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INTRODUCTION

Welcome to the Department of Earth, Atmospheric, and Planetary Sciences [EAPS]. This manual is a compilation of information gathered from practical experience, summarized from department documents, pulled from MIT’s website, and when credited, collected from outside resources. The content is approximately evenly divided between administrative issues and the EAPS education program. The handbook is intended to welcome new faculty and act as a reference for experienced faculty. It contains information that has proved useful in the past, but it is by no means exhaustive. At the least, it should help you identify the correct person to whom a question should be addressed.

This document was compiled by EAPS Headquarters. Please report any errors or need for changes to Karen Fosher.

ADMINISTRATIVE ISSUES

INSTITUTE CALENDAR

The Institute runs on multiple calendars. When considering financial or academic matters, you need to know the definition of the appropriate cycle. MIT has defined the following time periods:

- **Fiscal Year**: July 1 – June 30
- **Financial Aid Year**: Summer – Spring
- **Academic Year**: Fall – Summer
- **Summer Term**: June 1 – August 31
- **Fall Term**: September 1 – January 15
- **Spring Term**: January 16 – May 31

The end of classes in the Fall term is separated from the beginning of classes in the Spring term by a one month period called the Independent Activities Period [IAP]. During this time the MIT community participates in special credit and non-credit classes and activities. EAPS uses this time to schedule various field trips associated with our classes.

The calendar of Institute events during the academic year is published by the Registrar’s Office. You can find a copy in the printed version of the MIT Bulletin, published annually and available from the Education Office, or on-line through the link at: http://student.mit.edu

EAPS EVENTS

*Daily - Cookie Hour, 3pm, 923*

*Weekly Events*

- Department Lecture Series (Wednesdays during the semester)
- Research discipline meetings (schedule varies with discipline)
- Faculty Lunch Meetings (Thursdays during the semester)

*Fall Semester Events*

- Department Field Trip to Western Massachusetts
• PAOC Retreat
• Graduate Student Weekend at Long Pond
• EAPS Holiday Party
• EAPS at AGU; evening reception for alumni/ae
• Victor Starr Lecture

Spring Semester Events
• Henry W. Kendall Lecture
• William Brace Lecture
• Presentations of Senior Thesis Research
• Student Awards Dinner
• Reception for doctoral candidates and family after Hooding Ceremony
• Reception for Graduates on Commencement Day

EAPS FACILITIES

EAPS is principally housed in Building 54, the Green Building, but Building E25 has additional research labs and offices for faculty and graduate students. The Joint Program on the Science and Policy of Global Change has offices in E19. Additional research labs are located in NW13, the Neutron Activation Facility; N9, G&G lab space; and Building 37. Video conferencing facilities are available in building 54. Wallace Astrophysical and Geophysical Observatories are located in Westford, Massachusetts.

You should be aware of issues of personal safety and theft. Building 54 is a particularly difficult building in which to restrict access. The building houses an Institute classroom used many evenings and weekends, so unfamiliar persons enter and exit beyond the normal working hours. In all buildings, you should exercise common sense about your surroundings. When a lab or office is left unattended you should close and lock the door. The MIT Police can be reached at 253-1212 or, in emergencies, by dialing “100.”

HEADQUARTERS SERVICES

Allison Provaire [provaire@mit.edu]
Administrative Assistant to Department Head
• Appointments with Department Head
• Reservations for 54-915/923

Brandon Milardo [bamilardo@mit.edu]
Administrative Assistant to Administrative Officer
• Departmental Mail
• Parking – This issue is not handled within the department for students. To find he rules relating to keeping a car on campus, parking options, costs, and other information for students, see:
  o http://web.mit.edu/facilities/transportation/parking/student/index.html
• Audio-Visual Equipment (also available through Education Office)
• Report Problems with 54-811 Color Copier/Printer and large-format plotter
• Ordering business cards
• Reimbursement of EAPS education expenses
• Reservations for the Department van (drivers must be registered on the department insurance policy)
• Report any general building issues (i.e. heating & ventilation, elevator problems, water leaks)
• Teaching Supplies (also available through Education Office)

COMMUNICATIONS OFFICE

The Communications Office staff coordinate our print, web, and social media efforts so that they each serve the strategic goals of the department. They publish a monthly e-newsletter, EAPSpeaks, and an annual print newsletter, EAPS Scope. They can provide counsel on a wide range of materials that you might wish to use to highlight the efforts of your research group.

Helen Hill [hhl@mit.edu]
Communications Officer
• Is editor and writer for the monthly and annual newsletters
• Works on website development
• Has overall responsibility for the Communications Office

Jennifer Fentress [jfen@mit.edu]
Communications Coordinator
• Designs web/print materials
• Ensures collateral materials are consistent with EAPS brand
• Coordinates event promotion

Heather Queyrouse Wagner [heatherq@mit.edu]
Communications Coordinator
• Manages EAPS social media accounts
• Maintains the department website
• Manages the Events and Calendar postings

ENVIRONMENTAL HEALTH and SAFETY

Environmental Health and Safety for the department is administered by the EH&S Office located at N52-496. Day-to-day activities are managed by the department EH&S Coordinator in conjunction with Laboratory Safety Representatives. Lab Safety Representatives are lab personnel charged with the responsibility of interfacing with the Coordinator on behalf of the lab.

The EH&S Coordinator for EAPS is responsible for overseeing daily safety issues within the department and acting as a liaison between EAPS and the EH&S Office. Other responsibilities of the Coordinator include providing advice and assistance with various EH&S matters, administering the laboratory inspection program, providing training, investigating accidents, and maintaining records for the department.
The EH&S Coordinator for the Department of EAPS is:
Brian Smith
[bsmith@mit.edu]
617-253-6238
66-471

You may be required by law or because of MIT’s policies and recognized best practices to be trained in certain aspects of Environmental Health and Safety. For example those, whose work involves the use of hazardous chemicals will be required to complete chemical hygiene and hazardous waste training, read the department Chemical Hygiene Plan, and sign the department Chemical Hygiene Clearance form. Chemical hygiene and managing hazardous waste training, along with a wide array of other courses, is offered by the EH&S Office, both online and in a classroom. The EH&S Coordinator can help you to determine which courses you may need and supply you with a copy of the Chemical Hygiene Plan and the clearance form. More information is available through the EH&S Office’s web site at http://ehs.mit.edu/site or by calling the EH&S Coordinator.

INFORMATION RELATING to YOUR OFFICE
Duties of Support Staff

You can expect your Administrative Assistant (AA) to provide comprehensive administrative support for you and the members of your research group. Your AA will work closely with the Financial Officer and Headquarters team to accomplish financial and business tasks including:

- Reconcile and monitor accounting statements for research grants and fund accounts
- Prepare commitment reports and perform account projection analysis
- Compile budgets and forms for grant applications to sponsoring agencies
- Monitor expenditures for compliance with sponsor guidelines and in accordance with approved budgets
- Process procurement paperwork, invoices, travel reimbursements and transfer vouchers as well as making travel reservations
- Coordinate personnel appointments and timesheets with Personnel Administrator
- Support includes making travel arrangements, managing contacts, complex calendar management, preparing course material, and managing office space for students, postdocs and visitors
- Order supplies, coordinate group meetings and other events
- Perform special projects and provide other administrative assistance as needed

These tasks are a general description of the role of AA. As you develop a relationship with your AA, the scope of their duties will change as your needs and preferences are better defined.

