

COLUMBIA UNIVERSITY

DEPARTMENT OF  
EARTH AND ENVIRONMENTAL SCIENCES

**GUIDE TO THE PHD PROGRAM**

*Fall 2016*

# TABLE OF CONTENTS

<b><u>I. WHO THIS GUIDE IS FOR.....</u></b>	<b><u>5</u></b>
<b><u>II. WHO'S WHO IN DEES.....</u></b>	<b><u>7</u></b>
DEES'S PERSONNEL CAN BE DIVIDED INTO THE CATEGORIES OF FACULTY, ADMINISTRATIVE STAFF AND TECHNICAL STAFF. ....	7
ADMINISTRATORS AT AFFILIATED ORGANIZATIONS.....	9
<b><u>III. THE DEES'S COMMITTEE STRUCTURE.....</u></b>	<b><u>9</u></b>
DEES COMMITTEES.....	9
STUDENT GOVERNANCE.....	11
<b><u>IV. ADVISORY STRUCTURE, REQUIREMENTS, OBLIGATIONS AND FINANCIAL ASSISTANCE.....</u></b>	<b><u>11</u></b>
ADVISORS.....	11
ADVISORY COMMITTEE.....	13
REQUIREMENT TO MAINTAIN GOOD STANDING.....	14
ACADEMIC-YEAR FINANCIAL SUPPORT.....	14
SUMMER SUPPORT.....	15
RESEARCH AND EDUCATIONAL SUPPORT.....	16
TEACHING ASSISTANTSHIP OBLIGATIONS.....	16
VACATIONS.....	17
SOLVING PROBLEMS AND RESOLVING CONFLICTS.....	17
RESPONDING TO MISCONDUCT.....	18
ADVANCED STANDING FOR A MASTERS DEGREE.....	19
TRANSFER CREDIT.....	19
FOURTEEN-SEMESTER "HARD" TIME LIMIT.....	20
<b><u>V. PROGRAMMATIC MILESTONES AND DEADLINES.....</u></b>	<b><u>20</u></b>
MILESTONES AND DEADLINES FOR STUDENTS NOT ANTICIPATING ADVANCED STANDING FOR THE MASTERS DEGREE.....	20
MILESTONES AND DEADLINES FOR STUDENTS ANTICIPATING ADVANCED STANDING FOR THE MASTERS DEGREE.....	22
<b><u>VI. ACADEMIC ISSUES RELEVANT TO MOST ALL SEMESTERS.....</u></b>	<b><u>23</u></b>
MEETING BETWEEN PH.D. STUDENT AND ADVISORY COMMITTEE.....	23
ACADEMIC CALENDAR.....	23
EARLY REGISTRATION.....	23
REGISTRATION AT THE START OF THE SEMESTER.....	24
CHECKLIST FOR THE REGISTRATION PROFESSOR.....	25

CONTINUOUS REGISTRATION .....	25
LEAVE OF ABSENCE.....	25
R-CREDIT.....	26
<b><u>VII. ACADEMIC ISSUES MOSTLY RELEVANT TO THE FIRST TWO SEMESTERS....</u></b>	<b>26</b>
CHECKLIST FOR ADVISORY COMMITTEE MEETINGS DURING THE FIRST TWO SEMESTERS .....	26
ENTRANCE DEFICIENCIES .....	27
COURSEWORK .....	28
<b><u>VIII. ACADEMIC ISSUES MOSTLY RELEVANT TO SEMESTERS PRIOR TO THE MASTERS MEETING.....</u></b>	<b>30</b>
ADVISORY COMMITTEE MEETING.....	30
CHECKLIST FOR ADVISORY COMMITTEE MEETINGS.....	30
MASTERS MEETING.....	30
AD HOC POLICY ON APPEALING RESULTS .....	34
<b><u>IX. ACADEMIC ISSUES MOSTLY RELEVANT TO SEMESTERS PRIOR TO THE CERTIFYING EXAM.....</u></b>	<b>34</b>
ADVISORY COMMITTEE MEETING.....	34
CHECKLIST FOR ADVISORY COMMITTEE MEETINGS.....	34
RESEARCH PAPER AND APPRENTICESHIP CERTIFICATION .....	35
CERTIFYING EXAM (“ORALS”, “QUALIFYING EXAM”, “GENERAL EXAM”).....	36
AD HOC POLICY ON APPEALING RESULTS .....	39
<b><u>X. ACADEMIC ISSUES MOSTLY RELEVANT TO THE SEMESTERS PRIOR TO THE DISSERTATION PROPOSAL.....</u></b>	<b>39</b>
ADVISORY COMMITTEE MEETING.....	40
CHECKLIST FOR ADVISORY COMMITTEE MEETINGS.....	40
DISSERTATION PROPOSAL .....	40
ANNUAL DISSERTATION TOPIC LIST.....	41
<b><u>XI. SUBSEQUENT SEMESTERS THROUGH THE PH.D. DEFENSE.....</u></b>	<b>41</b>
ADVISORY COMMITTEE MEETING.....	41
CHECKLIST FOR ADVISORY COMMITTEE MEETINGS.....	41
PREPARING FOR THE PH.D. DISSERTATION DEFENSE.....	42
OPEN DEFENSES.....	42
AD HOC POLICY ON APPEALING RESULTS .....	43
DISSERTATION REVISIONS .....	44
USE OF TITLE OF “DR.” .....	44
<b><u>XII. LIFE AFTER COLUMBIA .....</u></b>	<b>44</b>

STAY IN TOUCH.....	44
LAMONT-DOHERTY ALUMNI ASSOCIATION.....	44
<b><u>XIII. MISCELLANEOUS INFORMATION.....</u></b>	<b>45</b>
EMPLOYMENT OPPORTUNITIES .....	45
LANGUAGE TEST AND COURSES.....	45
PROFESSIONAL SOCIETIES.....	46
STUDENT LOANS.....	46
WORK / LIFE (WORK LIFE OFFICE, OMBUDS, OTHER) .....	46
<b><u>PROCEDURES.....</u></b>	<b>47</b>
PROCEDURE 1: REQUEST TO CHANGE ADVISOR.....	47
PROCEDURE 2: REQUEST TO ADD OR CHANGE SECOND OR THIRD MEMBER OF ADVISORY COMMITTEE.....	49
PROCEDURE 3: REQUEST TO REVIEW AN ENTRANCE DEFICIENCY.....	50
PROCEDURE 4: REQUEST TO SUBSTITUTE A COURSE TO REMOVE AN ENTRANCE DEFICIENCY .....	52
PROCEDURE 5: DECLARATION OF (OR CHANGE OF) DEPTH AND BREADTH DISCIPLINES ...	53
PROCEDURE 6: REQUEST TO SUBSTITUTE A NON-DEES GRADUATE LEVEL COURSE FOR A DEPTH OR BREADTH REQUIREMENT. ....	54
PROCEDURE 7: REQUEST TO TAKE A COURSE ON AN R-CREDIT BASIS.....	55
PROCEDURE 8: REQUEST FOR A LEAVE OF ABSENCE .....	56
PROCEDURE 9: REQUEST FOR A TIME EXTENSION .....	57
PROCEDURE 10: REQUEST FOR TRANSFER CREDIT AND ADVANCED STANDING .....	58
PROCEDURE 11: NO LONGER APPLIES – FALL 2016.....	61
PROCEDURE 12: CERTIFICATION THAT MASTERS REQUIREMENTS HAVE BEEN SATISFIED..	62
PROCEDURE 13: SUMMARY OF MASTERS MEETING.....	63
PROCEDURE 14: APPRENTICESHIP CERTIFICATION.....	64
PROCEDURE 15: NOMINATION OF CERTIFYING EXAM COMMITTEE MEMBERS.....	65
PROCEDURE 16: COMPLETION OF DISSERTATION PROPOSAL .....	66
PROCEDURE 17: ANNUAL DISSERTATION TOPIC AND DESCRIPTION .....	67
PROCEDURE 18: NOTIFICATION OF APPROACHING PH.D. DEFENSE .....	68
TIME GRAPH .....	69

## I. WHO THIS GUIDE IS FOR

This Guide has been prepared in order to help Ph.D. Students, advisors and administrative staff members understand the requirements and procedures of the Ph.D. Program in the Department of Earth and Environmental Science (DEES).

The Guide covers the Ph.D. Program and includes the Master's-level work that is performed along the road to a Ph.D. The term Ph.D. Student is used to indicate students in this program, irrespective of whether they have completed their initial Master's-level training. Information about the DEES's other educational programs, such as its Master's Program in Climate and Society, is found elsewhere.

The Ph.D. program prepares the student to become an independent researcher, and therefore the primary responsibility for successfully completing the Ph.D. program rests with the Ph.D. Student. Like most Ph.D. Programs, ours expects a high degree of initiative and self-motivation from every Ph.D. Student. Both are necessary to complete the Ph.D. dissertation (or "thesis"), which is such a central element of the program. Ph.D. Students are expected to be familiar with the requirements of the program and general GSAS policies and to actively work to satisfy them in a timely manner.

Nevertheless, no Ph.D. Student is left completely to his or her devices. Ph.D. Students are supervised, mentored and assisted by many different University-affiliated personnel, who in aggregate cover many different aspects of the program: Academic oversight is provided by the student's Advisory Committee, consisting of an Advisor and two other Ph.D.-level scientists who are focused on the student's coursework and dissertation research. Administrative oversight is provided by members of DEES's staff, and especially the Senior Administrative Manager of the educational program, who monitor the student's progress towards fulfilling programmatic requirements (Departmental and GSAS).

This Guide is directed not only to Ph.D. Students but also to the DEES's faculty and administrative staff. The department's goal is to provide the very best academic advising and administrative oversight; this can only happen when everyone involved is familiar with and in agreement as to how the program works. Thus, this Guide is part overview and part reference manual.

All incoming Ph.D. Students and all Advisors and Advisory Committee members are *strongly* urged to be familiar with the material in this guide! Both should refer to it on an ongoing basis, as it contains material relevant for each successive stage in a Ph.D. Student's program. Every Ph.D. Student needs to be able to consult his or her Advisory Committees about the appropriate course of action needed to move forward. This can only happen when everyone involved is familiar with the requirements and has the same understanding of the rules. While GSAS Departments are given a fair amount of independence, the GSAS

policies must be followed as well. Students should refer to the GSAS website on a regular basis.

Many other University offices provide other kinds of services useful to Ph.D. Students, such as the library, the housing office, and the student health service. This Guide is not a good source of information about them, even though they play important roles in the lives of all Ph.D. Students. Consulting websites in these areas is recommended.

Much of the scientific research that Ph.D. Students perform would not be possible without the laboratories and technical personnel needed to perform state-of-the-art science. DEES *per se* has few (if any) of either. Instead, it provides Ph.D. Students access to them through partnerships with *affiliated organizations*, some of which are part of Columbia University and others which are independent. These include the Lamont-Doherty Earth Observatory (LDEO or “Lamont” or “the Observatory”), the American Museum of Natural History (AMNH or “the museum”), the Goddard Institute of Space Studies (GISS), and the International Research Institute of Climate and Society (IRI). Each has its own scientific, administrative and technical staff and its own idiosyncratic administrative structure. Every Ph.D. Student interacts with at least one of these organizations on matters related to his or her research. This Guide can offer few details, on account of the wide variability of practices.

The Ph.D. Student’s Advisor needs to point the student to the necessary information. Information can also be found on the web sites of the affiliated organizations:

Lamont-Doherty Earth Observatory (LDEO)  
<http://www.ldeo.columbia.edu/>

American Museum of Natural History (AMNH)  
<http://www.amnh.org/>

Goddard Institute for Space Studies (GISS)  
<http://www.giss.nasa.gov/>

International Research Institute for Climate and Society (IRI)  
<http://iri.columbia.edu/>

## II. WHO'S WHO IN DEES

DEES's personnel can be divided into the categories of faculty, administrative staff and technical staff.

DEPARTMENT CHAIR: Peter Kelemen  
845-365-8728; [peterk@ldeo.columbia.edu](mailto:peterk@ldeo.columbia.edu)

DEPARTMENT VICE CHAIR: Sidney Hemming  
845-365-8417; [sidney@ldeo.columbia.edu](mailto:sidney@ldeo.columbia.edu)

The faculty member with responsibilities for the overall PhD Program is the DIRECTOR OF GRADUATE STUDIES (DGS): Göran Ekström  
845-365-8427; [ekstrom@ldeo.columbia.edu](mailto:ekstrom@ldeo.columbia.edu)

The administrative staff consists of people who manage programs and money, keep records and assist with scheduling, correspondence and so forth. The Senior Administrative Manager is responsible for the day-to-day operation of the Ph.D. program. The Business Manager is in charge of finances. The Assistant Director of the Climate and Society Program manages that Master's Program. They are assisted by several other staff members. Ph.D. Students will frequently interact with the Senior Administrative Manager and the LDEO-based office staff on matters such as registration, scheduling exams, Teaching Assistant (TA) assignments.

SENIOR ADMINISTRATIVE MANAGER: Carol Mountain  
LDEO, 845-365-8551, 557 Schermerhorn, 212-854-9705; [carolm@ldeo.columbia.edu](mailto:carolm@ldeo.columbia.edu)

ADMINISTRATIVE ASSISTANT: Monica Hinojosa  
LDEO, 845-365-8482; [hinojosa@ldeo.columbia.edu](mailto:hinojosa@ldeo.columbia.edu)

BUSINESS MANAGER: Sarah "Sally" Odland  
LDEO, 845-365-8633, [odland@ldeo.columbia.edu](mailto:odland@ldeo.columbia.edu)

FINANCIAL ASSISTANT: Yasmin Yabyabin  
LDEO, 845-365-8550; [yas@ldeo.columbia.edu](mailto:yas@ldeo.columbia.edu)

ASSISTANT DIRECTOR OF THE CLIMATE & SOCIETY PROGRAM: Cynthia Thomson  
554 Schermerhorn, 212-854-9896; [cthomson@iri.columbia.edu](mailto:cthomson@iri.columbia.edu)

DEES currently has only one technical staff member, a Curator responsible for archiving the Schermerhorn-based collections of rocks, minerals and other teaching aids. Ph.D. Students assigned as TA's may need the Curator's assistance to access these collections.

