

Self-service copy machines and printers are available at most libraries. Most library copiers and printers use only Stanford IDs or copy cards using the StanfordCardPlan (SCP). The SCP allows students to charge purchases at the bookstore, libraries and other locations. The charges are added directly to your University bill. You can sign up for the SCP via Axess, under the Student Center tab, Finances section. Student should use either the Engineering Library or the Branner Earth Sciences Library in the Mitchell Building to do personal copying.

In the Durand building, a photocopying center is maintained in Room 126B. If you receive authorization from the Department Manager, you will be assigned a code number which you use when operating the machine. Any copies you make using this code are charged to your advisor's research account.

Research Purchasing

Purchasing is done via Stanford’s Buying and Paying online portal. Information on using Stanford’s SmartMart, iProcurement or Expense Report modules can be found under the “How To” tab. Additional information on how to use the system can be found by asking advanced students in your research group or your research advisor’s administrative associate for guidance. All expenditures are charged to a university account and require approval of the Department Manager and/or Research Financial Administrator (RFA).

Purchase requests are processed through the departments and/or centers that handle the accounts funding the purchase. Be aware that if you are working with a faculty member in another department, their administrative procedures for ordering materials may differ from the Department of Materials Science and Engineering’s procedures.

Some materials and services may also be purchased by using the department’s credit card (P Card). The P Card is used for purchases that are NOT available through SmartMart or iProcurement. Please see your faculty advisor’s administrative associate for more information on these options. Approvals for these are necessary in the same way as for purchase
requisitions described above.

Security

The Durand and McCullough Buildings are both locked after 5:00 pm and on weekends and unlock again at 7:30 am each work day. Moore Building is a locked building and accessed only by authorized card from the outside. Administrative offices close at 5:00 pm. **Please make sure all doors are closed and locked, and DO NOT prop open the doors.** Remember your keys. Try to make sure your office is also locked when you leave for the day or for long periods of time. Many people roam around the campus and it is very easy for people to wander into the building. It is also important to close and lock your windows at the end of the day and over the weekend. Unfortunately, things are occasionally taken from offices in many buildings on campus, including ours.

Telephones and Web/Video Communication

The Stanford community and some of the surrounding areas are in area code 650. Telephones are available in various laboratories and offices. Phones on the University system have prefixes of: 497, 498, 721, 723, 724, 725 and 736. These numbers may be reached by dialing 1, 3, 4, 5, 6, 7 or 8 followed by the last four digits. Off-campus numbers are reached by first dialing 9, then the entire seven digits if it is in the 650 area code. Outside the 650 area code, you must dial 9, then 1, then the area code, and then the full seven-digit number. More phone information can be found at [https://uit.stanford.edu/service/phone/students/placing](https://uit.stanford.edu/service/phone/students/placing).

Stanford provides free video conferencing tools for faculty, students and staff via the “Zoom” video conference software [https://zoom.stanford.edu](https://zoom.stanford.edu). Stanford also uses the “Jabber” service for web and mobile communication tasks such as instant messaging, voice/video calls, desktop sharing and more [https://uit.stanford.edu/service/jabber](https://uit.stanford.edu/service/jabber).
Degree Progress

More Information: https://studentaffairs.stanford.edu/registrar/students/graduate-minimum-progress

General Description of Programs

The Department of Materials Science and Engineering is concerned with the relation between the structure, processing and properties of materials. This field brings together, in a unified discipline, developments in Physics, Chemistry and Biology that are applied to modern materials of technological, engineering and scientific significance. Materials scientists and engineers utilize a distinctive suite of characterization techniques that probe materials structure down to the atomic level. One important goal of this work involves the development of processes for altering the structure of materials and thereby controlling their properties. Moreover, our faculty are increasingly involved in nanotechnology, energy related materials and bio-chemical processing. We often conduct our research in interdisciplinary teams working with other groups within the department and in collaboration with scientists and engineers from other departments at Stanford as well as with outside institutions.

Curricula at Stanford are planned to offer the breadth of education and depth of training necessary for leadership in the profession. To engage in this profession with competence, four years of undergraduate study and at least one year of postgraduate study are recommended. For those who plan to work in highly technical development or fundamental research, additional graduate study is desirable.

Master of Science in Materials Science and Engineering

The university’s basic requirements for the MS degree are discussed in the Graduate Degrees section of the Stanford Bulletin. The following are specific departmental requirements.

The Department of Materials Science and Engineering requires a minimum of 45 units for a master’s degree to be taken in residence at Stanford. A Master’s Program Proposal form should be filled out, signed by the student’s academic adviser and submitted to the department’s student services manager by the end of the student’s first quarter of study. Final revisions to the master’s program proposal must be submitted no later than one academic quarter prior to the quarter of expected degree conferral. Stanford Materials Science undergraduates who are pursuing or who plan to pursue a Coterminal MS degree may have more flexibility in their programs and should consult with their academic advisers regarding appropriate core course and elective choices.

Engineer in Materials Science

The University’s basic requirements for the degree of Engineer are outlined in the Graduate Degrees section of the Stanford Bulletin.
A student wishing to enter the Engineer program must have completed the requirements of the M.S. in Materials Science and Engineering, and must file a petition requesting admission to the program, stating the type of research to be done and the proposed supervising professor. Once approved, the Application for Candidacy must be submitted to the department’s student services manager by the end of the second quarter in the Engineer program. Final changes in the Application for Candidacy form must be submitted no later than one academic quarter prior to degree conferral.

The 90-unit program must include 9 units of graduate courses in Materials Science with a MATSCI subject code (no research units, seminars, colloquia, and MATSCI 400 Participation in Materials Science Teaching, Participation in Teaching) beyond the requirements for the M.S. degree, and additional research or other units to meet the 90-unit University minimum requirement. A grade point average (GPA) of 3.0 must be maintained for all degree course work taken at Stanford.

The Engineer thesis must be approved and signed off by two Academic Council faculty members, one must be a MATSCI faculty member.

**Doctor of Philosophy**

The Ph.D. degree is designed to prepare students for careers in research and teaching at the university level. The Ph.D. degree is offered exclusively as a full-time program, consisting of 135 units and five milestones. The candidacy for the Ph.D. program is 5 years. Exceptions may be granted for candidacy extensions up to one year.

The Ph.D. program is designed to give students a broad and deep understanding of materials science and engineering so that they will have long and fruitful careers as researchers.
Program Planning: M.S. Degree

Degree requirements are as follows:

1. A minimum of 30 units of Materials Science and Engineering (MATSCI) course work, including core and lab courses specified below, all taken for a letter grade. Research units, one-unit seminars, MATSCI 299 Practical Training and courses in other departments (i.e., where students cannot enroll in a class with a MATSCI subject code) cannot be counted for this requirement.

Of these 30 units Materials Science requirements, students must include either a. or b.

a. three classes from EE 222 or MATSCI 202-210 core courses and three MATSCI 171, 172, 173, 174, 175 laboratory courses. One laboratory requirement may be fulfilled by taking a lab course from another engineering department.

<table>
<thead>
<tr>
<th>a. Select three of the following core courses:</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 222 Applied Quantum Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 202 Materials Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 203 Atomic Arrangements in Solids</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 204 Thermodynamics and Phase Equilibria</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 205 Waves and Diffraction in Solids</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 206 Defects in Crystalline Solids</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 207 Rate Processes in Materials</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 208 Mechanical Properties of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 209 Electronic and Optical Properties of Solids</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 210 Organic and Biological Materials</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total core course units</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Select three of the following lab courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MATSCI 171 Nanocharacterization Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 172 X-Ray Diffraction Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 173 Mechanical Behavior Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 174 Electronic and Photonic Materials and Devices Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 175 Nanoscale Materials Physics Computation Laboratory</td>
<td>3</td>
</tr>
<tr>
<td><strong>One laboratory requirement may be fulfilled by taking lab courses from another engineering dept.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total lab course units</strong></td>
<td><strong>9</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

b. four classes from EE 222 or MATSCI 202-210 core courses and two MATSCI 171, 172, 173, 174, 175 laboratory courses. One laboratory requirement may be fulfilled by taking a lab course from another engineering department.

<table>
<thead>
<tr>
<th>Select four of the following core courses:</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EE 222 Applied Quantum Mechanics I</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 202 Materials Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 203 Atomic Arrangements in Solids</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 204 Thermodynamics and Phase Equilibria</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 205 Waves and Diffraction in Solids</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 206 Defects in Crystalline Solids</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 207 Rate Processes in Materials</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 208 Mechanical Properties of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 209 Electronic and Optical Properties of Solids</td>
<td>3</td>
</tr>
<tr>
<td>MATSCI 210 Organic and Biological Materials</td>
<td>3</td>
</tr>
</tbody>
</table>

Total core course units 12

<table>
<thead>
<tr>
<th>Select two of the following lab courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATSCI 171 Nanocharacterization Laboratory</td>
</tr>
<tr>
<td>MATSCI 172 X-Ray Diffraction Laboratory</td>
</tr>
<tr>
<td>MATSCI 173 Mechanical Behavior Laboratory</td>
</tr>
<tr>
<td>MATSCI 174 Electronic and Photonic Materials and Devices Laboratory</td>
</tr>
<tr>
<td>MATSCI 175 Nanoscale Materials Physics Computation Laboratory</td>
</tr>
</tbody>
</table>

One laboratory requirement may be fulfilled by taking lab courses from another engineering dept. *

Total lab course units 6

TOTAL 18


c. 15 units of approved course electives to result in a technically cohesive program. Of the 15 units of elective courses:

1) 12 units must be taken for a letter grade (except for those submitting a M.S. thesis report).
2) a maximum of three units may be seminars.
3) If writing a master’s thesis report, a minimum of 6 and a maximum of 15 units of MATSCI 200 Master’s Research may be counted. Master’s research units may be counted only if writing a M.S. thesis report. The final version of the thesis report must be signed off by two faculty and submitted to student services manager by last day of classes of the graduation quarter. See student services manager for details and approval.
4) a maximum of three units may be undergraduate units, but not courses below the 100 level offering.
5) a maximum of five units may be used for a foreign language course (not including any remedial English or courses in the student’s native language if other than English). Students must plan to enroll in an upper level designation of a foreign language course offering.
6) the combination of seminar, undergraduate, and language units may not exceed six units total.
7) the combination of research, seminar, undergraduate, and language units may not exceed 15 units total.
8) activity units may not be counted toward M.S. degree.
9) A minimum grade point average (GPA) of 2.75 for degree course work.

All proposed degree programs are subject to approval by student's academic adviser, and department’s student services manager, who has responsibility for assuring that each proposal is a technically cohesive program. The M.S. degree is expected to be completed within two years during the University’s candidacy period for completion of a master’s degree.