MIT Procurement Card

The MIT procurement card works much like a standard check/charge card, although there is a list of items for which it cannot be used. As an example, you can take visitors out to lunch at any restaurant with your card—provided it is not associated with a hotel (hotels equal travel, and travel is not an allowable use). Instruction in the appropriate use of the card is provided before you receive the card. More information can be found at: http://vpf.mit.edu/index.php/site/sourcing_procurement/policies_procedures/procurement_card/acquiring_an_mit_procurement_card_and_using_the_card
Telephone Information

Phone cards can be purchased with the MIT procurement card and often prove useful when you are off campus. Long term rentals of cellular phones and pagers can be arranged through MIT. See http://web.mit.edu/is/tel/cell-rates.html for more information.

Directions for using the MIT voicemail system are found at: http://colony.mit.edu/tep/tpc/voicemail.html

COMPUTING RESOURCES

Set-Up

Athena is the name for the MIT network. Once you have an MIT ID number you can establish an Athena user account and register a user name and password through the Institute website at: http://web.mit.edu/register/

Your user name is your Kerberos ID. The Institute offers computer support through various offices and units. The list of available services and resources can be found on the Institute website at: http://web.mit.edu/offices/category/computing.html

Remote Access

Access to secure web servers at MIT is controlled through the use of personal certificates. You may download a personal certificate onto every computer that you use. The download is available at <http://web.mit.edu/is/help/cert/> and requires a MIT-supported browser, your MIT ID number and Kerberos ID. Your certificates will need to be renewed annually. Your computer also needs the MIT CA (Certification Authority) installed prior to downloading your personal certificate. If your web browser was downloaded from an MIT installer, the MIT CA was automatically included.

Backup

For a nominal cost, Tivoli Storage Manager (TSM) is an application that lets you automatically and regularly back-up files from your computer over the network and restore them when needed. Documentation, a link to register an account, and software downloads are available at: http://itinfo.mit.edu/product?name=tsm

E-mail

You can configure your e-mail account with a custom message for auto-response when you will be out of town. See: https://owa.exchange.mit.edu > options > set automatic replies.

Computer Support

The department provides a first line of computer support through a consultant available on a regular schedule. Send requests for a consultation or problem solving to [eaps-dcs@mit.edu].

Prior to purchasing software independently, check with Jen Fentress or Information Services and Technology at <http://ist.mit.edu/services/software> for either direct download of certain programs, as well as information on the business/productivity or specialized statistical/engineering software available through volume and site licenses. EAPS has already purchased licenses for certain programs, and Headquarters can provide you with the necessary information and computer disks for installation.

Well before you are ready to start writing any proposals for the NSF, update or establish your access to the NSF Fastlane. Talking with Mark Pendleton before submitting your first proposals will help to clarify what administrative items may be included.
EQUIPMENT

Equipment purchases are charged overhead unless the item costs $5,000 or more. Therefore, a computer costing $3,220 with 56% overhead is a $5,023 charge on your research grant. A $5,000 computer has no overhead charge and is a $5,000 charge on your research grant. Additional avenues to eliminate overhead on equipment purchase are outlined below. Please check with the EAPS Finance Office for the current overhead rate.

Fabricated Equipment

This is an account set up by Property and the Office of Sponsored Programs [OSP] where you can ‘make’ your own piece of equipment or set up a computer cluster. Individual components can be purchased at any price, as long as the total cost for the whole is over $5,000. Example: you buy five computers to be networked together at $1,000 each. Under normal rules $1,000 computers would draw overhead; as fabricated equipment, overhead is not charged.

Components

The purchase of components linked to prior purchases can eliminate overhead. Enhancement parts may have their cost added to the cost of a minor equipment item they are enhancing if their acquisition cost is at least $2,000, if they increase the value of the item of minor equipment to $5,000 or greater, and if they are acquired within 60 days of the original acquisition and will permanently increase the useful life of the item. If all these conditions are met, the enhancement part and the item of minor equipment will be capitalized; otherwise, they will be expensed. The purchase order or the tag number of the enhanced item of minor equipment must be referenced on the requisition and purchase order for the enhancement part in order for the minor equipment item and the enhancement part to be considered capital.

Amortization

Amortizing the cost of equipment purchases might be a useful way for you to manage the balances and cash flow in your various accounts. You can buy equipment out of your discretionary account and reimburse the original account over three years through payments from your research accounts.

Facility Account

An account can be set up to share the cost of a printer or other networked device. More information on service center policies can be found at: http://osp.mit.edu/sites/osp/files/u72/service_center_accounting_and_procedures-2013-07-30.pdf

ADDITIONAL RESOURCES

The d’Arbeloff Fund for Excellence in Education

Through the generous support of alumni from the Classes of 1951, 1955 and 1972, MIT faculty have resources available to them for innovative educational projects that encourage creative curriculum and teaching changes, improve the quality of teaching at MIT, and enrich the educational experience. Typical projects have included the development of new curricula, training programs to enhance teaching skills and techniques, and instructional aids and evaluation methods. Since 1994, more than fifty educational projects have received support from these alumni funds.

http://web.mit.edu/acadinfo/alumnifunds/about.html

MIT Research Support Committee

The Provost’s Office administers annual awards for the MIT Research Support Committee. The RFP is distributed to the faculty late in the Fall term through each Department Head. These funds are made available to new faculty members or to faculty members who wish to
implement an innovative concept that would have a small chance of receiving outside support. A large number of separate funds are included in the RFP, but two of particular interest are:

*The James H. Ferry Jr. Fund Award for Innovation in Research Education* – “to advance the research, scholarly and educational activities of faculty initiatives judged to be innovative in character, ones leading to significant advances, and ones advancing career development of faculty.”

*The Charles E. Reed Faculty Initiatives Fund* – “to support new research directions proposed by faculty in the Schools of Science and Engineering and HST.”

**DISCRETIONARY MONEY**

**Faculty Accounts**

Funds are put into your faculty account at the beginning of each fiscal year to cover teaching expenses, office supplies (not including toner) etc. Black and white copying for classroom material is supplied by the department through the copier in 54-913, but you are expected to pay for color copying. If your TA is doing this work, make certain that they get the account code from your AA. Money in this account not spent at the end of the fiscal year is returned to the department.

**Freshman Seminar and Freshman Advising**

The Academic Resource Center coordinates the payment of small amounts of money to freshman advisors. The amount of this grant is determined on a per capita basis and is meant to encourage faculty to plan social and recreational activities with their advisees without concern about financing the event. (Refer to pg. 20 for description of Freshman Advising)

**Industrial Liaison Program (ILP)**

“Industry’s chief gateway and guide to MIT is the Industrial Liaison Program (ILP). The ILP provides its member companies access to the entire spectrum of activities at MIT.”

http://ilp.mit.edu/

The Office of Corporate Relations wants to encourage faculty participation in ILP. Points are given for your submissions to the program i.e. CV, manuscripts. At the end of the year accumulated points are converted into money and deposited into discretionary accounts. Contacting the ILP is recommended to find out what they are giving points for as the system and rate both can change.

**VACATION and TRAVEL INFORMATION**

**Vacation Funding**

When support staff, research staff, and postdoc associates go on vacation their salary comes from MIT instead of research funds, which is why it is important for it to be reported to Payroll appropriately. Your research accounts will be charged for it originally and a credit will come through the system to your grant(s).

**Travel (per diems)**

A visitor can be paid a per diem while at MIT. A letter is written to Travel requesting permission to pay a per diem. A travel advance can be made out prior to arrival so that money is available to the visitor upon their arrival. The per diem is limited by IRS regulation to one year. There is a limit on the per diem rate.
FACULTY SALARY ISSUES

Summer Salary

Overview – Faculty members may receive up to three months summer salary in addition to, but separate from, their nine months of academic salary. The summer session is effective June 1 through August 31, and faculty members decide which months should be charged to research accounts and/or start-up funds. Research accounts can only be charged 90% effort per month. The additional 10% effort needs to be charged to a discretionary account if you are requesting a full month of salary. Payments will be issued at the end of each summer month and will be paid at the new salary rates as a normal salary payment. Off campus status will be provided (reducing the overhead rate) if the faculty member plans to be off campus for 100% of the time the summer salary is to be paid.

