



Graduate Student Handbook (updated June 2017)

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This handbook was created as a guide for students and faculty in the Department of Ecology, Evolution & Environmental Biology (E3B) at Columbia University. The handbook is always under revision. Therefore students and advisors with pressing questions are encouraged to contact their advisor or the Director of Administration and Finance (Director A&F) for clarification.

Additional information about E3B may be found in the Graduate School of Arts and Sciences (GSAS) Bulletin online at: <http://gsas.columbia.edu/> <http://www.essential-policies.columbia.edu/> or on the E3B department webpage: <http://e3b.columbia.edu/>

E3B'S MISSION STATEMENT

The Department of Ecology, Evolution & Environmental Biology (E3B) at Columbia University was established in 2001. Although we are a relatively young department, we have grown rapidly over the past decade. We now have an internationally diverse student body and a network of supporters at Columbia and throughout New York City. We conduct field research all over the world – in Africa, Latin America, South America, South East Asia – and in our own backyard in New York City. Our affiliated faculty members come from other departments at Columbia as well as from the American Museum of Natural History, New York Botanical Garden, Wildlife Conservation Society, and EcoHealth Alliance. Together we provide an unparalleled breadth and depth of research opportunities for our students.

All of E3B's core faculty members are located in the 10th and 11th floors of the Schermerhorn Extension building on Columbia's Morningside campus. E3B's adjunct faculty come from all over New York City and are not necessarily located on the Morningside campus.

Our department is committed to studying ecological and evolutionary processes and understanding life, sustaining biodiversity, and ensuring functioning ecosystems in the future. In this endeavor, our professors lecture and research in the fields of evolutionary and ecological theory, natural history, genetics and behavior, ecosystem ecology, biogeochemistry, ecophysiology, disease ecology, marine biology, and restoration ecology, applied ecosystem ecology and microbial ecology. However, conservation is the theme that unites us.

E3B Faculty

Core Faculty

Dr. Marina Cords Professor
 Dr. Ruth DeFries Denning Professor of Sustainable Development
 Dr. Maria Diuk-Wasser Associate Professor and Director of Graduate Studies
 Dr. Joshua Drew Lecturer and M.A. Program Advisor
 Dr. Kevin Griffin Professor and Chair
 Dr. Krista McGuire Assistant Professor
 Dr. Don Melnick Thomas Morgan Hunt Professor of Conservation Biology
 Dr. Duncan Menge Assistant Professor
 Dr. Shahid Naeem Professor
 Dr. Matthew Palmer Senior Lecturer, Director Undergrad Studies, Postbac Program Advisor
 Dr. Dustin Rubenstein Associate Professor
 Dr. Jill Shapiro Senior Lecturer and EBHS Major Advisor
 Dr. Maria Uriarte Professor

Adjunct and Affiliate Faculty at Columbia University

Dr. Natalie Boelman, CU (Lamont)
 Dr. Hilary Callahan CU (Barnard Biology)
 Dr. Steve Cohen CU (SIPA)
 Dr. Adela Gondek CU (SIPA)

Dr. Paul E. Hertz CU (Barnard Biology)
 Dr. Ralph L. Holloway CU (Anthropology)
 Dr. Darcy B. Kelley CU (Biology)
 Dr. Brian Morton CU (Barnard Biology)
 Dr. Paul E. Olsen CU (DEES)
 Dr. Dorothy Peteet CU (DEES, Lamont)
 Dr. Miguel Pinedo-Vasquez CU (EICES)
 Dr. Robert E. Pollack CU (Biology)
 Dr. William Schuster CU (Black Rock Forest)
 Dr. Paige West CU (Barnard Anthropology)

E3B Adjunct & Affiliate Faculty

Dr. George Amato AMNH
 Dr. Michael Balick NYBG
 Dr. Mary Blair AMNH
 Dr. Daniel Brumbaugh AMNH
 Dr. Frank Burbrink, AMNH
 Dr. Michael T. Coe WHRC
 Dr. Joel Cracraft * AMNH
 Dr. Peter Daszak EHA
 Dr. Susan Elbin NYC Audubon
 Dr. Joshua Ginsberg * Cary Institute of Ecosystem Studies
 Dr. Eunsoo Kim AMNH
 Dr. Martin Mendez WCS
 Dr. Kevin Olival EHA
 Dr. Susan Perkins AMNH
 Dr. Charles Peters NYBG
 Dr. Christopher Raxworthy AMNH
 Dr. Howard Rosenbaum * WCS
 Dr. Melinda Rostal EHA
 Dr. Scott Silver WCS
 Dr. Nancy Simmons AMNH
 Dr. Brian Smith AMNH
 Dr. John Steven Sparks AMNH
 Dr. Eleanor Sterling * AMNH
 Dr. Dennis Stevenson NYBG
 Dr. Melanie Stiassny AMNH
 Dr. Patrick Thomas WCS

Abbreviations: **AMNH:** American Museum of Natural History, **EHA:** EcoHealth Alliance, **NYBG:** New York Botanical Garden, **WCS:** Wildlife Conservation Society, **WHRC:** Woods Hole Research Center; * indicates a Core E3B affiliate who has recently been quite involved with E3B teaching, advising and/or service

E3B Staff

(Located on 10th Floor Schermerhorn Extension)

E3B

Kevin Griffin E3B Department Chair
 Lourdes Gautier Director of Administration and Finance (DIRECTOR A&F)
 Maria Diuk-Wasser Director of Graduate Studies (DGS)
 Joshua Drew M.A. Program Advisor (MAPA)
 Matthew Palmer Director of Undergraduate Studies and Postbac Advisor
 Jill Shapiro Advisor for the Major in EBHS
 Kyle Bukhari Interim Business Manager
 Jae McFadden Administrative Coordinator
 Alexandra Vamanu Administrative Assistant

Post-Doctoral Research Scientists

Chak, Tin Chi Solomon
 Brooks, Katherine
 Davis, Kyle
 Feng, Xiaohui "Sunny"
 Harris, Stephen
 Huang, Ching-I
 Maia Villar de Queiroz, Rafael
 Rynkiewicz, Evelyn
 Sanchez-Vicente, Santiago
 Tufts, Danielle
 Wolf, Amelia

General University Information**COLUMBIA UNIVERSITY IDENTIFICATION CARDS (CUID)**

Students may obtain a CUID card in 204 Kent Hall. The ID office is open Monday – Friday, 9:00 am to 5:00 pm. The CUID card allows access to all Columbia buildings and is required to check out books from the library. The CUID card is the student's passport to NYC, offering discounted admissions to museums. For more information, <http://arts.columbia.edu/arts-initiative>

LIBRARIES

Students need a CUID to gain access to the Columbia libraries. To gain access to other universities' libraries in NYC, students must obtain a semester sticker from the ID Center at Kent Hall. Ph.D. students may also apply for special semester-long loan privileges from Butler Library. All students may renew books online and will be prompted to do so by email a few weeks before the book is due. For access to electronic journals, please visit CU here: <http://library.columbia.edu/>
 For AMNH libraries go here: <http://www.amnh.org/our-research/research-library/electronic-resources>

Graduate Student Lounge

There is a newly renovated Graduate Student Lounge in 301 Philosophy Hall.
<http://gsas.columbia.edu/graduate-student-center>

PHOTOCOPYING

The photocopier is located on the 11th floor. The charge for copies is \$0.05/page. Graduate students who wish to use the copier will be assigned a personal ID and code. This machine is available 24/7 for

student use. The Administrative Assistant will ask students to pay their bill periodically. There are also copy machines in each of the libraries. Students can purchase cards to use these machines at Butler library. Copiers that offer a full set of services are available in the School of Journalism building in the basement (854-3233) and the School of International Affairs (854-3797). Another copy facility that is open on weekends and offers limited services is located at Lerner Hall, room w301 (in the computer center). These copy facilities are less expensive than the libraries. For more information telephone them or check the Columbia home page.

PRINTING

All students have access to ACIS printing which allows them to print a set number of pages/week at any printer on campus. Please note students are not permitted to print to the faculty and staff printer on the 11th floor. E3B has set up a printer for students in room 1021. The IP# is: 128.59.233.209. Students are responsible for maintaining this printer and ordering cartridges.

POSTER PRINTING

E3B has a poster printer available for student use, located on the 10th floor, in the open conference room. The charge is \$2.00 per linear foot, including mistakes. Payment is to be made to the Administrative Assistant.

Please see Appendix 7 for instructions.

INTERNATIONAL STUDENTS

Upon arrival, international students should check-in with the International Students and Scholars Office (ISSO) located on 525 Riverside Drive, near 123rd Street (<http://www.columbia.edu/cu/isso/isso.html>).

ISSO is the best source for international students with questions. Here students may obtain academic clearance and social security numbers. (This is very important if you are expecting stipends).

Additionally, students may acquire a form making it easier to arrange a U.S. bank account. Students must also fill out employment forms at the ISSO to get paid. Make sure to fill out the appropriate tax form your home country has a tax treaty with the U.S. This will save you a lot of money in taxes. **Once you know your social security number, please inform the DIRECTOR A&F.** Be sure that you understand your visa status and what is expected and permitted by the U.S. government.

STUDENT STIPENDS

After receiving a stipend, students may pick up checks at **Student Financial Services, 210 Kent Hall**.

Stipends checks are distributed twice a year: early September and early January. Students must be registered to receive their check. Be sure to register early to insure your check is ready on time.

Students may also arrange to have checks directly deposited. Please check <https://ssol.columbia.edu/> to confirm you are eligible and complete their online form. International students should note a 14% tax is automatically deducted from their check if their country does not have a tax treaty with the U.S. For more information on tax treaties, contact ISSO. U.S. citizens must file taxes on their stipend before April 15th. Since situations vary, we recommend students contact a tax specialist with questions.

TAX ON FELLOWSHIPS & GRANTS

Students must pay taxes on their fellowships and stipends. International students are encouraged to attend the ISSO's tax workshops well before April 1st. All foreign students receive a W-2 form and have a portion of their fellowship withheld by the U.S. government. American students do not receive a W-2. These differences arise from federal law, and do not reflect university policy. Grants may also be taxable. This can include funds for research and travel etc. One exception is that external grants routed

through Columbia's Sponsored Projects (SPA) office are not taxed. The same grant awarded directly to a student will be taxed. However, this is not always an option, as some agencies will only award individuals. Students are encouraged to consult an accountant or tax expert to understand individual issues. Our purpose in including this information in the handbook is to encourage students to think about these matters early and use the right resources. As April 15 approaches, it becomes harder to find personal attention! If no tax is withheld from your stipend, you may consider paying an Estimated Tax, to avoid unforeseen penalties.

OUTSIDE EMPLOYMENT FOR FELLOWSHIP STUDENTS

Students who receive fellowship funds administered by GSAS as teaching, research or dissertation fellows must obtain permission from their departments to work part-time for up to 10hrs/week. Part-time employment in excess of 10hrs/week requires the approval of one of the Deans of the GSAS. Students awarded GSAS fellowships are not allowed to work more than 20hrs/week. For further clarification in particular cases, students should speak to the appropriate Financial Aid Officer at GSAS.

STUDENT HEALTH INSURANCE

Ph.D. students on a fellowship should be aware that this covers only the Columbia University Basic Health Insurance and Health Service Fee. For more information <http://gsas.columbia.edu/content/columbia-health#insurance>

STUDENT SERVICES HOTLINE

To learn more about Columbia's services including billing, registration, health services, residence halls, etc., contact the Office of Student Services at their free hotline phone number: 854-4400.

HEALTH INSURANCE/IMMUNIZATION

Upon arrival students should submit immunization records to Health Services in John Jay Hall. Missing records can lead to a block registration or degree conferral. Full-time students are automatically enrolled in Health Services and Columbia Health Insurance. A charge on your account confirms that you are enrolled. If you have other health insurance, you may request a waiver. **There are deadlines for enrollment and for waiving enrollment.** If you are going to the field and need immunizations from Health Services, plan ahead. Not all immunizations are covered by Health Services, and they may be costly. You may want to budget these costs into grant proposals. For more information, please visit: <http://health.columbia.edu/>

COLUMBIA UNIVERSITY GYM MEMBERSHIP

The gym is located in the Dodge Fitness Center: <http://www.gocolumbialions.com>. Lockers can be obtained, with valid ID, from 9:00 am to 4:30 pm in the room 439 Dodge. Lockers go quickly, so get there as soon as you can. There is a student access fee. Check with the gym for specific charges.

Columbia University's Sexual Respect Website

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

RAPE/ANTI-VIOLENCE CENTER HOTLINE

The hotline to contact a Peer Advocate is (212) 854-HELP.

SECURITY

The Security Office is located in 111 Low Library. The number is 854-2796. A late night shuttle bus is available to the Columbia Community for service between 110th Street and 125th Street, between Morningside Drive and Riverside Drive. The bus runs only until 2 am. You may also request an escort to take you home from 2 am until sunrise. Request shuttle bus or escort service by calling 854-SAFE.

Additional information is on the following websites:

<http://www.essential-policies.columbia.edu/>

<http://www.columbia.edu/content/students.html>

E3B Facilities

HOURS

Regular business hours for E3B are Monday through Friday, 9:00 am to 5:00 pm.