Milestones Timeline: M.S. Degree

Year 1: End of first
• submit MS Program Proposal

Year 2: Application to graduate deadline of final quarter
• submit Final Program Proposal
• apply to graduate in Axess

M.S. Academic Requirements
Every student in the MS degree program must submit a MS Program Proposal form prior to the end of the first quarter of enrollment (second quarter for HCP students). Each student, with the help of their faculty advisor, prepares a program of study that meets his or her particular area(s) of interest. The Program Proposal must be approved by the student's faculty advisor and be submitted to the MSE Student Services Manager by the stated deadline. Students who do not submit a Program Proposal on time will have an enrollment hold placed on their record until they submit an acceptable proposal.

Master's Thesis Report
Students wishing to take this option must consult with a MATSCI faculty member initially. Out of the 45 units M.S. degree requirements, 6-15 units may be taken in Materials Science Master's research by enrolling in MATSCI 200. Students using 15 units of research toward the degree must participate in a more complex and demanding research project than those using lesser units.
The M.S. thesis report must be approved and signed off by two faculty members. In general, one is student's research adviser, if adviser is a non MATSCI faculty member, a second MATSCI faculty is required to sign off on the thesis report. Consult with student services manager about faculty criteria, and requirements. Three copies of M.S. thesis report in final format should be submitted to two faculty advisers, and the department. The report is not an official University thesis but is intended to demonstrate to the department and faculty student's ability to conduct and report a directed research.

As a general guideline, a 6-9 units of master's research is a normal load for most students. The report should reflect the number of units taken. For instance, 3-4 laboratory reports are required for a 3-unit laboratory course. Accordingly, the level expected for 9 units of research would be at least equivalent to three such courses.

Students are advised to submit their thesis draft to faculty adviser readers by the end of fifth week of the quarter in which the units are to be assigned to allow time for faculty comments and revisions. A collated final version of the thesis report should be submitted to faculty and student services manager by last day of classes of student's graduation quarter. The appropriate grade for satisfactory progress in the research project prior to submission of the final report is 'N' (continuing); the 'S' (Satisfactory) final grade is given only when the report is fully approved and signed off by both faculty members.

In cases where students decide to pursue research after the initial program submission deadline, they should submit a revised M.S. Program Proposal at least two quarters before the degree is granted. The total combined units of Materials Science research units, seminars, language courses, and undergraduate courses cannot exceed 15. If a master's thesis report is not submitted, units in MATSCI 200 Master's Research cannot be applied to the department's requirement of 45 units for the conferral of the master's degree.

Honors Cooperative Program
Some of the department's graduate students participate in the Honors Cooperative Program (HCP), which makes it possible for academically qualified engineers and scientists in industry to be part-time graduate students in Materials Science while continuing professional employment. Prospective HCP students follow the same admissions process and must meet the same admissions requirements as full-time graduate students. For information regarding the Honors Cooperative Program, see Graduate Programs in the "School of Engineering" section of the bulletin.

Petition Process for Transfer from M.S. to Ph.D. Degree Program
Students admitted to graduate programs are admitted specifically into either the terminal M.S. or the Ph.D. program. A student admitted to the terminal M.S. program should not assume admission to the Ph.D. program. Admission to the Ph.D. program is required for a student to be eligible to work towards the Ph.D. degree.

A student in the terminal M.S. program may petition to be admitted to the Ph.D. program by filing an M.S. to Ph.D. petition form. Petition must include a one-page statement of purpose explaining why the student wishes to transfer to the Ph.D. program, most recent unofficial
transcript, and two letters of recommendation from members of the Stanford faculty, including one from the student’s prospective research adviser and at least one from a Materials Science faculty member belonging to the Academic Council. The M.S. to Ph.D. petition to transfer should be submitted to the student services manager by the second week of Spring quarter of the first year in the M.S. program. Students who wish to submit a petition to the Ph.D. degree, should plan to complete at least six of the MATSCI 200 series (including MATSCI 203 Atomic Arrangements in Solids, MATSCI 204 Thermodynamics and Phase Equilibria, MATSCI 207 Rate Processes in Materials) core courses during their first year of admission. A grade point average (GPA) of 3.5 or better in the core courses is requirement.

Transferring to the Ph.D. program is a competitive process and only highly qualified M.S. students may be admitted. Student’s original application to the graduate program as well as the materials provided for the transfer petition are reviewed. Students must adhere to requirements for the terminal M.S. degree, and plan to confer the M.S. degree in the event that the Ph.D. petition to transfer is not approved.

**Coterminal Master of Science Program in Materials Science and Engineering**

Stanford undergraduates who wish to continue their studies for the Master of Science degree in Materials Science and Engineering through the Coterminal program may apply for admission after they have earned 120 units toward graduation (UTG) as shown on the undergraduate unofficial transcript. Applicants must submit their application no later than eight weeks before the start of the proposed admit quarter. The application must give evidence that student possesses a potential for strong academic performance at the graduate level. Scores from the Graduate Record Examination (GRE) General Test must be reported before action can be taken on an application.

<table>
<thead>
<tr>
<th>Quarter to Start Coterm</th>
<th>Application Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter ’2019</td>
<td>10/19/2018</td>
</tr>
<tr>
<td>Spring ’2019</td>
<td>02/01/2019</td>
</tr>
<tr>
<td>Autumn ’2019</td>
<td>04/26/2019</td>
</tr>
</tbody>
</table>

Materials science is a highly integrated and interdisciplinary subject, therefore students of any engineering or science undergraduate major are encouraged to apply.

Information and other requirements pertaining to the Coterminal program in Materials Science and Engineering may be obtained from the department’s student services manager.

**University Coterminal Requirements**

Coterminal master’s degree candidates are expected to complete all master’s degree requirements as described in this bulletin. University requirements for the Coterminal master’s degree are described in the “Coterminal Master’s Program” section. University requirements for the master’s degree are described in the ”Graduate Degrees” section of the bulletin.

After accepting admission to this Coterminal master’s degree program, students may request transfer of courses from the undergraduate to the graduate career to satisfy
requirements for the master’s degree. Transfer of courses to the graduate career requires review and approval of both the undergraduate and graduate programs on a case by case basis.

In this master’s program, courses taken during or after the first quarter of the sophomore year are eligible for consideration for transfer to the graduate career; the timing of the first graduate quarter is not a factor. No courses taken prior to the first quarter of the sophomore year may be used to meet master’s degree requirements.

Course transfers are not possible after the bachelor’s degree has been conferred.

The University requires that the graduate adviser be assigned in the student’s first graduate quarter even though the undergraduate career may still be open. The University also requires that the Master’s Degree Program Proposal be completed by the student and approved by the department by the end of the student’s first graduate quarter.

**Important Reminders:**

- The University’s minimum requirement for each master’s degree is 45 unduplicated units of coursework done at Stanford. Stanford does not accept transfer credit toward a master’s degree. However, students may apply up to 18 units of applicable Stanford coursework taken via the Non-Degree Option (NDO) Program toward their MSE degree.

- Students must maintain a minimum cumulative GPA of 2.75 in order to maintain good academic standing and graduate with the MSE MS degree.

- Every student should be familiar with the University’s requirements for minimal progress as outlined in the Graduate Academic Policies and Procedures (GAP).

- There is a two-year limit from the first quarter of enrollment in the master’s program to conferral of the degree (the university refers to this limit as the candidacy period). The MS program is usually completed in five academic year quarters.
  - **Students in the Coterminal program:** the two-year period begins in the first quarter of graduate standing.
  - **Students in the Honors Cooperative Program** have a five-year limit for completing the degree.

- In your final quarter, you must submit an Application to Graduate for Advanced Degrees through Axess.

- Because the M.S. degree is an advanced degree awarded entirely on the basis of course work, the program should contain a substantial amount of advanced MSE course work. Mezzanine (200 level) courses, suitable for advanced undergraduates or beginning graduates, may be used in partial satisfaction of this requirement.

- All units must be at the 100 level or higher. No courses numbered below 100 count toward a graduate degree.
Curricular Practical Training (MATSCI 299)
MATSCI 299 offers course credit for MSE graduate students currently on an F-1 visa who would like to complete relevant work experience as part of their program of study. This is done in a manner consistent with the USCIS regulations and the Bechtel International Center. Such work must be relevant to the curricular program pursued by the student.

If you are on a student visa, you will need to submit the PTA (Practical Training Application) form in Axess and your CPT request to the Bechtel Center. Instructions on how to submit your CPT application and current policy information are provided at: https://bechtel.stanford.edu/immigration/employment/f-1-employment/curricular-practical-training-cpt.

CPT Course Enrollment Policies
- Sign up for MATSCI 299 on your study list in the quarter during which you work.
- MSE students can take CPT for a maximum of two quarters.
- PhD students can take CPT for three quarters.
- If you receive an Incomplete ("I") in any of these courses, you may not enroll in any additional CPT courses until you clear the Incomplete.
- If you receive a No Credit ("NC") in any of these courses, you may not enroll in any additional CPT courses.

Requirements for Completing the Course

1. The course is completed and a grade of "S" assigned following submission and approval of a final report. The report should describe in competent English the work you performed and how it relates to your academic program (NOT your research).

2. The report should be 3 to 5 pages, single spaced, and should not contain company proprietary information.

3. The report cover page should include:
   - the student's name
   - Stanford ID number
   - the course number: MATSCI 299
   - the quarter during which the course is taken
   - the company you worked for

4. The report must have a section describing how your work improves your skills relating to SPECIFIC Stanford class(es) that you have taken (NOT how your work improves your research skills, and NOT how these classes help your work).

5. Papers resulting from the work can be added as an appendix, but do not alone fulfill the requirement.
Program Planning: Ph.D. Degree

Ph.D. Academic Requirements and Milestones
In order to meet the requirements of the Ph.D. program, every student must meet department and university requirements. First, the student must find a research topic and supervisor. Then the student will complete the five milestones:

- Pass the department’s qualifying examination.
- Complete the candidacy form (complete the courses listed).
- Form a dissertation reading committee.
- Pass the Oral Examination, in which dissertation results are presented and defended.
- Submit the dissertation to the university.

The Ph.D. degree is awarded after the completion of a minimum of 135 units of graduate work as well as satisfactory completion of any additional University requirements. Degree requirements for the department are as follows:

<table>
<thead>
<tr>
<th>Core Courses ¹</th>
<th>Units</th>
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<tbody>
<tr>
<td>MATSCI 201</td>
<td>30</td>
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<td>MATSCI 202</td>
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<td>MATSCI 203</td>
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<td>MATSCI 209</td>
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<tr>
<td>MATSCI 210</td>
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<tr>
<td>Five Elective Graduate Technical Courses ²</td>
<td>15</td>
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<tr>
<td>Materials Science Colloquia ³</td>
<td>3</td>
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<tr>
<td>MATSCI 230</td>
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<td>MATSCI 230</td>
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<tr>
<td>MATSCI 230</td>
<td></td>
</tr>
<tr>
<td>Research &amp; Electives</td>
<td>87</td>
</tr>
<tr>
<td>75 Units of MATSCI 300: Ph.D. Research</td>
<td></td>
</tr>
<tr>
<td>12 Units of Electives ⁴</td>
<td></td>
</tr>
</tbody>
</table>

¹ At least six of these courses must be taken during the first year (including MATSCI 203 Atomic Arrangements in Solids, MATSCI 204 Thermodynamics and Phase Equilibria, and MATSCI 207 Rate Processes in Materials). All core courses must be completed for a letter grade, and taken during the first two years in the program.
Elective technical courses must be in areas related directly to student's research interest in Materials Science and Engineering, and may not include MATSCI 230 Materials Science Colloquium, MATSCI 299 Practical Training, MATSCI 300 Ph.D. Research or MATSCI 400 Participation in Materials Science Teaching. All courses must be completed for a letter grade.