Each faculty member who is paid for the full three summer months is required to sign a form indicating that they are not taking a vacation during that period.

Procedure – In May of each year, the Department’s Personnel Administrator sends a package to each Administrative Assistant for their faculty. The package consists of a memo with instructions regarding summer salary and a form for each faculty member to sign should they request to receive three month of summer salary.

TENURE and PROMOTION

The MIT Policies and Procedures Guide outlines the standard of excellence established for its faculty as follows:

The ideal attributes of any departmental faculty, taken as a group, are scholarly achievement, creativity, collegiality, professional competence and leadership, ability and desire to teach, and willingness to cooperate with other departments in promoting the work and welfare of the Institute as a whole...

Teaching and research are the primary functions of the Institute and are nourished by efficient and imaginative administration. Service to the community and the nation is an inherent obligation. These four-- teaching, research, administration, and public service--are essential features in the MIT program and make comparable demands on ability and devotion.

When the performance of a faculty member is appraised, consideration will be given to high achievement in any of these areas, and the value of the faculty member’s total contribution will be measured not only by the extent and nature of his or her other activities but also by the effectiveness with which they are pursued.

The contributions of a faculty member are not, however, measured solely by activities directly related to Institute programs. The objectives of the Institute are served and its programs enriched by the active participation of its faculty members in outside activities that contribute to the advancement of the faculty member’s profession or provide an opportunity for professional growth through interaction with industry, business, government, and other activities and institutions of our society.

http://web.mit.edu/policies/4.1.html

General Promotion and Tenure Schedule

According to Department policy on promotion, all faculty members are considered for promotion based on a set schedule, unless extraordinary situations warrant a delay. Below is a general schedule for the promotion process.

Promotion clock starts: starting date
| Promotion to Associate without tenure: | starting date + 5 |
| Promotion to Tenure | starting date + 7 |
| Mandatory Tenure date* | starting date + 8 |
| Promotion of Full Professor** | starting date + 12 |

(* see item #3 in Guidelines, below.)
(** estimated)

All successful promotions are effective on July 1 of the fiscal year indicated.

### Guidelines for Appointment & Reappointment of Assistant and Associate Professors

1. New Assistant Professors receive an initial three-year appointment. During this period, they will meet with the Department Head annually and with their mentor as needed. As a result, they should have an accurate idea of their performance including areas that may need improvement.

2. At the end of the three-year period, the Department Head will consider making an additional three-year appointment. It is typically during this second three-year appointment (normally after the fourth academic year) that a non-tenured faculty member will be considered for promotion to associate professor without tenure.

3. The Institute has two relevant requirements regarding age and years of service. In order to remain on the faculty, assistant professors with eight years of service under age 35 must receive a promotion to associate professor. Associate professors with a total of eight or more years of service must receive tenure in order to continue after age 35.

4. The review process accompanying this promotion to Associate Professor without tenure is quite rigorous and is designed to provide a clear view of the progress an assistant professor has made and their ultimate prospects for tenure. Candidates for this promotion are judged based on excellence in teaching and research as well as service to the Department and the Institute as outlined in MIT’s Policies and Procedures. With respect to research, they must have a significant set of accomplishments, have shown promise for outstanding research in the future, and have established themselves as one of the leaders of their generation in their sub-field.

#### Process

A promotion committee will be formed during the candidate’s fourth year as an assistant professor. The Department Head appoints a committee of senior faculty in the department to evaluate the candidate’s qualifications for promotion. The committee decides if the promotion and the timing of the promotion are appropriate. If the decision is favorable, the committee notifies the DH to proceed with the promotion case. A decision not to proceed to tenure can be taken at the department level without seeking an outside evaluation. The candidate needs to provide the following items:

- List of recommended referees and referees to be avoided.
- Hard copies of an up-to-date CV with publications, honors and awards, and service (both inside and outside MIT).
- A one or two-page statement of current and future research interests.
- A one or two-page teaching statement.
- At least 2 but not more than 4 reprints or preprints.
- Scientific American Summary (This is a one-page review of the faculty member’s research in layman’s terms. The summary is not included in the case, but a copy is needed one week before the Dean presents the case to Academic Council.)
When all referee evaluation letters are received, the Department Head will notify the promotion committee, which will meet to develop an opinion about the case. Subsequent to evaluation by the committee, the Department Head will schedule a faculty meeting to review the case and complete the evaluation process. If the faculty votes to go forward with the promotion, the case will be presented at a pre-scheduled Science Council Meeting.

At Science Council, nominated promotion and tenure faculty cases are presented and reviewed by the Department Heads. The Department Heads provide formal advice by vote to the Dean concerning submission of the case to the Institute’s Academic Council. The Dean presents the School of Science promotion/tenure cases to Academic Council. Once they pass AC, they are then voted on by the Executive Committee. Promotion/tenure results are relayed to the faculty member by their respective Department Head after the vote of the Executive Committee.

Guidelines for Appointment with Tenure

The process for promotion to Associate Professor with tenure typically begins in the late spring of the sixth academic year at MIT. The Institute’s Policies and Procedures Guide states the following with regards to tenure:

The Institute regards tenure as important to ensuring academic freedom in teaching, research, and extramural activity. A department and School make a career commitment when the award of tenure is recommended. The Institute as a whole, acting through the Academic Council and the Corporation, joins in this commitment when tenure is awarded.

Persons awarded tenure must be judged by distinguished members of their discipline to be of first rank among scholars and to show promise of continued contribution to scholarship. Tenured members of the Faculty must also demonstrate outstanding teaching and university service; however, teaching and service are not a sufficient basis for awarding tenure.

A single standard for tenure applies across the Institute, for all Schools and disciplines and for all modes of inquiry. Although the single standard requires that all candidates be of exceptional quality as confirmed by distinguished members of their disciplines, it may be appropriate, based on the culture of the discipline or the modes of inquiry, to look at different factors as evidence of significant scholarly achievement.

http://web.mit.edu/policies/3.2.html

A tenure committee is assembled with the same makeup as the promotions committee. The candidate will supply the same materials listed above, but more letters of recommendation will be required. The committee makes their recommendation known to the Department Head sometime early in the fall semester of the seventh academic year. If the case receives sufficient support, a meeting of all tenured faculty members is scheduled.

During the week prior to the meeting, the case is made available to all tenured faculty members. Tenured faculty members who are not able to attend the meeting are asked to review the case and submit their comments to the Department Head. At the faculty meeting, the case is presented, discussed, and voted upon. The recommendation of the faculty is taken under advisement by the Department Head. If the Department Head believes the case is sufficiently strong, he presents the case to the Science Council for their approval early in the spring semester of the seventh academic year. The Department Head notifies the candidate of the outcome of the process as early as possible.
The promotion to Full Professor usually occurs four years later. This promotion is meant to recognize significant contributions in research, education, and/or service to MIT and to the broader scientific community.

**EDUCATION in EAPS**

**DEPARTMENTAL ROLES and RESPONSIBILITIES**

The responsibility for teaching and supervising student research lies directly with the EAPS faculty. In some instances, the appropriate research advisor for a student is one of the Principal or Senior Research Scientists. When a Senior Research Scientist serves as a research advisor, a current member of the EAPS faculty will be assigned as the student’s academic advisor. When a Principal Research Scientist serves as a research advisor, a current member of the EAPS faculty will be assigned as the student’s academic and co-research advisor. Either a current EAPS faculty member or a Senior Research Scientist may sign a competed thesis. A retired EAPS faculty member who has remained active in the Department may fill the same roles as a current faculty member.