SECURITY AND ACCESS TO 10TH FLOOR SCHERMERHORN

Students need an active ID to enter the Schermerhorn Extension building during off-hours. If you cannot access the building, please visit the Security office in 111 Low Library. Generally the 10th floor elevators are locked after business hours. However, elevators stay unlocked for night classes ending at 8 p.m. After elevators are locked, students may still enter 10th floor using the stairs. The stairs have a code that can be obtained from the DIRECTOR A&F. A security system is activated on the 10th floor after business hours. Please be aware of your surroundings at all times. Do not leave laptops, other valuables or bags unattended. Notify staff immediately if you see any strangers wandering on the 10th, 11th, or Greenhouse floors.

RESERVING CLASSROOM & CONFERENCE ROOM

Schedules for the E3B classroom (1015) and conference room (1016) are maintained the Administrative Assistant. If you need to reserve a room or borrow AV equipment, please see the assistant well in advance. These rooms can accommodate PowerPoint presentations as and photographic slides. Please be considerate, keep the rooms neat and do not leave any trash behind.

STUDENT DESK SPACE

E3B attempts to give desk space to all Ph.D. students whose primary workplace is Columbia. Desk and room assignments are made by the DIRECTOR A&F. Students should not make their own arrangements to 'sublet' their desk space. Because space is limited, students must respect changes to allocations, if made. In some cases students may need to share a desk with one other person, and should be prepared to change their desk space arrangements after one semester if necessary.

MAIL

Student mail is located in a file cabinet outside the E3B administrative offices. Outgoing mail is located behind the reception area. E3B and EICES faculty/staff mailboxes are also located here. For mailing large packages, students may visit the post office is on 112th St. between Broadway and Amsterdam Ave.

OBTAINING FORMS

Important forms are listed here on our website:

http://www.columbia.edu/cu/e3b/resources_forms.html. For other forms, please contact the administrative assistant at 212-854-9987. Additionally, grant proposal coversheets may be obtained from the Sponsored Projects Administration (SPA) office. Our representative is Heather Horgan. Her email address is hh176@columbia.edu and phone number is 212-854-4830. SPA is located at 615 West 131st Street, 4th Floor.

KITCHEN AREA

A small kitchen with a refrigerator, electric kettle, microwave, and sink is available on the 10th floor of Schermerhorn Ext. Please be respectful of these facilities and clean up after yourself. We are happy to provide these amenities, but we ask that students take responsibility for keeping the space clean and neat.

General Academic Information

ORIENTATION

Orientation for incoming graduate students is held at the beginning of fall semester (around September 1st). All graduate students are encouraged to attend the welcome session and to meet entering students. A notice with the specific date is sent out by the first week in August each year.

RESIDENCY AND EXTENDED RESIDENCE

A minimum length of “Residence status” is required to obtain a graduate degree at Columbia. One Residence Unit (RU) is equal to one semester of full-time registration. Two RUs are required for the E3B M.A. degree. Six RUs are required for the E3B Ph.D. degree, and four RUs are required for E3B Ph.D. students entering with advanced standing.

RUs are a measure of tuition dollars and do not necessarily equal certain number of credits or courses. However, the accepted measure is 9-12 credits are equal to 1 RU. Students may sign up for more than 12 credits if they can do the work.

Continuous registration is required for all graduate degrees. For special circumstances for leaves of absence please refer to the GSAS Bulletin. After completing the appropriate number of RUs M.A. students must register for **Extended Residence (ER)** status for their second year and Ph.D. students must register for **Matriculation and Fees (M&F)** status for their third year.

Students must register for **Extended Residence** in any semester in which they hold a University appointment (e.g. as a TA or fellow) or are completing work towards a degree requirement (e.g. submitting a literature review, taking qualifying exams, doing a proposal defense, etc.). Registration for Matriculation and Facilities Fees is required during semesters when students are in the field or conducting research. M&F registration for Ph.D. students is required for the semester in which the student defends and submits his/her thesis. Some exceptions do apply, so please refer to the GSAS bulletin and if you have further questions, consult with the DIRECTOR A&F.

For part-time M.A. students, please refer to the GSAS Bulletin for quarter-residence and half-residence unit information. You are allowed to take up to two courses if registered for a quarter-residence and up to three courses if registered for a half-residence. The total, whether it is 4 half-residence units or a combination of full, half, and quarter RU's, must add up to 2 whole residence units. GSAS allows 4 years to complete part-time study.

ADVANCED STANDING AND RESIDENCE UNITS

Advanced standing is available to Ph.D. students who have already completed an M.A. degree, international equivalent, or equivalent professional degree. On the basis of such work, a maximum of two Residence Units (20 credits) may be awarded for credit toward the Ph.D. degree. Students granted advanced standing are *not* eligible to receive the sequential M.A. degree from Columbia. Students who have not completed an M.A. degree (or equivalent) are ineligible for advanced standing.

Upon admission, the graduate school will forward students eligible for advanced standing to E3B. The DGS will then decide how many credits to grant, depending on the extent prior work. Qualified students must accept advanced standing status if awarded. Indeed, fellowship packages may be based on student's likelihood of achieving advanced standing.

COURSE SCHEDULE/CALL NUMBERS

An up-to-date course schedule and call numbers for registration can be located on the web at <http://www.columbia.edu/cu/bulletin/uwb/>

E3B courses are under “E” for Ecology, Evolution, and Environmental Biology. SIPA courses are under “I” for International Affairs. Law School courses may not be on the web. Please contact the Law School directly.

REGISTRATION PROCEDURE

Registration dates for the various schools in the University are located at:

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

Students may also register during the pre-registration period. This is the best option for those who know they will be away in the field during the registration period.

For registration process details, please refer to the GSAS Bulletin online at:

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

You should activate your registration, even if you are not certain about your course schedule, to avoid a late registration fee. To do so, you may register for one class. If you are unsure about your registration status please speak to the DGS or DIRECTOR A&F.

Don’t forget to register on time. First year M.A. students should register for one Residence Unit (RU) each semester and second year M.A. students should register for Extended Residence (ER). If you are a part-time M.A. student, please see the “Residency” section above. You may also speak to the DIRECTOR A&F if you are still unsure of your status.

All Ph.D. students in their first and second years should register for one Residence Unit in each semester. Third-year Ph.D. students also register for one Residence Unit (RU) in each semester if they do not have advanced standing. Thus most students will register for 6 residence units over the course of 3 years; students with advanced standing will register for only 4 or 5. In the semesters after completing your residence units, you will register either for Extended Residence (ER) or Matriculation and Facilities (M&F) status. If you are fulfilling a degree requirement (such as taking classes or qualifying exams, turning in a literature review, or defending a proposal), you will need to register for Extended Residence.

Matriculation and Facilities (M&F) status is for students who are ABD (all but dissertation), thus who are working only on their research, including writing up. M&F is also the correct registration status for students in the semester in which they defend Note that registering for ER is considerably more expensive than registering for M&F.

The *Inter-University Doctoral Consortium* allows Columbia Ph.D. students (not M.A. students) to take classes at certain other institutions in and around New York. Currently, the following institutions are in the Consortium: CUNY, NYU, Fordham, Stony Brook, Princeton, and Rutgers. The GSAS Bulletin provides details. GSAS Student Services handles registration and grades.

You cannot drop a course without the approval of your advisor and/or committee (once the class has started). To approve dropping a course, your advisor should e-mail the DGS and DIRECTOR A&F to indicate that you are allowed to drop a specific course.

SUMMER REGISTRATION

Ph.D. fellowships do not cover summer classes. However, if a Ph.D. student would like to register for a summer course, they may do so through the School of Continuing Education’s special summer programs

<http://ce.columbia.edu/summer> Students may enroll in these courses without having to pay additional tuition. Interested students should fill out an Application for Summer Tuition Credit. This form can be obtained from the DIRECTOR A&F and must be approved by the student's adviser.

Please note that summer tuition credit will be taken out of the subsequent fall fellowship. The tuition stipend will be reduced accordingly. In this case, students may still be responsible for minor fees including health services. Please note that students are responsible for making sure the debits and credits are accurate when processed. If you choose to enroll in Summer Session, you will have to handle the financial details with Student Financial Services. This summer tuition discount credit *may* also apply to M.A. students. Please check with 107 Low to see if you qualify.

AWARDING DEGREES

Degree Conferrals for M.A. and Ph.D. are held in October, February, and May. The **application deadlines** for the M.A. degree is **August 1, November 1, and December 1**, respectively (or the next business day if these dates fall on a weekend or holiday).

SUBMITTING DEGREE APPLICATIONS

Applications must be submitted to the DIRECTOR A&F who will forward all applications to the Registrar's office. For the Ph.D., the application procedure for dissertation defense set by the dissertation office, 107 Low, must be carefully followed. **The dissertation must be deposited by 5:00 pm on the Friday before the conferral dates.** Please work closely with the DIRECTOR A&F to insure that your paperwork is processed correctly. **Submit all applications and forms to the DIRECTOR A&F, not to the Registrar or to the Dissertation Office.**

M.A. & M.PHIL DEGREES FOR PH.D. STUDENTS

Ph.D. students are eligible for the sequential M.A. degree after successful completion of 2 semesters of coursework, with the recommendation of the DGS. Ph.D. students are eligible for the M. Phil. after completion of all the requirements, including the advanced written exams, literature review, and oral defense of the research proposal. Forms must be processed by the department to notify the graduate school to confer the M. Phil. These forms are part of the package of materials that the committee receives after a student defends the dissertation proposal and are forwarded to GSAS by the DIRECTOR A&F. Ph.D. students may participate in the May Commencement if they have successfully defended their dissertation. Please obtain information packets on degree conferrals in the E3B office. Forms are to be filled out and returned to the DIRECTOR A&F.

GRADUATE STUDENT MEETINGS

The Chair of E3B, the DGS, and the MAPA are available to meet with graduate students as issues arise and will schedule periodic meetings.

STUDENT-FACULTY REPRESENTATIVE

Graduate students may elect a representative to attend E3B faculty meetings. This gives students the opportunity to be aware of decisions, issues, and opportunities discussed during faculty meetings. The representative is there as an observer, not to raise issues. If students wish to bring up issues, they should do so at student meetings. The student representative is welcome during any part of the Faculty Meeting during which general issues are discussed. The student representative will be asked to leave for any part of the meeting during which confidential items are discussed, including the progress of

individual students and financial matters.

GRADUATE STUDENT ADVISORY COUNCIL (GSAC)

The Graduate Student Advisory Council (GSAC) is a student government organization at Columbia University. Membership consists of student-elected departmental representatives from the 61 PhD and 26 MA programs of the Graduate School of Arts and Sciences. GSAC has two critical roles. First, they facilitate communication between graduate students and administrators. Second, they sponsor social, cultural, and academic events, as well as workshops to improve the quality of life for graduate students. GSAC's events offer students from different departments the chance to socialize and learn from each other. A GSAC Rep from E3B is to be elected every year in May. Candidates can be re-elected. Students should notify the DIRECTOR A&F of the election results, so that the name can be reported to GSAS. Keep in mind that this person is not only representing you, but E3B as well. GSAC will show funding priority for departmental events and student group initiatives to those Ph.D. programs with active GSAC representatives. <http://gsas.columbia.edu/content/graduate-student-advisory-council-gsac>

CONTACT PERSONS AT E3B

Students may consult with any E3B faculty member for advice. However, certain faculty and departmental staff members have positions clearly designed to help students with certain issues.

Director of Graduate Studies (DGS)

The DGS oversees the progress of all students through the graduate programs. S/he keeps records on student progress, processes special requests (e.g. registration for independent study, committee membership), and provides advice on all academic matters. Your advisor may also provide such advice, but sometimes it is useful to have another person to talk to. You should go to the DGS for any academic matters concerning your studentship. Academic matters concern courses, degree requirements, and research plans, and are to be distinguished from logistical or administrative matters. We expect you to be in regular contact with the DGS: be proactive, drop in and let us know how things are going!

M.A. Program Advisor (MAPA)

The MAPA works with the DGS to oversee the progress of M.A. students. For M.A. students, the MAPA is the first point of contact, but s/he may consult with the DGS when matters arise that relate to general policy issues. M.A. students should contact the MAPA for all academic matters, which concern things like courses, degree requirements, advising committees, and research plans (and as such are distinguished from logistical or administrative matters which are the DIRECTOR A&F's purview). If you are an M.A. student, you should be in regular contact with the MAPA at least once every term, even when all is going well.

Director of Administration and Finance (DIRECTOR A&F)

The DIRECTOR A&F is responsible for overseeing the execution of departmental and university policies, including those related to students. S/he is the person to see for logistical or administrative matters, but not the person to ask for academic advice. Logistical issues include things like registration, stipends, grad school forms, letters verifying status, scheduling defenses, financial issues including obtaining reimbursement for conference expenses, and disbursement of the pre-dissertation feasibility study grant. The DIRECTOR A&F has an administrative assistant who helps with some student services at the DIRECTOR A&F's instruction; however, your first point of contact for logistical and administrative issues should be the DIRECTOR A&F her/himself.