Materials Science & Engineering Ph.D. students are required to take MATSCI 230 Materials Science Colloquium during each quarter of their first year. Attendance is required, roll is taken, and more than two absences results to an automatic "No Pass" grade.

You must complete any waived number of units by taking the equivalent number of units of other relevant upper level MATSCI courses.

Advanced Specialty Courses

<table>
<thead>
<tr>
<th>Biomaterials</th>
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<tbody>
<tr>
<td>CHEMENG 310 Microhydrodynamics</td>
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<tr>
<td>CHEMENG 355 Advanced Biochemical Engineering</td>
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<tr>
<td>ME 381 Orthopaedic Bioengineering</td>
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<tr>
<td>BIOE 260 Tissue Engineering Lab</td>
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<tr>
<td>ME 457 Fluid Flow in Microdevices</td>
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<tr>
<td>MATSCI 380 Nano-Biotechnology</td>
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<tr>
<td>MATSCI 381 Biomaterials in Regenerative Medicine</td>
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<tr>
<td>MATSCI 382 Biochips and Medical Imaging</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Electronic Materials Processing</th>
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<tbody>
<tr>
<td>EE 212 Integrated Circuit Fabrication Processes</td>
<td></td>
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<tr>
<td>EE 216 Principles and Models of Semiconductor Devices</td>
<td></td>
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<tr>
<td>EE 311 Advanced Integrated Circuits Technology</td>
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<tr>
<td>EE 316 Advanced VLSI Devices</td>
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<tr>
<td>EE 312 Integrated Circuit Fabrication Laboratory</td>
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<tr>
<td>MATSCI 312 New Methods in Thin Film Synthesis</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Materials Characterization</th>
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<tbody>
<tr>
<td>CHEMENG 345 Fundamentals and Applications of Spectroscopy</td>
<td></td>
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<tr>
<td>EE 329 The Electronic Structure of Surfaces and Interfaces</td>
<td></td>
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<tr>
<td>MATSCI 312 New Methods in Thin Film Synthesis</td>
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<tr>
<td>MATSCI 320 Nanocharacterization of Materials</td>
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<tr>
<td>MATSCI 321 Transmission Electron Microscopy</td>
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<tr>
<td>MATSCI 322 Transmission Electron Microscopy Laboratory</td>
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<tr>
<td>MATSCI 323 Thin Film and Interface Microanalysis</td>
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<tr>
<td>MATSCI 326 X-Ray Science and Techniques</td>
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<table>
<thead>
<tr>
<th>Mechanical Behavior of Solids</th>
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<tbody>
<tr>
<td>AA 252 Techniques of Failure Analysis</td>
<td></td>
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</table>

29
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AA 256</td>
<td>Mechanics of Composites</td>
</tr>
<tr>
<td>MATSCI 251</td>
<td>Microstructure and Mechanical Properties</td>
</tr>
<tr>
<td>MATSCI 353</td>
<td>Mechanical Properties of Thin Films</td>
</tr>
<tr>
<td>MATSCI 358</td>
<td>Fracture and Fatigue of Materials and Thin Film Structures</td>
</tr>
<tr>
<td>ME 335A</td>
<td>Finite Element Analysis</td>
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<tr>
<td>ME 335B</td>
<td>Finite Element Analysis</td>
</tr>
<tr>
<td>ME 335C</td>
<td>Finite Element Analysis</td>
</tr>
<tr>
<td>ME 340</td>
<td>Theory and Applications of Elasticity</td>
</tr>
<tr>
<td>ME 345</td>
<td>Fatigue Design and Analysis</td>
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**Physics of Solids and Computation**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>APPPHYS 272</td>
<td>Solid State Physics</td>
</tr>
<tr>
<td>APPPHYS 273</td>
<td>Solid State Physics II</td>
</tr>
<tr>
<td>EE 222</td>
<td>Applied Quantum Mechanics I</td>
</tr>
<tr>
<td>EE 223</td>
<td>Applied Quantum Mechanics II</td>
</tr>
<tr>
<td>EE 228</td>
<td>Basic Physics for Solid State Electronics</td>
</tr>
<tr>
<td>EE 327</td>
<td>Properties of Semiconductor Materials</td>
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<tr>
<td>EE 328</td>
<td>Physics of Advanced Semiconductor Devices</td>
</tr>
<tr>
<td>EE 329</td>
<td>The Electronic Structure of Surfaces and Interfaces</td>
</tr>
<tr>
<td>MATSCI 331</td>
<td>Atom-based computational methods for materials</td>
</tr>
<tr>
<td>MATSCI 343</td>
<td>Organic Semiconductors for Electronics and Photonics</td>
</tr>
<tr>
<td>MATSCI 347</td>
<td>Introduction to Magnetism and Magnetic Nanostructures</td>
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**Soft Materials**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CHEMENG 310</td>
<td>Microhydrodynamics</td>
</tr>
<tr>
<td>MATSCI 343</td>
<td>Organic Semiconductors for Electronics and Photonics</td>
</tr>
<tr>
<td>ME 455</td>
<td>Complex Fluids and Non-Newtonian Flows</td>
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</table>
## Milestones Timeline: Ph.D. Degree

<table>
<thead>
<tr>
<th>Year</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
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<tr>
<td>1</td>
<td>Lab Safety 9/18</td>
<td>Grant Writing Workshop 10/10</td>
<td>Update of Rsrch. Adv Search Due 11/9</td>
<td>Declare Research Group</td>
<td>Turn In RA/TA Forms for Summer</td>
<td>Turn in RA/TA Forms for Autumn</td>
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<td></td>
<td>Orientation 9/21</td>
<td>Mtg w/Acad. Adv. By 10/15</td>
<td>Turn in RA/TA Forms for Winter</td>
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<tr>
<td></td>
<td>Grant Overview 9/28</td>
<td>Mtg w/1 Rsrch. Adv. by 10/31</td>
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<td>Ice Cream Social 9/28</td>
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<tr>
<td>2</td>
<td>What to Expect This Year Meeting 9/28</td>
<td>Grant Writing Workshop 10/10</td>
<td>Turn in RA/TA Forms for Winter</td>
<td>Qualifying Exam</td>
<td>Qualifying Exam</td>
<td>Turn in RA/TA Forms for Summer</td>
<td>Turn In RA/TA Forms for Autumn</td>
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<td>Mtg w/Acad. Adv. By 10/15</td>
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<td>Mtg w/1 Rsrch. Adv. by 10/31</td>
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<tr>
<td>3</td>
<td>What to Expect This Year Meeting 9/28</td>
<td>Mid-Program Evaluations</td>
<td>Turn in RA/TA Forms for Winter</td>
<td>Mid-Program Evaluations</td>
<td>Turn in RA/TA Forms for Summer</td>
<td>Turn In RA/TA Forms for Autumn</td>
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## Milestones Timeline: Ph.D. Degree (continued)

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<th>Y E A R</th>
<th>Sept</th>
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<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
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<tr>
<td></td>
<td>What to Expect This Year Meeting 9/28</td>
<td>Turn in RA/TA Forms for Winter</td>
<td>Turn in RA/TA Forms for Spring</td>
<td>Reading Committee Meeting</td>
<td>Turn In RA/TA Forms for Summer</td>
<td>Declare TGR if eligible for Summer</td>
<td>Turn in RA/TA Forms for Autumn</td>
<td>Declare TGR if eligible for Autumn</td>
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<tr>
<td></td>
<td>What to Expect This Year Meeting 9/28</td>
<td>What to Expect This Year Meeting</td>
<td>Turn in RA/TA Forms for Winter</td>
<td>Oral Exam Quarter</td>
<td>Turn in RA form for Spring Quarter</td>
<td>Oral Exam Quarter</td>
<td>Writing Dissertation</td>
<td>Writing Dissertation</td>
<td>Submit Dissertation</td>
<td>Graduation</td>
<td>WORK/RESEARCH/POST-DOCTORAL/LIFE</td>
</tr>
</tbody>
</table>

### Important Reminders:

- The university's minimum requirement for the doctoral degree is 135 unduplicated units of coursework done at Stanford. Please see below for information on course unit requirements and transferring credits from another institution.

- Students must maintain a minimum cumulative GPA of 3.0, in all courses taken at Stanford, in order to maintain good academic standing in the program.

- All units must be at the 100 level or higher. No courses numbered below 100 count toward a graduate degree.

- Every student should be familiar with the University's requirements for minimal progress as outlined in the Graduate Academic Policies and Procedures [GAP](#).

- Students are required to be admitted to candidacy by the end of their second year in the program. More information on candidacy can be found below.
• Students must consult with their academic adviser on Ph.D. course selection planning. For students with a non-MATSCI research adviser, the MATSCI academic/co-adviser must also approve the list of proposed courses. Any proposed deviations from the requirements can only be considered by petition.

• Ph.D. students are required to apply for and have conferred a MATSCI M.S. degree normally by the end of their third year of studies. A Graduate Program Authorization Petition (in Axess) and an M.S. Program Proposal must be submitted after taking the Ph.D. qualifying examination.

• A departmental oral qualifying examination must be passed by the end of January of the second year. A grade point average (GPA) of 3.5 in core courses MATSCI 201-210 is required for admission to the Ph.D. qualifying examination. Students who have passed the Ph.D. qualifying examination are required to complete the Application for Candidacy to the Ph.D. degree by June of the second year after passing the qualifying examination. Final changes in the Application for Candidacy form must be submitted no later than one academic quarter prior to the TGR status.

• Students must present the results of their research dissertation at the University Ph.D. oral defense examination.

• Current students subject to either this set of requirements or a prior set must obtain the approval of their adviser before filing a revised program sheet, and should as far as possible adhere to the intent of the new requirements.

• Students may refer the list of "Advanced Specialty Courses and Cognate Courses" provided below as guidelines for their selection of technical elective units. As noted above, academic adviser approval is required.

• At least 90 units must be taken in residence at Stanford. Students entering with an M.S. degree in Materials Science from another university may request to transfer up to 45 units of equivalent work toward the total of 135 Ph.D. degree requirement units.