**EAPS Committee on the Education Program [CEP]**

The committee represents the department faculty in all areas related to educational activities, exercises oversight of the educational program, and provides council and advice to the Department Head on graduate and undergraduate policy. Its members are the Associate Department Head, Graduate Officer, Undergraduate Officer, and Education Director.

While each disciplinary group within EAPS has a specialty committee for education issues within that area, the CEP provides oversight for the entire program. It is responsible for the organization and enforcement of all aspects of the graduate and undergraduate degree requirements, approval of general examination topics and committee membership, and monitoring of student progress as determined by grades and progress along the timeline established for completion of the program.

The CEP provides oversight of curricula and teaching activities. It identifies problems and gaps in course offerings, intervals for class offerings and opportunities to partner with other institutions in teaching. The CEP ensures the high quality of the education programs through the review of course evaluations for all faculty, especially junior faculty, and regular review of teaching loads. It meets with new and junior faculty to discuss their interests and suggest areas where contributions to teaching are needed.

Specific duties include:

- Exercising oversight of the degree programs through:
  - reviewing subject offerings and changes for the following year’s catalog,
  - recommending changes in the degree requirements to the faculty,
  - approving any deviations from degree requirements.
- Developing and distributing guidelines for advisors.
- Reviewing student end-of-term grades and act on warning letters and recommendations to ODGE and CAP, when appropriate.
- Ensuring that disciplinary groups have met with and reviewed progress of all pre-generals students at least once per year, and that all post-general students have met with their thesis committee at least once per year (though best practice would be to meet once a semester).
- Mediates between students and advisors when needed.
• Meets with new faculty shortly after their arrival to explain teaching expectations and discuss specific teaching contributions (existing classes, new classes, etc.)
• Oversees the Student Research Fund Committee [SRFC].

Discipline Specialty Committees [SC]

In general, each of the four departmental disciplines has a specialty committee, which oversees the general education program within that area. Specialty committees work to maintain continuity in the student-advisor relationship, to establish overall standards of academic performance, and to provide undergraduate curriculum recommendations to the Undergraduate Committee. These committees neither replace the faculty advisor, nor assume any of the advisor’s responsibilities. The Graduate Studies Manual provides greater detail about the role of the SC role in graduate education.

INSTITUTE COMMITTEES

Committee on Graduate Programs [CGP]:

The committee shall consist of six elected faculty members, the Associate Chair of the Faculty, two graduate student members, and ex officio, the Dean for Graduate Students and the Vice President for Research (or their designated representatives).

The Committee shall exercise general overview of graduate programs and of students working for advanced degrees. Among its many other responsibilities, the Committee shall act with power on proposals for changes in graduate level subjects of instruction, upon requests from graduate students for approval of minor departures from general requirements, and in evaluating the academic performance of graduate students, including the issuance of formal warnings and denials of further registration in the graduate school.

http://odge.mit.edu/gpp/oversight/cgp/

Committee on Academic Performance [CAP]:

The CAP is a standing faculty committee concerned with the academic performance of all undergraduates. Its work can be divided into these categories:

• Review of Petitions Requesting a Change to Student’s Academic Record
• Enforcement of Credit Limits
• End of Term Academic Review
• Degree Candidate Review

http://web.mit.edu/acadinfo/cap/about/index.html

Committee on Curricula [COC]:

The COC acts with power on proposals to create, revise, or cancel undergraduate subjects, on proposals to create, revise, or terminate undergraduate curricula, and on student petitions for second SB degrees and substitutions for the General Institute Requirements. The Committee also serves as the Faculty advisory body to the Registrar.

http://web.mit.edu/registrar/subjects/cmtes/coc

EDUCATION OFFICE SUPPORT for TEACHING

The Education Office coordinates the education activities within the department, working directly with the Department Head and the Graduate, Undergraduate, and Admissions Committees. The office acts as a liaison between the Department and internal and external
constituencies. Additional responsibilities include working individually with students to advise them regarding degree requirements, funding information, policies and procedures, and career options. Individual faculty members work with the staff of the Education Office to facilitate the smooth running of EAPS classes.

**Course Scheduling**

Classes are scheduled during all three terms of the academic year and IAP, although the schedule is limited during IAP and the summer term. IAP is the time for long-term or long-distance field trips associated with both undergraduate and graduate classes. During the summer, EAPS only offers courses for thesis and pre-thesis research. The Fall term schedule is planned during March, and the Spring term schedule is planned during September. The schedule for IAP activities is sent to the Registrar in September.

A course is generally offered on a regular schedule, either yearly or bi-annually. Exceptions might occur when a faculty member plans a sabbatical. The Education Office plans the day, time, and room assignments of the term’s schedule once faculty have determined the roster of courses for that term. A priority in the process is keeping a class scheduled within its historic time/room slot. EAPS is in control of scheduling the classrooms on the 8th floor (824 and 819) as well as 54-1627. Therefore, we have more flexibility in responding to classes that alternate years and to last minute changes. Classes in other buildings are scheduled through the Schedules Office. The Schedules Office has a firm rule about priority in time/room slots. The class that had the slot the previous year has absolute priority for the coming year. In these circumstances, it is more difficult to work around both classes affected by sabbaticals and those offered in alternating years.

**Course Offerings: Changes, Additions, and Deletions**

Descriptions of all course offered within a department are published annually in the online MIT Bulletin. The description includes course content, terms offered, grading options, number of credits, and instructional staff.

All new courses and changes to existing courses need to be approved by the CEP before their submission for Institute approval. The process starts during the Fall term for changes that will take effect in the following academic year. The Education Office solicits information on course changes to the bulletin and enters the information supplied by faculty into the Curricular Information System to generate the draft version of the proposal. When the draft version is approved by both the faculty member and Department Head, the Education Office formally submits the proposal.

If you are designing a new course you should discuss with your colleagues the role the class will fill in the broader curriculum. We have no formal procedure for soliciting support within a disciplinary program of EAPS for changes to courses, but discussions prior to submission of a proposal will ensure that course offerings are relevant to our students. Equally important, your colleagues are a valuable source of experience, and utilizing their knowledge will make the process less time-consuming for you and will result in a course better planned from the beginning.

If you wish to give a new class a “trial run” before submitting a formal proposal to the COC, we can offer the course under one of the EAPS “Special Problems” or “Special Topics” course numbers.

**Teaching Assistants**

EAPS has funding for a limited number of Teaching Assistants. Often the requests for TAs exceeds the number that are funded. Teaching Assistants are assigned based on the following priorities:

- Undergraduate courses initially receive 1.0 TA, Graduate courses initially, 0.5 TA*
Courses with labs, large enrollments, or many graded assignments receive extra consideration

Requests for TA should be made to the Education Office. This is often done at the same time as course scheduling. Instructors generally choose the graduate student to be assigned to their courses, but an acceptable alternate approach is to advertise among the EAPS graduate students to identify interested students. You do not need to know the name of the TA as the time the request is submitted, but the Education Office does need to know a month before the start of the term.

* TAs are expected to work 20 hours per week on the class to which they are assigned, but we commonly make TA appointments with fractional Full Time Equivalent (FTE), or less than a 100% level of effort, with a corresponding reduction in the expected hours per week of work. Note that 20 hours is an average value, so some weeks could have more hours if other weeks had less.