Department Chair

The Department Chair is responsible for general management of the department, including hiring of faculty, setting budgetary priorities, and communicating with the departmental faculty at large and the higher-level university administrators. This is the person to come see if there are general departmental issues that concern you, such as matters of overall policy or general faculty concern. The Chair is always in close communication with the DGS, MAPA, and DIRECTOR A&F, so (depending on the nature of the issue) these individuals can also be consulted regarding such issues: chances are that they will pass them on to the Chair for action. The Chair welcomes student input in our growing department, but is generally not well placed to handle specific issues related to specific students.

GRADES AND SATISFACTORY PROGRESS

Generally, E3B expects all students to maintain good academic standing. For MA students, this means maintaining a B average... For PhD students, the grade of B is *minimally* acceptable in non-policy courses. Understanding grading is the student's responsibility and students must be proactive. The earlier in the semester you understand the grading policy in a class; the easier it will be to address low grades should they arise. **If you have questions regarding grades, speak to your program advisor.**

A. Incompletes

In consultation with the instructor, students may receive a temporary grade of Incomplete if they have not completed the course requirements by the end of the semester. When Incomplete is assigned, the student and instructor should come to an understanding about deadlines for completing the work, normally sometime in the Spring semester for Fall courses, or by the end of the summer for Spring courses. The graduate school automatically turns grades of Incomplete into R-credit (no letter grade) after 12 months; this change cannot be reversed. Courses with R-credit do not count toward the point-totals required for each degree. This GSAS policy and should incite students to resolve Incompletes promptly. <http://gsas.columbia.edu/content/grading-system#incomplete>

You should be aware of another type of grade that can be used for unfinished work. The grade of "CP" (credit pending) can be given when a student plans in advance to continue work in a registered course beyond the semester of registration. In such a case, the student can get a temporary grade of CP until the work is completed. The grade of CP is appropriate for research type courses only; it would not apply to lecture or seminar type courses. It is also likely to apply only rarely to research courses, since usually one designs a Directed Research or Directed Readings course to fit into one semester.

B. Clarification of Grading System

Grades range from A+ to F. A grades are 'excellent', B grades are 'very good', C grades are 'fair', D grades are 'poor', and F is failing.

C. Consequences of Poor Grades

Failing to maintain good academic standing may result in a variety of consequences. Consequences range from re-taking exams, to teacher intervention. It is best to consult your teacher **immediately** if you are in danger of receiving a low grade so you might address the situation as soon as possible.

D. Minimum Grades

Generally, the grade of B is considered *minimally* acceptable for graduate students. Two exceptions include: **B-** is the minimum grade for policy courses and **B+** is the minimum grade for Evolutionary

Primatology Ph.D. students. Students receiving a grade lower than a B in a core course will have to arrange for appropriate additional work with the instructor of the course and the DGS.

Students receiving less than a B will get credit for the course, unless they receive an F. All credits count towards your degree, but students need to maintain a 3.00 GPA each semester. Part-time student's GPA will be calculated once 12 credits are completed. Students with a GPA below 3.00 will be placed on academic probation. Students who fail to improve after one semester will be referred to faculty for further action. This may include dismissal from the program.

Students are not allowed to graduate if their GPA falls below 3.00. In some cases, students may negotiate with the instructor to complete extra work to raise their grade. However, this is in no way guaranteed. Any such work must be completed by summer semester after the course in question

SEMINARS

Every Tuesday from 4:00-5:00 p.m., during the academic year, E3B holds a seminar in the 1015/16 classroom featuring practicing scientists and graduating Ph.D. students. This series provides an opportunity for students to meet leaders in their field, gain insights into novel techniques and theories, and to witness a proper scientific lecture firsthand. Students are encouraged to meet and have lunch/dinner with the speaker. If you are interested, please contact the Research Seminar coordinator to make arrangements. Coffee and cookies are offered before the talk, and a reception with food and drink is provided afterward to stimulate conversation among students and the speaker. *Please note that Ph.D. attendance to the seminars is required for the first 3 years. Attendance is expected when possible thereafter. M.A. students must register and attend the series every semester of the program, unless they are away in the field; M.A. students should consult with the MAPA if they are planning not to register for the Research Seminar.

In the case of scheduling conflict with a course that is essential for the student's degree, only under exceptional circumstances and at the discretion of the head faculty for the seminar course, a student will be allowed to take a modified version of the course, consisting of the following: The student will sign up for the seminar course, will be exempted from attending the seminar talks but will be required to sign up for 1-on-1 meetings with all speakers (not lunch meeting). The student will be expected to research the speaker's work before the meeting.

DIRECTED RESEARCH

Registering for Directed Research allows graduate students to receive academic credit for a one semester research project or internship.

How to register for Directed Research:

1. Download the "Directed Research" form from the E3B website:
<http://e3b.columbia.edu/resources/>
2. Fill out form. Consult with your supervisor about the content, extent, and required activities of the D.R., and ask for their signature (an electronic signature is acceptable) before proceeding with the next step.
3. Ask DGS (Ph.D. students) or MAPA (M.A. students) to sign form and approve amount of credits.
4. Submit signed form to the DIRECTOR A&F.
5. Register for correct section as instructed by the DIRECTOR A&F.
6. Register for the course officially through the Registrar.

Directed Research forms should be submitted to the DIRECTOR A&F two days before the end of the 'add/drop' period at the beginning of the semester -- Columbia's Academic Calendar can be found here:
<http://registrar.columbia.edu/event/academic-calendar>

To ensure submission of a grade for biology-internship Directed Research:

During finals week, Directed Research supervisors should submit Grades via web or, to the DGS or MAPA. An e-mail is sufficient. Please ensure that your research supervisor knows this, and please take responsibility for reminding him/her of the date by which the grade needs to reach the correct person. If the grade is NOT submitted on time, you will receive a grade of CP that will have to be removed by the submission of the grade.

How to register for Directed Readings for your policy internship:

1. Download the “Directed Reading” form from the E3B website:
<http://e3b.columbia.edu/resources/>
2. Fill out form.
3. Ask your internship supervisor and the MAPA to approve form and amount of credits.
4. Submit signed form to the DIRECTOR A&F.
5. Register for the correct section set up by the DIRECTOR A&F for 3 points, as instructed by the DIRECTOR A&F.

Directed Reading

Registration for Directed Reading (GR9509) gives students the opportunity to delve into a specific topic one-on-one with a professor. The professor generally structures the course with the student’s input. To register for Directed Reading, you must **submit the form to the DIRECTOR A&F two days before the end of the add/drop period**. If the forms are not submitted on time, you will not be able to register. Forms can be filled-out and submitted in advance. It may be necessary to think ahead if people whose signatures you’ll need will be out of town during the add/drop period. Registration directly with the registrar is also required. The student registered for Directed Readings must take the initiative to *remind the professor* at the end of the semester to submit the grade. If no grade is submitted, the student will receive a CP. The professor submits a letter grade via web grading or to the DGS or MAPA at the end of the semester, as well as a copy of the student’s report on the readings.

GRANT PROPOSALS

University policy states that graduate students must submit their research grant proposals through Columbia’s Office of Sponsored Projects Administration (SPA). SPA’s review ensures that research by University scholars is appropriately reviewed by institutional review boards (e.g. Animal Subjects Review Committee, see below). In addition, submission of grant proposals through SPA relieves individual scholars of the tax liability that would accrue if grants were given to individuals, rather than the institution.

SPA uses **Rascal**, Columbia’s Administration System, which can be accessed online at <http://www.rascal.columbia.edu/>

Rascal is home to several services containing administrative data required by SPA. It culminates with approval by a Principal Investigator (PI). The PI is required to answer conflict of interest questions pertinent to his/her specific research as well as to provide other information about the proposal. In most cases, a student’s advisor is the PI on his/her grant proposals and students are co-PI’s.

If you are working with vertebrate animals you will need approval of an animal protocol by the Animal Subject Review Committee (this is critically important –you need this even if you are not seeking funding). The Rascal homepage will direct you to Compliance and Animal Care Protocols.

Since departments are charged for indirect costs (IC) on grants that do not have this item built into the budget, you should make every effort to have the granting agency include IC whenever possible.

The DIRECTOR A&F must receive a copy of all grant proposals submitted to SPA. Our SPA contact is Heather Horgan; email: hh176@columbia.edu , phone number: 212-854-4830. SPA is located at 615 West 131st Street, 4th Floor.

VERTEBRATE RESEARCH

Columbia students working with vertebrates, even if they do so completely non-invasively, are responsible for getting IACUC approval if needed. The following three conditions specify all possible scenarios.

- (1)** If a project meets EITHER of the following conditions, it must have Columbia IACUC approval: (A) the work is done on Columbia campus or involves animals kept on campus or (B) the work is funded (even partially) by a grant or gift that runs through the university.
- (2)** If the sole funding for a project runs through a non-Columbia institution, then IACUC approval issues are all handled by that institution. In this case students must consult with the other institution.
- (3)** Any project that does not meet either of the above two conditions (1 or 2) may need a Columbia IACUC approval. (Note that this scenario would include any unfunded projects.) In this case, the student is advised to contact the IACUC and enquire as to whether a protocol is required. There is no easy black-and-white rule to apply here, and students/faculty should not make assumptions about what is or isn't needed. Students should also be aware that many journals will not publish research on vertebrates without an explicit statement that IACUC approval was obtained before the project started regardless of the conditions above.

M.A. students are advised that the process of IACUC approval can take more than a year from start to finish. This means that it is very unlikely that you will obtain approval for a project for which your advisor has not started the process well before your arrival at Columbia. If your planned M.A. project might require IACUC approval, contact your advisor and the MAPA as soon as possible.

COPYRIGHT

E3B students have asked about how to interpret copyright legislation, especially as regards to images in PowerPoint presentations. These could be presentations for an assignment or as part of TA duties. The Columbia Teaching Center plans to add information on this topic to its website. Meanwhile, these references may be helpful:

CUIT (Columbia University Information Technology) has a web page on Copyright Policy, <http://cuit.columbia.edu/cuit/it-policies>

The Columbia's Libraries page also has links to some Guidelines: <http://library.columbia.edu/subject-guides/media-services/copyright.html>

Masters of Arts in Ecology, Evolution and Conservation Biology (See also 'General Academic Information' and the GSAS Bulletin)

The Master of Arts in Ecology, Evolution and Conservation Biology focuses on biological sciences and integrates environmental policy and economics concepts. This interdisciplinary approach provides students with a range of options for building their careers. Graduates may continue their education in a Ph.D. program or enter the job market directly as scientific researchers, teachers or administrators in a NGO or government agency dedicated to the conservation of natural resources. The M.A. program at E3B is *project-based*, meaning that all students must complete a capstone project as a major requirement for the degree. Students have the option of tailoring their course work to develop their interests, and to craft a capstone project that allows them to gain additional skills and experience.

ADVISORS AND COMMITTEES

All students need to find a project advisor, and to set up a committee as follows:

Advisors must be selected in the first semester of study. Advisors need to be E3B/EICES faculty members. If you are uncertain of a faculty member's status, check with the DIRECTOR A&F, DGS, or the MAPA. All students should have identified an advisor by the last day of class in the Fall term of their first year. If you are having problems finding an advisor please contact the MAPA.

A committee with 3 members (including advisor) must be formed before seriously planning for your capstone project. 2 members must be affiliated with E3B/EICES. You must have one core CU/E3B faculty member on your committee, unless otherwise approved by the E3B chair and MAPA.

Ideally, the 3 members will be identified in the Fall term of the first year, but if that is not possible **all students should have identified at least 2 members of their committees by the last day of the Add/Drop period in the Spring term of their first year.** You should inform the MAPA about the composition of your committee as soon as any changes occur.

M.A. COURSE REQUIREMENTS

To earn their M.A. degree students must complete:

2 Resident Units (A Resident Unit (RU) is equal to one semester at full-time tuition).

43 credits

A balance of elective courses (see below).

All students must complete the following Core Courses:

- 1) Fundamentals of Ecology GR6112 and Fundamentals of Evolution GR6110 (with option to place out*)
- 2) Conservation Biology (EEEE GR6905, 3 credits.
- 3) Two policy classes to be selected in consultation with your advisor and the MAPA.
- 4) Four Semesters of Research Seminar (EEEE GR6300), 1 credit per semester. Students are excused for one of the four semesters if they spend a semester in the field (Research Semester). Consult with the MAPA if you need to be excused from registering.

- 5) Project development seminars (EEEE GR4850 and EEEB GR4851) for 3 credits each.
- 6) Statistics.

*A student can petition to place out of this requirement. The petition is evaluated by the student's advisor, the MAPA, and the Chair and if significantly advanced training in ecology and evolution can be demonstrated, this requirement will be waived. Students that are granted the waiver will still need to make up for the 4 credits by taking additional elective courses.

Core courses account for 20 credits. Core course credits are reduced to 19 when taking a Research Semester, 16 when opting out of the Fundamentals, and 15 when taking a Research Semester while at the same time opting out of the Fundamentals.

To fulfill the program requirements, students must complete the required credits with a combination of elective courses, directed readings and directed research.