CURATOR: Robina Simpson  
554 Schermerhorn, 212-854-5029; res2@columbia.edu

The DEES faculty consists of scientists who teach courses, advise Ph.D. Students and conduct research. Their research is usually conducted through one of the affiliated organizations, such as LDEO, GISS, AMNH, IRI, so most are members of one or more of these organizations, as well as being faculty members of DEES. In DEES, faculty members are *professors*, *lecturers* or *associates*. The majority of faculty members are professors. The lecturer title is used mostly for short-term appointments, especially when someone is hired to teach a single course. The associate title is used when the position has an educational focus but does not require a Ph.D.

The head of the faculty is called the Chair, a senior professor elected by the other professors for a three-year term. The Chair has overall responsibility for the functioning of DEES, and oversees all of the DEES's staff (including its professors) and all of its programs. The Chair is assisted by a Vice Chair, also a senior professor. The Chair and Vice Chair are among the people to whom students can turn to discuss significant problems (see the Conflict Resolution section).

The professorial staff is divided into three ranks, professor, associate professor and assistant professor, based on seniority. Professors are also categorized by whether they are full-time in DEES, or whether their primary appointment is with another organization (such as LDEO, AMNH, GISS or IRI), in which case the word *Adjunct* is added to their title. Full-time and adjunct professors all participate equally in DEES responsibilities, but adjuncts have a reduced time commitment.

Note that LDEO, as a research institution, uses the term *Adjunct* in a different sense than does DEES as a GSAS Academic Department. An LDEO Adjunct Research Scientists is a scientist from another institution visiting LDEO. A person with such a title would not typically be a DEES Adjunct Professor. The two titles merely have similar sounding names.

A retired professor who continues to participate in the mission of DEES is given the title *Emeritus* Professor. A professor from another institution who is on an extended visit to Columbia University is sometimes given the title *Visiting* Professor. The Emeritus and Visiting Professor titles are mostly honorary; such professors have only limited Departmental responsibilities, but can serve on Advisory Committees if they so choose.

A complete list of the Department's faculty and other staff can be found in the Faculty & Staff section of the DEES website, at URL: <http://eesc.columbia.edu/faculty-staff>

## **SCIENTISTS AT AFFILIATED ORGANIZATIONS**

Many research scientists at affiliated organizations (e.g., LDEO, AMNH, GISS and IRI) are not formally affiliated with DEES. They are not DEES faculty, so their names do not appear on the faculty and staff section of the DEES website. Nevertheless, many of these excellent scientists participate in the Ph.D. program, some as Advisors and others in more informal mentorship arrangements. Ph.D. Students are encouraged to get to know them, and especially those in their own research specialties. Readers are referred to the institutions' own web sites for up-to-date information.

## **ADMINISTRATORS AT AFFILIATED ORGANIZATIONS**

All of DEES' affiliated organizations (e.g., LDEO, AMNH, GISS and IRI) have their own administrative staffs. They provide many different services to their respective scientists, including payroll, space allocation, financial oversight of grants and contracts, purchasing, travel reimbursement, accounting, etc. DEES manages Ph.D. Student payroll directly, but most research-related administrative services (including office space) are provided through the particular affiliated organization that hosts a given Ph.D. Student. All Ph.D. Students need to become familiar with the administrators in their host organizations and the procedures that they are expected to follow. Advisors need to introduce students to the key administrators who they will need to interact with during their research, explain the functions of each, and identify the people who can help resolve commonly arising problems.

## **III. THE DEES'S COMMITTEE STRUCTURE**

### **DEES COMMITTEES**

Academic departments work by committee. Each committee is staffed by professors and each has its own specific function or mission. Every committee is led by a chairperson, who spearheads the work and who is the main point of contact. Committees vary in size from just one professor to more than ten. DEES has many committees; those with special relevance to the Ph.D. program include:

The GRADUATE ADMISSIONS COMMITTEE reviews student applications, recommends students for admission to the program, assigns initial advisors and identifies student deficiencies.

Chairperson (2016-2017):

Jerry McManus, [jmcmamus@ldeo.columbia.edu](mailto:jmcmamus@ldeo.columbia.edu)

The GRADUATE PROGRAM COMMITTEE (GPC) monitors the progress of all Ph.D. Students and identifies instances where students are falling behind schedule or fail to meet programmatic requirements. Ph.D. Students interact with the committee when they choose

depth and breadth, add or change Advisory Committee Members, request exceptions from normal procedures, etc. The Chair of this committee is also the Director of Graduate Studies of the Department.

Chairperson and Director of Graduate Studies (2016-2017):

Göran Ekström, [ekstrom@ldeo.columbia.edu](mailto:ekstrom@ldeo.columbia.edu)

The EXAMINATIONS SUBCOMMITTEE of the GPC chooses examiners for student exams, such as the Certifying Exam.

Subcommittee Chair (2016-2017):

William Menke, [menke@ldeo.columbia.edu](mailto:menke@ldeo.columbia.edu)

The STUDENT-FACULTY RELATIONS COMMITTEE (SFRC) serves as the liaison between the graduate student body and the faculty. It addresses systemic issues by providing a confidential forum for students to bring forward frustrations and suggestions for improvements. When making recommendations to the faculty and Department Chair, it preserves the anonymity of students.

Chairperson (2016-2017):

Peter Eisenberger, [petere@ldeo.columbia.edu](mailto:petere@ldeo.columbia.edu)

The TA COMMITTEE decides which courses are eligible for teaching assistants, vets course prospectuses, assigns TA units to each course and sets overall TA policy. Individual TA assignments are made by the Senior Administrative Manager with committee oversight.

Co-Chairs (2016-2017):

Nick Christie-Blick, [ncb@ldeo.columbia.edu](mailto:ncb@ldeo.columbia.edu)

Natalie Boelman, [nboelman@ldeo.columbia.edu](mailto:nboelman@ldeo.columbia.edu)

Two committees that are specifically established for each Ph.D. Student:

The ADVISORY COMMITTEE, a three-person committee chaired by the Ph.D. Student's academic advisor, provides mentorship and scientific oversight as the student progresses towards the Ph.D.

EXAMINING COMMITTEES, which are short-lived committees that are created to conduct specific exams, including the Certifying Exam and the Ph.D. Dissertation Defense.

## STUDENT GOVERNANCE

Ph.D. Students have many opportunities to join committees of the Department and its affiliated institutions and are encouraged to participate in this form of University governance.

The LDEO Colloquium Committee, which selects speakers for the weekly Colloquium, is among the many with historically strong student participation. See:

<http://www.ldeo.columbia.edu/news-events/events/colloquium/earth-science-colloquium>

The Graduate Student Committee (GSC) is an organization for students in our department to address issues of mutual concern. Leaders are elected and all students are welcome to participate in GSC activities. See:

<http://eesc.columbia.edu/student-life/graduate-student-life/gsc>

The Campus Life Committee at LDEO Review and recommend improvements to policies, procedures, and facilities pertaining to the general quality of daily life for all staff members on the Lamont Campus

<http://www.ldeo.columbia.edu/about-ldeo/organization/committees/campus-life-committee>

## IV. ADVISORY STRUCTURE, REQUIREMENTS, OBLIGATIONS AND FINANCIAL ASSISTANCE

### ADVISORS

Every Ph.D. Student has an *Advisor* (also called a *Sponsor*), a scientist in his or her field of study who monitors his or her progress towards the Ph.D. and who provides mentorship and oversight on all academic and research matters. All ranks of DEES Professors, all ranks of Lamont Research Professors, and many Ph.D.-level scientists at other affiliated institutions are pre-approved to serve as Advisors.

Other Ph.D.-level scientists at affiliated organizations may also serve, but their appointment as Advisor requires the prior approval of the Dean of Columbia University's Graduate School of Arts and Sciences (GSAS).

Ph.D. Student and Advisor jointly have the responsibility to stay in touch with one another and to hold regular meetings. Ph.D. Students have the responsibility to keep their Advisors informed of their academic and research progress and of any problems that develop.

Advisors have the responsibility to track carefully their Ph.D. Student's academic and research progress and to understand the requirements of the Ph.D. program well enough to give good advice.

Advisors have a responsibility to actively seek grants and contracts that provide financial support for their Ph.D. Students through Graduate Research Assistantships (GRA's). Budgets should include both nine months of academic year support and three months of summer support.

The Admissions Committee identifies an Advisor for every Ph.D. Student at the time of admission, based on a variety of factors, including the student's research interests as expressed in the application, preliminary discussions (if any) between the student and a prospective Advisor, and the Advisor's willingness to take on the role. The Advisor constitutes the first member of the Ph.D. Student's Advisory Committee.

In most cases, this initial assignment of an Advisor will persist throughout the student's term of study. However, a Ph.D. Student is permitted to change his or her Advisor when circumstances clearly warrant: the student's research interests may change to such a degree that his or her current advisor is no longer able to provide the required degree of supervision; or personality conflicts may become so severe that they preclude a mentorship relationship. In such cases, the Ph.D. Student may petition that the current Advisor be replaced with one of his or her choosing, provided that both the current Advisory Committee and prospective Advisor have agreed. Ph.D. Students are strongly cautioned that the changing of an Advisor is a serious matter not to be undertaken lightly.

Ph.D. Students are encouraged to initiate informal discussion about the possibility of changing their Advisors by contacting the Director of Graduate Studies, any member of the Graduate Program Committee or via confidential memo to the DEES Chair. Current and proposed Advisors are also encouraged to confer with one another. A formal petition is then made to the Graduate Program Committee (Procedure 1).

Advisors are expected to enforce the requirement that their pre-orals advisee attend LDEO's Friday Colloquium and to provide a Pass/Fail grade for the corresponding course, G6001 Earth Science Colloquium.

## ADVISORY COMMITTEE

Each Ph.D. Student is guided by his or her Advisory Committee, consisting of the Advisor and two other Ph.D. level scientists. The Advisor is the chairperson of the Advisory Committee.

At least one member must be a DEES professor (either full-time or adjunct, of any rank). This person (or persons, if more than one member is a DEES Professor) has the special responsibility of ensuring that the other members of the committee are fully informed about relevant DEES policies and procedures.

Initially, before the start of the first semester, the Ph.D. Student's Advisor selects two additional Advisory Committee members to populate the Student's First-year Advisory Committee. This committee serves in part to provide broad advice on topics relevant to all first-year students in DEES, such as the selection of courses and the balance of research and course work. The Student and the First-year Advisory Committee meet together with a member of the Graduate Program Committee at the start of the first semester to review various rules and procedures in the Department and to address any issues or questions. At the end of the first year, the Student and the Advisor review the membership of the First-year Advisory Committee, and the Student requests any potential, appropriate membership changes to populate his or her Advisory Committee moving forward (Procedure 2).

All DEES professors (full-time or adjunct), Lamont Research Professors, and their equivalents at GISS, AMNH and IRI are automatically eligible to serve on Advisory Committees. Furthermore, a Ph.D. Student may petition that any other Ph.D.-level scientist be permitted to serve (including scientists from other Columbia departments and other institutions).

The student arranges to meet formally with his or her Advisory Committee each semester (no later than the registration period) to discuss overall progress, the course program, research, exam schedules, review/identify the student's deficiencies and formulate a plan to eliminate them, etc. Signed paperwork from this meeting is required in order to register for the next semester. Pre-orals students must also obtain final approval of their courses from the Director of Graduate Studies.

Advisors who anticipate substantial absences from the University (e.g. fieldtrips, sabbatical leaves) must make arrangements for the Ph.D. Student to receive adequate advising in his or her absence. A Ph.D. Student who experiences problems related to the prolonged absence of his or her Advisor should discuss the matter with the Director of Graduate Studies.

The purpose of the Advisory Committee is to assist the student during his or her graduate career. As such, the committee membership should reflect and complement the student's research interests. The Ph.D. Student may therefore change the second and third members

of the Advisory Committee, as circumstances warrant (Procedure 2). All members of the former and proposed Advisory Committee are expected to approve of the change. The full Advisory Committee should hold a meeting with the Ph.D. Student before Registration to discuss coursework and other plans for the semester. Follow-up meetings are especially important during the first year.

## **REQUIREMENT TO MAINTAIN GOOD STANDING**

Ph.D. Students must maintain “good standing” in DEES, which includes maintaining continuous residence (except if a leave of absence is granted); maintaining a B+ minimum average in coursework; abiding by University rules concerning ethical conduct and proceeding forward with research in a manner deemed acceptable by the student’s Advisory Committee.

To remain in good departmental standing, each student must satisfy all required programmatic deadlines (see PROGRAMMATIC MILESTONES AND DEADLINES section). However, DEES recognizes the need for flexibility and consequently will consider individual cases justifying relaxation of a deadline (Procedure 9).

The Graduate Program Committee will notify a Ph.D. Student in writing if he or she is determined to be not in good standing and GSAS may send a warning of loss of good standing. Such a determination is very serious because it is grounds for dismissal. In cases where the determination is due to poor grades or research performance, the Ph.D. Student will be given a one-semester grace period to correct the problem.

## **ACADEMIC-YEAR FINANCIAL SUPPORT**

The term “academic year” refers to the September 1 through May 31-time period that includes the Fall and Spring semester.

A student in good standing can expect to receive financial support for five years. A Ph.D. Student’s Advisor can petition the Department for a sixth year of funding for the student. Support for a seventh year and beyond should *not* be expected by *any* student. Academic-year support is guaranteed by Columbia’s Graduate School of Arts and Sciences (GSAS); financial support policies are uniform across all of its Departments, of which DEES is but one.

Eligibility for University housing may also change after five years, see:

<http://facilities.columbia.edu/housing/essentials#Eligibility>

In any given semester, the financial support received by a Ph.D. Student comes from either a *fellowship* or a *Graduate Research Assistantship (GRA)*. A GRA is compensation for assisting in a specific research project, and typically originates externally, either from a grant or contract that Columbia has with the US Government or a private company. The process of applying for a typical research grant or contract is usually the responsibility of an individual scientist, who then becomes its *Principal Investigator (PI)*, in charge of overseeing its successful completion. A PhD Student funded through a GRA will have some responsibilities specific to the research grant or contract, as determined by its PI, however, they are usually synergistic to his or her dissertation research. In many cases, the Advisor will be the PI of the research grant or contract that supports his or her advisee. Both fellowships and GRA's carry with them a full scholarship. Whatever a Ph.D. Student's source of support, he or she is expected to become increasingly involved in research over time in conjunction with DEES and GSAS requirements.

