Department of Materials Science and Engineering

Masters Student Handbook

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Note: The information contained in this graduate handbook template focuses on the resources and locations available at the Carnegie Mellon Pittsburgh Campus.
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1. Welcome
Welcome to the graduate program in Materials Science and Engineering at Carnegie Mellon University. The Department of Materials Science and Engineering (MSE) is one of seven academic departments in Carnegie Institute of Technology, the engineering college at Carnegie Mellon. MSE has a long and distinguished tradition in materials education and research, and today our faculty continue to address the more important and challenging issues at the forefront of science and technology.

Materials Science and Engineering is an interdisciplinary activity that applies the principles of basic sciences and engineering to understanding the behavior of materials, their development and applications. Both our undergraduate and graduate students are exposed to this interdisciplinary approach.

2. Degrees Offered
The Materials Science and Engineering department offers three graduate degrees:
Master of Science in Materials Science and Engineering (MSE)
Master of Science in Materials Science (MATSCI)
Doctor of Philosophy in Materials Science and Engineering (PhD)

3. University Policies & Expectations
It is the responsibility of each member of the Carnegie Mellon community to be familiar with university policies and guidelines. In addition to this departmental graduate student handbook, the following resources are available to assist you in understanding community expectations:
- Academic Integrity Website: https://www.cmu.edu/student-affairs/ocsi/academic-integrity/index.html
- University Policies Website: www.cmu.edu/policies/
- Graduate Education Website: http://www.cmu.edu/graduate/policies/index.html
- College Of Engineering Website: http://engineering.cmu.edu/current_students/graduates/policies.html

Carnegie Mellon University does not discriminate in admission, employment, or administration of its programs or activities on the basis of race, color, national origin, sex, handicap or disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. Furthermore, Carnegie Mellon University does not discriminate and is required not to discriminate in violation of federal, state, or local laws or executive orders.
Inquiries concerning the application of and compliance with this statement should be directed to the vice president for campus affairs, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-2056.

The Statement of Assurance can also be found on-line at: https://www.cmu.edu/policies/administrative-and-governance/statement-of-assurance.html

5. The Carnegie Mellon Code
Students at Carnegie Mellon, because they are members of an academic community dedicated to the achievement of excellence, are expected to meet the highest standards of personal, ethical and moral conduct possible.

These standards require personal integrity, a commitment to honesty without compromise, as well as truth without equivocation and a willingness to place the good of the community above the good of the self. Obligations once undertaken must be met, commitments kept.

As members of the Carnegie Mellon community, individuals are expected to uphold the standards of the community in addition to holding others accountable for said standards. It is rare that the life of a student in an academic community can be so private that it will not affect the community as a whole or that the above standards do not apply.

The discovery, advancement and communication of knowledge are not possible without a commitment to these standards. Creativity cannot exist without acknowledgment of the creativity of others. New knowledge cannot be developed without credit for prior knowledge. Without the ability to trust that these principles will be observed, an academic community cannot exist.

The commitment of its faculty, staff and students to these standards contributes to the high respect in which the Carnegie Mellon degree is held. Students must not destroy that respect by their failure to meet these standards. Students who cannot meet them should voluntarily withdraw from the university.

The Carnegie Mellon Code can also be found on-line at: http://www.cmu.edu/student-affairs/theword/code.html

6. University Resources

a. Office of the Assistant Vice Provost for Graduate Education
www.cmu.edu/graduate; grad-ed@cmu.edu

The Office of the Assistant Vice Provost for Graduate Education, AVPGE, directed by Suzie Laurich-McIntyre, Assistant Vice Provost for Graduate Education, provides central support for graduate students in a number of roles. These include: being an ombudsperson and resource person for graduate students as an informal advisor; resolving formal and informal graduate student appeals; informing and assisting in forming policy and procedures relevant to graduate students; and working with departments on issues related to graduate students and implementation of programs in support of graduate student development.

The Office of the Assistant Vice Provost for Graduate Education (AVPGE) offers a robust schedule of professional development opportunities. Some are geared towards a specific population (master’s students, PhD students at the beginning of their program, graduate students seeking tenure track positions, etc.) and others are open to all graduate students (time management, balancing, staying healthy).
The Office of the AVPGE also coordinates several funding programs, and academically focused seminars and workshops that advise, empower and help retain all graduate students, particularly graduate students of color and women in the science and technical fields. The fundamental goals of our programs have been constant: first, to support, advise and guide individual graduate students as they work to complete their degrees; second, to contribute to the greatest degree possible to the diversification of the academy. Visit the Graduate Education website for information about:

- Conference Funding Grants
- Graduate Small Project Help (GuSH) Research Funding
- Graduate Student Professional Development: seminars, workshops and resources
- Graduate Women Gatherings (GWG)
- Inter-university Graduate Student of Color Series (SOC)

b. Office of the Dean Student Affairs
www.cmu.edu/student-affairs/index.html
The Office of the Dean provides central leadership of the metacurricular experience at Carnegie Mellon. The offices that fall under the division of Student Affairs led by Dean of Student Affairs Gina Casalegno, include:

- Career and Professional Development Center
- Counseling & Psychological Services (CAPS)
- Housing & Dining Services
- Office of Community Standards & Integrity
- Office of International Education (OIE)
- Student Activities
- Student Life

Graduate students will find the enrollment information for Domestic Partner Registration in the Office of the Dean of Student Affairs and on the website.
http://www.cmu.edu/student-affairs/dean/domestic_partner/index.html