Please note that elective courses, directed readings and directed research fall within one of the following categories:

1. Conservation science
2. Environmental policy
3. Education and communication

The M.A. in Ecology, Evolution and Conservation Biology provides for flexibility in tailoring the lineup of courses that is most appropriate for the student's interests, but it should include both Conservation science and Environmental policy courses. Make sure that you plan accordingly to fulfill this requirement, and check with the MAPA to make sure that you are registering for classes that are considered acceptable in each category. Work with your advisor and the MAPA to decide on a set of electives that best suits your interests and career goals.

Students can choose to substitute one of the electives in Conservation science with a directed reading or a directed research. Students cannot substitute any of the required electives in Environmental Policy with either a directed research or a directed reading. Considering an average of 3 credits per course, 5 electives will account for about 15 credits. To make up for the total credits required for graduation, the student is free to select any additional course, directed reading and/or directed research, after discussing the matter with the MAPA.

ELECTIVES OVERVIEW

This list provides examples of courses that have been offered in the past and that may be used to fulfill the elective requirements. Other courses may also be available and eligible as a requirement for the M.A. program; please consult with the DIRECTOR A&F about the future availability of specific courses at E3B, and check with the University's Academic Calendar for schedules in all other Schools and Departments. Consult with the MAPA about the eligibility of specific courses as Conservation science electives; when consulting with the MAPA it is useful that you obtain the syllabus of the class in which you are interested beforehand. Please note also that not all courses are offered every year, so please plan accordingly.

If you would like more information about elective courses please contact the MAPA.

EXAMPLES OF POSSIBLE ELECTIVES

Conservation Science:

Forest Ecology
 Disease Ecology and Conservation
 Restoration and Urban Ecology
 Race: Tangled Historical-Biological Concept
 Evolution I
 Introduction to Conservation Genetics
 Teaching Conservation Biology
 Fundamentals of GIS in Ecology and Conservation
 Global Assessment and Monitoring Using Remote Sensing
 Environmental data analysis and modeling
 Marine and Coastal Ecology
 Marine Conservation Biology

Environmental Policy:

Economics of the Environment
 Environmental Science for Sustainable Development
 The Geopolitics of Energy
 Alternative Energy Resources
 The Economics of Energy
 History of American Ecology & Environmentalism
 Quantitative Methods-Energy/Policy Analysis
 Urban Energy Systems & Policy
 Law, Economics and Development
 Environmental Science for Sustainable Development
 Human Ecology and Sustainable Development
 Community Development Policy
 Environment, Conflict and Resolution Strategies

Education and Communication:

Science in Secondary school
 Science in Childhood education
 Science in the Environment
 Structure of Science Knowledge and Curriculum Design
 Middle School Living Environment Methods Laboratory
 Introduction to Science Education Practice
 Neurobiology of Consciousness, Constructivism, and Information Processing
 Science Curriculum Improvement in the Elementary School
 The Nature and Practice of science
 Science, Technology & Society
 Selected Topics and Issues in Science Education

Science Teacher Education
Curriculum and Pedagogy in Science Education

THE CAPSTONE PROJECT

The Capstone Project (CP) gives students the opportunity to design, participate, and carry out a research, outreach, or education activity as the culmination of their training at E3B. The CP is designed to be flexible, allowing students to explore a variety of activities and potential outputs. Students must work with their advisors, committees, and the MAPA in identifying a suitable project. A project proposal must be approved by the committee and the MAPA by the end of the first year. Generally, the MAPA and the proposed research advisor will make the final decision about the proposed work and approve proposals that (a) are considered suitable for a M.A. degree project, and (b) are in line with the study program of the student.

Due to the flexible nature of the CP, the final outcome of your work can take many forms (see below). However, all projects must include: 1) a final written summary and 2) a presentation in a special research seminar.

Examples of non-thesis CP include but are not limited to:

- Design of and/or significant work in courses, curricula or other educational activities
- Design of and/or significant work in museum, botanical garden, or zoo exhibits
- Design of and/or significant work in outreach programs, including innovative media products
- Development of software, web-based, or other forms of innovative analytical, research, or educational tools

For these students the CP should be a formal research thesis (see below for more details on the M.A. thesis); the final manuscript of a research thesis will fulfill the requirement for the written portion. A research-based CP can be based on research in the field, the laboratory, and/or reviews of the literature. Work with your advisor and the MAPA in laying out a course of work that will help you package your projects for publication. Students doing other kinds of work for their CP should submit to the MAPA a written summary of their work and its outcomes by the Wednesday before commencement. A seminar will be scheduled for the last week of the spring term for all graduating students to present their projects to the broader E3B community. We strongly encourage products that are publishable in the peer-reviewed literature, especially for students wishing to pursue a Ph.D. or a career focused on research. We also highly recommend depositing the final version in the Columbia Academic Commons, an open access repository for scholarly works.

As above, ideally all projects will have a publishable or otherwise public outcome. Students should agree with their committee to a timeline and to milestones for the completion of the CP work and the submission of the final summary. All students must submit a final copy of their summary to their committee at least two weeks prior to its May due date. This will give committee members the two weeks that they are entitled to have for review of the final version, which must incorporate their suggestions from previous drafts.

Completing a project and finishing a summary requires considerable time and effort. We urge students to plan accordingly. Students make several revisions and have several committee meetings or meetings with individual committee members before producing the polished final version submitted to the committee 2 weeks before Commencement. Considering each of these revision cycles may take 2-3 weeks, work a schedule backward from the pre-Commencement deadline for deposit of the final version in the department. As a general rule plan to submit a working final draft to your committee by mid-March.

Students cannot assume committee members will be able to review a final draft in less than two weeks; as readers, they must have 14 days. However, if all the committee members are willing to take less time than 14 days, the students may be entitled to a little extra time. Please note that agreeing to take less time for reading is an extreme sign of courtesy. Faculty members are very busy at the end of the term, and they may not be able to be so flexible (nor are they in any way expected to be).

Students who do not complete their CP work and submit their final summaries in a timely manner will not be cleared for graduation, and their graduation will be postponed to October. Students whose graduation is postponed may need to pay additional tuition.

M.A. THESIS

Students aiming for a thesis-based capstone project must develop a research proposal during the first semester of their first year. At the end of the semester, the research proposal will be submitted to the potential advisor and the MAPA for approval.

Students pursuing a thesis-based CP will spend a considerable portion of their registered time working on research that leads to a final thesis. Research work for the thesis is generally carried out within the context of ongoing research activities of the E3B Department or the partner institutions. Students are also welcome to discuss with the MAPA research options outside the Department and the consortium. Students should be able to conduct their research work within an external project as long as (a) the research is considered suitable for a Master degree thesis, (b) it is in line with the study program of the student and (c) there is a suitable Advisor willing to mentor the student.

Field work and data collection for the thesis is generally carried out and completed during the summer between the first and the second year of the M.A. program. Students can apply to the MAPA to request that the field work and data collection period be extended into one of the two semesters of the second year (research semester). Requests for a research semester must be submitted to the MAPA by the end of the summer semester between the first and the second year and need to be clearly motivated and in line with the research plan. Students will receive up to 12 credits for their field work, data collection and research activity; actual number of credits will depend on the overall work load.

To complete their course requirements, students in the thesis-based program submit a thesis to their committee members. The committee will evaluate the thesis and will clear the student for graduation upon satisfactory result.

The M.A. thesis is traditionally shorter than the Ph.D. dissertation, but should still be of publishable quality. The general requirements for formatting are the same as those of the Ph.D. dissertation, which are posted online at: <http://gsas.columbia.edu/content/formatting-guidelines>

Most theses follow a journal manuscript format; that is, they include an introduction, materials and methods, results, discussion and conclusion sections. Students should work with their committee to develop the formatting expectations for their thesis well in advance of its submission for final reading.

The thesis is due for deposit in the department on the Wednesday before Commencement.

In April students in the Thesis-based program receive a form which needs to be signed by their advisor and committee members to approve the thesis and recommend the student for degree conferral. This form is due the Wednesday before Commencement. It is the student's responsibility to obtain the signatures from all the committee members. If a member will be out of the country, please make appropriate arrangements in advance, and note that in such a case, a faxed signature will likely be acceptable (confirm with the DIRECTOR A&F in advance however).

Students should agree with their committee to a timeline and to milestones for the submission of thesis revisions. All students must submit a final copy of their thesis to their committee at least two weeks prior to its May due date. This will give committee members the two weeks that they are entitled to have for review of the final version of the thesis, which must incorporate their suggestions from previous drafts.

As with capstone projects, theses require substantial amounts of time to compile. As a general rule plan to submit a working final draft to your committee by mid-March in order to allow the committee members sufficient time to suggest revision.. Students cannot assume committee members will be able to review a final draft in less than two weeks; as readers, they must have 14 days. Please note that agreeing to take less time for reading is an extreme sign of courtesy. Faculty members are very busy at the end of the term, and they may not be able to be so flexible (nor are they in any way expected to be).

Students who do not submit their thesis in a timely manner will not be cleared for graduation, and their graduation will be postponed to October. Students whose graduation is postponed may need to pay additional tuition.

Students will need to submit a bound hard copy and an electronic version of their thesis to the E3B DIRECTOR A&F by the Wednesday before Commencement. Black thesis/dissertation springback binders are available from the Columbia bookstore. Electronic submission is preferably done on a CD as theses may eventually be put on the E3B website for public access. Students must turn in the signed approval form along with the final bound and e-versions of the thesis, all at one time, on the Wednesday before Commencement to the DIRECTOR A&F. (The DIRECTOR A&F will provide the specific date for submission of the thesis to the department by the beginning of April.)

SCHEDULING FIELD WORK

Fieldwork is generally carried out during the summer semester between year 1 and year 2. Students will get up to 12 credits for their fieldwork by registering for directed research in the following Fall semester. The faculty recognizes that it is sometimes difficult for students to complete all of their field research for the M.A. thesis in just one summer. Therefore, thesis-based M.A. students may request a **Research semester**, which allows them to spend one of their four semesters in the field conducting research, in

addition to the summer period.

Whether it is wise for a student to extend fieldwork in this manner is a decision to be taken carefully in consultation with the student's entire committee and the MAPA. A careful review of any outstanding core requirement will be performed before authorizing a student to take a *Research semester*. Students who spend one semester in the field will not be expected to register for the Research Seminar during that semester.

READING ASSISTANTSHIP

M.A. students have the option of registering with the Department for paid Reading Assistantship in undergraduate courses. Reading Assistants support a course instructor throughout a semester. The Reading Assistantship will allow students to develop additional skills for a variety of professional directions that they may choose to follow. Reading Assistantships are voluntary and limited in number based on the needs of the department and allocations from the Graduate School of Arts and Sciences. The DIRECTOR A&F will send out a request during the spring semester for interested students to indicate their availability during the following academic year.

INTERNSHIPS FOR M.A. STUDENTS

Pending consultation with and approval of the MAPA, students may use internships as substitutions for elective coursework. Registration for Directed Research ensures that credit will be given for the work.

DIRECTED READINGS - SUBSTITUTE FOR REQUIRED ELECTIVE COURSES

There are a limited number of required courses in the biology and policy categories that can be satisfied through Directed Readings: that limit is 1 course in each category, unless otherwise stated in the track-specific requirements. Students must secure approval of such a substitution in advance, using the Directed Readings form. Such substitutions will be approved only if it can be demonstrated that Directed Readings provides a learning experience that is not available in course format.

Directed Readings used for thesis work are not acceptable as a substitute for an elective course.

PROGRESS REPORTS

At least once a semester it is good practice to schedule a meeting with the MAPA to evaluate progress and discuss future options. The meetings are informal, but will help students keep on track with their studies. During the meeting the MAPA will update the student's records on his/her coursework, committee members, research planning and progress, etc. This information allows the faculty to assess a student's progress at regular intervals, and to intervene for both the students' and the graduate programs' benefit when conflicts or problems arise.

TRAVEL TO MEETINGS

Pending the availability of funds (see Appendix 3), M.A. students can receive up to \$450 from the department in support of travel to a scientific meeting (approved by the MAPA) any time during their 2-year studentship. In most cases, students are likely to attend meetings in their second year, when they have the greatest chance of presenting their own research (which is strongly encouraged!). The student must be enrolled in the M.A. program in order to be eligible for reimbursement.

Reimbursements for travel and business expenses will be made **AFTER** the trip has occurred. Lodging,

travel expenses and registration fees can be reimbursed. To receive reimbursement, you must:

- i. provide documentation that you actually attended the conference (e.g. a registration receipt).
- ii. submit your Travel Business Expense reports within 2 weeks of arriving back to the USA.
- iii. fill out your forms online from the E3B website at:

<http://e3b.columbia.edu/resources/>

iv. Submit original receipts. If you pay with a credit card, you will also need to submit a credit card statement showing the expense(s) in question.

v. if you make purchases in a foreign country, you must get the currency conversion for the exact dollar amount. Use <http://www.oanda.com/> this is the only site Accounts Payable will honor.

Some general words of advice regarding reimbursement procedures:

Advance planning is critical: inform yourself in advance of the expenses that can be covered, and how to process the paperwork to get a reimbursement. The DIRECTOR A&F or the Administrative Assistant can help you here. If established procedures are not followed, your account with the University may be jeopardized (you may not get reimbursed), especially since these transactions may be audited by the IRS (Internal Revenue Service).