The University requires all students to make every effort to secure an external fellowship. Such a fellowship adds to the student's prestige (it can be listed in his or her CV) and reduces the financial burden on the University and the individual scientists whose grant-writing efforts raise the money. External fellowships are desirable even when the announced stipend is less than Columbia's rate. The University will provide the funds necessary to bring a lesser fellowship up to the amount of current University fellowships, and add a little extra to reward successful external funding. Students should discuss external fellowship opportunities with their Advisory Committees. GSAS provides a list of opportunities at:

<http://gsas.columbia.edu/external-fellowships>

## **SUMMER SUPPORT**

The term "summer" refers to the June 1 through August 31-time period. Ph.D. Students receive this summer stipend and are expected to use the summer months to further their dissertation research. The source of the summer stipend is typically the Advisor's research grants and contracts in the area of that research. DEES guarantees that every Ph.D. Student in good standing receives 3 months of summer support for 5 years.

## **RESEARCH AND EDUCATIONAL SUPPORT**

Funds to support a student's Ph.D. research (lab equipment and supplies, field support, travel to scientific meetings to present research results, etc.) are normally the responsibility of the Advisor.

The Department also provides each full time Ph.D. Student in good standing with \$1000 per year in research support for their first five years. These funds are intended to help students attend special meetings, travel for fieldwork, conduct analyses, buy computers or equipment - any reasonable research purpose. See:

[http://eesc.columbia.edu/sites/default/files/fy17\\_phd\\_research\\_1k\\_funds\\_policy.pdf](http://eesc.columbia.edu/sites/default/files/fy17_phd_research_1k_funds_policy.pdf)

GSAS sponsors a modest Conference Matching Travel Fund that can supplement travel to scientific meetings (Procedure 11). See:

<http://gsas.columbia.edu/content/funding-attend-conferences>

## **TEACHING ASSISTANTSHIP OBLIGATIONS**

In order to gain additional experience, all Ph.D. Students, regardless of their source of support, are required to perform 4.0 units of Teaching Assistant (TA) duties. A unit is equivalent to 10 hours per week for one semester. By DEES policy, no student is permitted to TA in his/her first semester, and DEES makes every effort not to assign TA duties in their second semester, either. However, if a student and advisor agree to a TA assignment in the second semester, it will be considered.

TA duties are assigned by the Senior Administrative Manager in a manner that takes into consideration the qualifications of the Ph.D. Student, the needs and preferences of both the Ph.D. Student and the course instructor, and the advice of the Student's Advisor. The Ph.D. Student should discuss suitable teaching assignments with his or her Advisor, and should make his or her preference known to the course instructor and to the Senior Administrative Manager. Effort is made to assign students their first choice, but this is not always possible. Not all DEES courses require TA's. Those that do, have TA prospectuses published on the DEES Web Site:

[eesc.columbia.edu/courses/ta\\_prospectus](http://eesc.columbia.edu/courses/ta_prospectus)

TA duties usually include assisting in lecture courses, elementary laboratories, and field courses. Certain other assignments, such as curating and undergraduate tutoring, may occasionally be accepted by the Department as fulfilling the TA requirement.

Insofar as is possible, DEES tries to accommodate a Ph.D. Student's offsite activities (e.g., cruises, fieldwork) that preclude his or her TA'ing in a particular semester, especially when such activities are critical to that student's dissertation research. However, each Ph.D. Student has the responsibility to keep the Senior Administrative Manager informed of his or her schedule, to avoid last-minute cancellations that adversely affect the quality of DEES's course offerings.

DEES awards an annual *TA Prize* to encourage good teaching efforts and to reward those individuals with the most positive impact of their teaching.

Useful teaching tips can be found on GSAS's website at:

<http://gsas.columbia.edu>

## **VACATIONS**

DEES does not provide vacation time, *per se*, but recognizes that Ph.D. Students need to take modest amounts of time off for relaxation and family matters. Students are expected to obtain the permission of their advisors for all such absences, and advisors are expected to allow them, within reasonable limits.

Note that Fall and Spring Recess and Summer Semester are *not* holidays. Ph.D. Students are expected to use these periods, and any others in which they have no scheduled classes, to perform GRA duties and to pursue their dissertation research.

Ph.D. Students who wish to observe religious holidays must inform their advisor in advance and must plan to make up any missed work.

## **SOLVING PROBLEMS AND RESOLVING CONFLICTS**

Scientific, educational, administrative and social problems are not uncommon in any Ph.D. Student's program. Interpersonal conflicts, though less common, can develop between two Ph.D. Students or between a Ph.D. Student and a member of the staff. Every effort should be made to resolve problems and conflicts early, as they tend to worsen with time. The University makes available a variety of resources to help Ph.D. Students resolve conflicts and deal with the problems that they encounter; everyone is encouraged to fully utilize them. The Senior Administrative Manager is a good first resource and students are welcome to start there for assistance and direction to other resources.

Complaints involving allegations of discrimination or gender-based misconduct are treated very seriously by the University and are handled separately by the Office of Equal Opportunity and Affirmative Action, as described in the next section.

In scientific and educational matters, a Ph.D. Student's first resource is his or her Advisor and the other members of his or her advisory committee. Ph.D. Students should feel free to discuss problems with them, and are also free to approach other members of the scientific staff and other students for advice. In cases where a greater degree of confidentiality or distance is warranted, the PhD Student may wish to meet with the Director of Graduate Studies or any member of the Graduate Program Committee. Ph.D. Students are also welcome to discuss, on a confidential basis, problems with the DEES Chair or Vice Chair.

In administrative matters, a Ph.D. Student's two most important resources are the DEES Senior Administrative Manager and the comparable administrator at their Affiliated Institution. The latter are called Division Administrators (DA's) at LDEO; their titles at other institutions vary. These administrators often will be able to solve the problem directly, and even when they can't, will usually be able to advise the Ph.D. Student how to better approach it.

The Ombuds Office offers a safe place for any member of the Columbia community to discuss workplace issues, interpersonal conflict, academic concerns, bureaucratic runarounds, and many other problems. See:

<http://www.columbia.edu/cu/ombuds/>

## **RESPONDING TO MISCONDUCT**

We at Columbia University are committed to providing a learning, working, and living environment free from discrimination, harassment, and gender-based misconduct. Under University policies, these types of behaviors include discrimination, discriminatory harassment, sexual harassment, sexual assault, gender-based harassment, stalking, and intimate partner violence. The University encourages everyone to become familiar with the types of behaviors that constitute misconduct. Everyone, including Ph.D. Students and their advisors, should regularly review the material at:

<http://titleix.columbia.edu/>

Ph.D. Students who feel that they are the victims of discrimination, harassment, or gender-based misconduct are encouraged to take immediate steps to ensure their continued health and safety and to report the incident, as described in:

<http://titleix.columbia.edu/what-do-i-do-now>

University employees, including DEES faculty, technical and administrative staff and TA's, play an important role in stopping discrimination, harassment, and gender-based misconduct. Employees who learn of suspected instances of this type of behavior, directly

or indirectly, have a duty to report the information immediately to the Office of Equal Opportunity and Affirmative Action (EOAA). This duty to report takes precedence over requests for confidentiality, even those made by the alleged victim.

## **ADVANCED STANDING FOR A MASTERS DEGREE**

DEES presumes that students entering with Master's Degree in a relevant field will be able to accelerate the completion of the Ph.D. degree, since they will already have completed a Master's-level research project and some graduate-level courses elsewhere. The milestones outlined in this Guide build in this expectation and give a shorter timeline for students entering with a Master's degree than for those who enter without one. However, the Ph.D. Student must explicitly request Advanced Standing for a Master's degree (Procedure 10). It is not conferred automatically, but only after careful review by both the Department and GSAS and only after the Ph.D. Student has demonstrated Masters-level competence by finishing two semesters with satisfactory academic performance (at least a B+ average).

Since the Ph.D. Student is required to demonstrate two semesters with satisfactory academic performance, the Department will only act upon an application for Advanced Standing after the end of the Ph.D. Student's second semester. The Ph.D. Student should apply shortly after reviewing his or her second-semester grades and expect to be notified of a decision by early in the following semester.

The award of Advanced Standing confers two (2) Residence Units, exempts a Ph.D. Student from the Masters Meeting requirement, makes him or her ineligible for a Columbia Master's Degree and advances all deadlines by two semesters. Applications for only one Residence Unit are not permitted by DEES.

Note that Advanced Standing pertains to Columbia's recognition of an external Master's degree, and not to its recognition of individual graduate courses that the Ph.D. Student may have taken at another institution (see Transfer Credit, below), either as an undergraduate or as a graduate student in a Masters program.

## **TRANSFER CREDIT**

Ph.D. Students may apply for up to 15 transfer credits of graduate-level courses, which if granted, reduce the number of courses that they are required to take for their degree, but which do not change any deadlines or other requirements. Students who have exceeded their credit requirement may continue to enroll in courses.

A Ph.D. Student must explicitly request Transfer Credit (Procedure 10). It is not conferred automatically, but only after careful review by both the Department and GSAS and only

after the Ph.D. Student has demonstrated Masters-level competence by finishing two semesters with satisfactory academic performance (at least a B+ average). Transfer Credit, which confers *points*, pertains to a specific set of graduate courses and is different than Advanced Standing for a Master's degree awarded by another institution, which confers *Residence Units*. However, a Ph.D. Student who requests both Advanced Standing and Transfer Credit applies for both concurrently.

Since the Ph.D. Student is required to demonstrate two semesters with satisfactory academic performance, the Department will only act upon an application for Transfer Credit after the end of the Ph.D. Student's second semester. The Ph.D. Student should apply shortly after reviewing his or her second-semester grades and expect to be notified of a decision by early in the following semester.

Columbia University undergraduates who are accepted into the Ph.D. program may apply for points for graduate level courses taken as an undergraduate. These courses cannot have counted toward the undergraduate degree.

#### **FOURTEEN-SEMESTER "HARD" TIME LIMIT**

Ph.D. Students must complete their degree within fourteen (14) semesters. Exceptions may be made on recommendation of the Department to the Dean only when special circumstances warrant. Such extensions are initiated by submitting a schedule for completion of work for the degree together with the Advisory Committee's recommendation to the Department Chair (Procedure 9). Note that Resident Units conferred through Advanced Standing for a Master's degree count against this deadline; two RU's reduce the time limit to twelve (12) semesters.

#### **V. PROGRAMMATIC MILESTONES AND DEADLINES**

Please note that a graphical timeline is provided at the end of this document.

#### **MILESTONES AND DEADLINES FOR STUDENTS NOT ANTICIPATING ADVANCED STANDING FOR THE MASTERS DEGREE**

Each Semester

**Advisory Committee Meeting:** At least once every semester, no later than just before Registration for subsequent semester.

**Early Registration,** in April for Summer and Fall Semester and November for Spring Semester (see GSAS Academic Calendar for deadline). Watch for dates of the several registration periods in GSAS and DEES announcements.

**Registration,** at the start of every semester to finalize course schedule.

## Specific Semesters

**Language Courses** (students identified as needing English language instruction, only) by end of first semester.

**Review membership of Advisory Committee**, at the end of the second semester.

**Apply for Transfer Credit**, by end of second semester (Ph.D. Students with external graduate degrees only.)

**Apply for External Funding**, by end of second semester.

**Declare Depth and Two Breadth Disciplines**, by Registration of third semester.

**Application for the Masters Degree submitted to the Registrar**, by end of third semester.

**Masters Paper Outline and Proposal Outline Presented to Advisory Committee**, by end of third semester.

**Masters Papers submitted to Department**, no later than September 15 or February 15 of semester of the exam.

**Masters Meeting**, by end of fourth semester.

**Award of M.A. Degree**, upon successfully completing of Masters Meeting and upon completing 20 coursework points (including any transfer credits awarded but excluding research points).

**Certifying Exam Research Project Submitted to Department**, no later than September 15 or February 15 of semester of the exam.

**Remove Entrance Deficiencies**, prior to taking the Certifying Exam.

**Apprenticeship Certification**, prior to taking Certifying Exam.

**Certifying Exam**, by end of sixth semester.

**Submit Annual Dissertation Topic to the Department**: Time of Registration (post-Certifying Exam students, only).

**Complete 45 Units of Coursework** (including any advanced standing awarded but excluding research points), by end of eighth semester.

**Dissertation Proposal**, by end of seventh semester.

**Award of M.Phil.**, after removing Entrance Deficiencies, receiving Apprenticeship Certification, passing Certifying Exam, completing 45 credits and completing Dissertation Proposal by the end of the eighth semester.

**Dissertation Defense**, by end of tenth semester.

**Complete TA Duties**, prior to being awarded Ph.D.

**Deposit Dissertation**, with guaranteed funding, by end of tenth semester; hard deadline of fourteen semesters.

## MILESTONES AND DEADLINES FOR STUDENTS ANTICIPATING ADVANCED STANDING FOR THE MASTERS DEGREE

### Each Semester

**Advisory Committee Meeting:** At least once every semester, no later than just before Registration for subsequent semester.

**Early Registration,** in April for Summer and Fall Semesters and November for Spring Semester (see GSAS Academic Calendar for deadline).

**Registration,** at the start of every semester.

### Specific Semesters

**Language Exam** upon arrival to begin the Ph.D. program (students from undergraduate institutions with non-English instruction, only).

**Language Courses** (students identified as needing English language instruction, only) by end of first semester.

**Review membership of Advisory Committee,** at the end of second semester.

**Apply for Advanced Standing** and Transfer Credits by end of second semester.

**Apply for External Funding,** by end of second semester.

**Declare Depth and Two Breadth Disciplines,** by Registration of third semester.

**Certifying Exam Research Project submitted to Department,** no later than September 15 or February 15 of semester of the exam.

**Remove Entrance Deficiencies,** prior to taking Certifying Exam.

**Apprenticeship Certification,** prior to taking Certifying Exam.

**Certifying Exam,** by end of fourth semester.

**Submit Annual Dissertation Topic to the Department:** Time of Registration (post-Certifying Exam students only).

**Complete 45 Units of Coursework** (including any transfer credits awarded but excluding research points) by end of sixth semester

**Dissertation Proposal,** by end of fifth semester.

**Award of M.Phil.,** after removing Entrance Deficiencies, receiving Apprenticeship Certification, passing Certifying Exam, completing 45 credits and completing Dissertation Proposal by the end of the sixth semester.