The Office of the Dean of Student Affairs also manages the Emergency Student Loan (ESLs) process. The Emergency Student Loan service is made available through the generous gifts of alumni and friends of the university. The Emergency Student Loan is an interest-free, emergency-based loan repayable within 30 days. Loans are available to enrolled students for academic supplies, medication, food or other expenses not able to be met due to unforeseeable circumstances.
http://www.cmu.edu/student-affairs/dean/loans/index.html

c. Assistance for Individuals with Disabilities
http://www.cmu.edu/education-office/disability-resources/index.html
The Office of Disability Resources at Carnegie Mellon University has a continued mission to provide physical and programmatic campus access to all events and information within the Carnegie Mellon community. We work to ensure that qualified individuals receive reasonable accommodations as guaranteed by the Americans with Disabilities Act (ADA) and Sections 503 and 504 of the Rehabilitation Act of 1973. Students who would like to receive accommodations can begin the process through Disability Resources secure online portal or email access@andrew.cmu.edu to begin the interactive accommodation process.
For more information please see https://www.cmu.edu/disability-resources/. Students with disabilities are encouraged to self-identify with the Office of Disability Resources by contacting Catherine Getchell, 412-268-6121, getchell@cmu.edu to access the services available at the university and initiate a request for accommodations.

Office of Disability Resources, Carnegie Mellon University
Margaret Morrison Plaza A30
5136 Margaret Morrison Street
Pittsburgh, PA 15213
Phone: (412) 268-6121

d. Counseling & Psychological Services
http://www.cmu.edu/counseling/
Counseling & Psychological Services (CAPS) affords the opportunity for students to talk privately about issues that are significant for them in a safe, confidential setting. Students sometimes feel confused about why they are feeling upset and perhaps confused about how to deal with it. An initial consultation with a CAPS therapist will clarify options and provide a recommendation to the appropriate mental health resource at Carnegie Mellon or the larger Pittsburgh community. CAPS services are provided at no cost. There are, however, limits on the number of sessions. Follow-up psychiatric services and off-campus referrals for longer term therapy are at the client's expense. Appointments can be made in person or by telephone, 412-268-2922.

e. Office of International Education (OIE)
http://www.cmu.edu/oie/
Carnegie Mellon hosts international graduate and undergraduate students who come from more than 90 countries. OIE is the liaison to the University for all non-immigrant students and scholars. OIE provides many services including: advising on personal, immigration, academic, social and acculturation issues; presenting programs of interest such as international career workshops, tax workshops, and cross-cultural and immigration workshops; supporting international and cultural student groups such as the International Student Union and the International Spouses and Partners Organization; maintaining a resource library that includes information on cultural adjustment, international education and statistics on international students in the United States; posting pertinent information to students through email and the OIE website, and conducting orientation programs.

f. Eberly Center for Teaching Excellence
www.cmu.edu/teaching
Support for graduate students who are or will be teaching is provided in many departments and centrally by the Eberly Center for Teaching Excellence. The Eberly Center offers activities for current and prospective teaching assistants as well as any graduate students who wish to pre-prepare for the teaching component of an academic career. The Center also assists departments in creating and conducting programs to meet the specific needs of students in their programs. Specific information about Eberly Center support for graduate students can be found at: http://www.eberly.cmu.edu/services/graduate-students
g. Graduate Student Assembly
www.cmu.edu/stugov/gsa/index.html
The Carnegie Mellon Student Government consists of an Executive Branch and a Legislative Branch. This is the core of traditional student government, as governed by the Student Body Constitution. The Executive Branch serves the entire student body, graduate and undergraduate, and consists of one president and four vice-presidents. The Legislative Branch for graduate students, The Graduate Student Assembly (GSA) passes legislation, allocates student activities funding, and otherwise acts on behalf of all graduate student interests. GSA also plans various social opportunities for graduate students and maintains a website of graduate student resources on and off-campus, http://www.cmu.edu/stugov/gsa/Resources/index.html Each department has representation on GSA and the department rep(s) is the main avenue of graduate student representation of and information back to the graduate students in the department.

h. Intercultural Communication Center (ICC)
www.cmu.edu/icc/
The Intercultural Communication Center (ICC) is a support service offering both credit and non-credit classes, workshops, and individual appointments designed to equip nonnative English speakers (international students as well as students who attended high school in the U.S.) with the skills needed to succeed in academic programs at Carnegie Mellon. In addition to developing academic literacy skills such as speaking, reading and writing, students can learn more about the culture and customs of the U.S. classroom. The ICC also helps international teaching assistants (ITAs) who are non-native English speakers develop fluency and cultural understanding to teach successfully at Carnegie Mellon and provides ITA testing.

i. Health Services
www.cmu.edu/HealthServices/
University Health Services (UHS) is staffed by physicians, advanced practice clinicians and registered nurses who provide general medical care, allergy injections, first aid, gynecological care and contraception as well as on-site pharmaceuticals. There is a small visit fee to see the physicians and advanced practice clinicians; nurse visits are free of charge. Fees for prescription medications, laboratory tests, diagnostic procedures and referral to the emergency room or specialists are the student’s responsibility. UHS also has a registered dietician and health promotion specialist on staff to assist students in addressing nutrition, drug and alcohol and other healthy lifestyle issues. In addition to providing direct health care, UHS administers the Student Health Insurance Program. The Student Health insurance plan offers a high level of coverage in a wide network of health care providers and hospitals. It also covers most of the fees for care at Student Health Services. Graduate students should contact UHS to discuss options for health insurance for spouses, domestic partners and dependents. Appointments can be made by visiting UHS’s website or by telephone, 412-268-2157.

j. Campus Wellness
http://www.cmu.edu/student-affairs/wellness/
At the university, we believe our individual and collective well-being is rooted in healthy connections to each other and to campus resources. There are a wide variety of resources, opportunities and people that help students thrive inside and outside the classroom. The BeWell@CMU e-newsletter seeks to be a comprehensive resource for CMU regarding all wellness-inspired events, announcements and professional and personal development opportunities.
To sign up for the e-newsletter, text BEWELLATCMU to 22828 and share your preferred email address.