It takes about *two weeks* for the University to process payments after submission of documentation.

During the summer, be aware that June 30 is the end of the fiscal year. If you attended a conference before June 10, be sure to present your paperwork for reimbursement by June 10 at the latest. **When you travel, always keep all your original receipts. They are essential.**

PH.D. IN ECOLOGY, EVOLUTION AND ENVIRONMENTAL BIOLOGY

I. General Requirements

The Ph.D. program is designed as a five-year program. **Forty total science credits** are required to complete the program, with the exception of students entering with “advanced standing” status who must complete 20 credits. Requirements for the EEB Ph.D. include:

- 2 core courses (section A)
- elective courses (section B)
- thesis development seminar (section C)
- 3 semesters as a teaching assistant
- oral general knowledge exam
- proposal defense
- dissertation defense

A. Core Courses. All first-year Ph.D. students are required to take two core courses in **Ecology** (EEEB GR6112) and **Evolution** (EEEB GR6110) in the first year. These courses prepare students to work as professionals in their field by bringing them to a similar advanced level, and introducing them to the latest developments in the field. Students may opt out of these courses if they can demonstrate competency in these areas. Decisions to grant this petition rest with the course instructors. Students receiving a grade of less than B in the core courses are required to take a written exam at the end of the first summer based on assigned readings, and must pass this exam to claim successful completion of the core course requirement.

B. Electives

Students without advanced standing are required to take a total of 40 science credits, which include the core courses, the E3B Research Seminar, directed research and readings and elective courses. Those with advanced standing are required to take a total of 20 science credits. Core course, elective courses and thesis development seminar all count towards the **total science credits** needed for program completion.

Elective courses provide specialized training in the concepts and methods of one or more of the areas of program specialization: evolution, ecology, and environmental biology. Courses taken to fulfill foreign language requirements are not considered “science” credits. Generally we recommend students take 5-6 electives total (3-4 for students with advanced standing). Students’ mentors and committees should advise on the number and content of elective courses. Keep in mind that courses at other selected universities in the area, those that are part of the inter-university doctoral consortium (CUNY, NYU, Stony Brook, Princeton, AMNH etc.), can be used as electives. You will need to consult those universities’ websites for information on current course offerings, and complete the appropriate paperwork (available from GSAS, not the department).

Students generally fulfill additional credits with directed readings and research courses. These give the student the freedom to design their own course of study, within their supervisor’s guidelines. To that end, students and supervisors should discuss expectations about the amount of time devoted to the directed studies, the frequency of meetings, and what they anticipate resulting products to be, and then summarize this information in the directed studies form. The form has to be signed by the supervisor and DGS. Generally, students are expected to devote 3-4 hours of directed studies per week for one credit, so for example a student would spend about 10-12 hours per week on a three-credit course

C. Mandatory Thesis Development 6-Credit Seminar

This course will help guide students towards candidacy by teaching them the skills necessary to be effective and independent scientists. Students will conduct an extensive literature review, write a preliminary dissertation proposal, and present their research ideas to the group. Students will learn how to give and receive constructive written and oral feedback on their work. The course will be designed specifically to engage students in research early in their academic careers and teach them the necessary skills to be effective and independent researchers. Instructors will use a pass/fail grading system.

II. Committees

The advisor, not the student, extends the invitation to faculty to serve on a committee. The advisor may discuss committee membership with the student in advance, but students are not to set up their own committees (this is a GSAS rule). The advisor also chooses the Chair of the Committee, whose job is to preside at the proposal and thesis defenses. The Chair should be a CU/E3B tenured faculty member who is not the student's advisor (this is a university rule). An advisor may, with compelling reason, petition the Department Chair to allow a Dissertation Committee Chair who is either untenured or non-CU/E3B.

Keep in mind that time is required to nominate and have the committee approved by GSAS. If you propose a committee that differs greatly from the guidelines, please speak to your advisor as soon as possible. Your advisor can then consult with the Chair of E3B and the DGS.

Students will complete the Ph.D. program under the guidance of several committees whose membership usually overlaps substantially, if not completely.

A. Three-Member Advisory Committee

An entering Ph.D. student has a mentor/advisor, and, in consultation with the mentor, develops a 3-member advisory committee by December of the first year of study. If an advisor and student are not able to identify committee members by this time, the DGS and Chair will assign members. The advisory committee gives advice related to course and internship selection, the scheduling of early degree requirements, and early research plans. Typically members of this committee then become part of the dissertation committee.

B. Three-Member Orals Committee

An orals committee consists of three members, not including the student's primary advisor. The student's advisory committee, guided by the student's advisor, will determine the final composition of the oral examination committee. The members of the orals committee should broadly represent at least two of the three pillars of the Department: (1) ecology; (2) evolution and behavior; and (3) environmental biology. The orals committee need not consist of the same members as the dissertation committee, but in most instances, there will be substantial overlap between the two committees. The orals committee can include one to two appropriate faculty members from outside the E3B Department. The advisor cannot participate or be present during the examination. In unusual circumstances approved by the DGS, committee members can participate in the examination via conference call (e.g. Skype).

C. Five-Member Dissertation Committee

The responsibility for selecting and recommending the final defense committee members rests with the

Sponsor, Department Chair, and the DGS. Students may not select their own defense committees; furthermore, students should not be placed in the position of having to ask particular faculty members to serve on their defense committees.

The doctoral defense will be conducted by a final defense committee that is composed of exactly five members. At least three of the members of the final defense committee must be from the list of approved Ph.D. sponsors, and at least one of the five must be either:

1. a faculty member, clinician or practitioner who holds a position at another university or research institution
2. a full-time CU faculty member outside the student's own department or program
3. a CU research scientist outside the student's own department or program
4. an adjunct professor at Columbia University outside the student's own department or program
5. a full-time faculty member whose appointment is at Barnard College, Jewish Theological Seminary, or Union Theological Seminary OR
6. a full-time faculty member in the student's interdisciplinary program whose field is outside of the student's dissertation field.

Examiners from the list above are nominated by the Department or Program Chair in consultation with the Sponsor or DGS. When submitting the Dissertation Defense Application, the department/ program provides the Dissertation Officer with evidence of the examiner's qualifications, usually a curriculum vitae, for approval by the Dean's office. Final approval of the members of a final defense committee rests with the Dean of the Faculty of the Graduate School of Arts and Sciences.

When proposing defense committee members who have not been previously approved to serve on a defense committee and who
do not have a Columbia affiliation, and/or
do not serve at Columbia in an adjunct capacity, and/or
do not hold a Ph.D., must submit to GSAS a copy of their curriculum vitae together with the final defense examination

D. Committee Meetings

Students will meet at minimum once per year with their committees, preferably by early March. . Students should hold an annual meeting with concurrent participation of all their committee members (either in person or via electronic participation). Sequential meetings with individual committee members cannot take the place of annual committee meetings.

Each student must work with his/her advisor and committee to complete an annual committee report form and submit it to the department administrator before April 1st. Committee report forms can be downloaded from the E3B website <http://e3b.columbia.edu/resources/>

E. Orientation

In the fall semester of the student's first year, each advisor will meet with student and any identified committee members to go over the student's proposed timeline, identify other potential committee members, discuss possible field experiences for the first summer, etc.

III. Preliminary research experience

In their first year, students are expected to develop a preliminary project, from the general concept/design through implementation, the latter scheduled generally for the summer of their first year. Students can apply for competitive funding from the department as well as the funds they apply for from outside the university. THE PROPOSAL MUST BE SUBMITTED TO ADVISORS AT LEAST TWO WEEKS PRIOR TO DUE DATE IN THE DEPARTMENT. Those who receive funding from the department are obligated to write the results in a report. Students have the option of deferring access to these funds until the end of their second year.

IV. Teaching Assistantships

Graduate students planning a career in academia often underestimate the importance of teaching experience needed to obtain a job offer. Job candidates for university-level positions are often judged on their potential to fill a particular teaching niche (e.g. "We need a behavioral ecologist"), their potential to teach a variety of courses (e.g. "We need a teacher in behavioral ecology, vertebrate morphology, biometry, and introductory biology"), and the quality of their teaching (judged from student evaluations, letters of reference etc.). Most job applications require a statement on your teaching experience, objectives, style, and goals. The University offers a number of training programs to develop and improve students' teaching skills (See <http://teachingcenter.gsas.columbia.edu/>).

A. Teaching Assistantship Requirements With these demands in mind, all Ph.D. students are required to teach for 3 semesters. Teaching duties normally fall between the 2nd semester of the first year and the 2nd semester of the third year of study, depending on the availability of teaching opportunities. In exceptional circumstances, which include unusual student priorities and the ability of the department to accommodate the irregularity, a student may be able to postpone one semester of teaching up to and including the penultimate year in the program. Any such plan is most likely to be realized if it is discussed early on with the DGS. There is no additional monetary compensation provided to the TAs since teaching obligations are a component of all fellowships and are a requirement for the degree.

B. Assigning Teaching Assistantships The Chair and the DGS will assign teaching assistantships. Students will be asked by the Director of Administration & Finance (DAAF) to submit preferences for TA-ing particular courses (during Spring semester) and efforts will be made to match the TA to the course s/he desires. However, a perfect match is not always possible.

In making TA assignments, we take into account student and faculty preferences, special skills, and previous assignments and the needs of the student's educational program and the department's instructional program. The number of TA's assigned to a course is based on anticipated enrollment, demands of the course and teaching style of the instructor. TAs and instructors will be notified of assignments at the end of the spring semester for the following academic year.

Please note: 1. You cannot TA for a course for which the department has not officially allocated a TA position. 2. You cannot enroll in a course for which you are the TA. 3. The departmental teaching

guidelines provide useful information about the TA experience, and are included as an Appendix to this handbook.

V. Oral General Knowledge Exam

The Oral Exam is designed to broadly test students' knowledge in ecology, evolution, and environmental biology. Much of the learning takes place in the broad reading that students will do in preparation for the exam, and in conversations with committee members about what the student should prepare. The exam will consist of a 2-3 hour oral examination by an orals committee. Students will be judged in their abilities to think critically and demonstrate a broad base in biological and environmental knowledge. Although the timing of the exam will vary, most students will be expected to take the exam by the end of their fourth semester.

An orals committee shall consist of three members, not including the student's primary advisor. The advisor can participate in the examination, but must leave the room while the other three committee members assess the student's performance. The members of the orals committee should broadly represent at least two of the three pillars of the Department: (1) ecology; (2) evolution and behavior; and (3) environmental biology. The orals committee need not consist of the same members as the dissertation committee, but in most instances, there will be substantial overlap between the two committees. The committee can include one to two appropriate faculty members from outside the E3B Department. In unusual circumstances approved by the DGS, committee members can participate in the examination via conference call (e.g. Skype).

The orals committee is taxed with the goal of engaging students in an active dialogue about a broad range of relevant issues. Students should meet with each of member of their orals committee at least once prior to the examination. The student should initially present the examiner with a preliminary reading list and some general topics that are relevant to their interests, the expertise of the committee member, and the general goals of the exam. Discussions between the student and committee members should serve to refine the reading list and provide general guidance as to the scope of the exam. However, while students are to work with their orals committee prior to the exam to discuss a range of potential topics, the committee is free to ask any questions that they deem relevant.

If a student does not pass the oral exam, the orals committee may choose to assign the student a provisional pass and prescribe a written follow-up. The student will then have a month to complete the assignment and respond to the committee. The committee may choose to reconvene with a follow-up oral exam where the student will be asked about their written responses, plus any follow-up question the committee deems necessary. A student failing the orals exam will be dismissed from the program.

VI. Proposal defense

Upon successful completion of core courses, oral review and exams, Ph.D. students will prepare a research proposal. One month prior to the proposal defense, students will submit their written research proposal to their committees, in the form that would be submitted to a major funding source (e.g. NSF, NASA, EPA, USDA). After successful completion of their proposal defense, Ph.D. students are eligible for the M. Phil degree.

It is expected that all dissertation committee members are present at the proposal defense. The role of the committee is to work with the student to determine the best proposal defense format. To that end, students will present their research ideas to their committee and their committee will ask questions to

help focus the research. Committee members should ask broad questions regarding the significance of the research to advancing the field.

To ensure efficient scheduling, we strongly suggest the committee agree on a defense date at least **three months in advance**. Remember, most faculty members have very busy schedules, so the more time they are given, the easier it will be to schedule the defense. After agreeing on a defense date, students must send an electronic or hardcopy of their proposal for committee members to review. Students should also remember to contact their advisor to remind them to alert the DAAF of the defense date. The defense must then be officially approved by the DAAF. If the proposal defense date is not approved, the student may be forced to register “ER” in the subsequent semester, which may have negative financial consequences. Students would be wise to avoid this with early scheduling. Following a successful defense, a copy of the proposal, in electronic form, along with appropriate forms must be submitted to the DAAF.

VII. Advancing to Candidacy

After the Ph.D. student successfully defends the proposal and has completed all other necessary requirements (including core courses, internships, science credits, literature review, and ACEs), the student then advances to candidacy and receives their M. Phil. degree. Forms for advancement to candidacy are signed by each committee member after the proposal defense and subsequently submitted by the student to the DAAF.