Teaching Evaluations

Students in all EAPS classes are asked to complete teaching evaluations for each course instructor (faculty and teaching assistant). In addition, the students are asked for further information about the effectiveness of the teaching assistant. This information is used to award the department prize for teaching excellence by graduate students.

The Education Office distributes the blank forms, collects the completed forms, and provides instructors with summaries of the results. Instructors can examine individual forms once the grades for the class have been submitted. By default, EAPS uses the general forms supplied by the Institute. These can be customized to a limited extent to make them more appropriate for your classes. If you would like to discuss other options for an evaluation form, please come to the Education Office. The tabulated results from course evaluations are available on-line at: https://web.mit.edu/acadinfo/sse/

A MIT certificate is needed to view the evaluations.

Teaching and Course Portfolios

Teaching and Course Portfolios are scholarly documents designed to facilitate a reflective approach to teaching and learning. A portfolio can be summative, serving to evaluate past teaching, or it may be used as a formative instrument to identify the strengths and weakness in teaching and to formulate plans for the future. There is no template to be filled in; each portfolio is a personal document that you build because it is useful for you.

The portfolio will contain documents from your classes, identified goals for your teaching, and multiple ways to evaluate your teaching. This is a vehicle to place the student evaluations in context and increase their utility. The Teaching Portfolio spans the range of your teaching experience, touching on most of the classes that you teach. The Course Portfolio focuses on one course only. Both approaches are a longitudinal examination of your teaching and your student’s learning.

The Education Office has resources that can help you assemble a Teaching or Course Portfolio should you wish to use it as part of a case for promotion/tenure or as a way to assess strengths and weaknesses of a current class.

Room Scheduling

Often, classrooms in Bldg. 54 are used by faculty and students for seminars and meetings. The Education Office supervises the scheduling of the 8th floor rooms and 1627. Headquarters supervises the scheduling of 54-915/923. For planning purposes, current schedule information is available on the EAPS website. To reserve a classroom for a meeting, contact Roberta Allard
at extension 3-3381 or [allard@mit.edu]. Please remember that classes have priority in using these rooms.

**Visiting/Special Students**

Students who are pursuing an undergraduate or graduate degree at an institution of higher education in the US (other than MIT) or abroad and who have been invited by an MIT department or laboratory to do research in their field of studies may apply for Visiting Student status for a minimum of 3 months and a maximum of 12 months. Please note that a $1000 fee is charged to the researcher for each student, which cannot be paid from a research account. In addition, the student must pay a registration fee for each semester they are in attendance. For detailed instructions, see: http://eapsweb.mit.edu/resources/vs

Special Students apply through the Admissions Office to take specific courses. The admission is approved by each department with a course listed on the application. Once admitted, the student attends class and receives a grade just as a regular MIT student. The special student pays full tuition.

**ACADEMIC PROGRAM REGULATIONS**

**Registration for Classes**

Graduate students need to be registered for both the Fall and the Spring terms. Registration Day happens twice a year, at the beginning of the Fall & Spring semesters, although registration can take place during the previous and following weeks. Pre-registration and registration are accomplished online at <registration.mit.edu>. For the Fall and Spring terms, registering for 36 units is considered a full-time load. A student should meet with their advisor prior to registering for classes. A student’s registration needs to be approved by the advisor. After approval, the student needs to submit the registration to the Registrar. The advisor does not need to approve pre-registration.

Each educational program within EAPS has a number of Special Problems and Special Topics courses that are used when faculty want to offer a special one-time seminar. Graduate students who need to receive credit for pre-thesis research should register for a “Current Research in...” subject. EAPS offers a number of field courses over IAP for which students can register on-line or through the course instructor. No extra tuition is charged for these courses.

A student must be registered for a course in the summer term if they will be receiving a stipend. EAPS only offers pre-thesis research and thesis research courses in the summer. Tuition for these courses is 100% subsidized by the Provost if the student’s performance is satisfactory and it is the only course for which they are registered. The pre-thesis research courses are identified by the title “Current Research in ....” There are pairs of pre-thesis research courses for each research area. One subject of the pair is letter-graded, and the other is Pass/D/Fail.

**Grades**

*Description of Grading Criteria* - Classes are approved by the COC to receive either letter grades or Pass/D/Fail grades, and grades can only be assigned using the specified method. Check the bulletin or with the Education Office before the beginning of the term if you have any questions about a specific class. Knowing the grading system before you teach a new class will affect how you assign and grade the class work.

The Institute explanation of the basic set of letter grades is listed below. Specific grades for incomplete work, absence from required work, and grades for continuing classes are listed on the reverse side of the formal grading sheet.
A Exceptionally good performance demonstrating a superior understanding of the subject matter, a foundation of extensive knowledge, and a skillful use of concepts and/or materials.

B Good performance demonstrating capacity to use the appropriate concepts, a good understanding of the subject matter, and an ability to handle the problems and materials encountered in the subject.

C (Undergraduate Work) Adequate performance, demonstrating an adequate understanding of the subject matter, an ability to handle relatively simple problems, and adequate preparation for moving on to more advanced working the field.

D (Undergraduate Work) or C (Graduate Work) Minimally acceptable performance, demonstrating partial familiarity with the subject matter and some capacity to deal with relatively simple problems, but also demonstrating deficiencies serious enough to make it advisable to proceed further in the field without additional work.

F Failed. This grade also signifies that the student must repeat the subject to receive credit.

Note that the MIT internal grading system includes plus (+) and minus (-) modifiers for use with the letter grades A, B, and C for all academic subjects (except advanced standing exams). These modifiers are included on internal grade reports. However, they are not officially part of student’s grades, they do not appear on MIT transcripts, and they do not affect internally or externally reported grade-point averages.”

A student’s grade point average “is computed by multiplying the grade points received in each subject by the total units assigned to that subject and dividing the sum by the total units. Grade points are as follows: A = 5; B = 4; C = 3; D = 2; F = 0; O = 0. Grades of I, S, SA, OX, T, and DR [dropped class] are used for incomplete or continuing work and are not used in computation of a graduate student’s cumulative rating, and the grades of J and U not until final grades are received.

http://web.mit.edu/gso/gpp/registration/performance.html#2

The Institute expects undergraduate students to maintain a 3.0 GPA; graduate students, a 3.5 GPA.

Assessment of Graduate Student Grades - An informal survey of faculty indicates that the customary use of these grades within EAPS has evolved into a looser interpretation of Institute descriptions. Within our department, the grades of “A” and “B” are both acceptable grades for a graduate student to receive. When a graduate student receives a grade of “C” for a class, the student does receive academic credit, but the student’s performance is considered more carefully by the faculty. While the specific nature of this additional scrutiny varies by program, the following is generally applicable:

• A grade of “C” in a class outside of the student’s specialty is viewed more leniently than if the grade were received for a class central to the student’s research area.

• Additional work might be required in some form. If course work in the specific area is not feasible, the student could demonstrate increased competency in the subject through additional reading and writing.

• Evaluation of a student’s performance on the general exam could include consideration of the circumstances under which the “C” grade was received.

• The student’s GPA must be high enough to indicate that their performance generally demonstrates an understanding of the complexities of the subject and the ability to apply this understanding productively.
**Grade Reports** - In the week before final exams, the Registrar’s Office sends the grade sheets for the term’s classes to the Education Office, and they are then distributed to faculty. Classes are approved by the COC to receive either letter grades or Pass/D/Fail grades. Grades can only be assigned using the specified method. Check the bulletin or with the Education Office before the beginning of the term if you have any questions about a specific class. Completed and signed grade sheet should be promptly returned to Roberta Allard in the Education Office.