**Dissertation Defense,** by end of eighth semester.

**Complete TA Duties,** prior to being awarded Ph.D.

**Deposit Dissertation,** with guaranteed funding, by end of eighth semester; hard deadline of twelve semesters.

## VI. ACADEMIC ISSUES RELEVANT TO MOST ALL SEMESTERS

### MEETING BETWEEN Ph.D. STUDENT AND ADVISORY COMMITTEE

Regular meetings between the Ph.D. Student and his or her Advisory Committee are *essential* for the Ph.D. Student's successful completion of the Ph.D. Program. The meetings are for the Ph.D. Student's benefit and should focus on programmatic issues. The Ph.D. Student has the responsibility for scheduling these meetings, and the members of the Advisory Committee have the responsibility of making themselves available for them. At the very least, the Advisory Committee must meet once per semester; however, more frequent meetings are highly recommended. Exemplary checklists for meetings at different stages of the Ph.D. Student's program are given later in this document.

### ACADEMIC CALENDAR

Important dates for the current Academic Year can be found in the Graduate School of Arts and Sciences' (GSAS) Academic Calendar:

[gsas.columbia.edu/content/academic-calendar](https://gsas.columbia.edu/content/academic-calendar)

Also consult the Academic Calendar at the Registrar website:

<http://registrar.columbia.edu/event/academic-calendar>

### EARLY REGISTRATION

Registration is the process whereby a Ph.D. Student renews his or her relationship with the University at the beginning of each semester. A Ph.D. Student registers for classes but also, more generally, for *residence status*, as explained further below. Residence status is the more important, because many University actions, such as visa rules and paying Ph.D. Students their stipend, are dependent upon it.

Early Registration for Summer and Fall Semester is in April and for Spring Semester is in November (see the GSAS Academic Calendar for specific deadlines). Early Registration is accomplished through Columbia's Student Services Online:

<https://ssol.columbia.edu/>

Early Registration is particularly important when the Ph.D. Student is doing fieldwork or on a cruise during the summer and into the early fall. Being properly registered ensures that stipend, housing, and status are not interrupted. Visa regulations will not be violated.

A Ph.D. Student registers for registration status of Residence Units (RU), Extended Residence (ER) or Matriculation and Facilities (M&F), depending upon his or her situation: a student who has not yet accumulated six Residence Units registers for RU and a student who has already accumulated six residence units registers for ER. M&F is used only in the rare case that a Ph.D. Student is not in residence at the University (e.g., working at an outside job while preparing his or her dissertation for the defense). Ph.D. Students with questions about their registration status should refer them to the Senior Administrative Manager.

Ph.D. Students are not required to register for classes during Early Registration. However, since program changes can be made at the start of the semester, Ph.D. Students should feel free to register for whatever classes they think they will take; they can always update these choices later. Early Registration for classes helps DEES by providing a preliminary estimate of the number of students taking each class.

Many graduate seminars are announced only near the start of the semester. At that time, Ph.D. Students should check on DEES's seminar offerings before making a final selection.

Students who are not planning to take any course should register for EESC G9001 (Departmental Research in Earth and Environmental Sciences) for one (1) point. This practice ensures that a course entry appears on the Ph.D. Student's transcript every semester. These points do not count toward the 45-point coursework requirement (discussed below).

Students who have outside summer funding such as an NSF Graduate Fellowship, a summer paid internship outside the University (e.g., at an oil company) or who are on a Leave of Absence generally do not register for the Summer. They must notify the DEES Business Manager and the Senior Administrative Manager of the circumstances well in advance of the start of the Summer. These students do not receive summer salary from Columbia.

## **REGISTRATION AT THE START OF THE SEMESTER**

Ph.D. Students first should report to the DEES Office (106 Geoscience, LDEO), where they will be given registration forms and instructions. The packet of material prepared for each Ph.D. Student in advance of registration contains paperwork to be completed after consultation with the Ph.D. Student's Advisor. The Advisor must sign-off on the completed form. In cases where the Advisor is unavailable (e.g., due to travel), the Senior Administrative Manager will designate an alternative.

Fall Semester registration includes a step where the student then brings the registration paperwork to a *Registration Professor* for final approval. The Registration Professor is a professor charged with checking over a student's paperwork to ensure that all departmental requirements are being met. Their names and office hours are included in the instructions. In Spring registration, pre-oral students must get final approval from the DGS.

### **CHECKLIST FOR THE REGISTRATION PROFESSOR**

- Has the Advisor signed off on courses?
- Has the Ph.D. Student met with his or her Advisory Committee during the previous semester?
- Is the Ph.D. Student maintaining at least a B+ average?
- Does the Ph.D. Student have a plan for removing any outstanding Entrance Deficiencies?
- Is the Ph.D. Student scheduled for a Master's Meeting this semester? If so, alert him or her to the deadline for submitting the research paper and proposal.
- Is the Ph.D. Student scheduled for a Certifying Exam this semester? If so, alert him or her to the deadline for submitting the research paper.
- Has the Ph.D. Student properly signed and dated all the appropriate forms?

### **CONTINUOUS REGISTRATION**

Ph.D. Students are required to maintain continuous enrollment, registering for the appropriate residence status (RU or ER) each semester until they distribute their Ph.D. thesis to their 5-person Defense Committee. Students maintain their status at the University by being registered, and should not allow their registration to lapse. Matriculation and Fees (M&F) can be used in special circumstances. Check with the Senior Administrative Manager or Business Manager.

### **LEAVE OF ABSENCE**

Ph.D. Students wishing to interrupt their studies for a compelling reason — such as sustained physical or mental ill health, maternity or paternity, national service, or personal reasons— must apply for a leave of absence, which exempts them from the continuous registration requirement (Procedure 8). See:

<http://gsas.columbia.edu/content/leaves-absence>

and

[gsas.columbia.edu/content/suspension-responsibilities-childbirth-policy](http://gsas.columbia.edu/content/suspension-responsibilities-childbirth-policy)

## **R-CREDIT**

Occasionally, a Ph.D. Student may wish to attend a course but not to receive a grade in it, perhaps because he or she is taking several other courses with substantial workloads. Enrolling in the course for R-credit provides official recognition of the course on the Ph.D. Student's transcript, but with no grade being given. (Procedure 7)

R-credit is not accepted toward meeting requirements for degrees. Once R-credit is awarded, the grade is not subject to change. Furthermore, by University policy, a Ph.D. Student may not take a course for R-credit, and then repeat it for regular graduate credit later. For further information, see:

[gsas.columbia.edu/content/grading-system](https://gsas.columbia.edu/content/grading-system)

## **VII. ACADEMIC ISSUES MOSTLY RELEVANT TO THE FIRST TWO SEMESTERS**

### **CHECKLIST FOR ADVISORY COMMITTEE MEETINGS DURING THE FIRST TWO SEMESTERS**

- The Ph.D. Student's course of study (that is, courses they plan to take over the next few years) and the courses planned for the current semester;
- The importance of attending LDEO's Friday Colloquium, which is treated as a course;
- For Ph.D. Students with entrance deficiencies, the coursework needed to remove them;
- For Ph.D. Students seeking Transfer Credit for graduate courses taken at other institutions, discuss the application process.
- For Ph.D. Students seeking Advanced Standing for an external Masters Degree, discuss the application process.
- The choice of Depth and Breadth disciplines;
- The research project that the Ph.D. Student is expected to perform during the course of the year and advice on how he or she can get started (e.g., background reading);
- For Ph.D. Students being funded by a GRA, any special requirements of the assistantship;
- Any Affiliated Institution requirements, such as lab-safety courses, that need to be completed; and
- Affiliated Institution personnel who will be important for the Ph.D. Student to get to know (e.g., division administrators, secretaries, technicians, lab managers, etc).
- Discuss options for applying for external funding (e.g. NOAA and NSF graduate fellowships, etc.).

## ENTRANCE DEFICIENCIES

Ph.D. Students are required to have at least one college year with a B or better in Chemistry, Calculus and Physics (Calculus-based).

The Admissions Committee will identify any deficiencies before the student's first registration in the Department. The student must remove the deficiency as soon as possible; the M. Phil. degree cannot be granted until all have been removed. A deficiency is generally removed by earning a grade of B or higher in an appropriate course, selected in consultation with the student's Advisor and/or Advisory Committee and approved by the Graduate Program Committee.

Columbia University courses that may satisfy deficiencies include the following examples (others are possible). These include basic undergraduate courses and, if students are prepared, higher level EESC courses that require basic science courses and move substantially past them.

### Chemistry

CHEM 1403-1404 (General Chemistry)

CHEM 3443-3444 (Organic Chemistry)

EESC 4009 (Chemical Geology)

EESC 4924 (Atmospheric Chemistry)

### Physics

PHYS 1201-1202 (General Physics, calculus pre-req)

EESC 4085 (Geodynamics)

EESC 4925 (Physical Oceanography)

### Calculus

MATH 1101, 1102 or 1201 (Calculus I, II or III)

APMA 3101 (Linear Algebra)

EESC 6908 (Quantitative Methods in Data Analysis)

Up to two 4000-level courses that are used to satisfy deficiencies may also count towards the Ph.D.

If the Ph.D. Student believes that the determination is mistaken, he or she may petition the Graduate Program Committee to review it (Procedure 3). The Ph.D. Student must remove all entrance deficiencies as soon as possible by taking an appropriate course (as listed below) and receiving a B or better grade in it. Courses that remove entrance deficiencies are listed below. A Ph.D. Student may petition the Graduate Program Committee to substitute a course not on the list (Procedure 4).

## COURSEWORK

Courses should be selected in consultation with the Ph.D. Student's Advisory Committee.

The Department's research and instruction are arranged within eight Major Disciplines:

- atmospheric science
- biogeosciences
- geochemistry
- geology/paleontology
- geophysics
- modern & future climate
- oceanography
- paleoclimate.

Courses associated with each Major Discipline are listed in the *Course Listings by Discipline Table* on the DEES website at:

[eesc.columbia.edu/programs/graduate-programs/phd-earth-environmental-sciences/course-listings](http://eesc.columbia.edu/programs/graduate-programs/phd-earth-environmental-sciences/course-listings)

A total of 45 points is required for the PhD. The Certifying Examination is normally taken when 30 points of accepted graduate credits are completed. Of these 30 points (typically 8-10 courses), 12 points (at least 4 courses) are required to be completed within a single Major Discipline. This constitutes the Depth Requirement. A minimum of an additional 6 points are required; one course each from two of the other seven Disciplines. This constitutes the Breadth Requirement. Courses that are listed in the student's Depth discipline cannot be counted as Breadth courses. A Ph.D. Student's initial choice of Depth and Breadth disciplines, and any changes to them, must be declared to the Department (Procedure 5).

All courses used to satisfy the Depth and Breadth Requirements must be taken for a letter grade. R-Credit courses do not count toward Ph.D. points. Graduate level courses from other Columbia departments, and graduate level courses taken at other institutions for which Transfer Credit has been awarded, can count as Breadth or Depth courses, upon recommendation of the Ph.D. Student's Advisory Committee (see Procedure 6).

All pre-Certifying Exam (Pre-Orals) students must register for EESC G6001 Earth Science Colloquium, which confers one point per semester for required attendance at LDEO's Friday Colloquium. Post-Certifying Exam students do not receive credit for this course.

Students who are not taking any other courses in a given semester should register for EESC G9001 Research in Earth and Environmental Sciences. The points conferred by G9001 do

not count towards the 45-point requirement except in very specific circumstances worked out with the Senior Administrative Manager.

Students having a Masters Meeting should register for EESC G6003 Masters Research *only* in the semester in which it is scheduled. The 4 credits for G6003 count towards the 45-point requirement upon successfully completing the Master's Meeting.

A Ph.D. Student should develop a tentative program of courses during his or her first semester. It should take into account the student's own assessment of what courses are most relevant to his or her dissertation research, his or her Advisor's assessment of the same, the schedule of courses being offered, and the recommendations of other Ph.D. Students who have taken particular courses. See the Directory of Classes for a full list of offerings:

<http://www.columbia.edu/cu/bulletin/uwb/>

Note that only 4000-level courses and above count towards the point requirements. The specific choice of courses for a given semester must be approved by the Advisor as part of the Registration process.

Ph.D. Students should note that many graduate courses are given only in alternate years or in the case of some specialty courses, even less frequently, and take this into account when developing their program of courses. For this information check the on-line GSAS Bulletin and the Columbia College on-line Bulletin. Also, a Ph.D. Student can confer with the instructor or the DEES Senior Administrative Manager about the scheduling.

Nine universities in the New York City area (Columbia University, CUNY, Fordham, New School, New York University, Princeton, Rutgers, Stony Brook and Teachers College) participate in the Inter-University Doctoral Consortium, a program whereby students enrolled in any of the schools can take courses in any of the other schools without paying additional tuition. See:

<http://gsas.columbia.edu/iudc>

## **EXTERNAL FUNDING**

All Ph.D. Students are strongly encouraged to apply for external funding (e.g. NSF and NOAA graduate fellowships), both because they confer prestige on both the student and DEES and because they stretch University fellowship funds. A list of funding opportunities can be found at:

[gsas.columbia.edu/content/fellowship-faqs#FellowshipsExternal](http://gsas.columbia.edu/content/fellowship-faqs#FellowshipsExternal)

## VIII. ACADEMIC ISSUES MOSTLY RELEVANT TO SEMESTERS PRIOR TO THE MASTERS MEETING

(Students not anticipating Advanced Standing for the Masters Degree, only)

### ADVISORY COMMITTEE MEETING

The committee should be closely monitoring the Ph.D. Student's academic performance and helping him or her get started on a significant research project.

### CHECKLIST FOR ADVISORY COMMITTEE MEETINGS

- Review of the Ph.D. Student's course of study, including courses already completed and the courses planned for the current semester;
- Review the Ph.D. Student's academic performance to date;
- Review the Ph.D. Student's attendance record at LDEO's Friday Colloquium;
- For Ph.D. Students with entrance deficiencies that have not yet been removed, review the plan to remove them;
- Discuss the Ph.D. Student's TA assignments, including suggestions on how their instructional and research obligations can be balanced;
- Discuss external fellowship opportunities that the Ph.D. Student may take advantage of;
- For Ph.D. Students being funded by a GRA, discuss any special requirements of the assistantship;
- Discuss the progress of the Ph.D. Student's research project;
- Discuss research plans for the current semester;
- By the end of the third semester, the Ph.D. Student must present to the committee outlines or initial drafts of two documents that will be used during the Master's Meeting: 1) a research report based on his or her research; and 2) a research proposal embodying the Ph.D. Student's original ideas. Discuss with the Ph.D. Student how he or she should finalize these documents;
- Discuss opportunities to present research at departmental seminars, other universities and professional meetings.