• Students may propose a petition for exemption from a required core course if they have taken a similar course in the past. To petition, a student must consult and obtain academic and/or research adviser approval, and consent of the instructor of the proposed core course. To assess a student's level of knowledge, the instructor may provide an oral or written examination on the subject matter. The student must pass the examination in order to be exempt from core course requirement. If the petition is approved, the student.

• Candidacy is valid for five years from the date of approval by the department unless terminated by the department (e.g., for unsatisfactory progress). The candidacy end date is listed on the student's record in Axess.

• Students who are unable to graduate before their five years of candidacy expire may request a maximum of one additional year of candidacy per extension. Extensions require review of a dissertation progress report, a timetable for completion of the
dissertation, and any other factors regarded as relevant by the department. Students must file a request for candidacy extension before the end of their program's time limit. The department is not obligated to grant an extension. Please submit your request for extension to the MSE Student Services Manager. Extensions are subject to final approval by the Associate Chair of Graduate Education.

- During your final quarter in the program, you must submit an *Application to Graduate for Advanced Degrees* through Axess.
Milestone 1: Ph.D. Qualifying Examination

The purpose of these guidelines is to ensure that every student is made fully aware of the rules and procedures for the Ph.D. as set forth and established by the faculty. When appropriate, petitions to waive one or more of the following requirements will be considered by the faculty.

1. The minimum standard for admission to the Ph.D. oral qualifying exam is a GPA of 3.50 or better in the MATSCI core courses selected by the student. Only grades received at Stanford will be used in this calculation; if a student petitions out of one or more of the core courses, the GPA will be calculated based only on those core courses taken at Stanford. (The table of grade numerical equivalents is listed on the Registrar’s website). A transcript for each student in the Ph.D. program will be reviewed by his or her academic advisor after each quarter. A student with an average below the minimum of 3.50 is strongly urged to meet with his or her advisor to discuss remedial measures.

2. For students with a GPA in these courses between 3.25 and 3.49, admission to the exam will only be by petition to the Department Chair and vote of the faculty. Any student with an average below 3.25 will not be permitted to take the exam.

3. At least six core classes of MSE 201-210 must be completed prior to the exam; of these, MatSci: 203, 204, and 207 are required to be completed before the exam can be taken.

4. Students must have been admitted to and be officially enrolled in the Ph.D. program.

5. Students must submit the Graduate Program Authorization Petition to add an M.S. degree in Materials Science unless they already had such an M.S. degree and they are transferring courses into the Ph.D. program.

Exam purpose
The exam evaluates your capacity to perform outstanding research, and has several goals:

- To motivate you to review and synthesize course work and research material.
- To determine your creative potential to pursue doctoral research.
- To determine your ability to understand and apply fundamental concepts.
- To test your oral communication skills and your ability to respond to questions.
- To identify areas that need strengthening as you work toward the doctorate.

Exam Structure
The oral qualifying examination can last up to 2.5 hours and is comprised of two parts.

- **Section A** consists of a 20 minute presentation on the student’s proposed area of research and a 30 minute question session covering the student presentation. The presentation is expected to cover some of the theoretical formalism and principles underlying the research topic and the experimental techniques to be used. While it is not necessary for a student to have obtained experimental data for the examination, it is essential that material beyond the level of the core curriculum be presented. The
questioning session for this part of the exam will cover the proposed area of research, theoretical background material, and proposed experimental methods. The student is expected to demonstrate an ability to think clearly about the important aspects of his or her research topic.

- **Section B** of the qualifying exam is a question and answer session lasting up to 100 minutes. It is intended to test the student's breadth of knowledge in the materials science core curricula as it relates to their proposed area of research. The connection between the core curricula and the research area is subject to the interpretation of the individual examiners and may be direct or indirect. Students are encouraged to review the core curricula and look for these connections when preparing for the exam.

Selecting a research advisor early in your career is very important. Ph.D. students are required to be working in a research group by the end of the Winter Quarter of their first year and your research topic will be selected in collaboration with your advisor. When preparing for your qualifying exam, it is important to study fundamental aspects of materials science emphasized in the series 200 core courses and consider how these aspects relate to your research area. The exam will evaluate your ability to assimilate this knowledge and your understanding of these basic principles as well as your aptitude for independent thought and potential to conduct research.

**Important Reminder:**
Two weeks before the examination date the student must provide a one-page abstract (summary) of their research presentation to the Student Services Manager along with the completed PhD Qualifying Exam Proposal. Please include a list of completed MSE 200 level core classes.

**Committee Structure**
The Qualifying Examination Committee has three members - the student's research advisor and two MSE faculty members, assigned by the department, one of whom acts as the committee Chair. The committee Chair is responsible for conducting the examination and for timing the 20 minute student presentation. All examining committees are formed prior to the beginning of the fall quarter. Once all faculty assignments have been made, the Student Services Office will notify the student. It is then the student’s responsibility to submit an MSE Ph.D. Qualifying Exam Proposal Form to the Student Services Manager no later than three weeks before the qualifying exam, or the end of October, whichever is earlier.

**Student Responsibilities**
The Quals examination must be taken by the end of January of the student’s second year. The student will arrange the examination by scheduling the committee members and finding an examination room. Since many faculty members travel and are otherwise unavailable for part of each quarter, students are encouraged to avoid scheduling problems by making arrangements with the Examination Committee as soon as possible. Do not wait until the end of the quarter to convene the committee. Many students must take this exam every year and faculty has several students to consider along with other commitments. Once the qualifying examination is scheduled and a room is arranged, the student must inform the Student Services Manager of when and where the exam will take place.

**Important Note**
Because the oral qualifying examination can be a demanding and challenging personal experience for the students, the department urges all students to carefully plan and thoroughly prepare for it. Adequate preparation for the examination cannot be overemphasized; especially as the 20 minute time limit makes a well-rehearsed presentation of crucial importance. Your preparation should involve interchanges with other students, practicing the 20 minute research presentation as well as practice with responding to questions. Careful study and mastery of the material will pay dividends in enhanced confidence and eliminate the necessity of retaking the examination. Emphasis in preparation should be placed on understanding and integrating basic principles relating to the student’s research area, rather than on memorizing detailed equations or formal derivations. For candidates with a native language other than English, extensive practice in speaking and listening to English within the context of scientific material is urged, along with prior completion of as many of the required English courses as possible.

**Exam Results**
Following the examination, the Committee members meet privately and the student’s advisor notifies the student of the Committee’s decision. The student’s performances on Section A and Section B are evaluated and graded separately and given a pass or fail grade. In the event that the student does not pass one or both sections, they may retake the section they did not pass. The second examination, normally with the same Examining Committee, must be completed by June 1st of the student’s second academic year.
Milestone Two: Application to Candidacy for the Ph.D.

After passing the departmental oral qualifying examination, students complete the Ph.D. Program Proposal (Application for Candidacy) form. This is the form that details the degree requirements to be met by the individual student, including all the courses listed in the degree requirements as well as the research units and any other course requirements imposed by the University. Spend some time with your advisor selecting courses appropriate for the academic direction you wish to pursue before submitting the form.

Changes on the Ph.D. Program Proposal form may be made by submitting an Academic Program Revision form, but final changes must be submitted no later than one academic quarter prior to completion of the technical course work. All changes are subject to the same approval process by the advisor(s), Student Services Manager and Advanced Degree Committee. Candidacy is granted for five years. Taking more time to complete your degree requires an extension along with an explanation of why it is taking longer – and is not automatic.
Milestone Three: Doctoral Dissertation Reading Committee

The University requires all candidates for the Ph.D. degree to present a dissertation which is an original contribution to knowledge, the result of independent work exemplifying the highest standards of the discipline and of lasting value to the community. Every doctoral dissertation is read and approved by a three-member doctoral dissertation reading committee. The student proposes the reading committee by submitting a Doctoral Dissertation Reading Committee Form to the Student Services Manager. Prospective members of the committee must agree to participate and the chair of the department approves the committee.

The Doctoral Dissertation Reading Committee is made up of at least one member from the student’s major department, typically the candidate’s principal research advisor, and two other members. Normally, all members are on the Stanford Academic Council. If a reader is not on the Academic Council, but is particularly well-qualified to consult on the dissertation topic and holds a Ph.D. or equivalent foreign degree, the department chair may approve their appointment as reader. If that individual is to serve as the principal dissertation adviser, the department requires the appointment of a co-adviser who is a member of the Academic Council. A student may petition to add or remove members of the reading committee or to change their principal advisor.

At least twice per year students are expected to report to the full Reading Committee on the progress of their dissertation. Each member of this Committee must certify approval of both the scope and quality of the dissertation and read and sign the final product.
Before being awarded a Ph.D. degree, the candidate must successfully pass a University Oral Dissertation Defense Examination. The purpose of this examination is to test the Candidate’s command of the field of study and to confirm fitness for scholarly pursuits. Details concerning the length of the examination, its scheduling and other details are described in the Stanford Bulletin. Information about department procedures is available in the Student Services Office. The student is responsible for requesting an Oral Examination by submitting a University Oral Exam Schedule form (found on the Student Affairs website) to the Student Services Manager at least 2 weeks prior to the date proposed for the examination. Orals may be scheduled at any time of day that is agreeable to the examining committee members.

The Oral Examining Committee is comprised of at least five members, three members of the Doctoral Dissertation Reading Committee, a fourth faculty member and a University Chair. At least two members of the Oral Examining Committee must be regular faculty members of the Materials Science Department and three must be members of the Stanford Academic Council. The student, with their advisor’s help, will find an appropriate outside Chair who must be an Academic Council member and may not be affiliated with either the Materials Science & Engineering Department or the department of the student’s advisor (if that advisor is from outside MSE). The purpose of requiring an outside Chair is to make certain that University rules are followed and that the review is objective.
The University Oral Dissertation Defense Examination is directed toward the student’s dissertation and area of research specialization. After the student, their advisor and the Oral Examining Committee have agreed on a date and time for the University Oral Examination, the student should arrange for a room in which to take the exam. The first part of the dissertation defense is a public seminar type event. The student is expected to present the research results in a talk and many students from the department will likely attend. Some questions may follow from the audience. Knowing this, the student should be schedule a room large enough to hold an audience. Following the presentation, the student and the Committee may move to a smaller room where the Committee will present its questions concerning the student’s completed research. This portion of the examination may not exceed two hours.