**Degree Lists and Thesis Submission**

MIT awards degrees in June, February, and September. During the first week of the Fall, Spring, and Summer terms students who wish to graduate submit a petition to be included on the current degree list. Petitions submitted after the deadline require the payment of a Late Fee. It is always easier for a student to leave the degree list at the last minute (no penalty involved), than to be added after the deadline. The thesis should be submitted to the Education Office by the deadline specified on the Institute academic calendar for the student to remain on the degree list and be eligible to graduate. In some instances, the student can arrange with the Education Office for a slightly delayed date for submission if the advisor approves. At the end of the term, the EAPS CEP certifies the list of EAPS students to receive degrees, and the Committee on Graduate School Programs or the Committee on Academic Programs approves the list.

**ADMISSION of GRADUATE STUDENTS**

**Committee Structure**

The EAPS Admissions Committee represents the department faculty in all areas related to graduate admissions activities. The committee is responsible for the organization, review, and approval of all graduate admissions decisions for the department. The committee determines the recipients of fellowships from department endowed and expendable funds, as well as nominating students for MIT competitive fellowships supervised by the Office of the Dean for Graduate Education. The Department Head sets policy for the reimbursement of expenses for visits by admitted students. The committee will also review trends in applications, admissions, and acceptances, and coordinate appropriate changes in admissions procedures.

The committee is composed of a representative from each program within the department. Each representative is responsible for communication between the committee and their respective disciplinary group concerning student applications, travel reimbursements, and fellowship nominations.

**Admission Process**

EAPS admits students for entry in September and February, but the department focuses on admission for September. Admission for February is usually offered only to the unquestionably superior applicant. Students apply to and are accepted into a specific education program: Atmospheric Science, Climate Science; Geology/Geochemistry/Geobiology; Geophysics; and Planetary Science. Students may pursue graduate study in one of three possible degree options:

1. **The 5th Year Master’s Degree, Combined B.S./M.S. Program:** Usually, MIT undergraduates can complete this program by adding one year of graduate study to their undergraduate degree program. Undergraduate majors must formally apply to the Master’s program in order to pursue this option. All requirements for both degrees must be completed as described in the MIT Bulletin, but a combined B.S./M.S. thesis is acceptable.

2. **The Master of Science Program:** This degree typically requires a full year of formal subjects and one year of thesis research, including summer. To receive a M.S. degree a student must complete 66 units of graduate subjects (42 units must be "H" level) and a thesis.

3. **The Doctoral Program:** The Ph.D. degree usually requires three or four terms of formal subjects, followed immediately by the General Examination. Upon successful and
unconditional completion of the General Exam, the student is expected to devote two to three years to original research, the writing of a dissertation, and the completion of a successful defense of the dissertation. Students are expected to finish the entire program in 4–5 years.

Application to the EAPS graduate programs is an online process. The application, transcripts, and letters of evaluation are all submitted online. Faculty members have immediate online access to any application. Each Admissions Committee member commonly reviews all of the applications to their research area and brings particularly interesting applications to the notice of other faculty. Initial decisions on admission are made by individual faculty. At the Admission Committee meetings the representative from each research area brings the list of applicants that have been recommended for admission by a faculty member and is prepared to argue the merits of each person admitted. Current EAPS faculty and Senior Research Scientists are eligible to recommend applicants for admission. The Committee makes the final decision concerning admission for each applicant.

**Admitted Students**

No applicant to one of the EAPS doctoral programs is admitted without a guarantee from faculty of financial support for the student and willingness to serve as the student's advisor. Occasionally the faculty in a research area will agree to jointly support a student. One faculty member is always assigned as the student's advisor. EAPS has a number of endowed and expendable fellowships, and an additional number of Presidential Fellowships are funded by the Institute. Fellowships are reserved for incoming students and are used as a recruiting tool.

All the students we admit are highly qualified and have received competing offers of admission. The policy in the immediate past has been that each admitted student residing in the contiguous United States is invited to visit the department as they decide which offer to accept. The department pays for travel, food, and lodging. Most recently we have arranged a department-wide Open House for the admitted students to visit during the same time period. Admitted students can visit individually if they can not attend the Open House. If you invite an applicant to visit before they are admitted, you or the student must pay for the travel costs. If you then admit the student, the department will assume the travel expenses. An admitted student has until April 15th to notify us of their decision.

**GRADUATE STUDENT LIFE**

**Student Organizations**

*Graduate School Council [GSC]*

The Graduate Student Council [GSC] consists of elected representatives from academic departments and graduate living groups. The GSC is primarily concerned with promoting the general welfare and concerns for the graduate student body, and communicating with the MIT faculty and administration on their behalf. The major functional goals this year are:

- Improving communications
- Strengthening internal MIT collaborations
- Increased accountability

Less seriously, the GSC also sponsors many social, cultural, and athletic events throughout the entire year to help improve the quality of life for graduate students.

http://web.mit.edu/gsc/www/About/about.html

*EAPS Graduate Student Advisory Council [EGSAC]*

**General Description** - All EAPS graduate students are members of EGSAC. Business meetings are held periodically, and officers are elected annually. EGSAC organizes social
events throughout the year for graduate students, including the weekly Peer Hour, the annual Fall trip, and a number of barbeque events and picnics. More information can be found at their website: http://www-eaps.mit.edu/egsac/index.html

In a more serious vein, the organization elects the department representative(s) to the GSC and a non-voting graduate student representative to the Graduate Committee. EGSAC has been effective in representing graduate student concerns to the faculty.

**Mentoring Program** - in the spring of 2003, EGSAC started a mentoring program in which post-generals graduate students who are interested in participating act as mentors to incoming graduate students and to continuing pre-generals graduate students who want mentors. This is on a purely voluntary basis, and one post-generals student may be a mentor to more than one pre-generals student if they are willing, depending on how the numbers work out. The mentor and mentee should be in the same program within EAPS so that they have the same general exam structure, etc.

The mentoring might just involve meeting once a month for lunch or coffee, to talk about how things are going. This is just a general guide to the level of involvement, though. The precise relationship should depend on what the two students feel is necessary, and the amount of contact will vary depending on whether or not the younger grad student is passing through a difficult stage, such as choosing an advisor or preparing for the general exam. There should be a general feeling that the older student is looking out for the welfare of the younger.

This program is designed to help students with anything other than their homework. That is, the mentor is not supposed to be a tutor, but rather someone the mentee could talk to if they have difficulty with things like

- Knowing how to choose an advisor
- Communicating with the advisor
- Communicating with fellow grad students
- Preparing for the general exam or thesis proposal
- Feeling isolated
- Knowing how to go about choosing a generals project or thesis topic
- Wanting to switch advisors or projects, or wondering if this would be OK
- Being harassed or discriminated against
- Worrying about being capable of completing a PhD

Of course, the mentor is not supposed to be a substitute for the advisor. The mentor should keep an eye on how the new graduate student is doing and suggest other resources or people to talk to if the mentee seems to be having problems. For example, a mentor could help identify a situation where a grad student is blaming themselves for problems that actually come partly from a lack of advising.

Most new grad students start to talk to post-generals graduate students on their own anyway, but it is difficult for some people, and takes time for most people. This mentoring program is supposed to prevent new graduate students from slipping through the cracks and floundering while no one notices.

**Student Research Fund [SRF] – Houghton Fund**

The Student Research Fund is available to help students in Geology & Geochemistry, Geophysics, and Planetary Science conduct research on special projects in cases when other means of department or faculty support are not available. Requests to help support travel to disciplinary meeting for the purpose of presenting research results are also funded. A request
for proposals is sent out twice a year, at the beginnings of the Fall and Spring terms. The funds are awarded by the SRF Committee on the basis of need and merit of the project, are usually in the range of $200-$800, but higher amounts will be considered. The Committee has a fixed amount of money it can distribute over the academic year. The Houghton Fund serves a similar purpose for PAOC students.