### MASTERS MEETING

A Ph.D. Student who enters without a Masters Degree (or who does not receive Advanced Standing for their degree) is awarded the M.A. degree through the Masters Meeting. In the semester before the Ph.D. Student has his or her Masters Meeting, he or she must submit an application for the Master's Degree online at:

[registrar.columbia.edu/registrar-forms/application-degree-or-certificate](http://registrar.columbia.edu/registrar-forms/application-degree-or-certificate)

A copy/scan of the application should be sent to the Senior Administrative Manager.

The Masters Meeting focuses on a research project and a short research proposal.

The research paper and proposal must be submitted to the Department Office in the semester for which the Masters Meeting is scheduled no later than the relevant deadline: September 15 for the Fall term; February 15 for the Spring term (see Milestones and Deadlines section). While Ph.D. Students are encouraged to include updated material in their oral presentation during the Master's Meeting, the paper and proposal turned in on the 15th are the ones that are distributed to the committee. No others should be submitted.

The purpose of the research paper is to demonstrate the Ph.D. Student's ability to perform scientific research. The underlying research project should have proceeded to the stage where at least some conclusions can be drawn. To be acceptable, the research paper must meet these minimum standards: It must be typed (as contrasted to hand-written), it must have at least: 1) a title, 2) an abstract, 3) an introduction that identifies the central problem under consideration and states research objectives, 4) a body that describes the research that has been performed to date; 5) a conclusion that discusses research results to date; and 6) bibliographic references. Figures, if any, may be preliminary but must be accompanied by explanatory captions. Its length is limited to no more than 10 pages of text (typed, double-spaced, or  $\leq 3000$  words) excluding figures, figure captions and bibliography... Overall, the research paper should demonstrate that the Ph.D. Student had undertaken considerable thought in defining a clear and realistic research project.

The Ph.D. Student may submit a published paper or submitted manuscript as his or her research paper, provided that: 1) he or she is its first author; 2) the work described was conducted as part of the Ph.D. Program and was not used to fulfill requirements of another program or degree; and 3) the text meets the minimum standards enumerated above.

The purpose of the research proposal is to demonstrate the Ph.D. Student's ability to recognize and formulate relevant and tractable research projects. The proposal need not be related to the Ph.D. Student's current research and can be on any subject chosen by the student, irrespective of the availability of the funds or facilities needed to pursue it. If related to the Ph.D. Student's current research, it may not be a trivial extension of it. The underlying idea must be the Ph.D. Student's own, but he or she is encouraged to draw upon material discussed in committee meetings, seminars, workshops, etc.; he or she is welcome to discuss the idea with his or her committee. To be acceptable, must meet these minimum standards: It must be typed, it must have at least: 1) a title, 2) an abstract, 3) an introduction that identifies the central problem under consideration and states research objectives, 4) a body that describes proposed research (e.g. the hypothesis that is being tested, the design of the experiment, etc.); 5) a conclusion that discusses the potential impact of hypothetical results; and 6) bibliographic references. Figures, if any, may be preliminary

but must be accompanied by explanatory captions. Its length is limited to no more than 4 pages of text (typed, double-spaced, or  $\leq 1200$  words) excluding figures, figure captions and bibliography.

The Master's Meeting, between the Ph.D. Student and the Advisory Committee members, serves to evaluate the student's academic and research performance/potential, though the focus of the meeting is on the latter. The meeting also serves to give the Ph.D. Student experience in oral presentation prior to the Certifying Exam.

If, on the day of the exam, the Ph.D. Student believes himself or herself to be in an impaired physical or mental state likely to affect performance, he or she should bring it to the attention of his or her Advisor prior to the start of the meeting. The Advisor should postpone the exam when circumstances warrant.

The duration of the Masters Meeting is 2 hours, and is formatted as follows:

The first 75 minutes are devoted to the student's research project, beginning with a 15-minute uninterrupted oral presentation by the student (similar to those given at Geological Society of America or American Geophysical Union conferences), and continues with 60 minutes of discussion and questions. The Advisory Committee members should save questions until the talk is completed for more detailed discussion.

The last 45 minutes of the Masters Meeting are focused on the proposal. The student prepares a 15-minute presentation of the proposal, which may be interrupted for questions by the Advisory Committee members.

The Advisor is responsible for reading the above format to the committee members and the Ph.D. Student at the beginning of the meeting, and for conducting the meeting in general. At the end of the meeting the student is asked to leave the room while the Advisory Committee conducts a written confidential assessment of the Ph.D. Student's performance, based on a scale from 1 (low) - 5 (high). In the event that an Advisory Committee member is unwilling to give a numerical score, then "strong performance", p. 29 "marginal performance", and "poor performance" will be tallied as 3.6, 3.25 and 2.9, respectively. Assessments are then averaged, with three possible outcomes:

Score Category

>3.5	I – Strong Performance Grant/Continue: Grant M.A. and allow student to continue on toward Ph.D.
3.0-3.5	II - Marginal Performance, requiring discussion followed by an additional ballot to determine whether:

- a. Grant/Continue: Grant M.A. upon completion of specific conditions in a specific timeframe and allow student to continue on toward Ph.D.;
- b. Grant/Terminate: Grant M.A. upon completion of specific conditions no later than the end of the current semester but not allow student to continue on toward Ph.D.; or
- c. Not-Grant/Terminate: Not Grant M.A. and not allow student to continue on toward Ph.D.

< 3.0 III – Poor Performance

Not-Grant/Terminate: Not grant M.A. and not allow student to continue on toward Ph.D.

Once the vote is tallied, a discussion is required among the Advisory Committee members (still in closed session) to determine if any additional conditions (e.g., course work, modifications to research paper, etc.) must be satisfied by the student in order to receive the M.A. degree award, regardless of the average score. Such conditions must be approved by two-thirds of the Advisory Committee. Once the Advisory Committee determines the outcome of the Masters Meeting, the Ph.D. Student is called back into the room, informed of the Committee's decision, and provided a verbal summary of his or her performance.

If the vote is for Category I or IIa, the Advisory Committee also determines when the Ph.D. Student will sit for his/her Certifying Exam (but no later than the deadline). They also decide if the research topic presented at the Master's Meeting qualifies to become the paper presented at the Certifying Exam, or whether a different topic must be pursued. The Committee must also give verbal feedback to the Ph.D. Student on the student's research and performance, and they must give advice on how the Ph.D. Student might best prepare for his or her Certifying Exam. Within one week following the Master's Meeting, the Advisor is responsible for putting in writing the Advisory Committee's verbal comments to the student on his or her research and (when applicable) suggestions on how he or she should best prepare for the Certifying Exam (Procedure 13).

The Ph.D. Student who receives a Category I is recommended to receive his or her M.A. degree at the end of the current semester. The Ph.D. Student who receives a Category IIa is recommended to receive his or her M.A. degree only upon completion of the required conditions in the specified timeframe. If the conditions are not satisfied within the timeframe, the Ph.D. Student is not in good standing and will not be allowed to sit for his or her Certifying Exam and may be terminated upon recommendation of the Advisory Committee and approval of the Graduate Program Committee.

A vote in either Category IIb, IIc, or III is a statement indicating the Advisory Committee's lack of confidence in the Ph.D. Student's ability to do Ph.D.-level research. If the vote is for Category IIb, the student is judged deserving of an M.A. degree, but may receive it only after completing the specified conditions by the end of the current semester. At that time, if

the conditions have not been satisfied, the student will not have satisfied the conditions for receiving the degree and will be terminated without receiving the M.A. degree.

If the vote is for Category IIc or III, the student does not receive the M.A. degree. He or she may leave immediately, but must leave by the end of the current term.

Categories I, IIa and IIb confer four points for the course EESC G6003 Masters Research. These points count toward the 20-point minimum necessary for the M.A. degree, and toward the 45-point minimum necessary for the Ph.D.

### **AD HOC POLICY ON APPEALING RESULTS**

A student has no right to appeal the results of his or her Masters Meeting. The Advisory Committee has the sole responsibility to assess the student's performance in the Masters Meeting. In performing these duties, the committee is required to exercise good professional judgment, adhere to the relevant procedures and to cover the appropriate type and level of material.

In extraordinary circumstance, the Department Chair has the authority to determine whether the exam was conducted properly and whether the student was in an appropriate physical/mental state for valid testing to have occurred. If such an investigation reveals irregularities or extenuating circumstances that had a clear and major negative impact on the student's performance or the committee's evaluation of that performance, then the Department Chair may invalidate the exam and allow the Ph.D. Student to retake it.

## **IX. ACADEMIC ISSUES MOSTLY RELEVANT TO SEMESTERS PRIOR TO THE CERTIFYING EXAM**

### **ADVISORY COMMITTEE MEETING**

In the semester before the exam, the committee must review the Ph.D. Student's plans for or progress on the required research paper, coursework and any other relevant information, and certify that the student is sufficiently prepared to have a reasonable prospect of passing the Certifying Exam. This is called the *Apprenticeship Certification* (Procedure 14).

### **CHECKLIST FOR ADVISORY COMMITTEE MEETINGS**

- The Ph.D. Student's course of study, including courses already completed and the courses planned for the current semester. The Ph.D. Student should have now completed most course work;
- The Ph.D. Student's academic performance to date, including (if relevant) the satisfying completion of any requirements imposed as a result of the Master's

- Meeting. Should the Committee determine that all requirements have now been satisfied, this fact should be communicated to the Department (Procedure 12).
- The semester before the Certifying Exam is scheduled, the student must present for approval, during a formal committee meeting (which can be the Masters Meeting), progress made on his/her primary research project. This project will be written up by the student prior to the Certifying Exam.
  - The semester before the Certifying Exam is scheduled, the committee must review the progress of the Ph.D. Student's research paper, coursework and any other relevant information, and certify that the student is sufficiently prepared to have a reasonable prospect of passing the Certifying Exam. This is called the *Apprenticeship Certification* (Procedure 14).
  - The student's attendance record at LDEO's Friday Colloquium;
  - For students with deficiencies that have not yet been removed, the plan to remove them;
  - The Ph.D. Student's TA assignments, including suggestions on how their instructional and research obligations can be balanced;
  - For students being funded by a GRA, any special requirements of the assistantship;
  - The progress of the Ph.D. Student's research project;
  - Research plans for the current semester;
  - Opportunities to present research at professional meetings.

## **RESEARCH PAPER AND APPRENTICESHIP CERTIFICATION**

In the semester before the exam, the Advisory Committee must review the Ph.D. Student's research, coursework and any other relevant information, and certify that the student is sufficiently prepared to have a reasonable prospect of passing the Certifying Exam. This is called the *Apprenticeship Certification* (Procedure 14).

The Ph.D. Student must prepare a research paper that describes original research conducted by the student.

The research paper must be submitted to the Department Office in the semester for which the Certifying Exam is scheduled no later than the relevant deadline: September 15 for the Fall term; February 15 for the Spring term (see Milestones and Deadlines). Ph.D. Students are encouraged to include updated material at the oral presentation during the exam, but the paper turned in on the 15th is the one distributed to the committee. No other versions should be submitted.

The purpose of the research paper is to demonstrate the Ph.D. Student's ability to perform scientific research. The underlying research project should have proceeded to the stage where significant conclusions can be drawn. To be acceptable, the research paper must meet these minimum standards: It must be typed (as contrasted to hand-written), it must have at least: 1) a title, 2) an abstract, 3) an introduction that identifies the central problem under

consideration and states research objectives, 4) a body that describes the research that has been performed to date; 5) a conclusion that discusses research results to date; and 6) bibliographic references. Figures, if any, may be preliminary but must be accompanied by explanatory captions. Its length is limited to no more than 15 pages of text (typed, double-spaced, or ≤4500 words), excluding figures, figure captions and bibliography.

The Ph.D. Student may submit a published paper or submitted manuscript as his or her research paper, provided that: 1) he or she is its first author; 2) the work described was conducted as part of the Ph.D. Program and was not used to fulfill requirements of another program or degree; and 3) the text meets the minimum standards enumerated above.

Note that the Ph.D. Student is expected to be ready to take the Certifying Exam by the deadline (See Milestones and Deadlines section). The Graduate Program Committee only grants exceptions for compelling reasons related to extenuating circumstance (Procedure 9). A Ph.D. Student's failure to meet the deadline will result in him or her being considered not in good standing.

#### **CERTIFYING EXAM ("Orals", "Qualifying Exam", "General Exam")**

The Examining Committee consists of the three Advisory Committee members and two additional members, chosen by the Examinations Subcommittee of the GPC. In selecting the additional members, the subcommittee is guided by the Ph.D. Student's Depth & Breadth coursework and takes into consideration (but is not obligated to use) up to four nominations made by the Ph.D. Student (Procedure 15). All members of the DEES professorial staff (both full time and adjunct) and all LDEO Research Professors and their equivalents at other affiliated institutions are eligible for nomination, but postdoctoral research scientists and scientists visiting from other institutions are not.

The Examining Committee evaluates the student's ability to perform Ph.D.-level research and demonstrate commensurate academic knowledge of his/her specialties.

The DEES Examinations Committee designates a chairperson from among the two additional members and designates which examiner is to test each of the four disciplinary areas (the Depth discipline, two breadth disciplines and General Earth Science), according to the following rules: An individual examiner tests a maximum of one discipline. Depth is tested by the Advisor, unless the Advisor agrees otherwise. General Earth Science is tested by the chairperson, or with the chairperson's concurrence, by the other additional member (but not by a member of the Advisory Committee). Each breadth discipline is tested by whoever is so designated by the DEES Examinations Subcommittee. The fifth member is not assigned a discipline of his or her own, but may ask questions on any of the other four disciplines. Once the Examining Committee has been selected, the DEES office schedules the exam.

The Ph.D. Student is informed of the Exam date and the make-up of his or her Examining Committee approximately four weeks in advance, in order to allow adequate time for study and practice. He or she is free to introduce him or herself to unfamiliar members and to ask the advice of any member on material he or she should study. However, Examining Committee members are not required to offer any advice; the Ph.D. Student is expected to respect the decision of any committee member who declines to offer it. Ph.D. Students are encouraged to include updated material at the presentation, but the copy turned in on the 15th will be distributed to the examining committee. No other copy should be submitted.

If, on the day of the exam, the Ph.D. Student believes himself or herself to be in an impaired physical or mental state likely to affect performance, he or she should bring it to the attention of the Chair of the Examining Committee prior to the start of the exam. The Chair should postpone the exam when circumstances warrant.