**k. University Police**

http://www.cmu.edu/police/

412-268-2323 (emergency only), 412-268-6232 (non-emergency)

The University Police Department is located at 300 South Craig Street, Room 199 (entrance is on Filmore Street). The department’s services include police patrols and call response, criminal investigations, shuttle and escort services (additional information included in the Parking and Transportation section of the handbook below), fixed officer and foot officer patrols, event security, and crime prevention and education programming. Visit the department’s website for additional information about the staff, escort and shuttle, emergency phone locations, crime prevention, lost and found, finger print services, and annual statistic reports.

University Police coordinates the Shuttle Service and Escort Service provided for CMU students, faculty, and community. Full information about these services, stops, routes, tracking and schedules can be found online at: http://www.cmu.edu/police/shuttleandescort/

Carnegie Mellon University publishes an annual campus security and fire safety report describing the university’s security, alcohol and drug, sexual assault, and fire safety policies and containing statistics about the number and type of crimes committed on the campus and the number and cause of fires in campus residence facilities during the preceding three years. Graduate students can obtain a copy by contacting the University Police Department at 412-268-6232. The annual security and fire safety report is also available online at http://www.cmu.edu/police/security-fire-reports/index.html

**7. The Word**

http://www.cmu.edu/student-affairs/theword/

The Word is Carnegie Mellon University’s student on-line handbook and is considered a supplement to the department (and sometimes college) handbook. The Word contains campus resources and opportunities, academic policy information and resources, community standards information and resources. It is designed to provide all students with the tools, guidance, and insights to help you achieve their full potential as a member of the Carnegie Mellon community. Information about the following is included in The Word (not an exhaustive list) and graduate students are encouraged to bookmark this site and refer to it often:

- Carnegie Mellon Vision and Mission
- Carnegie Code
- Academic Standards, Policies and Procedures
- Campus Resources & Opportunities
- Community Standards, Policies and Procedures
8. Graduate Study in Materials Science and Engineering: General Information
Graduate education in the Department of Materials Science and Engineering (MSE) at Carnegie Mellon is established upon a very broad basis. Emphasis is given to a spectrum of material areas, including nanotechnology, biomaterials, materials processing, structural and electronic, magnetic and optical materials. Along with the fundamentals of structure, defect state, thermodynamics and transport phenomena that underlie the entire field, education is focused equally between the materials classes of metals, ceramics, semiconductors and composite materials. Thus, students interested in topics such as nano- or bio-technology, material synthesis and processing, mechanical behavior of materials, the interrelationship between structure and properties, ceramic-science and electronic, magnetic and optical materials will get a solid grounding in the fundamentals of these areas through the graduate curriculum. Courses in special technical subjects in other engineering and science departments, as well as specific research topics, provide the breadth needed for a balanced program and special degree options. The comprehensive nature of the overall program is indicated by departmental faculty interests, which are balanced between engineering and science, and focused on contemporary and future topics of relevance to the application of materials in society.

Graduate study in MSE is designed to provide students with a systematic development of the fundamental scientific and engineering principles that govern the behavior and application of all materials. Entering graduate students typically have undergraduate and sometimes graduate degree backgrounds in a wide range of disciplines in engineering and science. Programs of study are planned individually in consultation with the faculty and academic advisor. These programs may be directed toward fundamental science, engineering or a blend of the two, depending on the preference, capabilities and professional career goals of the student. Recommended courses often include those offered by other departments within College of Engineering or by other colleges within Carnegie Mellon.

9. Department Personnel
The Main office of the MSE department is located in 3325 Wean Hall. MSE Staff members are located in both Wean Hall and Roberts Hall. MSE staff are here to assist you in your pursuit of graduate study.

a. MSE Faculty
The MSE faculty are listed on our website:
http://www.cmu.edu/engineering/materials/people/faculty/index.html

b. MSE Staff
Please see our staff “point of contact” webpage to determine which staff member to contact for different items:
https://www.cmu.edu/engineering/materials/people/staff/index.html

Department Mailing Address:
Department of Materials Science and Engineering
Carnegie Mellon University
3325 Wean Hall
5000 Forbes Ave
Pittsburgh, PA 15213
Telephone: 412-268-2700
10. Master of Science in Materials Science and Engineering (Course Option)

a. Coursework Requirements
The 96 satisfactorily completed units that are offered for the degree shall be subject to the following distribution requirements:

- Students are required to take 24 units of the departmental common MSE graduate core courses.

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>27-788</td>
<td>Defects in Materials</td>
<td>6</td>
</tr>
<tr>
<td>27-766</td>
<td>Diffusion in Materials</td>
<td>6</td>
</tr>
<tr>
<td>27-796</td>
<td>Structure of Materials</td>
<td>6</td>
</tr>
<tr>
<td>27-797</td>
<td>Bonding in Materials</td>
<td>6</td>
</tr>
<tr>
<td>27-798</td>
<td>Thermodynamics I</td>
<td>6</td>
</tr>
<tr>
<td>27-799</td>
<td>Thermodynamics II</td>
<td>6</td>
</tr>
</tbody>
</table>

- Students are required to take 24 additional units of MSE graduate elective courses (27-7**).
  - 12 of these units may include the departmental core courses not used to count towards the MSE graduate core requirement

- Students are required to take 24 additional units of approved MSE-related courses.
  - Up to 24 of these units may include approved advanced undergraduate courses (4**, 5**, 6** courses).

- Students are required to take 24 additional units of approved graduate courses.
  - Between 12 and 24 of these units can be individualized study courses, such as Masters Project (27-756) or Materials Problems (27-755).
  - Approved courses may come from CIT, Heinz, Tepper, SCS, and MCS.