**IMPORTANT NOTE**
Before the University Oral Examination is scheduled, it is strongly recommended that the student present an acceptable draft of the complete dissertation to the Reading Committee and allow at least two weeks for the Committee to review this draft. The student should then meet and discuss the dissertation with the Committee and receive approval before scheduling the University Oral Examination. Work closely with your advisor at this stage in making certain you are properly prepared. About a week prior to your oral examination, send a note to all students in the department (using mse-students@lists.stanford.edu) telling them when the presentation is scheduled and you may wish to send a reminder the day prior to the exam.
Specific instructions must be followed with regard to the format of the dissertation, and the manner of production as well as various other related matters. See Directions for Preparing Doctoral Dissertations on the Graduate Academic Policies and Procedures part of the Registrar’s website under Dissertation and Thesis Submission. [http://studentaffairs.stanford.edu/sites/default/files/registrar/files/docdissdir.pdf]. This document provides information on the format and structure of your dissertation. Many faculty members prefer that manuscripts be prepared in a format suitable for publication in scientific journals and be completed before the student leaves Stanford. Ph.D. candidates should not underestimate the time and effort required for the mechanics of putting the dissertation into acceptable final form. Editing, typing, art, footnotes, printing etc. require painstaking efforts on the part of the student. Ph.D. candidates must be sure to allow themselves enough time to oversee the final printing of the dissertation and its acceptance by the Degree Progress Office.

Students are strongly urged not to make employment commitments that could require them to leave Stanford before their dissertation is finalized. This will avoid the frustrating process of trying to do editing by mail and meeting the demands of a new job while doing the most boring and detailed part of the dissertation. It will avoid delays in the granting of the degree that can be extended for months and sometimes years. The written dissertation should not be considered a peripheral activity in the total task of obtaining the Ph.D. degree, but a major part in the development of a research task from conception to ultimate completion and communication.

Students submit their dissertation in electronic format. You will find information regarding the dissertation submission process on the Registrar’s website. The student is responsible for the various fees related to the cost of preparing and printing their dissertation.
Participation in Teaching

The opportunity exists for students to register for MATSCI 400 (Participation in Materials Science Teaching) and to earn for 1-3 units in any quarter in which they are making a significant contribution to the teaching of a course. Typically, such registration is appropriate when the student makes such major contributions as laboratory experiment design, construction and guidance; regular leading of a discussion group; presentation of an appreciable fraction of the lectures. Eligible students should obtain approval, from three people: the Student Services Manager, the student's Academic Advisor, and the faculty member with whose course the student will be participating.

Ph.D. Minor in Materials Science and Engineering

The University's basic requirements for the Ph.D. minor are outlined in the "Graduate Degrees" section of the bulletin. A minor requires 20 units of graduate work of quality and depth at the 200-level or higher in the Materials Science and Engineering course offering. Courses must be taken for a letter grade. The proposed list of courses must be approved by department's advanced degree committee. Individual programs must be submitted to the student services manager at least one quarter prior to the quarter of the degree conferral. None of the units taken for the Ph.D. minor may overlap with any M.S. degree units.
FINANCIAL INFORMATION

Getting Paid
A student receiving any type of financial support through the University must have either an Individual Taxpayer Identification Number or a Social Security Number. To receive your salary payments, you must have the proper forms (I-9) filed with the Payroll and have registered for the minimum number of units required (full time graduate enrollment 8-10 units).

Individual Taxpayer Identification Number
An Individual Taxpayer Identification Number is a tax processing number used by the IRS certain nonresident and resident aliens, their spouses and their dependents who are not eligible for a Social Security Number. Any foreign student receiving fellowship funds will need to obtain an ITIN as soon as possible after arriving by filing a Form W-7 with the IRS. Stanford will only issue one payroll check without an ITIN. The form may be mailed, along with the required documentation, or presented at an IRS office.

Social Security Number
Once you have a job offer (usually a Research Assistant appointment), you will be eligible to apply for a Social Security Number (SSN) for tax purposes and cancel your ITIN. After you receive a job offer from your faculty advisor, request a “job offer letter” from the Student Services Office and an additional letter from Bechtel. Take them to either:

Social Security Office, Campbell
770 W. HAMILTON AVE.
CAMPBELL, CA 95008

Social Security Office, Redwood City
2ND FLOOR
601 ALLERTON ST
REDWOOD CITY, CA 94063

After filing your SSN application, you will need to provide the application verification number to the Student Services Office (you might have to ask for this). When your Social Security card arrives, bring it to the Student Services Manager to copy, and then keep it in a safe place (you will rarely need the original.)

Fellowships
The tuition and stipend portion of a fellowship appears as a credit on the University bill approximately one week prior to the beginning of each quarter. You may receive a refund of excess financial support or a stipend check if some of your aid is restricted from paying all charges on your account. You are responsible for reviewing your account periodically and checking it prior to the payment deadline to avoid late fees or holds due to unpaid charges. Overall, pay attention to when you receive your fellowship funds so that you budget your money to pay for your needs.

It is highly recommended that you sign-up for direct deposit so your stipends can be electronically deposited. You may sign-up for direct deposit in the Finances section of the
Student Center tab in Axess. If you do not choose direct deposit, your stipend will be mailed to your address as listed in Axess.

**Fellowship Regulations**

Many graduate students at Stanford hold fellowships paid from government, industrial, or private sources. Information may be obtained from the university financial aid or career counseling offices, the United States Information Service or Fulbright offices abroad. Other sources may be found in the university libraries or on the internet.

A number of Graduate Fellowships are available from various University sources. Decisions concerning the disposition of these awards are made at the department or School level. Fellowship students are expected to perform well academically and maintain full-time study. Doctoral fellowships generally provide tuition to cover the cost of 8-10 units and provide a quarterly stipend. Graduate study involves some type of research work along with course work in order to obtain sufficient experience needed to write a doctoral dissertation. However, students on fellowships are not being directly paid to perform research work in the same way an RA is paid. Depending upon the type of fellowship you hold, there may be restrictions on accepting pay for work such as a small RA or an hourly appointment. You are responsible for knowing the rules of your fellowship and for abiding by them.

Occasionally, students receive prizes or awards which pay their salaries. Please make certain you clarify with the person in charge of the award how it will be paid and what the expectations are in exchange for the money, if any. Sometimes fellowships are “stewarded” – that is, the person giving the money is nearby the university and expects to either meet you in person or receive a thank you letter. In such situations, the Development Office will inform you that you are receiving a stewarded fellowship and advise you of any requirements which you are obliged to follow.

**Assistantships**

Students working as any type of assistant are considered Stanford student employees and are paid by the Stanford Payroll Office on the 7th and 22nd of each month, for a total of six payments per quarter. Payments begin two to three weeks after the start of the quarter. This payment method also applies to any student who submits hourly time sheets and is paid on an hourly basis. You must submit a timesheet to be paid. Instructions for completing these forms are included at the end of this document.

**Deadlines & Paydates**

For University fiscal purposes, the autumn quarter begins October 1st and ends December 31st, with your first salary payment on October 22nd. Winter quarter is from January 1st to March 31st with the first payment received on January 22nd. Spring quarter extends from April 1st through June 30th, with the first payment on April 22nd. Your last deposit/payment for the academic year is paid on July 7th. Summer quarter begins on July 1st through September 30th, with the first payment made on July 22nd.
Graduate assistantships are paid on following standard appointment periods:

<table>
<thead>
<tr>
<th>Quarter of RA/CA</th>
<th>Appointment Period</th>
<th>Paydates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autumn 2018</td>
<td>October 1 - December 31</td>
<td>7th and 22nd of the month</td>
</tr>
<tr>
<td>Winter 2019</td>
<td>January 1 - March 31</td>
<td>7th and 22nd of the month</td>
</tr>
<tr>
<td>Spring 2019</td>
<td>April 1 - June 30</td>
<td>7th and 22nd of the month</td>
</tr>
<tr>
<td>Summer 2019</td>
<td>July 1 - September 30</td>
<td>7th and 22nd of the month</td>
</tr>
</tbody>
</table>

It is highly recommended that you sign-up for direct deposit so your stipends can be electronically deposited. You may sign-up for direct deposit in the Finances section of the Student Center tab in Axess. If you do not choose direct deposit, your stipend will be mailed to your address as listed in Axess.

If you are changing your type of pay from a fellowship to an assistantship, there may be a delay in receiving your paycheck while the payroll system processes the change. Make sure you have sufficient funds to carry you through this transition period. For example, if your fellowship covers the spring quarter, you will receive your stipend in early April. After you begin working as an assistant on July 1st, there is a three week delay to receive your pay and your first check will be deposited on July 22nd. Overall, pay attention to when you receive your assistantship funds so that you budget your money to pay for your needs.

You may have small supplements to a University or outside fellowship paid by the faculty member supporting you. Whether this will come in the form of a fellowship or a position as an RA depends upon complex factors including how much is needed to fund you to the normal pay level, what kinds of funds your advisor has available to use and how they choose to budget their funds. If you have questions, see your advisor or the Student Services Manager. You are responsible for understanding how your financial support is paid, for ensuring you are receiving it correctly and on time and for following relevant tax issues.

Research Assistantship Responsibilities
If you have accepted financial aid as an RA (or CA), there are certain obligations associated with the award. It involves a commitment on the part of the student receiving the financial aid to carry out research of interest to the program to the best of his or her ability. The 50% Research Assistant receives a monthly salary and 8-10 units of paid tuition in exchange for an average of 20 hours of work per week each week of the quarter (not just weeks that classes are held). This is a job.

Most assistantships are supported by outside grants or contracts. The faculty member is obliged to produce the research within the time frames and in the manner prescribed in the grant’s funding proposal. You are being hired to help achieve that goal. You should meet with the faculty member regarding your work before the first week of the quarter. You will be assigned a task and progress on the assignment will be noted. Continued financial support is contingent upon satisfactory progress on your research work as well as your course work. We expect graduate students to carefully balance both coursework, coming to class alert, on-time, and prepared, and research, working on a continuing basis on your research project. You and your advisor should direct your research assignments toward using your particular background, experience and ability.
To hold a Research Assistantship, a student’s research activity must be directly related to the purpose of a funded project. Generally, these research programs are sufficiently broad to allow a student to combine his or her interests with the objectives of the supported research program. When the department faculty is convinced that a student’s work satisfies the University’s requirements concerning a contribution to knowledge and independent work, it may be included in the student’s dissertation.

The breaks between academic quarters are not considered vacation periods from research for Research Assistants although it is assumed students will be given some time off. Release time (dates, length, etc.) should be arranged between students and the professor for whom they are working **BEFORE** leaving for vacation.

**Course Assistantship Responsibilities**

Your advisor may encourage you to serve as a Course or Teaching Assistant (CA or TA) in one or two courses.

A Course Assistant helps with course preparation, grading, holding office hours and helping students with assignments. They rarely give lectures or present new class material. A Teaching Assistant presents new material in the course sections and has considerable independence in determining what is to be presented and how it will be presented. The MSE department generally uses course assistants rather than teaching assistants. A student may obtain a position as CA in another department.