At the start of the exam, the Examining Committee chairperson is responsible for: introducing the student and the student's background (Depth and 2 Breadth Disciplines and previous graduate work, if any) to the Examining Committee; and reiterating the exam rules. The student's Advisor is responsible for summarizing the student's coursework, previous graduate work, if any, and should inform the Committee of any information relevant to the preparation of the student for the exam.

The duration of the exam is approximately 2 hours, grouped as six 20-minute periods. It is formatted as follows:

- 1) The first 20-minute period focuses on the student's research project and begins with an oral presentation by the student on his/her research paper. The student will give a 15-minute uninterrupted oral presentation (similar to those given at Geological Society of America or American Geophysical Union conferences). The Examining Committee members should save questions until the talk is completed for more detailed discussion. The next 5 minutes are devoted to questions directly related to the oral presentation by members of the exam.
- 2) The next 20-minute period is devoted to questions related to the student's Depth discipline and is led by the examiner designated for that subject. The Chair shall announce a five-minute break between these two periods, so that all parties can relax, visit the bathroom, etc.
- 3) The next two 20-minute periods are devoted to the student's two Breadth disciplines. Each respective period is led by the examiner designated for that discipline. The Chair shall recess the exam for a five-minute break between these two periods.
- 4) The next 20-minute period is devoted to general Earth science and is led by the examiner designated for that subject. That examiner's specific responsibility is to cover many areas to

evaluate whether the student has sufficient breadth of knowledge in general earth sciences (including atmospheric science, oceanography and solid earth science).

5) The final 20-minute period is devoted to “open” questioning. During this period, the examiner who did not lead his or her own questioning period during the exam is given the priority opportunity to ask questions on any of the other four disciplines. Any examiner may also ask follow-up questions that arose during the course of the exam.

At the end of the examination, the student leaves the room, and the Examining Committee members conduct a confidential written ballot consisting of two grades. Grades are based on a scale from 1 (low) to 5 (high). One grade represents the examiner’s impression of the student’s overall performance (i.e., how the student answered all of the questions in general); the second grade represents the examiner’s impression as to how well the student answered that examiner’s own specific questions. (In the event that an examiner is unwilling to give a numerical grade, then "pass," "marginal performance," and "fail" will be tallied as 3.6, 3.25, and 2.9, respectively.) The ten grades will then be averaged, the final grade indicating one of five possible outcomes:

<u>Score</u>		<u>Category</u>
>3.5	I	Straight pass (M.Phil recommended upon completion of Dissertation Proposal; proceed to Ph.D.)
3.0-3.5	II	Marginal Performance Discussion followed by additional ballot to determine if: a. Conditional Pass, upon completion of specific condition (s) b. Conditional Fail with option to retake exam in 6 months c. Terminal Pass with M.Phil. Degree, possibly after completion of specific conditions; not allowed to continue on to Ph.D. d. Fail
<3.0	III	Fail

Once the vote is tallied and regardless of the average score, a discussion is required among the exam committee members (still in closed session) to determine if any additional conditions (e.g., course work, modifications to research paper, etc.) must be satisfied by the student to receive the M.Phil. degree. Such conditions must be approved by four-fifths of the exam committee.

Once the exam committee determines the outcome of the Certifying Exam, the student is called back into the room, informed of the Committee’s decision and provided a reasonable verbal summary of his or her performance.

If the vote is for Category IIa, the student is given a time frame in which to satisfy any conditions required to raise the IIa conditional pass to a straight pass (I). If the conditions

are not satisfied within the allotted time frame, the student will no longer be in good standing and may be terminated upon recommendation of the Advisory Committee and approval of the Graduate Program Committee.

A Conditional Fail (vote in Category IIb) implies that the student did not perform satisfactorily in the exam, though the exam committee has judged that he/she showed enough potential to warrant a second chance at passing the exam. The exam committee will set a time when the student will retake the exam, and any conditions, which must be satisfied prior to that time.

A vote in either Category IIc, IId or III is a statement indicating the exam committee's lack of confidence in the student's ability to do Ph.D. -level research. If the vote is for Category IIc (Terminal Pass), the student was judged deserving of an M.Phil. degree, but may receive the M.Phil. degree only after the orals project has been revised/improved and judged to be satisfactory by the exam committee (or a subset of the committee so designated by the full committee), and any other explicit conditions satisfied. A satisfactory Dissertation Proposal is required by DEES for the M.Phil. degree. Everything must be submitted by the end of the current semester. At that time, if the explicit conditions have not been satisfied, the student will be terminated without receiving the M.Phil. degree. If the project revisions are satisfactory and the other conditions are satisfied, the M. Phil degree will be awarded. If the vote is for Category IId or III, the student may leave immediately, but must leave by the end of the current term, without receiving the M.Phil. degree.

#### **AD HOC POLICY ON APPEALING RESULTS**

A student has no right to appeal the results of his or her Certifying Exam.

The Examining Committee has the sole responsibility to determine whether the student has passed or failed the Ph.D. Certifying Exam. In performing these duties, the committee is required to exercise good professional judgment, adhere to the relevant procedures and to cover the appropriate type and level of material.

In extraordinary circumstance, the Department Chair has the authority to determine whether the exam was conducted properly and whether the student was in an appropriate physical/mental state for valid testing to have occurred. If such an investigation reveals irregularities or extenuating circumstances that had a clear and major negative impact on the student's performance or the committee's evaluation of that performance, then the Department Chair may invalidate the exam and allow the Ph.D. Student to retake it.

#### **X. ACADEMIC ISSUES MOSTLY RELEVANT TO THE SEMESTERS PRIOR TO THE DISSERTATION PROPOSAL**

## ADVISORY COMMITTEE MEETING

The Ph.D. Student's coursework should now be finished, except for seminars. The student's research should be well underway and the committee should be focusing on helping the Ph.D. Student prepare for the Dissertation Proposal, which is a key step in defining the goals and scope of the Ph.D. Dissertation.

## CHECKLIST FOR ADVISORY COMMITTEE MEETINGS

- Review of the Ph.D. Student's course of study, including courses already completed and the courses planned for the current semester. The Ph.D. Student should now have completed all course work;
- The Ph.D. Student's TA assignments, including suggestions on how their instructional and research obligations can be balanced;
- The progress of the Ph.D. Student's research project;
- Research plans for the current semester;
- Discussion of how the student will draw together completed, in-progress and envisioned research into a coherent form that can be presented as a Dissertation Proposal;
- Discussion of how the Ph.D. Student should start to prepare for possible post-Ph.D. employment opportunities;
- For students being funded by a GRA, any special requirements of the assistantship; and
- Opportunities to present research at departmental seminars, other universities and professional meetings.

## DISSERTATION PROPOSAL

The purpose of the Dissertation Proposal is to formally review the student's *proposed* research at an early enough stage so that comments/guidance can be given to help optimize the student's research efforts.

The Dissertation Proposal is a public oral presentation, lasting 45-60 minutes, by the student to the Advisory Committee members and invited guests. See Milestones and Deadlines section for the relevant deadline. It should present the Ph.D. dissertation topic, background, goals, outline of any research completed to date and future research plans, including specific approaches to be followed and an approximate time table for completing the various stages of the proposed research.

Immediately after the presentation, the student and his or her Advisory Committee must have a private conversation in which the Committee responds, advice is given, the student's path forward is communicated, and the Committee signs off on the plan.

Dissertation proposals are not graded. The Advisory Committee certifies the Dissertation Proposal's acceptability on the Report of the Dissertation Proposal Committee form provided at the time of the presentation (Procedure 16). The Department sends the Report of the Dissertation Proposal Committee form to GSAS , followed by the Application for MPhil degree if the Dissertation Proposal is approved and all other requirements have been met.

## **ANNUAL DISSERTATION TOPIC LIST**

The Department maintains and widely distributes a list of the Dissertation Topics of all of its Ph.D. Students, to facilitate members of the university community becoming aware of their research. At the beginning of the fall semester, every post-orals candidate in the Department is required to submit a tentative title for his/her dissertation, including a few descriptive sentences on the scientific objectives of the study (Procedure 17). As long as the student remains a candidate for the Ph.D. degree, he/she will be expected to submit these entries annually until the Dissertation is distributed.

Because a dissertation will normally touch upon several fields of specialization, it is in the best interest of the student that all members of the DEES faculty be apprised in advance of its probable content. Advice and criticism accepted in early stages of dissertation research permit field and laboratory investigations to be adjusted to the most effective lines. Inadequacies brought to light in early stages can be dealt with, thus minimizing serious objections when the dissertation comes before the Departmental readers.

It is to be expected that the scientific objective of the Ph.D. dissertation may change as field and laboratory work progresses. The descriptive sentences, therefore, should state the aims and achievements of the research as of the date of its submission.

## **XI. SUBSEQUENT SEMESTERS THROUGH THE PH.D. DEFENSE**

### **ADVISORY COMMITTEE MEETING**

The student's research should be well-underway and the committee should be focusing on helping the student wrap up his or her research.

### **CHECKLIST FOR ADVISORY COMMITTEE MEETINGS**

- Discussion of details of the dissertation research;
- Discussion of possible post-Ph.D. employment opportunities;
- For students being funded by a GRA, any special requirements of the assistantship; and

- Opportunities to present research at departmental seminars, other universities and professional meetings.

## PREPARING FOR THE Ph.D. DISSERTATION DEFENSE

The process begins when the Ph.D. Student submits the final draft of the Ph.D. dissertation to his or her Advisor (called *Sponsor* by GSAS), proceeds through the Dissertation Defense, and ends once the student has deposited the successfully-defended and revised dissertation with GSAS. A step-by-step guide with information for both Ph.D. Students and Advisors is at:

<http://gsas.columbia.edu/content/distribution-defense-and-deposit-ten-steps>

Note that step 1 is for the PhD Student to get in contact with the Department. The student should alert the Senior Administrative Manager that he or she is ready to submit a draft of the dissertation to the main adviser for possible approval to defend. The adviser should send the names and affiliations of the five defense committee members, who have all agreed to be on the committee, to the Senior Administrative Manager. Once the adviser approves the dissertation draft, approval must be obtained from the critical readers who are usually the other two members of the student's advisory committee who will also be examiners on the defense committee. After the critical readers approve, the dissertation is sent to the last two examining committee members. This should be done by at least three to four weeks in advance of the defense date (Procedure 18).

The five-member Defense Committee must be approved by the Department. The Application for Defense is then prepared by the Department and forwarded to GSAS for approval. Guidelines for the nomination and appointment of the Defense Committee are at:

<http://gsas.columbia.edu/content/nomination-and-appointment-defense-committee>

The Ph.D. Student must insure that outstanding fees or loans to the University are paid and that he or she has fulfilled all other Departmental requirements. Once all requirements have been fulfilled and the examining committee has been appointed by the Dean, the candidate is notified of the examination date, usually about two weeks in advance.

## OPEN DEFENSES

If the candidate for a defense *and* all members of the Defense Committee choose to have an “open” defense, the following will apply:

During the public part of the exam, the candidate will have a maximum of 40 minutes to present major conclusions of the dissertation research, with at least half of the time devoted to a description of new findings or insights in the field discussed that directly resulted from research by the student. Questions following the initial presentation are permitted for a maximum of 10 minutes. Any member of the University community or other interested parties can attend this part of the defense.

The second part of the exam begins with the defense committee questioning the candidate in closed session for a period of up to 90 minutes. Its purpose is to verify that the Ph.D. Student's research has met the Department's high standards, and that the Ph.D. Student is well-able to explain the work, justify underlying assumptions, and convince the committee that the results are well-founded and significant.

If the candidate *or* one or more members of the Defense Committee prefer, the procedures for "closed defense" (i.e., 20-minute oral presentation followed by questions from the Defense Committee in closed session for a period of up to 90 minutes) will be followed.

The candidate is then excused and the Defense Committee votes to determine one of three outcomes, Pass, Incomplete or Fail, as described in:

<http://gsas.columbia.edu/content/defense-and-evaluation>

A unanimous vote to pass or a vote with only one dissent for a lower outcome constitutes a pass. In the case of three votes for pass and two for incomplete or fail, the voting sheet and dissertation must be submitted to the Dean for review and the candidate should be informed that the committee's vote was not conclusive and he/she should await further communication from the Dean.

## **AD HOC POLICY ON APPEALING RESULTS**

A Ph.D. Student has no right to appeal the results of his or her Dissertation Defense.

The Dissertation Committee has the sole responsibility to determine whether the student has passed or failed the Ph.D. Dissertation Defense. In performing these duties, the committee is required to exercise good professional judgment, adhere to the relevant procedures and to cover the appropriate type and level of material.

No Ph.D. Student who receives an outcome of fail may have a second defense unless the Dean considers, upon the evidence provided, that the first one involved procedural irregularities.

## **DISSERTATION REVISIONS**

The Ph.D. Student who has passed his or her Dissertation Defense must see to any minor revisions in light of comments made by the Defense Committee. Usually, the Ph.D. Student does not need to seek approval from the Defense Committee for minor revisions, provided the approval card is signed by the Advisor and DEES Chair. The Defense Committee, however, reserves the right to review those revisions. Upon completion of the required revisions, the Ph.D. Student deposits his or her dissertation with GSAS and is recommended for the Ph.D. degree. Instructions for depositing are at:

<http://gsas.columbia.edu/content/deposit-gateway>

## **USE OF TITLE OF “Dr.”**

All Columbia University degrees, including the Ph.D., are formally awarded only in October, February, and May. Deposit deadlines for each conferral date listed in the Academic Calendar. A Ph.D. Student may call him- or herself “Dr.” as of the day of his or her deposit, since that date will appear on his or her official transcript.

## **XII. LIFE AFTER COLUMBIA**

### **STAY IN TOUCH**

DEES tries to keep in contact with all of its former students. Former Ph.D. Students should send the Senior Administrative Manager an email once a year or so, and tell us how they’re doing, where they are, and to provide a current email address.

We are also eager to have current students talk to alumni for advice on career opportunities. Let us know if you’re willing!

### **LAMONT-DOHERTY ALUMNI ASSOCIATION**

Former Ph.D. Students with links to LDEO should be aware of its alumni association, which fosters communications and interactions among its alumni. See:

<http://www.ldeo.columbia.edu/about-ldeo/alumni>

### **XIII. MISCELLANEOUS INFORMATION**

#### **EMPLOYMENT OPPORTUNITIES**

DEES receives (and forwards by email) announcements of teaching and research opportunities at academic institutions and research opportunities with companies engaged in environmental research and petroleum/mineral exploration.