- The average grade of the course work shall be at least a B (3.0), and the student may choose any 72 to 96 of the first 120 units attempted to compute the average course grade.
11. Master of Science in Materials Science (Research Option)
The 144 satisfactorily completed units that are offered for the degree shall be subject to the following distribution requirements:

a. Coursework Requirements
   o Students are required to take **24 units of the departmental common MSE graduate core courses.** (see previous page for list of courses)
   o Students are required to take **24 additional units of MSE graduate elective courses (27-7**).
     o 12 of these units may include the departmental core courses not used to count towards the MSE graduate core requirement.
   o Students are required to take **24 additional units of approved MSE-related courses.**
     o Up to 24 of these units may include approved advanced undergraduate courses (4**, 5**, 6** courses).

b. Research Degree Requirements
   o Students are required to carry out **MSE-related graduate research**; they must take (at least) **72 additional units of 27-756 Masters Project.**
     o MSE-related research can be conducted under the supervision of MSE-affiliated faculty advisor.
     o Because of the nature of research and the requirement for an approved final report to be written, it is anticipated that many students will require between 72 and 120 research units to complete this degree program.
     o Students can only register for up to a total of 120 units of graduate research (or substitutions) before they must complete the degree.

c. General Degree Requirements
   o The student must satisfy the graduate research (27-756) and masters final report requirements upon completion of the first 120 units of graduate research (27-756) attempted.
   o Units of course-work and project-work are to be taken together insofar as possible. To ensure this, no more than 36 units of course-work may be taken in any given semester. (In the first semester, students may be permitted to take more than 36 course-work units.)
   o The student must satisfy all of the requirements upon completion of no more than 240 units attempted.

d. Research Unit Expectations
   o Research units are expected to be equivalent to hours worked on project per week. For example, a student taking 12 research units in a semester is expected to work approximately 12 hours per week on the research project. These hours do not include hours worked on coursework taken at the same time as research units.
   o Students must make satisfactory progress toward their research each semester they are enrolled in the program. Satisfactory progress is determined by the MSE-affiliated research advisor. Your advisor will assign a grade based on the research progress and the number of units you are registered in that semester.
e. Changing Research Advisors
"If the working relationship between a masters student in the research degree program* and their research advisor ends in a semester, the student must find a new research advisor before the end of the next mini session to remain in good standing for the degree program. If a student is unable to find a new research advisor by that date, they will be transferred to the coursework** degree program.”

* MS in Materials Science  
** MS in Materials Science and Engineering

f. Summer Research and Off-campus Summer Internships
Students have several options for the summer session. If you have any questions about your plans for the summer, please discuss with your academic advisor prior to the summer session.

- 27-773: Graduate Reading and Research – Summer reading and research is recommended for the summer months (May through August) during the first three semesters of full-time academic work. Summer research (27-773) does not count towards MSE-related graduate research (27-756) requirements. However, the work done in 27-773 can be used in the Master’s Final Report. Students are not permitted to take coursework while being registered for 27-773 in the summer session.

- If students need to make up research units missed in the first two semesters of the program, students may choose to take 6-12 units of 27-756: Masters Project to fulfill research requirements for the degree. Students will be charged tuition for these units.

- Students choosing to take other coursework on the CMU campus in the summer session will be charged tuition for these units.

- Graduate students wishing to participate in an off-campus summer internship are responsible to secure their position. International masters students interested in working off-campus in the United States during the summer session must apply for pre-completion OPT for their summer internship. A summer internship is not part of the MS curriculum in the MSE Department; international masters students in the MSE department are not eligible for CPT.

g. Final Research Report
- A Master’s Final Report that clearly and successfully states the objectives and accomplishments of the MSE-related research must be written and approved.
- The Master’s Final Report must embody the results of independent MSE-related research, be an original contribution to knowledge, and ideally include material worthy of publication.
- Requirements:
  - The Master’s Final Report is to be submitted to the research advisor at least TEN days before grades are due.
  - A passing grade will be assigned to “27-675 Master’s Report” based on approval of the report by the research advisor or department head.
12. General Rules for the MS Program
- All students must maintain a B (3.0) average to graduate.
- Course units with a grade lower than C (2.0) are not acceptable toward the degree requirements.
- Grades in approved projects may not be used in calculation of the B (3.0) average.
- Grades in approved projects must be B (3.0) or above to count towards the unit calculation for graduation.
- A student is considered full time at 36 units. A typical student enrolls in 48 units per semester. By permission of the department head, students may take more than 51 units.
- The average grade of the course work shall be at least a B (3.0), and the student may choose any 72 of the first 120 units attempted to compute the average course grade.
- All full-time students must enroll, attend, and actively participate in the Graduate Seminar course (27-774) each semester in which they are registered.

13. Transferring Between Programs
Students can apply to transfer from the course-based program to the research-based through the online application system. Applications should be received during the regular application cycle to be considered (October 15th or January 15th).

Students interested in the CMU MSE PhD program must also apply to the program to be considered. Students should consult the website for application deadlines, and should submit their application during the regular application cycle.

14. Statute of Limitations
All units required for a masters degree, whether earned in residence or transferred from another institution, must be recorded on the transcript within seven years of the date on which the student enrolled in the program. Once this time-to-degree limit has lapsed, the person may resume work towards a master’s degree only if newly admitted to a currently offered master’s degree program under criteria determined by that program.

This statutory period can be extended by the CIT Associate Dean for Academic Affairs for special circumstances that do not make it possible for the student to complete the requirements within the statutory period. Any request for a waiver of the statute of limitations for masters degree studies must be approved by the department head and by the CIT Associate Dean for Academic Affairs. The waiver request must explain the exceptional circumstances that warrant an extension. For cases in which a waiver is granted, the waiver will cover specific courses and will specify a time period for completion of the program.