The 50% time Course or Teaching Assistant receives a monthly salary and 8-10 units of paid tuition. Duties require 20 hours per week of assistance and, although students may be asked to assist in more than one course, total weekly hours will not exceed 20. It is common for a Course Assistant appointment to require less than 50% time (or 20 hours per week.) In such a situation, the remainder of the 50% appointment would generally be applied toward Research Assistantship for Ph.D. students. M.S. students appointed as Course Assistants will receive the percentage appointment which is approved for the course.

International graduate students who wish to be appointed as teaching assistants or course assistants must first be screened by EFS for readiness to use English in a teaching role. To make an appointment, a student should contact efs@stanford.edu. Students who are **native English speakers** may call 725-5378 or 725-1557 to request a waiver. For more information see: [https://language.stanford.edu/programs/efs/languages/english-foreign-students/screening-international-teaching-assistants](https://language.stanford.edu/programs/efs/languages/english-foreign-students/screening-international-teaching-assistants)
Course Unit Load for Assistantships
Students with Research, Teaching or Course Assistantships must maintain at least 8 units of course work per quarter (we strongly encourage registration for 10 units). Any difficulties with maintaining this course load should immediately be brought to the attention of the Student Services Manager and the student's advisor. If it is necessary to drop a course, sometimes research units can be taken to maintain the 8-10 units of registration.

Work Eligibility Forms
Students who receive research or course assistantships must complete an Employee Tax Data Form (filed annually), an Employment Eligibility Verification Form (I-9), and a Declaration of Tax Status (LA-6). The I-9 establishes eligibility to work in the US for a maximum of three years. This form may need to be renewed one or more times during a student's stay at Stanford. Students should be cognizant of any expiration date that may be listed and contact the Payroll Office with new documents well before that date so they can process an extension to the I-9.

In order to file an I-9, all international students must have a valid passport with the I-94 card and the I-20 or IAP-66 document containing an employment authorization stamp. These original documents must all be shown to the appropriate administrator in person. If you have questions regarding expired passports or employment authorization, contact the Bechtel International Center. No student, international or US, will be paid salary without showing either an original Social Security card or a copy of their application for a Social Security card.

University Bill
All bills for tuition, room and board and other related charges become subject to late fees if they are not paid by the posted due date. It is very important that you pay any charges for which you are responsible, including those not covered by any financial aid, including Post Office Mail Box fees, health care fees, and parking fees. If you are unsure about whether a charge is covered by financial aid and you pay a charge which is covered, you should contact the Office of Student Financial Service. You may receive a refund of payments you made, but were paid for by financial aid. Credits for fellowship funding received from the University or outside fellowships sent through the University will show in the AXESS system (if they have been entered and approved), but salary funding will not show as a credit. You can determine that your RA or CA appointment (salary) has been processed by checking to see if the tuition credit displays in AXESS.

If you have a bill which you are unable to pay in full by the due date, you should get in touch with an Account Representative in the Office of Student Financial Services right away. They may be able to make special payment arrangements.

You do not have to pay tuition or your housing fees up front if you have financial aid. If you are receiving a fellowship, these charges will be deducted from our fellowship stipend. If you have an RA or CA appointment, these costs can also be paid for by an automatic deduction from your paycheck if you make a request for this directly to the payroll office.
Health insurance for dependents is an additional charge and you must make arrangements for this with Vaden Health Center for medical coverage for your family members. You are entitled to a subsidy for one-half the cost of your health care only if you are receiving financial aid from the University or the department.

Students should review their University bill on Axess under the Home or Finances tab. Choose the Stanford ePay Login link. If you have problems or questions concerning your bill, you should contact the Student Services Center on the 2nd floor of Tresidder Memorial Union. Hours: Mon - Fri 9am – 5pm. Phone: (650) 723-7772 or (866) 993-7772.

Health Service Fee
The Campus Health Service Fee is assessed to cover the on-campus services available to students through Vaden Health Center at 866 Campus Drive. The Center provides medical care, support and education to Stanford students. The cost of most services is covered without charge for students who have paid the Campus Health Service Fee. Students who have not paid the Service Fee will be charged for each service. Spouses, domestic partners and dependents age 18 and over may also use the medical services, travel clinic and pharmacy.

Working Elsewhere - US Citizens
The University has a strict policy about working while being a registered student. If you are supported by any University source with a 50% appointment, you are not allowed to work more than eight additional hours per week anywhere – on or off campus. If you are thinking about additional work, you should discuss this with both your academic and your research advisors and have permission from them. With a 50% appointment, you are expected to work 20 hours per week every week, and carry a full-time academic course load. Even if you are only carrying research units, you are expected to perform 20 hours of paid work, in addition to the at least 20 hours of research you are doing, to earn the 8-10 course units, plus up to 8 more hours. Auditors and administrators are very suspicious that a student truly performing all of this work can handle additional assignments. Your grades will suffer and it is a violation of University and School policy. Don’t do this.

Working Elsewhere - International Students
Foreign students supported by the RA or CA funds are only allowed to work 20 hours per week on for their research or teaching projects. Foreign students with funding from a source other than Stanford are expected to devote their full energy to studying and are not allowed to work off campus Homeland Security rules, except in the summer under particular circumstances using Optional Practical Training or Curricular Practical Training, limit your outside activities. Learn about these rules at the Bechtel International Center and get their approval before you accept a job offer. Rules regarding work by international students and visitors are established by the US government, are part of your visa agreement, and are not generally under the control of the department, the School or the University. Violation of these rules may result in expulsion from the US.
Research Purchasing

Purchasing is done via Stanford’s Buying and Paying online portal. Information on using Stanford’s SmartMart, iProcurement, or Expense Report modules can be found under the “How To” tab. Additional information on how to use the system can be found by asking advanced students in your research group or your research advisor’s administrative associate for guidance. All expenditures are charged to a university account and require approval of the Department Manager and/or Research Financial Administrator (RFA). Purchase requests are processed through the departments and/or centers that handle the accounts funding the purchase. Be aware that if you are working with a faculty member in another department, their administrative procedures for ordering materials may differ from the Department of Materials Science and Engineering’s procedures.

Some materials and services may also be purchased by using the department’s credit card (aka “p-card”). Please stop by Durand 102 and ask to speak to the custodian of the p-card for the Materials Science and Engineering. If your faculty advisor is located in the Durand Building please see corresponding administrative associate. If your faculty advisor is located in the McCullough please report to their corresponding administrative associate. The p-card is used for purchases that are NOT available through SmartMart or iProcurement. Approvals for these are necessary in the same way as for purchase requisitions described above.
Most of the forms and petitions described below can be obtained from the Student Services Manager or online through the Student Resources tab on our website. Many of them are now available on-line through the Registrar’s Office website, although we prefer that you come by, discuss them with us, and use our color-coded forms. The student is required to sign all forms, obtain their academic advisor’s signature (as well as the research advisor if they are not the same person), and to return them to the Student Services Manager for review and forwarding, if necessary. The Manager will inform the student if any further action is needed.

There is usually a form for everything you want or need to do. Check with the Student Services Manager whenever you make a change in your program or degree or whenever you reach a benchmark in the pursuit of your degree.

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**Academic Program, Progress, Revisions, Changes**

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**Change of Advisor or Reading Committee Member**

Occasionally, a student’s research may diverge from the originally intended area and the student or the faculty adviser may request a change in assignment. Students are required to provide a change form to identify a new advisor or reading committee member for their dissertation and oral exam.

*For a subsequent change in advisor, due as soon as a change is agreed upon.*

https://mse.stanford.edu/sites/default/files/change_addition_advisor_reader_0.pdf

*For a Reading Committee Member change, due when the change is needed, but before the oral exam is scheduled.*


**Master’s Degree Forms**

- **Program Proposal for Master’s Degree**
  A list of courses to be taken in fulfillment of the requirements for the M.S. degree.  
  *Due by the end of the first quarter of study.*
  Located: Masters Program Proposal

- **MS Final Program Proposal**
  The final list of courses that were actually taken to fulfill the requirements for the M.S. degree (or courses enrolled in for the final quarter of study).  
  *Due during the first week of the quarter BEFORE you intend to graduate.*
  Located: Final Program Proposal

**M.S. to Ph.D. Program Petition**

This is a department form that allows a student enrolled in the M.S. program to petition to be
considered for the Ph.D. program and is, in effect, an application to the Ph.D. degree. The petition is considered seriously and not routinely approved. A student must have a GPA of 3.50 or better in department core course and provide a statement of purpose and letters of recommendation from two faculty members, including the proposed advisor (who will provide financial support) and an MSE academic council member.

_Due by June 1 of the student’s first year in the M.S. program._
Located: MS to PhD Petition

**Ph.D. Degree Forms**

- **Ph.D. Program Plan**
  A list of courses intended to be taken in fulfillment of the requirements for the Ph.D. degree.
  _Due in early November._
  Located: PhD Program plan

- **Ph.D. Candidacy**
  A list of courses taken and intended to be taken in fulfillment of the requirements for the Ph.D. degree. Also known as the Application for Candidacy. Students must also submit the Graduate Program Authorization Petition (online in Axess).
  _Due within two weeks of completing the Qualifying Exam._
  Located: Application for PhD Candidacy

- **Graduate Program Authorization Petition (on-line in Axess)**
  To request a new degree program or to request a change of degree program.
  - Required for all students admitted to the Ph.D. program to add an M.S. degree.
  - Required for all students who petition and are approved by the department to move from the M.S. to the Ph.D. program.
  _Due prior to qualifying exam to add an M.S. degree; due when petition is approved to add Ph.D. Once you have discussed this form with the Student Services Manager and your advisor, the petition may be submitted through Axess. There is a $125 application fee. The submitted petition is electronically routed to the current department and then the proposed department for those adding a program._

- **Ph.D. Final Program Plan**
  The final list of courses/research that were actually taken to fulfill the course/research requirements for the Ph.D. degree.
  _Due the quarter before you intend to submit for Terminal Graduate Rate Tuition along with your Dissertation Reading Committee form._
  Located: Final Program

  - **Doctoral Dissertation Reading Committee**
    Submitted by student to initiate department appointment of faculty members to the dissertation reading committee.
    _Due after completion of sufficient research to establish a committee who can help you as you progress with your dissertation, but before scheduling a University Oral Examination and prior to submission of the terminal graduate registration (TGR) form for reduced tuition._
    Located: https://stanford.app.box.com/v/docdiss-reading-committee-form

  - **Request for TGR Status** (Terminal Graduate Registration)
Doctoral students, who have been admitted to candidacy, completed all required courses and degree requirements other than the University oral exam and dissertation, completed 135 units and submitted a Doctoral Dissertation Reading Committee form may be eligible for a special reduced tuition category and may request TGR status to complete their dissertations. Tuition is reduced significantly at this point and students should organize their program to take advantage of this tuition discount. Students registered in TGR status must enroll each quarter in MATSCI 801 (for masters and Engineer degree students) or MATSCI 802 (for PhD students) under the name of their research advisor and for zero units. They may also enroll in up to three units of course work at this tuition rate.