Students are generally expected to have completed all TA-ships before advancing to candidacy, as TA-ships are a Ph.D. degree requirement. However, under special circumstances (see section on Teaching Assistantships above), a student may postpone one TA-ship until after advancing to candidacy.

VIII. Dissertation defense

Students writing their dissertation normally circulate drafts to their committee members well in advance of the dissertation defense. The research advisor then reads all drafts, sometimes several times if needed, while arrangements with other committee members reflect negotiations with the student, research advisor and other committee members. As these preliminary readings and revisions suggest that the dissertation is reaching its final state, the student finds a date that suits all committee members.

Once the committee has decided on a date and time, students must notify the DAAF to secure a **final confirmation** from all members that they will be present at the defense. The final confirmation must occur at least one month before the defense date. The application for the defense will *not* be submitted to the Dissertation Office until all committee members have confirmed that the date is acceptable.

Keep in mind that all committee members must receive a copy of the defendable dissertation at least **four weeks before the planned defense**. Two inside members of the committee must vouch to the DAAF that the thesis is indeed defendable at least two weeks before the planned defense. It is only with these two vouchers that the DAAF can schedule the defense and formally notify the Graduate School.

Students must be registered for M&F through the semester that their thesis is distributed. If the defense is held the subsequent semester, the student does not pay further registration fees as long as the dissertation is distributed to the committee before the first day of classes that semester. A confirmation email must be sent to the DAAF. For students on visas, please see the DAAF for information on

contacting ISSO and to discuss options for correct registration status.

Absentee member. When a committee member can only participate from afar, an accommodation may be made by employing audio or video conferencing during the defense. A maximum of two members of the dissertation defense committee may participate remotely, but the committee chair and the sponsor must be present at the defense.

The committee chair will register the need for remote participation on the GSAS Application for the Dissertation Defense, and will sign the voting sheet on the absent member's behalf after the defense. Committee members who must participate remotely are requested to submit comments, questions, and a provisional vote in advance so that the defense exercise may proceed in the event technical difficulties are encountered during the proceedings.

The absent member should submit before the defense a report containing comments, questions, and a provisional vote on the dissertation's approval. The committee chair will convey these questions to the candidate at the defense and rule on the quality the responses made. If circumstances prevent the submission of a report before the defense, the absent member's report should be sent as soon as possible after the defense to the dissertation defense committee chair and to the Dean of the Graduate School. The committee vote will not be considered final until the report is reviewed and the defense committee chair determines whether any further action is warranted.

Questions, comments and a vote must be submitted in writing even if the absent committee member participates remotely. The dissertation office cannot make arrangements for conference call set-up, projectors or audio equipment. This should be arranged by the student before the defense.

Emergency absentee. The dissertation defense committee may convene when one member is prevented from participating by extreme circumstances at the time of the defense. Such a last-minute absence will count toward the total of two members allowed to participate remotely. If the emergency that prevents the member from being present cannot be anticipated, the absent member is requested to comply with the regulations above as soon as possible AFTER the defense. The vote will not be considered final until the required letter has been submitted to the Dean's Office by the absent member of the committee.

The defense itself is held by the Chairperson of your committee and usually lasts at least 2 hours. You should discuss the format of your defense with your chair in advance. Normally, students present an overview of their thesis research, but it is typically brief (10-20 minutes), and serves mainly to focus everyone's attention and to relax the student. The rest of the defense generally involves the committee members asking questions about the research, the thesis and its contribution to the field in general.

Normally, the student is asked to step out of the room twice during the proceedings: at the beginning, as the committee discusses the format of the defense and any other organizational matters, and at the end, when the committee makes its collective judgment. The committee will decide whether parts or the entire thesis need to be seen again by any or all of its members before filing. Timing of revisions follows GSAS guidelines.

A copy of the dissertation, spiral bound, and the deposit card, must be presented to the DAAF prior to depositing in Low 107.

IX. Progress Reports/Academic Review

Students are required to submit two progress forms to the department by April 1st of each year: the annual committee report and an updated schedule of activities. Both of these forms can be downloaded from the department website at <http://e3b.columbia.edu/resources/>

The purpose of the report is to keep our records up to date on your coursework, committee membership, research planning and progress, internships and funding. This information allows the faculty to assess a student's progress at regular intervals, and to intervene for both the students' and the graduate program's benefit when conflicts or problems arise. Students should hold an annual meeting with concurrent participation of ALL their committee members (either in person or via electronic participation). Sequential meetings with individual committee members cannot take the place of annual committee meetings.

Example Ph.D. Track Model

	Year 1	Year 2	Year 3	Year 4	Year 5
Fall Semester	<i>Core Course I</i> Directed Readings/Research Electives	<i>Electives</i> Thesis dev. course Teaching Assistantship	Proposal defense Lab/field work/write-up dissertation	Lab/field work/write-up dissertation.	Lab/field work/write-up dissertation. Dissertation Defense
Spring Semester	<i>Core Course II</i> Directed Readings/Research, Teaching Assistantship	Oral Exam Teaching Assistantship	Lab/field work/write-up dissertation	Lab/field work/write-up dissertation.	Public presentation of thesis.

X. Funding & registration status

Arrangements for student funding vary widely. Typically, students are admitted with 5 years of guaranteed funding from Columbia. Funding covers tuition for the first 2 years plus stipend and matriculation fees for the 5 years. Students are expected to work with their advisor to obtain funds for their research. A number of students obtain external funds from government (e.g. NSF, NASA) and NGOs. Students who obtain external funding should consult with the DGS, DAAF, and their advisor concerning effective distribution of resources. Columbia does not provide summer funding. Students should manage their stipends and/or external resources to ensure their summer costs are covered. During the course of the PhD, students' registration status will change. Your registration status has consequences for department costs and students' ability to register for courses.

- For the first two years of the program, the department will cover full tuition costs. After the first two years and before the proposal defense, students will have Extended Registration (ER) status. Tuition costs at this stage are approximately 50% of full tuition. Students should complete all their coursework and TAs while they have full or ER registration status.
- After students defend their proposal, they will be registered for matriculation and fees (M&F). Students cannot officially register for courses or TA courses at this stage.

It is the responsibility of the student and their committee to ensure the timely completion of a Ph.D. If a student has not secured funds for any year beyond Columbia's commitment, their committee must

devise a funding solution for the student.

Financial deadlines

(1) The first deadline falls at the end of the 4th year for students without advanced standing (and at the end the 3rd year for those with advanced standing). This is the deadline for completion of all requirements for the M. Phil. (including all courses, exams, proposal defense & at least two TA-ships).

(2) The second deadline falls after the student's last E3B-funded semester. Students are given until the first date of the new semester to meet with their committee and discuss external funding.

Consequences

If you miss the first deadline, you will need to pay the difference between M&F and Extended Registration (ER) tuition until your requirements have been completed. If you miss deadline 2, you will have to pay M&F for the semester(s) after your last funded semester.

Reminders

E3B has found many students tend to complete their general requirement milestones towards the end of Spring semester. To avoid missing completions of a milestone remember:

You must be officially enrolled during the semesters you decide to take your core courses.

Your dissertation must be distributed to each committee member before the 1st day of the subsequent semester (summer session included). If that has occurred, no additional M&F will be charged even if the defense does not occur until sometime during the new semester.

The key is you must be registered during the semester you distribute your dissertation. If you are unsure about your particular situation, see the DAAF for clarification.

PH.D. IN EVOLUTIONARY PRIMATOLOGY

I. Degree Requirements The Ph.D. program is designed as a five-year program. The requirements for the Ph.D. include core courses, elective courses, two research/reading internships, experience as a teaching assistant, a literature review, two advanced exams, an oral proposal defense, a dissertation (orally defended), and a public presentation of the dissertation. Six units of full-time residency (4 for students with advanced standing) are required by the Graduate School of Arts and Sciences.

A. Core Courses First year students are required to take the yearlong NYCEP core course, or 3 separate courses, which address/es the areas of evolutionary morphology, genetics, and primate behavior and ecology. Students receiving a grade of less than B+ in this course are required to take a written exam at the end of the first summer based on the course material/s. In addition, students must take the NYCEP seminar in both semesters of the first two years of study, and attendance is expected thereafter if the student is resident in New York.

In addition to the above courses, we strongly recommend that students in the Evolutionary Primatology program take the E3B Thesis Development Seminar in the Fall of their second year (see description under Ecology & Evolution PhD program).

B. Elective Courses Elective courses provide specialized training in one or more of the major subdivisions of evolutionary primatology. Students usually select at least 3 such courses, which may be taught in other departments at Columbia, as well as through the consortium with CUNY, NYU and RGGGS (AMNH). Students are expected to take advanced statistics courses to gain the proficiency they will need for their research.

NYCEP faculty try to circulate lists of relevant courses in advance of the semester in which they are offered, but there can be last minute changes that are not included in those lists. Students should therefore take it upon themselves to consult listings at the other institutions, as well as Columbia's listings: it is a good idea to look in departments of Anthropology, Biology, and Psychology for courses of potential interest. Keep in mind that courses at other selected universities in the area, those that are part of the inter-doctoral consortium (CUNY, NYU, Stony Brook, Princeton, etc.); can also be used as electives. Courses must be graduate level for the student to receive credit.

Students generally fulfill credits beyond the coursework with directed studies; either directed research or directed readings. Students sign up for directed research credits for supervised, hands-on research experiences where students are actively collecting and analyzing data. Students earn directed readings credits for supervised literature explorations. Students and their supervisors first discuss the amount of time each expects to devote to the directed studies and what they anticipate resulting products to be and then summarize this information in the directed studies form, which has to be signed by the supervisor and the Director of Graduate Studies. Generally, students are expected to devote 3-4 hours of directed studies per week for one credit. So a student would spend about 10-12 hours per week on a three-credit course. When a student conducts an internship, it is typical to sign up for a directed research/readings course at the same time (to "get credit" for the internship).

C. Internships Two internships are required on distinct topics, one with a NYCEP mentor outside

Columbia, and one that brings an interdisciplinary aspect to the student's broad area (three being recognized, which are behavior/ecology/conservation, evolutionary morphology, and genetics). Internships are chosen in consultation with the advisor, the internship mentor, and any committee members if a committee has been constituted. At least one internship should be completed in the first year of study.

The purpose of the internship program is to train students in research methods through participation in specific faculty research projects, or through collaboration with faculty on new projects. Internships are expected to produce students with practical research experience. In addition to collecting data, students are trained in data analysis, and, if possible, the production of a manuscript ready for scientific review. Internships may also provide students an opportunity to generate preliminary data that can be included when submitting grant proposals.

Students with advanced standing should confer with their adviser, the DGS and the CU-NYCEP coordinator to determine if their experience may suffice to waive one of the two required internships. For example, a student with an M.A. or M.S. in a related field from another institution may be able to demonstrate that they have had training in research methods through participation in research projects with faculty at another university.

D. Preliminary research experience

In their first year, students are expected to develop a preliminary project, from the general concept/design through implementation, the latter scheduled generally for the summer of their first year. Students can apply for competitive funding from the department as well as for funds from outside the university. THE PROPOSAL MUST BE SUBMITTED TO ADVISORS AT LEAST TWO WEEKS PRIOR TO DUE DATE IN THE DEPARTMENT.

E. Scholarly Language Students are required to demonstrate proficiency in foreign languages as needed for their specific fieldwork locations. Proficiency is assessed by university examination or the department.

F. Teaching Assistantships Graduate students planning a career in academia often underestimate the importance of teaching experience needed to obtain a job offer. Job candidates for university-level positions are often judged on their potential to fill a particular teaching niche (e.g. "We need a behavioral ecologist"), their potential to teach a variety of courses (e.g. "We need a teacher in behavioral ecology, vertebrate morphology, biometry, and introductory biology"), and the quality of their teaching (judged from student evaluations, letters of reference etc.). Most job applications require a statement on your teaching experience, objectives, style, and goals.

i. Teaching Assistantship Requirements With these demands in mind, all Ph.D. students are required to teach for 3 semesters. Teaching duties normally fall between the 2nd semester of the first year and the 2nd semester of the third year of study, depending on the availability of teaching opportunities. In exceptional circumstances, which include unusual student priorities and the ability of the department to accommodate the irregularity, a student may be able to postpone one semester of teaching up to and including the penultimate year in the program. Any such plan is most likely to be realized if it is discussed early on with the DGS. There is no additional monetary compensation provided to the TAs since teaching obligations are a component of all fellowships and are a requirement for the degree.

ii. Assigning Teaching Assistantships The Chair and the DGS will assign teaching assistantships. Students will be asked by the DIRECTOR A&F to submit preferences for TA-ing particular courses (during Spring semester) and efforts will be made to match the TA to the course s/he desires. However, a perfect match is not always possible.

In making TA assignments, we take into account student and faculty preferences, special skills, and previous assignments and the needs of the student's educational program and the department's instructional program. The number of TA's assigned to a course is based on anticipated enrollment, demands of the course and teaching style of the instructor. TAs and instructors will be notified of assignments at the end of the spring semester for the following academic year.