15. Withdrawal of a Degree
The university reserves the right to withdraw a degree even though it has been granted should there be discovery that the work upon which it was based or the academic records in support of it had been falsified. In such a case, the degree will be withdrawn promptly upon discovery of the falsification. The complete reference to this university policy is available at:
16. Registration Policies and Procedures

a. Course Registration
Course registration is available at the HUB website. Full-time students should be registered for between 36-48 units per semester. Full-time students must request permission from program director to enroll in more than 48 units.

b. Audit Courses and Pass/Fail Courses
Auditing a course is “presence in the classroom without receiving academic credit”. To audit a course, a student must register for the course and complete the course audit form (available through the Hub forms page) and submit before the deadline. Audit units count toward the maximum units, but do not count toward the degree requirements.

Pass/No Pass grades are an alternative to course audit as it indicates a greater level of engagement in the course than the audit. Students who wish to receive pass/fail grading must register for the course, obtain the permission of their advisor, and complete and return the Pass/Fail Approval (pdf) form to the University Registrar's Office by the pass/fail deadline for that course. Pass/No Pass grades will not be counted toward completion of MS degree requirements.

c. Part-time status
Part-time MS enrollment is an option available for students in special circumstances, such as students who would like to pursue an MS degree while maintaining external employment. Students should contact the MS program Director when applying to the program.

*Note that immigration regulations do not allow Carnegie Mellon University to issue visa documents for the part-time MS program.*

c. Transfer Credit
Carnegie Mellon University offers students the opportunity to take courses for credit through a cross-registration program (see Pittsburgh Council on Higher Education (PCHE) and Cross-registration below) and through the receipt of transfer credit from other accredited institutions. The Carnegie Mellon University transcript will include information on such courses as follows: Carnegie Mellon courses and courses taken through the university's cross-registration program will have grades recorded on the transcript and be factored into the QPA. All other courses will be recorded on this transcript indicating where the course was taken, but without grade. Such courses will not be taken into account for academic actions, honors or QPA calculations. (Note: suspended students may take courses elsewhere; however, they may receive transfer credit only if their college's and department's policies allow this.)

https://www.cmu.edu/hub/registrar/registration/cross/index.html

The Department of Materials Science and Engineering will accept up to 24 units (2 courses) of graduate transfer credit toward the M.S. degree in according to the policies outlined in the College of Engineering website:
https://engineering.cmu.edu/education/academic-policies/graduate-policies/registration-grading-credit.html#transfer-credit-&-special-students

Only official and final college or university transcripts will be accepted for the awarding of transfer credit. Grade reports, letters and the like are not acceptable. Official transcripts for the awarding of transfer credit will reside in the student's permanent academic folder in the department.
Transfer units will be accepted for:

- Graduate level courses that have not been counted toward a previous degree at another university
- Courses with a 3.0 GPA or higher
- Courses that can be considered part of the M.S. graduate program in the MSE department
- Grades for transfer units will not be counted in the Carnegie Mellon GPA

*Students must have successfully completed at least 36 units in the graduate program before the units can be transferred.

Policy on Grades for Transfer units: The Carnegie Mellon University transcript will include information on such courses as follows: Carnegie Mellon courses and courses taken through the university's cross-registration program will have grades recorded on the transcript and be factored into the QPA. All other courses will be recorded on this transcript indicating total units, but without grade. Such courses will not be taken into account for academic actions, honors or QPA calculations.

15. Additional Requirements

a. Graduate Seminar
All full-time graduate students must also enroll, attend and actively participate in the Graduate Seminar course, 27-774, each semester in which they are registered as full-time students. The goal of the seminar is to broaden each student's doctoral education through exposure to research performed by other graduate students in the department and by an international cadre of highly respected external scientists. Students are graded according to the following guidelines:

1. The grade for the course is PASS or FAIL.
2. To pass, the only requirement is attendance, with no more than two unexcused absences. Unexcused include doctor’s appointments, vacations, and any other absences that are not research related. Absences resulting from conference trips, visits to research sponsors, etc. are excused, but the seminar coordinator must be notified.
3. Students with more than two unexcused absences are expected to make this up by attending seminars given in other departments or talks by external speakers at the University. Students should send the seminar coordinator the details of the talk before attending for approval.

b. English Language Requirement
In a continuing effort to improve technical and interpersonal communication, it is the policy of the department that all international students, whose first language is not English, should attempt to pass the Intercultural Communications Center's International Teaching Assistant (ITA) test before graduation.

https://www.cmu.edu/icc/language-certification/index.html

16. Academic Integrity
http://www.cmu.edu/policies/student-and-student-life/academic-integrity.html
Students at Carnegie Mellon are engaged in intellectual activity consistent with the highest standards of the academy. The relationship between students and instructors and their shared commitment to overarching standards of respect, honor and transparency determine the integrity of our community of scholars. The actions of our students, faculty and staff are a representation of our university community and of the professional and personal communities that we lead. Therefore, a deep and abiding commitment to academic integrity is fundamental to a Carnegie Mellon education. Honesty and good faith, clarity in the communication of core values, professional conduct of work, mutual trust and respect, and fairness and exemplary behavior represent the expectations for ethical behavior for all members of the Carnegie Mellon community.

Please review the entire policy at https://www.cmu.edu/policies/student-and-student-life/academic-integrity.html

a. Policy Statement
In any manner of presentation, it is the responsibility of each student to produce her/his own original academic work. Collaboration or assistance on academic work to be graded is not permitted unless explicitly authorized by the course instructor(s). Students may utilize the assistance provided by Academic Development, the Global Communication Center, and the Academic Resource Center (CMU-Q) unless specifically prohibited by the course instructor(s). Any other sources of collaboration or assistance must be specifically authorized by the course instructor(s).

In all academic work to be graded, the citation of all sources is required. When collaboration or assistance is permitted by the course instructor(s) or when a student utilizes the services provided by Academic Development, the Global Communication Center, and the Academic Resource Center (CMU-Q), the acknowledgement of any collaboration or assistance is likewise required. This citation and acknowledgement must be incorporated into the work submitted and not separately or at a later point in time. Failure to do so is dishonest and is subject to disciplinary action.