GRADUATE STUDENT SUPPORT

All students admitted to the EAPS doctoral or MIT/WHOI programs are admitted with full support that includes a stipend, health insurance, and full tuition. This support covers the full academic year and continues as long as the student is making satisfactory progress toward the degree. However, the specifics of the funding provided by the Joint Program vary from that of the EAPS program. This section applies to the EAPS program. Documentation from WHOI should be consulted for the relevant details of JP funding.

Funding for graduate students is structured as fellowships, research assistantships, and teaching assistantships. Each type of award can be made on a fractional basis so that, in combination, the total award for a student meets the tuition and stipend levels set by the department in accordance with the guidelines published by the Office of the Provost. The EAPS doctoral program spans five years, and support beyond that time is not automatic. Continued support must be approved by the Graduate Committee, and only will be granted if the student and advisor can explain the circumstances that require an extension, demonstrate that the student has been making satisfactory progress to date and has a reasonable expectation of finishing in the near future.

A full-time appointment for one regular semester as a Research Assistant [RA] or Teaching Assistant [TA] extends for a period of 4.5 months. Fall term appointments begin on September 1 and end on January 15. Spring term appointments begin on January 16 and end on May 31. Summer research appointments begin June 1 and end August 31. Both RA and TA appointments carry salaries and associated responsibility either to MIT or to a particular research grant or contract. The Graduate School Manual states the following rules:

1. Assistants observe normal Institute holidays (generally coinciding with national holidays). Periods when classes are not in session, such as IAP, Spring Vacation are not Institute holidays, and assistants are expected to work during these times. If on a twelve-month appointment, an Assistant is entitled to a paid two-week vacation, arranged with the approval of the research supervisor.

2. Assistants may not have other employment in which funds come from an MIT administered source.

3. Absence from the Institute during a working period requires approval of the student's supervisor.

MIT has a policy to provide childbirth accommodation to graduate students who give birth. The policy does not apply to adoption or to men who give support to their partners during childbirth. The Office of the Dean for Graduate Education administers the program through the petition process. A student supported by an RA or TA may request a leave of one month, one and a half months, or two months. During that time the student’s stipend will be paid from the Childbirth Accommodation Fund. For a student with an RA, the tuition will also be paid from the fund. Accommodation is also available for students with fellowship support. The details are available at: http://odge.mit.edu/gpp/registration/changes/childbirth-accommodation-maternity-leave/. Approval of the Childbirth Accommodation will stop the research and academic clocks for the time of the accommodation.
Research Assistantships

This is the most common type of support for the EAPS graduate students. Prior to the student’s taking the General Exam, the academic advisor usually provides funding using this type of award. After the General Exam, the thesis advisor most commonly provides the student’s funding. There is often no difference between the thesis advisor and the academic advisor, and the student should be working on a research problem for the advisor providing funding. You should clearly discuss your expectations for work to be performed with those students you are supporting on research grants.

The stipend of a research assistantship comes entirely from the research account, and the account is charged overhead. The tuition portion of the assistantship is subsidized by the Provost’s Office in order to reduce the expense of a graduate student to the researcher. The subsidy is currently 50%. During the summer the Provost has a 100% tuition subsidy for those students registering for only pre-thesis or thesis research.

Fellowships

Some students are supported by internal or external fellowships. EAPS has three departmental fellowships supported by endowed funds and a number of fellowships funded by the Institute. It is the custom of the department to use the fellowships from both of these categories to support first-year graduate students. These fellowships carry a larger stipend than a research assistantship. They are awarded for the nine-month academic year.

In addition, the graduate school has a number of competitive, restricted fellowships for which new and continuing students can apply. These have varying amounts allocated to stipend and/or tuition and are awarded for varying amounts of time.

Some EAPS students are funded by external fellowships such as those awarded by the NSF or NASA. When an external fellowship does not meet the funding guidelines, it is supplemented to achieve full tuition and to raise the stipend to the level of a research assistantship by an additional appointment, usually a research assistantship. Occasionally a teaching assistantship is used, by request, to supplement the fellowship, but the policy is to minimize this situation so that time on fellowship can be characterized by concentration on research.

Teaching Assistantships

EAPS uses teaching assistants for both undergraduate and graduate classes during both terms as well as for some classes during the Independent Activity Period [IAP]. This award includes a larger stipend than a research assistantship and requires the graduate student to devote 20 hours per week to the support of the course to which they are assigned. Funds for a specific number of teaching assistants are provided by the Provost’s office.

The department emphasizes the following Institute policies:

1. “The principal duties of a Teaching Assistant include assisting faculty members in classroom (field, observatory), and laboratory instruction, preparing apparatus or material for demonstration, conducting tutorials and discussion sections, and grading quizzes…”

2. “Students holding a Teaching Assistantship share a responsibility for promoting the scholarly and educational objectives of the department of which they are staff members. Graduate student staff, like faculty, should consider it a duty to become personally acquainted with the students assigned to them and to interest themselves in their students’ academic and non-academic progress…”

The particular obligations of an individual TA are to be decided by the faculty member in charge of the subject being taught. A Teaching Assistant in the department is expected to put in 20 hours per week, on average, although the temporal distribution of work may be highly non-uniform. Instruction in EAPS subjects takes a variety of forms, such as fieldwork at remote
locations, or astronomical observing during night hours. The faculty member in charge of the subject is responsible for working out with the TA in advance how work will be scheduled so that to the extent practicable, the TA’s instructional duties may be meshed with other responsibilities as a student. Normally, a TA should be registered for about 36 units of subjects, which may include thesis research or “Special Problems” courses.

Administration of Awards

The Education Office enters the information on graduate student funding into the Student Information System prior to each term. This process is time-consuming because it must be done by individual student. Thus, the Education Office needs the information from you identifying teaching assistants and the funding source for research assistants a month prior to the start of Fall, Spring, and Summer terms. Realize that delay in providing the needed information can result in the delay of a graduate student receiving their stipend at the start of the term. It is the general custom in EAPS for your Administrative Assistant to relay the cost objects associated with the research grants that you will use to support your advisees. Should you wish to provide the information directly, please notify the Education Office.

STUDENT ADVISING

UNDERGRADUATE ADVISING in EAPS

Program Structure

The Undergraduate program in EAPS is designed to reflect the interdisciplinary nature of our research. It allows the flexibility for a student to tailor a program to their interests. However this flexibility requires strong faculty involvement as advisors to ensure that students build a cohesive and rigorous program. EAPS offers a minor in Earth, Atmospheric, and Planetary Sciences, a minor in Astronomy jointly with Physics, and participates in the interdisciplinary Energy minor. Each program has a defined list of courses that contains required courses as well as electives. One faculty member within EAPS serves as the advisor for each of the minor programs. Undergraduates typically choose their majors at the end of the Freshman year.

Freshman Advising

An advisor for a Freshman is responsible for approving the student’s course selections for the first year and monitoring the student’s academic progress. The advisor can be very important in facilitating the student’s adjustment from high school to college by serving as a resource for advice and an avenue for identifying any appropriate support services within the Institute.

MIT has a variety of mechanisms for advising freshman.

• Freshman Learning Communities – Advisors are associated with the program, although most do not actively teach the courses. A student chooses to participate in this type of program because they are interested in having a small group learning experience as well as being interested in the content of any affiliated courses. Terrascope, offered jointly by EAPS, Civil and Environmental Engineering, and Biology, is an example of these communities. Other programs are Experimental Study Group, Concourse, Media, Arts, and Sciences.