Please note: 1. You cannot TA for a course for which the department has not officially allocated a TA position. 2. You cannot enroll in a course for which you are the TA. 3. The departmental teaching guidelines provide useful information about the TA experience, and are included as an Appendix to this handbook.

G. Literature Review One in-depth review of the scholarly literature most relevant to the proposed dissertation research, written in the style of an article submitted to a scholarly journal or an introductory chapter of a dissertation, will be submitted for approval by two faculty readers by the end of the third year of study (2nd for those with advanced standing). Normally the literature review is completed by early in the sixth semester, but participation in the Thesis Development Seminar (Fall of second year) may lead to earlier completion.

The literature review is meant to fulfill two goals. First, research and writing the review requires the student to become familiar with the literature relevant to his/her dissertation research. Second, the review acts as the first chapter of the student's dissertation. The following are guidelines for the literature review requirement:

1. Decide upon subject area of literature review in consultation with your advisor and committee. The subject area should parallel your dissertation research.
2. Two readers are needed; your advisor and preferably another member of your committee. A reader not on your committee, however, may be used if s/he can provide a valuable perspective. Your committee must approve any outside readers.
3. Prepare a final bibliography and write the literature review. It should be written in the format of a literature review publishable in a professional journal and will eventually form the basis of the first chapter of your dissertation. Submission of the review for publication is encouraged.
4. Submit a draft to readers for comments. Revise if necessary.
5. Submit final version for a grade (fail, low pass, pass, high pass) to both readers at a mutually agreed upon time. The grades are to be reported to the DIRECTOR A&F. As for ACE's, low-pass and high-pass are typically rare grades, meant to acknowledge unusual weakness or strength. (Fortunately fail is even rarer as grade!)

Generally, the literature review takes place prior to advanced exams, as it is the most comprehensive of the requirements, but timing and sequence is entirely up to the committee.

H. Advanced Comprehensive Examinations (ACE) Two advanced written examinations on general topics relevant to the dissertation research must be taken by the end of the 3rd year of study (2nd for those with advanced standing), and normally by the end of the 5th semester. Each exam is read by two faculty members of the student's committee.

The purpose of the ACE is to test a student's ability to think like a professional in his/her field. "Thinking professionally" means being master of information, being able to develop well-grounded critical analyses, and being able to communicate this mastery clearly to others. The format is a 72-hour take-home open-book exam, in which the student prepares one paper in the style of a TREE (*Trends in Ecology and Evolution*) or *Evolutionary Anthropology* article. The answer is limited to 15 pages (double space, 12 point font). The faculty approved this format feeling the exercise was much more like the work the student would actually undertake as a professional than other exam scenarios.

This should be a well-organized, well-argued essay on a question-driven topic. It should not simply review the literature. The overall topic of the exam is agreed upon by student and readers while the student prepares his/her bibliography. The bibliography usually encompasses 100-200 references (only some of which are usually cited in any one exam).

The specific question on which the student will write his/her essay will not be known by the student in advance of the exam. The readers set this question in consultation with each other. The readers should communicate their exam question to the DIRECTOR A&F, who will transmit it to the student at the start of the exam. In setting the question, readers may provide more or less direction. Too little may result in students taking a direction in the essay that was unanticipated (and perhaps not what the readers had in mind). Too much, however, might rob the student of the opportunity to develop his/her own coherent organizational or analytical scheme, which is a critical part of the exercise. We are looking here for students to pull together a larger body of thought in an informed, critical and organized way. Students are expected to provide references, to check their document for proper spelling and formatting and to write well.

Readers give the exam one of the following grades: fail, low pass, pass and high pass. Low pass and high pass are relatively rare grades, meant to acknowledge particular weakness or strength. Most students who pass their exam receive a simple pass. Graders are not required to provide extensive written or oral feedback on the exams to the student; however, they are welcome to give feedback to whatever extent is comfortable. They may choose to communicate through the student's advisor, or directly with the student. It is up to the graders to initiate any communication of this sort. If a student fails the exam, s/he will have one more chance to demonstrate proficiency, in a manner decided by the readers. An exam (or other assessment) failed twice is grounds for dismissal from the program. When the exam is graded, readers transmit their grade to the DIRECTOR A&F. They do this individually after consultation with one another. They need not submit the same grade if both are within the passing range. However, if one grader feels the student should fail and the other does not, their different opinions need to be resolved. **Practical information for ACEs:**

- Bibliographies for the exams are prepared in the semester before the exam is taken. Bibliographies typically include 100-200 references, and form the basis of literature for which the student is responsible. Student and readers must agree on the bibliographies. (Note that only *some* of the papers in the bibliography are likely to be cited in any one exam.)
- Students should discuss the exam format with the readers! The DIRECTOR A&F can send out a set of instructions to readers if needed, so please let him/her know if this is desirable.

- Students should inform the DIRECTOR A&F at least 2 weeks prior to the date on which they plan to take the exam. The examiners are to provide the exam question(s) to the DIRECTOR A&F at least a week in advance.
- Exam answers are submitted electronically to the DIRECTOR A&F and readers as an MS Word file, readable on a Windows based PC (which is what the office uses). Be sure to confirm that the answers were received by the DIRECTOR A&F as attachments sometimes cause problems in electronic correspondence!

Advanced Comprehensive Exam Waiver Students with advanced standing (and in rare instances students without advanced standing) can petition (with approval from their advisor) that a previously published scholarly work (which can include literature reviews) or their master's thesis be substituted for one of the advanced exams. The student must be the first author of the work and the topic must be related to Evolutionary Primatology. The petition would go to a standing committee of three appointed each year by the DGS and Chair. (Advisors of a student cannot serve on the standing committee when that student is under consideration; a substitute member will be found.) The committee will review accepted manuscripts (i.e., those in press), but not those that are accepted pending revisions. Along with the publication or MA thesis, the student and advisor are each requested to submit documentation (less than one page, email fine) covering the following points: (1) Why s/he believes that the paper serves as a replacement for an ACE exam. (2) For a multi-authored work, what the contribution of the student was relative to other authors. (3) The advisor's take on the student's request (as a separate document). The committee may ask a student to give an oral presentation (graduate student seminar) based on the publication before a final decision is made: in that case, the student must schedule the talk at a time when committee members can be present. Even if such a presentation is not required by the committee for the decision-making progress, a student should plan to present the work as part of the graduate student seminar, where it will be noted that the talk is specifically based on the advanced exam process. The committee will convene on an ad hoc basis. The committee will not review any documents over the summer, but they can be submitted as of the first day of classes in the Fall until April 15 in the Spring. April 15 is the deadline for submitting materials for review by this committee in a given academic year. The committee will generally take no longer than two weeks for its review unless committee members are traveling for extended periods, in which case the process could take a week or so longer. Students are reminded that if an oral presentation is requested by the committee members, the entire process is likely to be prolonged because of the difficulties of scheduling (and the decision may roll over to the next semester). Students are therefore advised to submit petitions in their first year, and as early in the year as possible.

I. Oral Examination of the Dissertation Proposal

Upon successful completion of core courses, the two ACEs and the literature review, Ph.D. students will prepare a research proposal. One month prior to the proposal defense, students will submit their written research proposal to their committees, in the form that would be submitted to a major funding source (e.g. NSF, EPA, USDA). After successful completion of their proposal defense, Ph.D. students are eligible for the M. Phil degree.

It is expected that all dissertation committee members are present at the proposal defense. The role of the committee is to work with the student to determine the best proposal defense format. To that end, students will present their research ideas to their committee and their committee will ask questions to help focus the research. Committee members should ask broad questions regarding the significance of the research to advancing the field.

To ensure efficient scheduling, we strongly suggest the committee agree on a defense date at least **three months in advance**. Remember, most faculty members have very busy schedules, so the more time they are given, the easier it will be to schedule the defense. After agreeing on a defense date, students must send an electronic or hardcopy of their proposal for committee members to review. Students should also remember to contact their advisor to remind them to alert the DIRECTOR A&F of the defense date. The defense must then be officially approved by the DIRECTOR A&F. If the proposal defense date is not approved, the student may be forced to register "ER" in the subsequent semester, which may have negative financial consequences. Students would be wise to avoid this with early scheduling.

Students should not submit proposals for advanced dissertation research to funding agencies such as NSF before a successful proposal defense has taken place. It is in the student's best interests to have as much feedback on the proposal as possible before such submission. Following a successful defense, a copy of the proposal, in electronic form, along with appropriate forms must be submitted to the DIRECTOR A&F.

J. Advancing to Candidacy and NSF Grant Proposal Submission

Students who have successfully defended the proposal and have completed all other requirements (ACEs, literature review, required courses and internships, 40 points of coursework for the Ph.D. program) will advance to candidacy and receive the M. Phil. degree. Forms for advancement to candidacy are signed by committee members right after the proposal defense. Students are generally expected to have completed all TA-ships before advancing to candidacy, as TA-ships are a (Ph.D.) degree requirement. However, under special circumstances (see section on Teaching Assistantships above), a student may postpone one TA-ship until after advancing to candidacy.

Students should not submit proposals for advanced dissertation research to funding agencies before a successful proposal defense has taken place. It is in the student's best interests to have as much feedback on the proposal as possible before such submission. In addition, some organizations (like NSF for the DDIG) require that you have advanced to candidacy at the time of proposal submission. Check NSF - DDIG deadlines (which differ for the Biology directorate and the Physical Anthropology programs) well in advance.

K. THE DISSERTATION

Dissertation Format Dissertation formats are generally up to the student's committee but we provide here specific guidelines: Students may include published manuscripts in the dissertation, but we recommend as well a thorough introduction, literature review, and conclusion. Students are expected to be primary authors of all chapters of its dissertation. For published documents or parts thereof where students are second authors or beyond, the manuscript would most often be included as an appendix to the dissertation unless the committee petitions the faculty. In any case where the work is co-authored, the student needs to provide a letter to the department explaining in detail the scope of effort they dedicated to the work. Please note that students need to seek copyright permission from the journal in which they published their work and to provide the department with letters of permission from the publishers. In addition, on the day of deposit, the student should bring in a copy of these letters to submit to the Dissertation Office along with the copies of their dissertation.

Dissertation Defense Students writing their dissertation normally circulate drafts to their committee

members well in advance of the dissertation defense. The research advisor then reads all drafts, sometimes several times if needed, while arrangements with other committee members reflect negotiations with the student, research advisor and other committee members. As these preliminary readings and revisions suggest that the dissertation is reaching its final state, the student finds a date that suits all committee members.

Once the committee has decided on a date and time, students must notify the DIRECTOR A&F to secure a **final confirmation** from all members that they will be present at the defense. The final confirmation must occur at least one month before the defense date. The application for the defense will *not* be submitted to the Dissertation Office until all committee members have confirmed that the date is acceptable.

Keep in mind that all committee members must receive a copy of the defendable dissertation at least **four weeks before the planned defense**. Two inside members of the committee must vouch to the DIRECTOR A&F that the thesis is indeed defendable at least two weeks before the planned defense. It is only with these two vouchers that the DIRECTOR A&F can schedule the defense and formally notify the Graduate School.

Students must be registered for M&F through the semester that their thesis is distributed. If the defense is held the subsequent semester, the student does not pay further registration fees as long as the dissertation is distributed to the committee before the first day of classes that semester. A confirmation email must be sent to the DIRECTOR A&F. For students on visas, please see the DIRECTOR A&F for information on contacting ISSO and to discuss options for correct registration status.

Emergency Absence of Committee Member

When a committee member can participate only from afar, an accommodation may be made by employing audio or video conferencing during the dissertation defense. A maximum of two members of the dissertation defense committee may participate remotely, but the committee chair and the sponsor must be present at the defense.

The committee chair will register the need for remote participation on the GSAS Application for the Dissertation Defense, and will sign the voting sheet on the absent member's behalf after the defense. Committee members who must participate remotely are requested to submit comments, questions, and a provisional vote in advance so that the defense exercise may proceed in the event technical difficulties are encountered during the proceedings.

The dissertation defense committee may convene when one member is prevented from participating by extreme circumstances at the time of the defense. Such a last-minute absence will count toward the total of two members allowed to participate remotely. If possible, the absent member should submit before the defense a report containing comments, questions, and a provisional vote on the dissertation's approval. The committee chair will convey these questions to the candidate at the defense and rule on the quality the responses made. If circumstances prevent the submission of a report before the defense, the absent member's report should be sent as soon as possible after the defense to the dissertation defense committee chair and to the Dean of the Graduate School. The committee vote will not be considered final until the report is reviewed and the defense committee chair determines whether any further action is warranted.

If the emergency that prevents the member from being present cannot be anticipated, the absent member is requested to comply with the regulations above as soon as possible AFTER the defense. The vote will not be considered final until the required letter has been submitted to the Dean's Office by the absent member of the committee.

Questions, comments and a vote must be submitted in writing even if the absent committee member participates remotely. The dissertation office cannot make arrangements for conference call set-up, projectors or audio equipment.