Instructors have a duty to communicate their expectations including those specific to collaboration, assistance, citation and acknowledgement within each course. Students likewise have a duty to ensure that they understand and abide by the standards that apply in any course or academic activity. In the absence of such understanding, it is the student’s responsibility to seek additional information and clarification.

b. Policy Violations
Cheating occurs when a student avails her/himself of an unfair or disallowed advantage which includes but is not limited to:

1. Theft of or unauthorized access to an exam, answer key or other graded work from previous course offerings.
2. Use of an alternate, stand-in or proxy during an examination.
3. Copying from the examination or work of another person or source.
4. Submission or use of falsified data.
5. Using false statements to obtain additional time or other accommodation.
6. Falsification of academic credentials.
Plagiarism is defined as the use of work or concepts contributed by other individuals without proper attribution or citation. Unique ideas or materials taken from another source for either written or oral use must be fully acknowledged in academic work to be graded. Examples of sources expected to be referenced include but are not limited to:

1. Text, either written or spoken, quoted directly or paraphrased.
2. Graphic elements.
3. Passages of music, existing either as sound or as notation.
5. Scientific data.
6. Concepts or material derived from the work, published or unpublished, of another person.

Unauthorized assistance refers to the use of sources of support that have not been specifically authorized in this policy statement or by the course instructor(s) in the completion of academic work to be graded. Such sources of support may include but are not limited to advice or help provided by another individual, published or unpublished written sources, and electronic sources. Examples of unauthorized assistance include but are not limited to:

1. Collaboration on any assignment beyond the standards authorized by this policy statement and the course instructor(s).
2. Submission of work completed or edited in whole or in part by another person.
3. Supplying or communicating unauthorized information or materials, including graded work and answer keys from previous course offerings, in any way to another student.
4. Use of unauthorized information or materials, including graded work and answer keys from previous course offerings.
5. Use of unauthorized devices.
6. Submission for credit of previously completed graded work in a second course without first obtaining permission from the instructor(s) of the second course. In the case of concurrent courses, permission to submit the same work for credit in two courses must be obtained from the instructors of both courses.

Procedures for dealing with allegations of these policy violations are detailed in the university’s Academic Disciplinary Action Procedures for Undergraduate Students and the Academic Disciplinary Action Procedures for Graduate Students, which are published in The WORD student handbook. Periodic review of these procedures will be overseen by the Dean of Student Affairs or her/his designee in consultation with Faculty Senate and the relevant student governing bodies. Any amendments to these procedures are subject to the approval of Faculty Senate. Additional guidelines and procedures for graduate students may exist at the college/department/program level, in which case they are communicated in the college/department/program graduate student handbook.

University-wide Protocol: https://www.cmu.edu/student-affairs/ocsi/academic-integrity/grads.html

17. University Policies
a. Policy Against Sexual Harassment and Sexual Assault

Sexual harassment and sexual assault are prohibited by CMU, as is retaliation for having brought forward a concern or allegation in good faith. The policy can be viewed in its entirety at:
If you believe you have been the victim of sexual harassment or sexual assault, you are encouraged to make contact with any of the following resources:

- Sexual Harassment Advisors, found in appendix A of the Policy Against Sexual Harassment and Sexual Assault;
- Survivor Support Network, found in appendix B of the Policy Against Sexual Harassment and Sexual Assault;
- Sexual Harassment Process and Title IX Coordinators, found in section II of the Policy Against Sexual Harassment and Sexual Assault;
- University Police, 412-268-2323
- University Health Services, 412-268-2157
- Counseling & Psychological Services, 412-268-2922

b. Maternity Accommodation Protocol  

Students whose anticipated delivery date is during the course of the semester may consider taking time away from their coursework and/or research responsibilities. All female students who give birth to a child while engaged in coursework or research are eligible to take either a short-term absence or formal leave of absence. Students in coursework should consider either working with their course instructor to receive incomplete grades, or elect to drop to part-time status or to take a semester leave of absence. Students engaged in research must work with their faculty to develop plans for the research for the time they are away.

Students are encouraged to consult with relevant university faculty and staff as soon as possible as they begin making plans regarding time away. Students must contact the Office of the Dean of Student Affairs to register for Maternity Accommodations. Students will complete an information form and meet with a member of the Dean’s Office staff to determine resources and procedures appropriate for the individual student. Planning for the student’s discussion with her academic contact(s) (advisor, associate dean, etc.) will be reviewed during this meeting.

18. Department Policies

a. Grading Policy

The general grading policy used by the MSE Department is described on the university grading policy page. The following are college-specific policies for graduate grading.

Project work may be given an S (Satisfactory) grade on a semester-by-semester basis, but a letter grade (A, A-, B+, B, B-, C+, C, C-, D+, D, or R) must be given in the final semester for a multi-semester project. The units with an S grade are counted toward degree requirements but are not included in computing the average grade.  
[http://engineering.cmu.edu/current_students/graduates/policies.html#grading](http://engineering.cmu.edu/current_students/graduates/policies.html#grading)
b. Graduate Student Time Off Policy
Students with graduate assistantships are expected to continue with their research during academic
breaks (including Summer months) with the exception of official University holidays*.

Paid time off for personal business or vacations generally is not included as part of a graduate's
financial support. A supported graduate student who wants to take a short break (up to ten days)
must get approval for that break from his/her advisor and, if required by the terms of the student's
support package, must make up the work. Supported graduate students wishing to take longer
periods of personal time off must do so without financial support and must receive approval from
their advisor at least five weeks prior to the requested time off. The advisor will notify the
Department's Business Office of any such arrangements so that an appropriate adjustment in the
student's support package can be processed.