• Freshman Advising Seminars – The faculty teaching each course serves as an advisor for the students in the class. Class meetings are once a week, and, in addition to the course content, can involve wide-ranging discussions of course work and adjustment to the
college environment. Even with the ending of the class at the end of the term, the faculty remains as the student’s advisor through the Freshman year.

- Traditional Advising – Students are assigned by the Academic Resource Center to those who have volunteered to be advisors. The students in an advising group do not necessarily share a common element in their experiences.

EAPS faculty have traditionally been active in Freshman Advising Seminars and are now also involved in advising through the Terrascope program. In addition to the community service this provides, we hope that by coming to know members of EAPS, freshman might seriously consider joining the department as a major.

Advising within the Major

When a new major joins EAPS, they are assigned an advisor within the chosen program area. We do not assign advisors to classes of students; rather matches are made individually. The Education Office or the a CEP member will ask if you are willing to advise a specific student. You are certainly free to let the Education Office know if you are interested in being asked to be an advisor, or are interested in advising a specific student. You always have the option of declining if you are feeling over-committed.

Your job as an advisor is to monitor your advisee’s academic progress, suggest an appropriate program of courses within department guidelines, approve course registrations, and provide general advice when necessary. While you will receive a grade report for each term that your advisee is registered, you can check their grades, status of current registration, and degree audit for General Institute Requirements at: http://student.mit.edu. A word of warning—do not let your advisees take the physical education requirements lightly. MIT rigorously enforces these requirements.

All EAPS majors are required to complete a research component as part of their programs. You have no obligation to serve as the advisor for the research, but students will have varying abilities to identify a suitable project and a faculty advisor. You might be called upon to help the student meet this challenge. To preempt this difficulty in the senior year, and to increase the student’s engagement in the discipline, you might encourage your advisee to become involved in the Undergraduate Research Opportunity Program [UROP] during the sophomore or junior year.

BEST PRACTICES for ADVISING GRADUATE STUDENTS

The content of this section relies heavily on documents produced by the University of Michigan for its faculty and graduate students. Copies of the faculty advising resource are available on the web at http://www.rackham.umich.edu/downloads/cpp-qt-mentoring.pdf

Your Responsibilities as an Advisor

The relationship between you and your advisee will develop and change over the duration of their career in the department. New graduate students need guidance in selecting suitable research questions and devising appropriate strategies for addressing these questions. You need to anticipate that your relationship will mature into a meaningful collaboration as your student gains experience. The essential ingredient for a good relationship is effective communication between you and your advisee. You should clearly and directly express your ideas and concerns about the student’s progress in both research and academics.

Generally, advisor responsibilities include:
• Most importantly, you provide the principal guidance on your student’s research and dissertation. Including,
  o Advice on their strengths & weaknesses as a researcher
  o Help identifying tractable and significant research problems, particularly at the start of their career. This aspect of the advisor/student relationship should naturally evolve as the student gains experience.
  o Clear guidelines on the standards that the student’s research needs to meet
  o Clear guidelines on writing styles and techniques for avoiding plagiarism
  o Providing the student the freedom to explore their own ideas
  o Editing of your student’s written work and comments on their oral presentations
• You are a source of financial support as long as your advisee is making “satisfactory progress” toward the degree.
• You need to be a source of encouragement and support. Communication between the two of you should reflect mutual respect.
• You need to help your student manage the transition between undergraduate and graduate work. Each student requires a very specific approach for success, and the approaches are quite different.
• You are a resource for helping your students build networks of colleagues and being willing provide letters of reference when needed.

Recognize that you cannot be all things to every student, or even to any one student. As an example, a junior faculty member might be a good source of enthusiasm and receptive to novel approaches. A more senior faculty member often has more influence within your program or the department. Encourage your students to build a network of mentors. Help them accomplish this by introducing them to colleagues and potential collaborators.

Mentors often are members of the faculty, but mentors don’t have to exclusively come from this role. Graduate students have found valuable support from:
• Postdocs
• Researchers at other schools
• Visiting Scientists/Professors

While there are shared common features, each graduate program in EAPS has its own procedures for tracking the progress of their students. Be aware of the processes you will use to track your advisees.

Expectations of your Graduate Students

Just as your advisee will have expectations concerning your interactions, you should have some realistic expectations for her/him. Your advisee should:
• Discuss with you their plans for meetings and publications
• Schedule meetings in a timely manner
• Arrive with an agenda
• Following a meeting, provide participants with a summary of agreements and plans
• Be responsive to the advice given by more experienced researchers
• Take themselves and their work seriously

This last item sounds rather simple, but is really quite complex. Remember that the
successful graduate student will be maturing in professional self-confidence and research skill as they advance in the program. The transition from undergraduate to graduate student is large, even for the highest quality student. Recognize their initial inexperience, provide them the support needed, and expect them to produce increasing complex and demanding results.

Dealing with Problems

To keep problems from occurring, talk with your students to clarify the roles and responsibilities you each have in regards to meetings, feedback, and reminders. Communicate your expectations for their work, but remember that even the most accomplished new graduate students arrive from their undergraduate programs with varying strengths and experience. It is your job to help each gain in knowledge and confidence as they progress in their work.

If problems do arise, have realistic expectations and be willing to look at the situation from the points of view of all involved. Concentrate on the problem and your actions and responses, not personalities. The student’s thesis committee can play a valuable part in helping to resolve a problem that develops. Remember that you are part of a larger organization, and you and the student have resources available to you both. You can discuss the situation confidentially and informally with one of the Department Mediators appointed by the Graduate Committee. You will find their names on the picture board on the 9th floor and on the EAPS website. You may also meet with an Institute ombudsperson with the assurance of complete confidentiality. You can find their contact information at http://ombud.mit.edu

BEST PRACTICES for WORKING with POSTDOCS

The hiring, interaction with, and eventual separation from postdoctoral scholars can be complicated and stressful, especially for junior faculty. The most important advice in this regard is to be very clear at the start of a postdoctoral term as to what the postdoc’s duties and responsibilities are, your view of how long the term of employment will be, resources available to support travel to scientific meetings etc. While it may seem overly formal, especially if you have a friendship with the person, put everything in writing so that there will be no chance of misunderstanding at a later time. The postdoctoral scholar will need to complete a Postdoctoral Career Development Plan on or before the first day of hire. Sponsors are required to discuss and sign off on the form. In addition you should communicate regularly with the postdoc regarding progress, their search for the next job etc.

A Postdoctoral Annual Development Review is required in order to extend the appointment. Reappointing someone each year gives you maximum flexibility, which must be weighed against the postdoc’s desire for a degree of stability and your ability to make a competitive offer. A good compromise is to offer an initial two-year appointment followed by the possibility of up to three additional years, one at a time. There is sometimes a misconception amongst postdocs that they are MIT employees and have the same freedom to pursue independent research topics that faculty or Principle Research Scientists have. In fact, in most cases they are hired by a faculty member using grant money to work on a very specific project and they are forbidden by MIT rules to be PI’s on grant proposals. There are exceptions to this rule but they are supposed to be rare, which should be made clear upon hiring. While it is a good idea to give the postdoc some degree of academic freedom to pursue research independent of the faculty member, this should be discussed explicitly and often to avoid confusion or misunderstandings.

If you communicate clearly and often with your postdocs and discuss minor problems before they become major ones you will find the experience of hiring and interacting post-docs to be extremely rewarding.

(As of September 2014, MIT will only sponsor a J-1 visa for an international postdoctoral fellow)