Columbia's Center for Career Education (CCE) also offers advice in finding a job. See:

<http://www.cce.columbia.edu/>

Corporate recruiters regularly visit Columbia to give presentations and to interview candidates. Interviews on the Morningside Campus are arranged by CCE and on the Lamont Campus by the office staff of the relevant LDEO research division.

An International Ph.D. Student who plans on post-degree employment in the US must apply for Practical Training (and deal with I-9 certification) well before the Dissertation Defense, in order to allow adequate time for Practical Training status to be finalized. Be aware that US Immigration and Naturalization Service (INS) rules are very strict and that Columbia is not allowed to grant exceptions to them. The best source of advice is Columbia's International Program and Service. See:

<http://www.columbia.edu/cu/isso/>

#### **LANGUAGE TEST AND COURSES**

Unless they have completed their undergraduate education in an institution where the language of instruction was English, International Ph.D. Students are required to take a language exam (see Milestones and Deadlines Section), administered through the American Language Program:

<http://www.ce.columbia.edu/alp>

Depending on the results of the test, Ph.D. Students may be required to take follow-up language courses.

## **PROFESSIONAL SOCIETIES**

Ph.D. Students are urged to join the professional society (societies) appropriate to their specialization. Information concerning membership applications may be obtained on line from the organization directly. Note that research funds may not be used to pay annual dues.

The principal Earth science organizations are:

American Association for the Advancement of Science  
American Association of Petroleum Geologists  
American Geophysical Union  
American Meteorological Society  
Geological Society of America  
International Association of Sedimentologists  
International Glaciological Society  
Mineralogical Society  
Paleontological Society  
Royal Astronomical Society  
Seismological Society of America  
Society of Economic Geologists  
Society of Economic Paleontologists and Mineralogists  
Society of Exploration Geophysicists

## **STUDENT LOANS**

The Rose Marie Cline Student Loan Fund was established in honor of her retirement in 1993 by her friends and colleagues at Lamont. The purpose of the fund is to provide a modest amount of monetary assistance "for students in sudden and unexpected financial need." Loans are to be repaid "on a student's honor." Applications are available in the DEES office (106 Geoscience, LDEO). Larger student loans may be available via the Graduate School Dean's Office in extreme emergencies, as are Federally-funded Guaranteed Student Loans. Contact the Dean's Office (107 Low Library) to apply for either type of loan.

## **WORK / LIFE (Work Life office, OMBUDS, Other)**

<http://universitylife.columbia.edu/>

<http://worklife.columbia.edu/>

<http://ombuds.columbia.edu/>

## PROCEDURES

### PROCEDURE 1: Request to Change Advisor

Initiator: The Ph.D. Student

Preparation:

1. You are strongly urged to have discussed this matter informally with either the DEES Chair or the Chair of the Graduate Program Committee before filing a formal request. A preliminary discussion with the Senior Administrative Manager may be helpful and is encouraged.
2. You must have identified a prospective new Adviser and he or she must have agreed to serve.
3. You must have had a meeting with your Advisory Committee (possibly attended by your prospective new Adviser) in which the proposed change was discussed and approved. (Cases where one or more members disagree are considered unusual, and are handled on an *ad hoc* basis by the DEES Chair. Please bring such a case directly to the attention of the DEES Chair).
4. If your prospective new Adviser did not attend the meeting in 3), you must have had a separate meeting with him or her in which you broadly discuss your educational and research plans.

Email Template:

To: Chair of the Graduate Program Committee (GPC)

Fr: Ph.D. Student

Cc: Senior Administrative Manager

DEES Chair

DEES Vice Chair

Current members of Advisory Committee, including Adviser

Proposed New Adviser

Other mentors (if any)

Subject: Request to Change Advisor

Content of memo:

1. Reason(s) for wanting to change Advisor.
2. The assertion that your current committee and prospective Adviser agree with the change.
3. Description of the meetings(s) with your Advisory Committee and your prospective new Adviser in which you identify any advantages and disadvantages of the proposed change that were discussed.
4. Discussion of how this change is likely to affect your anticipated graduation date.

Attachment(s) to memo:

1. Letter from current Adviser stating that he or she, together with the rest of the Advisory Committee, agree to the change.
2. Letter from the prospective new advisor, indicating a willingness to serve. This letter should also indicate whether any funding issues are likely to arise.

Review Process:

Upon receipt, the GPC chair should forward copies to all members of that committee.

Upon approval/denial, the GPC chair should notify Ph.D. Student, and should cc the Business Manager, the members of the GPC, and all the individuals on the original cc list.

## **PROCEDURE 2: Request to Add or Change Second or Third Member of Advisory Committee**

Initiator: The Ph.D. Student

Preparation:

1. You must obtain the prospective member's agreement to serve.
2. You are strongly urged to have discussed the change with the members of your current Advisory Committee (possibly attended by your prospective new member).
3. If your prospective new member did not attend the meeting in 2), you must have had a separate meeting with him or her in which you broadly discuss your educational and research plans.
4. If the proposed member is replacing a current member, you should be sure to thank that member for their efforts.
5. Although you have discretion in choosing the second and third members of your Advisory Committee, you must nevertheless ensure that at least one member of your committee is a DEES Professor (of any rank, either regular or Adjunct).

Email Template:

To: Senior Administrative Manager

Fr: Ph.D. Student

Cc: Current members of Advisory Committee, including Advisor  
Proposed New Member

Subject: Request to Add or Change Second or Third Member of Advisory Committee

Content of memo:

- 1) Name, affiliation and contact information of proposed member.
- 2) Reason why proposed change benefits your program.
- 3) Name of person who the proposed member replaces (if any).
- 4) Demonstrate that you have at least one DEES professors (of any rank, either regular or Adjunct) on your committee by identifying all of them on your committee.

Attachment(s) to memo:

- 1) Letter from prospective member agreeing to serve.

Review Process:

As the Ph.D. Student has the right to choose the second and third members of his or her committee, the Senior Administrative Manager need only check that the proposed person meets the Department's requirements for Advisory Committee Members, and that, after the change, the committee still has at least one DEES professor (of any rank, either regular or Adjunct), and then record the change. The Senior Administrative Manager can then notify the Ph.D. Student that the change has been approved, cc'ing all the individuals on the original cc list.

### **PROCEDURE 3: Request to Review an Entrance Deficiency**

Initiator: The Ph.D. Student

Preparation:

1. You must have identified the Entrance Deficiency that you believe was erroneously identified at the time of admission.
2. Working from your undergraduate or graduate transcripts, you must identify the particular course which you believe satisfies the deficiency.
3. You must make the case that the course satisfies the deficiency.
4. You must discuss the matter with your Advisory Committee and they must agree that the course satisfies the deficiency.
5. If any of the courses that you are putting forward for consideration uses a non-letter grading scheme, you should provide evidence that your grade meets the B or better standard.

Email Template:

To: Chair of the Graduate Program Committee (GPC)

Fr: Ph.D. Student

Cc: Senior Administrative Manager

Members of Advisory Committee, including Advisor

Subject: Request to Review an Entrance Deficiency

Content of memo:

1. List of your Entrance Deficiencies, as stated on your letter from the Admission Committee, any courses you have already taken that satisfy them, and your plan to satisfy the rest.
2. Identify the particular Entrance Deficiency that you think was erroneously identified.
3. Identify the specific undergraduate course that you believe satisfies the deficiency, by providing:
  - A. Name and Number of the course
  - B. Institution at which the course was taken
  - C. Year and Semester that the course was taken
  - D. Points
  - E. Your Grade (only grades of B or better are acceptable)
4. Discuss why you think the course satisfies the deficiency.

Attachment(s) to memo:

1. Letter from your Advisor stating that your Advisory Committee concurs with your request.
2. Any material that will assist the GPC to make the determination, such as the course description from the institution's course catalog.
3. (If relevant and if available) Official description of how to convert grades to Columbia's letter system.

Review Process:

The GPC should review the Ph.D. Student's official undergraduate transcript and his or her letter of admission.

Upon approval/denial, the GPC Chair should notify Ph.D. Student, and should cc the members of the GPC and all the individuals on the original cc list.

## **PROCEDURE 4: Request to Substitute a Course to Remove an Entrance Deficiency**

Initiator: The Ph.D. Student

Preparation:

1. Note: Use Procedure 3 for courses taken prior to your entering the Ph.D. Program.
2. You must have identified the course and noted its number, full name and instructor;
3. You must have discussed the proposed substitution with your Advisory Committee and they must have approved it.

Email Template:

To: Chair of the Graduate Program Committee (GPC)

Fr: Ph.D. Student

Cc: Senior Administrative Manager

Members of Advisory Committee, including Advisor

Subject: Petition to Substitute a Course to Remove an Entrance Deficiency

Content of memo:

1. A list of all your Entrance Deficiencies, and the ways in which you have – or plan to – satisfy them.
2. The proposed substitution, including course (its number, full name and instructor) and specific deficiency it is proposed to satisfy.
3. Discussion of why you think this substitution is appropriate.

Attachment(s) to memo:

1. Letter from your Adviser stating that your Advisory Committee approves the substitution.

Review Process:

Upon receipt, the GPC chair should forward copies to all members of that committee.

Upon approval/denial, the GPC chair should notify Ph.D. Student, and should cc the members of the GPC and all the individuals on the original cc list.

## **PROCEDURE 5: Declaration of (or Change of) Depth and Breadth Disciplines**

Initiator: The Ph.D. Student

Preparation:

1. You must have identified your proposed Depth and Breadth Disciplines. Be sure that they are on the list included in this Guide. Make sure that your plan for coursework covers them.
2. When changing your Depth discipline, you must check with your Advisor that he or she feels able to advise a student in that area.
3. You must have discussed the proposed change with your Advisory Committee and they must have approved it.

Email Template:

To: Senior Administrative Manager

Fr: Ph.D. Student

Cc: Members of Advisory Committee, including Advisor

Subject: Declaration of (or Change of) Depth and Breadth Disciplines

Content of memo:

1. List your current Depth and Breadth Disciplines.
2. Identify the proposed change, and list your Depth and Breadth Disciplines after the change.
3. Discussion of why you think the change is appropriate.
4. Provide an up-to-date list of the courses you are using, or plan to use, to satisfy you Depth and Breadth requirements. Include the course name and number, number of points, and whether or not you've yet taken the course.
5. Statement that you have discussed the changes with your Advisor and Advisory Committee, and that they approve.

Review Process:

Approval is automatic as long as the request conforms to the rules.

The Senior Administrative Manager verifies that the listed courses will satisfy the Depth and Breadth requirements. The Senior Administrative Manager then notifies the Ph.D. student that the Depth and Breadth Disciplines have been approved, cc'ing all the members on the original cc list.

**PROCEDURE 6: Request to Substitute a non-DEES graduate level course for a Depth or Breadth Requirement.**

Initiator: The Ph.D. Student

Preparation:

1. If the course is already listed in the Course Listing By Major Discipline Table, the course has been pre-approved and no action is necessary.
2. You must have identified the course and noted its number, full name and instructor.
3. You must have discussed the proposed substitution with your Advisory Committee and they must have approved it.
4. For courses taught by other Columbia departments, you need not yet have taken the course. However, if the course is from another institution, you must verify that you have already received Transfer Credit for it.
5. Students with Advanced Standing have reduced Depth and Breadth requirements and may not substitute Transfer Credit for Depth or Breadth requirements.

Email Template:

To: To: Senior Administrative Manager

Fr: Ph.D. Student

Cc: Members of Advisory Committee, including Advisor

Subject: Request to Substitute a Course for Depth or Breadth Requirement

Content of memo:

1. Identify each course that you would like to substitute and note the institution and department in which it was offered, its number, full name and instructor, and the Depth or Breadth discipline it is to be counted against. For a course taken at another institution, indicate when Transfer Credit was awarded.
2. Provide an up-to-date list of the courses you are using, or plan to use, to satisfy your Depth and Breadth requirements. It should include the course being substituted.
3. Statement that you have discussed the substitution with you Advisor and Advisory Committee, and that they approve.

Review Process:

Approval is automatic, as long as the request conforms to the rules.

The Senior Administrative Manager verifies that the course information supplied by the student is correct by comparing it with official University course listings or a previous award of Transfer Credit. The substitution is then recorded in the Ph.D. Student's file.

The Senior Administrative Manager then notifies the Ph.D. Student that the substitution has been approved, cc'ing all the members of original cc list.

## **PROCEDURE 7: Request to Take a Course on an R-Credit Basis**

Initiator: The Ph.D. Student

Preparation:

1. You must have identified the course, including number, name and instructor.
2. You must have the permission of the course instructor to take the course on an “R” credit basis.
3. You must have discussed the matter with your Advisory Committee, and they must have approved it.
4. Your request must be submitted at the *beginning* of the term, before the GSAS deadline, which is listed on the Academic Calendar.

Email Template:

To: Senior Administrative Manager

Fr: Ph.D. Student

Cc: Senior Administrative Manager,  
Members of Advisory Committee, including Advisor

Subject: Request to take a Course on an R-Credit Basis

Content of memo:

1. The course (including name, number and instructor) you propose to take for R credit.

For information on how to register for R credit see:

<http://gsas.columbia.edu/content/grading-system#r>

## **PROCEDURE 8: Request for a Leave of Absence**

Initiator: The Ph.D. Student

Preparation:

1. If you are in the midst of an emergency, ATTEND TO THAT EMERGENCY FIRST. Then, as soon as is feasible, alert the Senior Administrative Manager to your situation.
2. You should consider discussing your situation with the Senior Administrative Manager, Advisory Committee and/or the DEES Chair before formally requesting a Leave of Absence.

Email Template:

To: Senior Administrative Manager

Fr: Ph.D. Student

Cc: DEES Chair

Director of Graduate Studies

Members of Advisory Committee, including Advisor

Subject: Request for a Leave of Absence

Content of memo:

1. The compelling reason why you need a leave of absence, such as sustained ill health (physical or mental), personal, maternity/paternity, or national service.
2. The proposed length of the Leave of Absence.
3. Discussion of how the leave is likely to impact your academic plans and obligations.

Attachment(s) to memo:

1. Any documentation that might serve to document the compelling nature of your request.

Review Process:

Upon receipt, the Senior Administrative Manager should refer the matter to the Department Chair for action.

Upon approval/denial, the Department Chair should notify Ph.D. Student, the Senior Administrative Manager and all the individuals on the original cc list.