*University Holidays:
- New Year's Day
- Martin Luther King Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Day After Thanksgiving
- Day Before Christmas
- Christmas Day
- Day Before New Year's Day

Information Services is the only University office that can provide an official letter of enrollment,
oficial transcript and enrollment verification. Enrollment verification can be requested online
through The HUB at https://www.cmu.edu/hub/registrar/student-records/verifications/.

University process for Taking & Returning from Leave of Absence: https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/

University Process for withdrawal from program: https://www.cmu.edu/hub/registrar/leaves-and-withdrawals/

d. Change of Address
The MSE Department encourages students to keep their current local address up-to-date in SIO.
Students will be held responsible for any failure to receive official college notices due to not
having a correct address on file; F-1 students may jeopardize their status if address information is
not kept current. Students can change their address using SIO, which is available via the HUB

This supports a university initiative to have accurate living information for students for official
program/department/college/university notices, the ability to facilitate wellness checks, ensure
international students are in compliance with visa requirements, etc.

e. Departmental Purchases
Each faculty member’s administrator is authorized to place the order, but you must provide a
complete order form. Students are not authorized buyers on behalf of the University. An account
number for allocating the purchase to the proper contract can be supplied to you by your advisor.
The same order form is used for both PNC Card & Purchase Orders – which you can obtain from your advisor’s administrator.

Before presenting the order form to your advisor’s administrator, please be sure to complete the “Requestor’s Name” line and obtain your advisor’s signature on the “Faculty’s Signature” line.

e. Reimbursements
You may be reimbursed for work-related purchases. These should have the approval of your faculty advisor prior to purchase. Please note: CMU will not reimburse sales tax on any purchases you made even if the purchase was for university related work. Present the receipt(s) and account number to your faculty advisor’s administrator. Please note that it is university policy to submit a receipt for reimbursement within 30 days of incurring the expense.

You are strongly recommended to sign up for expense reimbursement direct deposit.

f. Travel
You may be asked to travel on university/MSE business occasionally and will be expected to keep the costs within reasonable limits and to follow consistent policy and procedures with respect to the reimbursement of these expenses.

Keep all receipts and records (mileage traveled in your own vehicle, for example).

Non-reimbursable expenses:
- In-room movies
- Laundry or valet services
- Personal grooming services (barbers, hairdressers and shoe shines)
- Personal telephone charges in excess of reasonable calls home, usually one per day
- Parking tickets or traffic violations
- Recreational fees
- Upgrades (air, hotel, car, etc.)
- Tickets purchased with frequent flier miles

Your faculty advisor must approve all trips for which you will be reimbursed.

The MSE departmental approver will check your travel request to see that it meets university guidelines, that the total cost will be within the approved budget, and that the expenses are charged to the proper accounts.

Domestic Travel: Domestic travel is any travel within and between any of the 50 states of the United States. Travel to Mexico and Canada is also considered domestic.

Foreign Travel: All foreign travel charged to grants and contracts must be approved from 45 to 90 days in advance by the sponsor’s administrative officer. Complete the Request for Foreign Travel form (blank copy included in this manual) and submit it to the MSE business manager, Anita Connelly. The Office of Sponsored Research must countersign this form before it is submitted to the sponsoring agency.

You should make your flight reservations as soon as possible to obtain advance purchase discounts. A Request for Transportation Ticket form can be completed and forwarded to CMU’s official
travel agent allowing the airfare to be billed directly to a specific contract. Please request your advisor’s administrator to complete this form by providing the purpose of travel, trip information, cost, and contract number. Your signature is also required on this form.

**Rental Cars**
Long distance travel by rental car is discouraged, since it increases travel time and places the university at higher risk for business travel accident liabilities. **Car rental agreements, for insurance reasons, should include “Carnegie Mellon” with the name of the individual.**

Do not accept any insurance coverage on car rentals. Carnegie Mellon Business Auto Liability Policy covers loss Damage, Collision, Liability and personal accident coverage. If you accept this coverage on a car rental, you will not be reimbursed.

Actual Cost vs. Per Diem Reimbursements: A traveler can use one of these methods for the duration of a trip. Unless per diem allowance is claimed for the trip, receipts are required.

**Actual Cost Reimbursement**
- Total meal expense for the day should not exceed $75.00.
- Individual meals over $40 should include justification.
- Gratuities must fall within the domestic standard (15-20%) for the total bill.

**Lodging receipts require:**
- The name and location of the lodging establishment.
- The date of the stay.
- Itemized charges listing lodging, meals and telephone calls separately.

**Meal receipts require:**
- The name and location of the restaurant.
- The number of people served.
- The date and amount of expense.

**Per Diem Reimbursement**
Per Diem can be used for meals & incidentals. Domestic rates can be accessed at [http://www.gsa.gov/portal/category/100120](http://www.gsa.gov/portal/category/100120)

Foreign per diem rates can be accessed at [https://aoprals.state.gov/web920/per_diem.asp](https://aoprals.state.gov/web920/per_diem.asp)

**Meals for Others**
These expenses are reimbursable when the name(s) of the meal attendees are listed and the business purpose of the meal is justified.

**One-Day Travel**
In general, trips of less than 50 miles one way do not qualify for reimbursement for an overnight stay. The university, following IRS regulations, does not allow travel meal expense for one-day travel. Per-diem rates may not be used for one-day travel.
19. Department Resources

a. Graduate Ombudsperson
In the course of graduate studies, situations sometimes arise where students need advice on some aspect of their activities or interactions with others in the department, yet may not feel that it is appropriate to speak with their advisor or another member of the faculty. While close friends and family members are important resources in such situations, it is also true that their scope of experience might not include working toward a doctoral degree in an Engineering School. For this reason, the MSE department relies on a Graduate Ombudsperson. The Ombudsperson is available to consult with students about any situation that affects their work and, where appropriate, offer advice or attempt to resolve a problem. Conversations with the Ombudsperson are confidential and the Ombudsperson will not communicate information to the Department Head or other faculty members without the student's consent.