Due before the beginning of the quarter for which the request is being made.


- **University Oral Examination Schedule**
  Lists the student’s information, examination information and the committee members. Due at least two weeks prior to the requested examination date.


- **Request for Graduation Quarter Registration**
  This form is very specifically used once only to register for your final quarter in which you will submit your dissertation or receive your degree. You may only register for one graduation quarter. Due before that quarter begins. You must also be registered for TGR status and have completed your oral dissertation defense.


**Application for Candidacy for Degree of Engineer**
A list of courses to be taken in fulfillment of the requirements for the Engineer’s degree. Due by the end of the second quarter in the Engineer Program.

**Application for the Ph.D. Minor**
Allows students to enroll in a program of study in another department that complements the student’s Ph.D. program. Requires approval from both the major and minor departments. Departmental requirements vary, but the University requires a minimum of twenty (20) units of course work in the minor department. Student must have a minor program advisor who may require to be a member of the student’s oral examination committee and reading committee. Due as soon as the minor is agreed upon.

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*Registrar’s Office Special Circumstances Forms*

**Petition to Change Course Enrollment**
The Registrar’s office has strict rules for course enrollments which are found in the Stanford Bulletin. Specific dates are published each quarter in the Time Schedule. Exceptions to the deadlines on course enrollments are normally granted only in exceptional cases where the delay was a result of University Action.
Due as soon as possible after the situation arises. Obtain from Student Services Center. Fees will be imposed to make any of these kinds of changes after the deadlines.
Located: https://stanford.app.box.com/v/change-crse-enroll

Application for Graduate Residence Credit
A maximum of 45 units for graduate work completed at another institution or at Stanford towards a master’s degree may be applied to the requirements for the degrees of Ph.D., D.M.A. or Engineer. To petition to receive credit for such residency units, you must first successfully complete at least one quarter of graduate work at Stanford. This not only reduces your residency requirement at Stanford, but may also help determine any course substitutions which can be made when planning your academic program. 
No due date, best if completed within the first year at Stanford.

Petition for Non-Academic Council Doctoral Committee Member
The student’s department chair may, in some cases, approve the appointment of a reader who is not on the Academic Council if that person is particularly well-qualified to consult on the dissertation topic and holds a Ph.D. or equivalent foreign degree. This may occur when an expert in the field the student is researching who would add academic insight to the examining committee is available and approved by the advisor. An explanation by the advisor is required as well as a resume from the proposed committee member.
Due when the Reading Committee form is submitted.

Petition for Less Than Full-Time Registration
This is a University form that must be completed and approved at both the department and University level when a student wants to reduce the units they will be enrolled for in a particular quarter below the 8-10 unit full-time level. The minimum number of units taken in a given quarter is determined in collaboration with the student’s department.
Due prior to the beginning of the quarter.

Application for Extension of Candidacy or Master’s Program
If your candidacy or master’s program has expired, you can submit this form to the department to request an extension for up to one year of the original period of candidacy. This form is not routinely approved and an extension will require a meeting between the student, the advisor and the department chair. If you intend to complete an M.S. degree as part of your Ph.D. degree, please complete the requirements of your M.S. degree in a timely manner. A detailed explanation of how and when the degree will be completed is necessary for approval.
Due prior to the termination of the original M.S. Program or Ph.D. candidacy.

Leave of Absence
A leave of absence is required for any term of the academic year (summer excluded) for which a student does not wish to enroll in classes. If you have a multiple degree program, a leave of absence is only granted for all programs and majors. Leaves are not granted for more than one year at a time and total leaves of absence may not cumulatively exceed two years. If a student does not take a properly documented leave of absence, he or she will have to reapply, be reinstated, and pay fees to continue their program. International students must discuss
plans and obtain a signature from the Bechtel International Center.

**NOTE:** Graduate students may not take a leave of absence during their first quarter of enrollment.

*Due prior to the beginning of the quarter of the anticipated leave to ensure a full refund.*

*Students who submit a form during a quarter, must submit their forms before the Final Study List deadline. Refunds are then processed on a per diem basis.*


**Returning or Extending a Leave of Absence**

If returning sooner than indicated on your Leave form, you must submit a Returning Graduate Student Request to Register form. To extend an initial leave of absence, you are required to submit a Leave of Absence form (with the extension portion filled out). An extension is granted in special circumstances only and cannot be longer than one additional year.

*Due prior to the end of your leave.*

Located:


**Application for Reinstatement**

If a student does not submit a Leave of Absence form and was discontinued for no enrollment, then the student must file an Application for Reinstatement to Graduate Study form. This must include a statement of purpose regarding the reasons for requesting a return to the degree program and an endorsement by the advisor that granting the request will result in degree conferral. Both an application fee and a reinstatement fee apply.

*Due at least one month prior to the beginning of the quarter of the anticipated return to school.*


**Request to Permanently Withdraw from Degree Program**

This form is a request that the Registrar’s Office permanently withdraw you from your degree program. If you decide to return to a degree program at a later date, you will have to apply for reinstatement and pay necessary reinstatement fee(s). The form may be used to withdraw from any degree if a student either chooses not to complete the degree or fails the Qualifying Examination and is not advanced to Ph.D. candidacy.

*Due as soon as the decision is made.*

Materials Science and Engineering department forms can be found at the Student Services Office in the Durand Building, first floor or online (https://mse.stanford.edu/student-resources/forms). These forms include, but are not limited to:

- MS Program Proposal
- MS Final Program Proposal
- MS Course Substitution Petition
- MS to PhD Program Petition
- PhD Program Plan
- PhD Application for Candidacy
- PhD Final Program Plan
- MSE Petition Form
- MSE Addition of Advisor Form

You will also need to talk to the Student Services Manager and fill out forms to do the following:

- take the Ph.D. qualifying examination with a grade point average in core courses below 3.50
- be exempted from required lab courses
- be exempted from required core classes
- make special course substitutions
- have a non-Stanford academic member on the departmental Ph.D. qualifying examining committee (not thesis defense).

Due prior to the effective date of the requested action. (i.e. submit a petition to be exempted from a core class or a lab class BEFORE the class is needed for your degree program.)
Safety Education Certification Statement
The Safety Education Certificate is required for all students. For more information please refer to the Health and Safety manual you will receive or did receive at the department’s safety training class.
Due prior to using any labs and being issued necessary keys.

Research Assistantship Form
This is a School of Engineering Form that details how you will be paid for any work you are doing for your research advisor (not for fellowship payments). You will need to fill out the top part of this form and sign it. Then have your advisor sign it and document how much they will pay you and from what research account. It is your responsibility to make sure that this form has been signed and returned it to the Student Services Manager or the responsible administrative assistant for the faculty member.
Due substantially before the quarter of pay begins in order for it to be processed in time for you to be paid appropriately.

https://drive.google.com/a/stanford.edu/file/d/0B0ouVUL42BcOMmNiNTBiZTctY2EyMi00Mzk5LWJIN2EtNTdhZmJIJUxNJYW/view?ddrp=1&pli=1&hl=en_US

NOTE: You will not be given special paychecks simply because the form was submitted late.

Course Assistant Form
This form will detail how you will be paid for any work you are doing for a course. You will need to fill out the top part of this form and sign it. Then have your course supervisor sign it and indicate your percentage of effort. It is your responsibility to make sure that this form has been signed and returned it to the Student Services Manager.
Due substantially before the quarter of pay begins in order for it to be processed in time for you to be paid appropriately.

https://drive.google.com/file/d/0B0ouVUL42BcOJzRmNzRkYTktYjEwMi00MTg5LWJIMtZDcxNzM5ODE5MVi/view?pli=1

Patent and Copyright Agreement Form
Needs to be signed by ALL graduate students upon their arrival at Stanford. This form is mandatory and can be signed electronically in Axess.

Employment Eligibility Verification Form - I-9
The I-9 form is used by the U.S. government to verify your identity and to establish your eligibility to work in the United States. It is available on the financial resources (Fingate) portion of the Stanford website. Any student paid as a research assistant (RA), course assistant (CA), teaching assistant (TA), or on an hourly basis for any type of work will need to fill this out and provide such proper documentation as an original social security card and an acceptable form of picture ID, to prove work eligibility. Types of acceptable ID’s are listed on the back of the form. Foreign students must provide a passport, visa, I-94 and the I-20 or IAP-66 as well as their social security card.
Due prior to being paid for the quarter on the payroll system.

Form LA-6
Used for foreign visitors, the United States and California laws require that Stanford have visitors complete this form and return it to their department yearly. The form records the visitor's tax status and is required for any type of payments made to foreign visitors, including reimbursements. Submit this form to the Student Services Manager soon after your arrival or whenever you are asked to complete one.
Due along with the I-9 form prior to the first applicable pay period.

Form W-4
The federal W-4 form is a Withholding Allowance Certificate which determines how much federal income tax is deducted from your pay. It must be completed and submitted to the payroll office prior to receiving any salary payments. It is both available and submitted online in Axess.
Due prior to the first applicable pay period.

Claim Tax Treaty for Fellowship Payments (W-8BEN Forms)
A student who receives a fellowship and is a resident of a country that maintains a tax treaty with the U.S. for reduced federal taxation on fellowship payments must complete and submit this federal form to Payroll to reduce the amount of taxes they will have to pay. The Stanford website (Gateway to Financial Activities section on Taxes) provides the steps required to claim this benefit.
Due prior to receiving any income from Stanford.
The Honor Code is the university's statement on academic integrity written by students in 1921. It articulates university expectations of students and faculty in establishing and maintaining the highest standards in academic work.

**Honor Code Text**

1. The Honor Code is an undertaking of the students, individually and collectively:
   a. that they will not give or receive aid in examinations; that they will not give or receive unpermitted aid in class work, in the preparation of reports, or in any other work that is to be used by the instructor as the basis of grading;
   b. that they will do their share and take an active part in seeing to it that others as well as themselves uphold the spirit and letter of the Honor Code.

2. The faculty on its part manifests its confidence in the honor of its students by refraining from proctoring examinations and from taking unusual and unreasonable precautions to prevent the forms of dishonesty mentioned above. The faculty will also avoid, as far as practicable, academic procedures that create temptations to violate the Honor Code.

3. While the faculty alone has the right and obligation to set academic requirements, the students and faculty will work together to establish optimal conditions for honorable academic work.

**Violations of the Honor Code**

Examples of conduct that have been regarded as being in violation of the Honor Code include:

- Copying from another's examination paper or allowing another to copy from one's own paper
- Unpermitted collaboration
- **Plagiarism**
- Revising and resubmitting a quiz or exam for regrading, without the instructor's knowledge and consent
- Giving or receiving unpermitted aid on a take-home examination
- Representing as one's own work the work of another
• Giving or receiving aid on an academic assignment under circumstances in which a reasonable person should have known that such aid was not permitted

**Penalties for Violating the Honor Code**

In recent years, most student disciplinary cases have involved Honor Code violations; of these, the most frequent arise when a student submits another’s work as his or her own, or gives or receives unpermitted aid. The standard penalty for a first offense includes a one-quarter suspension from the University and 40 hours of community service. In addition, most faculty members issue a "No Pass" or "No Credit" for the course in which the violation occurred. The standard penalty for multiple violations (e.g. cheating more than once in the same course) is a three-quarter suspension and 40 or more hours of community service.