## **PROCEDURE 9: Request for a Time Extension**

Initiator: The Ph.D. Student

Preparation:

1. You need to identify the specific deadline that you want extended and understand how that extension is likely to impact your overall schedule.
2. Since Ph.D. Students are expected to meet deadlines, you must be prepared to offer a substantial reason why a particular deadline should be extended in your case.
3. You should discuss the matter with your Advisory Committee and obtain their agreement that an extension is reasonable in your case.

Email Template:

To: Chair of the Graduate Program Committee (GPC)

Fr: Ph.D. Student

Cc: Senior Administrative Manager

Members of Advisory Committee, including Advisor

Subject: Request for a Time Extension

Content of memo:

1. The deadline you want extended, and the proposed date by which you will be expected to have fulfilled the underlying requirement.
2. The substantial reason you need an extension.
3. The likely effect of the extension on your schedule.

Attachment(s) to memo:

1. A letter from your Advisor, saying that your Advisory Committee has approved the matter and which identifies any financial impact that the extension might have.

Review Process:

Upon receipt, the GPC Chair should forward the request to the other member of the committee. The GPC has authority to grant extensions at its discretion, except for extensions to the overall fourteen semester limit, which must be referred to the Department Chair for possible consideration by the Dean.

Requests for an extension of the deadline for the Master's Meeting or the Certifying Exam should be approved only for a compelling reason related to an extenuating circumstance.

Upon approval/denial, the GPC chair should notify the Ph.D. Student, the Senior Administrative Manager and all the individuals on the original cc list.

## **PROCEDURE 10: Request for Transfer Credit and Advanced Standing**

Initiator: The Ph.D. Student

Note: Transfer Credit and Advanced Standing are only conferred after you complete two semesters at Columbia with satisfactory academic performance (at least a B+ average).

Preparation:

1. You should decide whether in addition to requesting Transfer Credit, you are also requesting Advanced Standing for an external Master's Degree.

### **For Transfer Credit:**

2. Starting with copies of your undergraduate and external Masters program transcripts, you must construct a list of all external *graduate* courses that you want considered for Transfer credit and determine their point value.
3. You must check that the total number of points you are requesting does not exceed 15.
4. If you took any of these graduate courses as an undergraduate (or the international equivalent of an undergraduate), you must establish that you had enough points to fulfill your undergraduate degree requirements without counting them.
5. You should check that official copies of all relevant transcripts are already on file in the Department office. If any are missing, you must provide them.
6. Note that an application for Transfer Credit need not be accompanied by an application for Advanced Standing.

### **For Advanced Standing:**

7. You need to show that your Master's Degree is relevant to your program at Columbia and that the work you did to obtain it is comparable to what you would have done to obtain a Master's Degree from Columbia and deserves the award of two (2) Residence Units. The Master's Degree should include a Research Paper or Thesis. The Master's Degree should include 2 semesters of graduate-level work.
8. An application for Advance Standing is most credible when the courses you took in your Master's program closely overlap those you otherwise would have taken as part of your program at Columbia.

Email Template:

To: Director of Graduate Studies (Chair of the Graduate Program Committee)

Fr: Ph.D. Student

Cc: Senior Administrative Manager

Members of Advisory Committee, including Advisor

Subject: Request for Transfer Credit and Advanced Standing

Content of memo:

For Transfer Credit:

1. A list of graduate courses for which you are requesting Transfer Credit, accompanied by the following information:
  - A. Name and Number of the course, and the course description
  - B. Institution at which the course was taken

- C. Year and Semester that the course was taken
  - D. Points and your Grade (only grades of B or better are acceptable)
  - E. Whether you took the course as an undergraduate or graduate student.
  - F. Why the course should be considered relevant to your current Ph.D. program.
2. The total number of points you are requesting, not to exceed 15.
  3. If you took any of these graduate courses as an undergraduate, you must establish that you had enough points to fulfill your undergraduate degree requirements without counting this course.
  4. If any of the courses that you are putting forward for consideration uses a non-letter grading scheme, you should provide evidence that your grade meets the B or better standard.

**For Advanced Standing**

5. Documentation of two semesters of graduate-level courses (see Transfer Credit (1))
6. Identify the department, institution and date of your Master's degree.
7. Argue that the work you did to obtain it is comparable to what you would have done to obtain a Master's Degree from Columbia and deserves the award of two (2) Residence Units (requests for only one RU are not allowed).

Attachment(s) to memo:

1. A copy of the GSAS Advanced Standing and Transfer Credit form, at: <http://gsas-2112p-01.gsas.columbia.edu/sites/default/files/GSAS-advancedstanding.pdf> with the top part filled out and signed.
2. Official transcripts not already on file in the Department Office.
3. If your former institution used a non-letter grading scheme, an official description of how to convert grades to Columbia's letter system.

**For Transfer Credit:**

4. If you are asking for credit for graduate courses taken as an undergraduate, excerpts from your undergraduate institution's literature that might help establish that these courses were in excess of your undergraduate degree requirements.

**For Advanced Standing:**

5. A copy of the Master's Thesis or Research Paper.
6. Excerpts from your institution's literature that might help establish that the Master's Degree that you received there is comparable to Columbia's.

Review Process:

For Transfer Credit: The Graduate Program Committee must verify the Ph.D. Student's course list against the official transcripts, agree that they are relevant to the Ph.D. Student's program and check that the total number of points requested does not exceed fifteen (15).

For Advanced Standing: The Graduate Program Committee must verify that the Master's Degree is in a subject relevant to the Ph.D. Student's program and that it is comparable to a Columbia Master's Degree and deserves the award of two (2) Residence Units.

The request should only be granted when a review of the Ph.D. Student's Columbia transcript verifies that he or she has maintained a B+ level or above during the first two semesters in DEES. The Director of Graduate Studies then fills out and signs the bottom part of the GSAS form and forwards the case to the Graduate School for final approval. Note that the number of Residence Units must be either 0 or 2 and the points of Transfer Credit may be no more than 15. The Senior Administrative Manager then notifies the Ph.D. Student of GSAS's decision, cc'ing all the individuals on the original cc list.

**PROCEDURE 11: No longer applies – Fall 2016**

## **PROCEDURE 12: Certification that Masters Requirements have been Satisfied**

Initiator: The Advisor

Preparation:

1. The Advisory Committee must agree that all requirements imposed as the result of the Masters Meeting have been satisfied.

Email Template:

To: Senior Administrative Manager

Fr: Advisor

Cc: Ph.D. Student

Business Manager

Other members of Advisory Committee

Subject: Certification that Masters Requirements have been Satisfied

Content of memo:

1. Name of Ph.D. Student
2. Statement that all requirements imposed as the result of the Masters Meeting have been satisfied.

Attachment(s) to memo:

(none) Student should have submitted the application for degree certificate by the deadline specified by GSAS on their website.

Review Process:

The fact is recorded and the process of awarding the Masters Degree is begun.

### **PROCEDURE 13: Summary of Masters Meeting**

Initiator: The Advisor

Preparation:

1. The Advisor must review the summary with the Advisory Committee before forwarding it to the department.

Email Template:

To: Senior Administrative Manager

Fr: Advisor

Cc: Ph.D. Student

Other members of Advisory Committee

Subject: Certification that Masters Requirements have been Satisfied

Content of memo

1. Opening paragraph that summarize the Ph.D. Student's performance at the Master's Meeting and which contain congratulatory remarks when appropriate.
2. Statement that the Advisor is acting on behalf of the Advisory Committee in providing the following information.
3. List of requirements (if any) imposed at the Masters Meeting, or the statement that no requirements were imposed.
4. Comments concerning the Ph.D. Student's research project.
5. (When applicable) Whether the Certifying Exam is recommended for the fifth or sixth semester and suggestions of how the Ph.D. Student should best prepare for it.

Attachment(s) to memo:

(none)

Review Process:

(none)

Note: Once the Senior Administrative Manager receives notice that the student has satisfied requirements for the Masters, certification will be confirmed with the Registrar and GSAS.

## **PROCEDURE 14: Apprenticeship Certification**

Initiator: The Advisor

Preparation:

1. The Advisory Committee must review the Ph.D. Student's research, coursework and any other relevant information, the Advisory Committee must certify that the student is sufficiently prepared to have a reasonable prospect of passing the Certifying Exam.

Email Template:

To: Senior Administrative Manager

Fr: Advisor

Cc: Ph.D. Student

Other members of Advisory Committee

Subject: Apprenticeship Certification

Content of memo:

1. Name of Ph.D. Student.
2. Statement that the Advisory Committee has reviewed the Ph.D. Student's research paper, coursework and other relevant information and is conferring the Apprenticeship Certification.

Attachment(s) to memo:

(none)

Review Process:

(none)

## **PROCEDURE 15: Nomination of Certifying Exam Committee Members**

Initiator: The Ph.D. Student

Preparation:

1. You must discuss your nominations with your advisory committee. All members of the DEES professorial staff (both full time and adjunct) and all LDEO Research Professors and their equivalents at other affiliated institutions are eligible for nomination, but postdoctoral research scientists and scientists visiting from other institutions are not.
2. You must be able to justify your nominations in terms of the expertise brought to the Examining Committee and its relevance to your Depth and Breadth subjects.
3. You must communicate your nominations to the Examinations Subcommittee Chair no later than six (6) weeks prior to your exam.

Email Template:

To: Examinations Subcommittee Chair

Fr: Ph.D. Student

Cc: Senior Administrative Manager

Members of Advisory Committee, including Advisor

Subject: Nomination of Certifying Exam Committee members

Content of memo:

1. Identify yourself and state your Depth and Breadth disciplines.
2. Identify the members of your Advisory Committee.
3. Give the approximate date you expect to be examined.
4. Assert that your nominations are made in consultation with your Advisory Committee.
5. List up to four (4) nominations, their affiliation and contact information (including email).
6. Describe the rationale for each nomination and especially whether the person has expertise relevant to your Depth and Breadth disciplines.

Review Process:

The nominations are advisory only. The Examinations Subcommittee should give them serious consideration but is not required to use them.

## **PROCEDURE 16: Completion of Dissertation Proposal**

Initiator: The Advisor

Preparation:

1. The Advisory Committee must attend the Ph.D. Student's Dissertation Proposal.

Email Template:

To: Senior Administrative Manager

Fr: Advisor

Cc: Ph.D. Student

Other members of Advisory Committee

Subject: Completion of Dissertation Proposal

Content of memo:

1. Name of Ph.D. Student.
2. Statement that Advisory Committee has attended the Ph.D. Student's Dissertation Proposal, and the date on which it was held. Advisor should state if the Dissertation Proposal was satisfactory and if the student should be awarded the M.Phil. If there are any conditions the student must complete, they should be noted.

Attachment(s) to memo:

(none)

Review Process:

(none)

## **PROCEDURE 17: Annual Dissertation Topic and Description**

Initiator: The Ph.D. Student

Preparation:

1. The Ph.D. Student receives from the DEES Office an email containing a template for creation or revision to Post-Orals students and accompanying instructions.

Action:

The Ph.D. Student uses the template to create or revise to the Topic and Description and emails it back, per the instructions that accompanied the template.

Review Process

(none)

## **PROCEDURE 18: Notification of Approaching Ph.D. Defense**

Initiator: The Ph.D. Student

Preparation:

1. Prepare this memo after you've submitted what you think is the final copy of your thesis to your advisor for possible approval to defend.

Email Template:

To: Senior Administrative Manager

Fr: Ph.D. Student

Cc: Members of Advisory Committee, including Advisor

Subject: Notification of Approaching Ph.D. Defense

Content of memo:

1. Your dissertation title
2. State that you've submitted what you think is the final copy of your thesis to your Advisor for possible approval to defend.

Attachment(s) to memo:

(none)

Review Process:

(none)

# TIME GRAPH

**MILESTONES AND DEADLINES FOR STUDENTS ANTICIPATING ADVANCED STANDING FOR THE MASTERS DEGREE**

coursework	
30 points and final includes at least 15 points from grades of C+ (5 points depth, 6 points breadth)	1st semester
	Student's Advisor selects two additional advisory committee members
	advisory committee meeting
	registration
	language test for international students (if req)
	advisory committee meeting
	2nd semester
	registration
	apply for external funding
	review membership of the advisory committee and request changes if desired
	apply for transfer credit
	3rd semester
advisory committee meeting	
registration, declare depth and 2 breadth disciplines	
complete removal of entrance deficiencies	
advisory committee meeting: obtain apprenticeship certification	
4th semester	
advisory committee meeting	
registration	
February 15: submit certifying exam research project	
certifying exam	
5th semester	
advisory committee meeting	
registration	
submit annual dissertation topic	
Dissertation proposal	
6th semester	
advisory committee meeting	
registration	
award M. Phil.	
7th semester	
advisory committee meeting	
registration	
submit annual dissertation topic	
8th semester	
advisory committee meeting	
registration	
complete TA duties	
Dissertation defense	
deposit Dissertation	
award Ph.D.	

Students entering with the Master's Degree

\* Students who have requested that their external Masters be accepted and that have been approved will advance 2 M.Phil. 3rd semester=5th; 4th semester=6th

**MILESTONES AND DEADLINES FOR STUDENTS NOT ANTICIPATING ADVANCED STANDING FOR THE MASTERS DEGREE**

coursework	
30 points, including 12 points within a single major discipline (depth) and 6 points within two other major disciplines (breadth)	1st semester
	Student's Advisor selects two additional advisory committee members
	advisory committee meeting
	registration
	language test for international students (if req)
	advisory committee meeting
	2nd semester
	registration
	apply for external funding
	review membership of the advisory committee and request changes if desired
	3rd semester
	advisory committee meeting
registration, declare depth and 2 breadth disciplines	
adv. committee meeting: present Master's paper and proposal outline	
4th semester	
advisory committee meeting	
registration	
February 15: submit Master's paper and proposal	
Master's meeting	
MA degree awarded	
5th semester	
advisory committee meeting	
registration	
complete entrance deficiencies	
advisory committee meeting: obtain apprenticeship	
6th semester	
advisory committee meeting	
registration	
February 15: submit certifying exam research project	
certifying exam	
7th semester	
advisory committee meeting	
registration	
submit annual dissertation topic	
dissertation proposal	
8th semester	
advisory committee meeting	
registration	
award M. Phil.	
9th semester	
advisory committee meeting	
registration	
submit annual dissertation topic	
10th semester	
advisory committee meeting	
registration	
complete TA duties	
Dissertation defense	
deposit Dissertation	
award Ph.D.	

Students entering without the Master's Degree