Dr. Neetha Khan (neetha@andrew.cmu.edu) serves as ombudsperson for graduate students to assist with difficult academic or personal situations where a confidential sounding board and/or an intermediary can be helpful.

Additionally, students may confer with the university graduate ombudsman, Suzie Laurich-McIntyre, slaurichmcintyre@cmu.edu, on issues of process or other concerns as they navigate conflicts. Suzie Laurich-McIntyre is the Assistant Vice Provost for Graduate Education.

b. Financial Aid
The MSE Department does not offer graduate research assistantships or formal financial support for either M.S. programs. Students interested in outside sources of aid should visit the following website:  https://www.cmu.edu/sfs/financial-aid/index.html

Graduate students should consult the graduate student financial aid information found on The HUB website: http://www.cmu.edu/finaid/graduate/index.html. Students will find the Graduate Financial Aid Guide, information about funding options and how to apply for financial aid and other helpful links.

U.S. citizens and permanent residents may complete the Free Application for Federal Student Aid (FAFSA) on line at http://www.fafsa.ed.gov/

Graduate students who find themselves in need of immediate funds for emergency situations should contact the Office of the Dean of Student Affairs, to inquire about an Emergency Student Loan.  https://www.cmu.edu/sfs/billing/emergency-loans.html

c. Graduate Student Advisory Committee (GSAC)
GSAC consists of a group of students who volunteer to help in coordinating academic and social activities for other students, and provides a mechanism for communication and input to the Department on policy or other matters.

20. Miscellaneous Items of Interest

a. General Office Procedures
   Keys
   If you are working on a research project, your advisor must request a key for you for each specific lab.
Mail
You are assigned a mailbox at the end of the 3300 corridor of Wean Hall for receiving campus mail. If you have outgoing mail, either campus or regular, the postal clerk picks up the mail at 8:00 am.

Addressing Campus Mail
All campus mail should be addressed with the person’s name, department, and building only.
Example: Kelly Rockenstein
Materials Science and Engineering
Wean Hall 3325

b. Carnegie Mellon’s Mailing Address
To ensure that mail and/or packages arrive to the department without any problems, you should advise that shippers address the package in the following way:

   Kelly Rockenstein
   Carnegie Mellon University
   5000 Forbes Avenue
   Materials Science and Engineering Department
   Wean Hall 3325
   Pittsburgh, PA 15213

If space does not allow for that many lines – you can omit the department.

c. Telephone Calls
   Campus calls
   You must dial “8” and only the last four digits of a campus number.
   Outside calls
   You must dial “9” when dialing an outside toll-free line.

d. University Center Stores (computer store, book store, art store, etc.)
This requires a University Store Requisition form, completely filled out, with the signatures of your faculty advisor. This form can be obtained from your faculty advisor’s administrator. Upon your return, please be sure to give the receipt to the administrator.

e. Physics Stockroom (7415 Wean Hall)
The Wean Hall Physics stockroom is located on the 7th floor. Items can be taken on “the honor system.” In other words, complete the form located at the stockroom verifying your name, items taken, and the Oracle (contract) number assigned to the project for which the items will be used. If you’re unsure of the Oracle number, please ask your advisor’s faculty assistant for the information. Please don’t abuse this system.

f. Copying and Scanning
The department has 2 color copiers/scanners you can use for research related-work in Wean Hall or in Roberts “Take 5” area. These machines perform many functions such as scanning, two-sided copying, collation, reduction and enlargements.
g. Departmental Printers
The MSE Department has two department printers that our students are permitted to use. Please remember these printers are benefit to students, not a requirement. Therefore, any abuse or misuse of the equipment will result in your permissions removed or removal of the equipment for all students. If you notice an error with the printers or if the printer needs toner, you should contact Bill Pingitore (wp26@andrew.cmu.edu).

Below is all the information and instructions you will need to add the printers to your laptops/computers.

Location of Printers
Name: Jasper
URL Address: jasper.materials.cmu.edu
Location: Wean Hall Copy/Mail Room (end of 3300 corridor)
Model: HP CP4025N

To add a printer on a MAC:
Open the “Print & Fax” settings.
Press the + sign to add.
Protocol: LPD
Address: -use URL address above-
Printing Using: you should select “select a drive to use” and then find the model above.

21. MSE Gas Order Requisition and Return Procedure

The following is the gas order requisition and return procedure, which must be adhered to by all graduate students and visitors in the Materials Science and Engineering Department.

Students/visitors are to order all cylinders through the Main Office. Please do not fax any orders in yourselves.

Once the gas is received – email Jeanna the cylinder tank number. It is handwritten on the tag and/or on the barcode on the neck of the cylinder.

Before ordering any gas, make sure there is no redundancy with other colleagues. Gases may be shared within your advisor’s group. For accounting purposes gases should not be shared among other research groups.

Order gas with an existing oracle charge account number.

When requesting a pick up of empty cylinders, send an email to Ray Butko (rbutko@andrew.cmu.edu) at Mellon Institute with the tank number(s) that need to be picked up and which lab they are in. Copy Kelly Rockenstein (krockens@andrew.cmu.edu) on the email – this will enable the department to keep a current accounting record.

When returning gas cylinders, no matter the date of pick up rental expenditures coincide with the month of cylinder return. Thus returning cylinders on Jan.1 or Jan.31 would be charged the same
rental fees. It is strongly recommended that all empty gas cylinders are to be returned at the end of each month to avoid being over charged.

Remember that scheduled drop-offs/pick-ups are every Tuesday and Friday.

Your continued cooperation with this procedure is appreciated!!!