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**Fundamental Standard**


The Fundamental Standard has set the standard of conduct for students at Stanford since it was articulated in 1896 by David Starr Jordan, Stanford's first president. It states:

Students at Stanford are expected to show both within and without the university such respect for order, morality, personal honor and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the university.

**Understanding the Fundamental Standard**

The Fundamental Standard is an aspirational statement of Stanford's ideal of civic and moral community. Although the spirit of the Fundamental Standard remains unchanged since 1896, these aspirational learning goals for all Stanford students elaborate its basic values today:

1. Students are expected to respect and uphold the rights and dignity of others regardless of race, color, national or ethnic origin, sex, age, disability, religion, sexual orientation, gender identity, or socio-economic status.
2. Students are expected to uphold the integrity of the university as a community of scholars in which free speech is available to all and intellectual honesty is demanded of all.
3. Students are expected to respect university policies as well as state and federal law.
4. For the purposes of clarity, students should be aware that they may be subject to discipline at Stanford University for acts of misconduct including:
   - Violation of university policy
   - Violation of a specific university directive
   - Violation of an applicable law
• Physical assault
• Sexual misconduct, sexual assault, sexual harassment, stalking
• Theft of property or services
• Threats
• Hazing
• Hate crimes
• Alcohol- and drug-related violations, including driving under the influence
• Intentional or reckless property damage
• Seeking a university benefit to which a student is not entitled
• Falsifying a document
• Impersonating another
• Computer violations
• Knowingly or recklessly exposing others to significant danger

Penalties for Violating the Fundamental Standard

There is no standard penalty that applies to violations of the Fundamental Standard. Infractions have led to penalties ranging from formal warning and community service to expulsion. In each case, the nature and seriousness of the offense, the motivation underlying the offense and precedent in similar cases are considered.

Other Stanford Policies

For your convenience and ease of reference, we have posted links to a number of Stanford University policies that are germane to Stanford's Fundamental Standard and Honor Code.

The Office of Community Standards strives to maintain the most current and comprehensive information possible. However, the posting/linking here in no way purports to be completely up-to-date or exhaustive. Please see the Stanford Bulletin among other official university documents—for comprehensive, current statements of Stanford policy.

University Expectations for Faculty and Staff
The University Code of Conduct: a guide to the ethical, professional and legal standards of the university, with guidance on how to uphold these standards.

Use of Computers and Networks
Computer and Network Usage Policy: Blanket policy about appropriate use of computers and networks; part of the Administrative Guide.

Sexual Violations
Sexual Assault
• Policy on Sexual Assault: Stanford’s policy on sexual assault; part of the Administrative Guide.
• **Sexual Assault Support & Resources**: A comprehensive resource about sexual violence and harassment. Includes information about reporting and other options, as well as education and prevention; provided by the Sexual Violence Advisory Board.

**Sexual Harassment**
- **Policy on Sexual Harassment and Consensual Sexual or Romantic Relationships**: part of the Administrative Guide.
- **Sexual Harassment Policy Office**: Any member of the Stanford community may contact this office for questions related to sexual harassment.
- **Title IX** concerns can also be reported to the Title IX Coordinator.

**Individual Abuse**
- **Controlled Substances and Alcohol Policy**: Policies related to controlled substances and alcohol on campus, from the Administrative Guide.
- **Possession of Dangerous Weapons**: Stanford policy for students regarding weapons on campus.
- **Smoke Free Environment**: Policy regarding where smoking is prohibited on campus, from the Administrative Guide.

**Copyrighted Material and File-Sharing Networks**
- **Computer and Network Usage Policy**: Basic copyright policy related to computers and file-sharing.
- **SULAIR Annual Copyright Reminder**: information about the current state of copyright law and how it applies to Stanford.
- **Computer Usage**: Detailed information about complying with Stanford policies and various laws regarding file-sharing/computing.

**Additional Policies**
- **Stanford University’s Policy on Arrests and Prosecution (PDF)**
- **Acts of Intolerance Protocol**: Outlines procedures and support options for members of the community when acts of intolerance occur on campus; from the Office for Campus Relations.
- **Hazing**: Policy about hazing, from the Stanford Bulletin.
- **Noise/Amplified Sound Policy**: Rules regarding noise and the use of amplified sound, from the Student Organization Handbook.
- **Guidelines for the Use of White Memorial Plaza**: Information about the use of White Plaza, from Student Activities and Leadership.
- **Policy on the Use of the Oval**: Part of the policy on university events in the Stanford Administrative Guide.
- **Use of the Main Quadrangle and Memorial Court**: Part of the policy on university events.
Graduate Academic Policies and Procedures (GAP)
http://gap.stanford.edu/
Graduate Academic Policies and Procedures handbook (the GAP handbook) is a compilation of university policies and other information related to the academic progress of Stanford graduate students -- from their application and admission, to the conferral of degrees and retention of records.

The GAP handbook provides background and rationale for Stanford's academic policies related to graduate students, defines certain university-wide requirements, and offers implementation guidance to describe how the various functions within the university work together to support the graduate student's academic progress. While recognizing that faculty are critically important as teachers, advisers and mentors, this handbook is designed primarily for university staff -- in school, department and program offices, and in the several central organizational units that support student administration. It should also be helpful to Department Chairs, Directors of Graduate Studies and others with responsibilities in this area.

Within schools, departments and programs, some of the processes described here may be carried out differently depending on local circumstances and the particular facts of individual students' cases. The information contained here is university-wide in its scope, however, and should provide a starting point for local implementation.

Stanford Bulletin
http://exploredegrees.stanford.edu/
The Stanford Bulletin is Stanford University's official catalog of courses, degrees, policies, and University and degree requirements.
- ExploreDegrees publishes degree requirements, University requirements, and academic and nonacademic policies and regulations, as well as information on Stanford's schools, departments, and interdisciplinary programs.
- ExploreCourses publishes courses and class scheduling for the entire University.

Libraries
http://library.stanford.edu/
The Stanford University Libraries (SUL) is more than a cluster of libraries; it connects people with information by providing diverse resources and services to the academic community. SUL includes more than 20 individual libraries across campus, each with a world-class collection of books, journals, films, maps, databases, and more.
- Engineering Library
http://library.stanford.edu/libraries/englib/about
  The Frederick Emmons Terman Engineering Library supports the research and teaching of the School of Engineering and Physics and Applied Physics Departments, as well as the research labs and institutes of the following departments: Aeronautics & Astronautics,

**Wellness Network**
https://wellness.stanford.edu/graduate
The Wellness Network at Stanford is a comprehensive online resource directory designed to connect students and the Stanford community to immediate help, health and wellness, and communities of support at Stanford.

The Wellness Network was created with guidance from students, faculty, staff and others. The site is managed by the Office of the Vice Provost for Student Affairs, but the extensive support network and resources it highlights represents our entire community, including Student Affairs, the Vice Provost for Undergraduate Education, the Vice Provost for Graduate Education and numerous campus and community partners.

**Graduate Life Office (GLO)**
https://glo.stanford.edu/
The Graduate Life Office’s specialty is helping graduate students, and they are here to help you navigate the issues, challenges and complications that are an inevitable part of life. The Graduate Life Office (GLO) can assist with a variety of situations including, but not limited to
- personal issues
- roommate problems
- family and health concerns
- academic challenges
- financial difficulties
GLO can also help you with practical questions about life on campus and in the local community. They know about support services across campus and can refer you to the staff or office best suited to address your needs.
- Some problems or concerns can benefit from professional counseling and we can help you determine if seeking professional advice is right for you. Counselors at Counseling, and Psychological Services (CAPS) at Vaden Health Center advise students about their individual needs.
- **Sexual Assault Support & Resources**: A comprehensive resource about sexual violence and harassment. Includes information about reporting and other options, as well as education and prevention; provided by the Sexual Violence Advisory Board.

**Office of Accessible Education**
https://oae.stanford.edu/
The Office of Accessible Education offers a variety of accommodations for undergraduate and graduate students with disabilities. Accommodations are determined and provided based upon the student's disability and the academic requirements of the school or program.
Bechtel International Center
http://icenter.stanford.edu/
They can assist you with all your visa questions, from application through extensions.

Counseling and Psychological Services (CAPS)
https://vaden.stanford.edu/caps/about-us
Counseling and Psychological Services (CAPS) is dedicated to promoting students’ mental health and well-being. The CAPS staff are specialists treating undergraduate and graduate students and can help address your concerns in a confidential and supportive setting. Many services are available without additional charge for students who have paid the Campus Health Service Fee. CAPS can provide:

- Evaluation and brief counseling, including individual, couples, and group therapy
- Workshops and groups that focus on social, personal, and academic effectiveness
- Crisis counseling for urgent situations 24 hours a day
- Consultation and outreach to faculty, staff, and student organizations
- Medication management

BEAM (Career Education & Development)
https://beam.stanford.edu/
The Career Development Center has recently transformed into Stanford Career Education, and is now known as BEAM (Bridging Education, Ambition, and Meaningful Work). Career educators at BEAM connect with students in appointments and meetups to help them explore career paths, identify and apply for opportunities, and cultivate personalized networks that shape their professional journey. Students are encouraged to take advantage of the 17+ customized career fairs, join industry treks in the Bay Area and around the U.S., and network with one of the 3,000 alumni in the Stanford Alumni Mentoring (SAM) program. In 2015 BEAM launched Handshake, an online platform that connects students with a diverse range of employers, events, and opportunities. BEAM’s programs and resources are designed to empower students to transform their education and ambitions into meaningful work.

Vice Provost for Teaching & Learning
https://vptl.stanford.edu/
The VPTL is a University-wide resource whose vision is that everyone at Stanford will know how learning works and will translate that knowledge into research-based, daily practice and public dialog. The center supports faculty, lecturers, teaching assistants, and students with courses and other resources designed to enhance teaching excellence and/or learning skills while also providing a source of motivation, inspiration, and guided self-reflective growth.
Instructions for Research/Course Assistantship Forms

RA/CA forms have moved to an entirely online system called Pega.

[https://stanford.pegacloud.io/prweb/sso](https://stanford.pegacloud.io/prweb/sso)

- This applies to PhDs who are NOT on SGF, NSF, NDSEG, or outside fellowships.
- This applies to anyone who intends to CA in Autumn.
- You must be enrolled for 10 units of MatSci 300 this summer (unless TGR/GRQtr = MatSci 802).

You enter the first informational section and the “processors” take it from there!