Format of the Defense

The defense itself is chaired by the Chairperson (not the sponsor) of your committee, following guidelines provided by the Graduate School, and usually lasts at least 2 hours. You should discuss the format of your defense with your chair in advance. Normally, students present an overview of their thesis research, but it is typically brief (~15 minutes), and serves mainly to focus everyone's attention and to relax the student. The rest of the defense typically involves the committee members asking questions about the research and about the thesis. The student is normally asked to step out of the room twice during the proceedings: at the beginning, as the committee discusses the format of the defense and any other organizational matters, and at the end, when the committee makes its collective judgment. Be aware that it is normal for the student to have additional revisions to make before filing – but these can be major or minor. The committee will decide whether parts or the entire thesis need to be seen again by any or all of its members before filing. A copy of the dissertation, spiral bound, and the deposit card, must be presented to the DIRECTOR A&F prior to depositing in 107 Low Library.

Public Presentation of Dissertation Research All students are required to prepare and present a full length seminar to the department. This seminar will take place around the time of dissertation defense (ideally just after the defense), but not before a student has submitted the defendable dissertation to the committee. You should schedule the seminar no later than the time you schedule the defense – earlier is better, if you can be reasonably sure of your dates. Keep in mind that the end of the academic year is often congested for scheduling.

II. Committees

Students will complete the Ph.D. program under the guidance of several committees whose membership usually overlaps substantially, if not completely. **The advisor, not the student, extends the invitation to faculty to serve on a committee.**

A. Three-Member Advisory Committee

An entering Ph.D. student has a mentor/advisor, and, in consultation with the mentor, develops a 3-member advisory committee by December of the first year of study. If an advisor and student are not able to identify committee members by this time, the DGS and Chair will assign members. The advisory committee gives advice related to course and internship selection, the scheduling of early degree requirements, and early research plans. Typically members of this committee then become part of the dissertation committee.

B. Five-Member Dissertation Committee

The responsibility for selecting and recommending the final defense committee members rests with the Sponsor (advisor), Department Chair, and the DGS. Students may not select their own defense committees; furthermore, students should not be placed in the position of having to ask particular faculty members to serve on their defense committees (this is a GSAS rule). The advisor also chooses the Chair of the Committee, whose job is to preside at the proposal and thesis defenses. The Chair should be a CU/E3B tenured faculty member who is not the student's advisor (this is a university rule). An

advisor may, with compelling reason, petition the Department Chair to allow a Dissertation Committee Chair who is either untenured or non-CU/E3B.

Keep in mind that time is required to nominate and have the dissertation committee approved by GSAS. If you propose a committee that differs greatly from the guidelines, please speak to your advisor as soon as possible. Your advisor can then consult with the Chair of E3B and the DGS.

Columbia's rules for dissertation committee membership are reprinted here:

The doctoral defense will be conducted by a final defense committee that is composed of exactly five members. At least three of the members of the final defense committee must be from the list of approved Ph.D. sponsors, and at least one of the five must be either:

- a faculty member, clinician or practitioner who holds a position at another university or research institution
- a full-time CU faculty member outside the student's own department or program
- a CU research scientist outside the student's own department or program
- an adjunct professor at Columbia University outside the student's own department or program
- a full-time faculty member whose appointment is at Barnard College, Jewish Theological Seminary, or Union Theological Seminary OR
- a full-time faculty member in the student's interdisciplinary program whose field is outside of the student's dissertation field.

Examiners from the list above are nominated by the Department or Program Chair in consultation with the Sponsor or DGS. When submitting the Dissertation Defense Application, the department/ program provides the Dissertation Officer with evidence of the examiner's qualifications, usually a curriculum vitae, for approval by the Dean's office.

Final approval of the members of a final defense committee rests with the Dean of the Faculty of the Graduate School of Arts and Sciences.

When proposing defense committee members who have not been previously approved to serve on a defense committee and who

- do not have a Columbia affiliation, and/or
- do not serve at Columbia in an adjunct capacity, and/or
- do not hold a Ph.D.,

Ph.D. programs must submit to GSAS a copy of their curriculum vitae together with the final defense examination.

C. Committee Meetings

Students will meet at minimum once per year with their committees, preferably by early March. Each student must work with his/her advisor to complete an annual committee report form and submit it to the department administrator before April 1st. Committee report forms can be downloaded from the E3B website <http://e3b.columbia.edu/resources/>

Advisors should address the following in their annual report:

Have the student and advisor agreed on due dates for both the upcoming year's progress (exams, coursework, literature review, etc.) as well as due dates for the progress for the entire doctoral program (i.e. expected graduation date)?

Has the student met all due dates for goals for the given academic year? If not, why?

If student has not met goals, have the advisor and student set guidelines on how to get back on track?
What are the guidelines?

Has the student or advisor made progress on securing funding for the doctoral research (number of grants applied/number of grants awarded)?

Has the student submitted or published any papers during the reporting period?

Are there any notable deficiencies in the student's academic progress? If so, how are these being addressed?

III. Funding and Registration Status Arrangements for student funding vary widely. Typically, students are admitted with 5 years of guaranteed funding from Columbia. Funding covers tuition for the first 2 years plus stipend and matriculation fees for the 5 years. Students are expected to work with their advisor to obtain funds for their research. A number of students obtain external funds from government (e.g. NSF, NASA) and NGOs. Students who obtain external funding should consult with the DGS, DIRECTOR A&F, and their advisor concerning effective distribution of resources. Columbia does not provide summer funding. Students should manage their stipends and/or external resources to ensure their summer costs are covered. During the course of the PhD, students' registration status will change. Your registration status has consequences for department costs and students' ability to register for courses.

- For the first two years of the program, the department will cover full tuition costs. After the first two years and before the proposal defense, students will have Extended Registration (ER) status. Tuition costs at this stage are approximately 50% of full tuition. Students should complete all their coursework and TAs while they have full or ER registration status.
- After students defend their proposal, they will be registered for matriculation and fees (M&F). Students cannot officially register for courses or TA courses at this stage.

It is the responsibility of the student and their committee to ensure the timely completion of a Ph.D. If a student has not secured funds for any year beyond Columbia's commitment, their committee must devise a funding solution for the student.

Financial deadlines

(1) The first deadline falls at the end of the 4th year for students without advanced standing (and at the end the 3rd year for those with advanced standing). This is the deadline for completion of all requirements for the M. Phil. (including all courses, exams, proposal defense & at least two TA-ships).

(2) The second deadline falls after the student's last E3B-funded semester. Students are given until the first date of the new semester to meet with their committee and discuss external funding.

Consequences

If you miss the first deadline, you will need to pay the difference between M&F and Extended Registration (ER) tuition until your requirements have been completed. If you miss deadline 2, you will have to pay M&F for the semester(s) after your last funded semester.

Reminders

E3B has found many students tend to complete their general requirement milestones towards the end of Spring semester. To avoid missing completions of a milestone remember:

You must be officially enrolled during the semesters you decide to take your core courses.

Your dissertation must be distributed to each committee member before the 1st day of the subsequent semester (summer session included). If that has occurred, no additional M&F will be charged even if the defense does not occur until sometime during the new semester.

The key is you must be registered during the semester you distribute your dissertation. If you are unsure about your particular situation, see the DIRECTOR A&F for clarification.

IV. PROGRESS REPORTS/ACADEMIC REVIEW Students are required to submit two progress forms to the department by April 1st of each year: the annual committee report and an updated schedule of activities. Both of these forms can be downloaded from the department website at <http://e3b.columbia.edu/resources/>

The purpose of the report is to keep our records up to date on your coursework, committee membership, research planning and progress, internships and funding. This information allows the faculty to assess a student's progress at regular intervals, and to intervene for both the students' and the graduate program's benefit when conflicts or problems arise.

Once a year, in May, the faculty collectively reviews each student's progress. Following the meeting, by early summer, students receive a letter from the chair or the DGS; advisors/mentors receive a copy of the letter.

QUESTIONS About the Program For questions about the academic part of the program, start with the DGS. For NYCEP-specific questions, consult the CU-NYCEP rep (Marina Cords). For administrative questions, see the DIRECTOR A&F.

SUMMARY OF GRADUATE DEGREES: M.A., M. Phil., and Ph.D.

The sequential M.A. degree is awarded to Ph.D. students who have completed one full year in the program (if they do not already have an M.A. degree).

The M. Phil. degree is awarded upon successful completion of all the Ph.D. requirements other than the preparation and defense of the dissertation. To remain in good standing, the student should complete this degree by the end of the fourth year of study (and is usually completed at the end of the third year), except for those students granted advanced standing, who must complete the degree by the end of the third year (and usually by the end of the second year) of study. Six units of residency and 40 credits approved by the DGS and the student's advisory committee are required for this degree.

The Ph.D. degree is earned after the defense and final deposition of the dissertation. The written dissertation is first submitted to the student's sponsor and other readers as recommended. After revisions, the dissertation is submitted to the full five-member dissertation committee, and the student defends the dissertation orally. Students are responsible for scheduling a departmental seminar around the time of their defense: the seminar can occur either before or after the actual defense, but not before the defense copy of the dissertation has been submitted to the committee. As requests for seminar slots tend to pile up around degree deadlines, it is advisable to think ahead, especially for dates in late April.

GRANTS & AWARDS

(See also “Grant Proposals” in GENERAL ACADEMIC INFORMATION)

Applying for grants is important for your career. The more you apply, the more you are likely to receive. The more you have received, the easier it will be to receive additional grants.

Departmental and GSAS budgets assume that some fraction of students will receive outside funding, and therefore students are expected both by GSAS and by the department to apply for funding to support their education (tuition, etc.) as well as their research.

In this context, it is important to understand the difference between outside- and inside-CU support.

Outside funds are those where the decision of who gets the funding is made outside the university – this kind of funding would include NSF Graduate Fellowships or EPA Star awards.

Inside funds are administered within Columbia – these would include various fellowships and awards that GSAS controls, as well as things like the GK-12 teaching fellowships that some CU science departments control.

The Conference/Research Financial Assistance Package for Ph.D. Students

Pending availability, funds are available to Ph.D. students for the following:

1) A maximum of \$450.00 in travel funds per conference (approved by the DGS) to cover travel expenses, lodging and registration fees. Only one conference is permitted per *academic* year (July to June). Funds will be provided for one conference without presentation. To obtain funding for more than one conference, a presentation is required. To receive reimbursement from conferences where presentation is required, you need to provide proof that you presented (e.g. an abstract or program page). If this information is on a website, you may submit a printout. Without appropriate documentation, the forms for reimbursement will not be processed. Any unused funds cannot be accrued or used for another year. As of January 2013, these funds may also be used for workshops or courses - the idea is to allow some flexibility. The Conference/Research Financial Assistance Package for Ph.D. Students procedures will apply, i.e. DGS approval.

Payments to students are in the form of reimbursements after you return from the conference. To receive your reimbursement for any conference you attend (whether you are presenting or not), you will need to fill out a Travel & Business Expense report (which you can obtain from the administrative assistant), and include all your original receipts. If you paid for anything with a credit card, you will also need to submit a credit card statement showing the expense(s) in question. Detailed instructions on T&BE reports are provided below.

GSAS provides additional conference travel funds for M. Phil. students. Further information can found at: <http://www.columbia.edu/cu/gsas/travelgrants>

3) up to \$3,000.00 for one field trip as a feasibility study to plan one's dissertation research. To apply for this fund, you will need to submit a written application, specifying the work you will undertake, how the work relates to your developing dissertation project and why this work is preliminary, and providing a detailed and justified budget. The application for the funds is to be submitted in early spring (exact date will be announced by the DIRECTOR A&F) for summer research. Under no circumstances will these funds be released to students who have already commenced dissertation research: these funds are for exploratory, pre-dissertation work. In the same spirit, funds will not be paid for equipment (this should come out of research grants).

For this expense, it is possible to request a Travel Advance. Please submit the travel advance request to the DIRECTOR A&F at least 2 weeks in advance (and more if it is near closing of the fiscal year), and be sure you are informed about what kinds of expenses are allowed. After your trip, a Travel and Business Expense report must be made, along with supporting documentation (original receipts!) for how the advance was spent. It is essential that you keep meticulous and accurate records, along with original receipts, and that you turn these in within 2 weeks of your return. Again, detailed instructions are provided below.

Some **general words of advice** regarding financial transactions:

Advance planning is critical: inform yourself in advance about the kinds of expenses that can be covered, and how to process the paperwork to get a reimbursement, or to account for an advance. The DIRECTOR A&F or Administrative Assistant can help you here. If established procedures are not followed, your account with the university may be jeopardized (you may not get reimbursed, may not receive any future advances, or may be obliged to return the money that was advanced to you), especially since these transactions may be audited by the IRS (Internal Revenue Service).

It takes about *two weeks* for the University to process payments after submission. During the Summer, please submit any requests for advances at least 3 weeks **before the end of the fiscal year** (June 30). If you are seeking reimbursement for conference attendance or internship expenses, and the costs were incurred before June 10, be sure to submit your forms for reimbursement or checks by June 10 latest or you will probably not receive the reimbursement.

Always keep all your original receipts. They are essential.

NOTE: See Appendix 3 for detailed instructions on submitting forms

Below are some possible resources you should explore. EVERYONE WHO QUALIFIES SHOULD APPLY FOR AN NSF GRADUATE FELLOWSHIP. This list is not comprehensive.

SPONSORED PROJECTS ADMINISTRATION, COLUMBIA UNIVERSITY <http://www.spa.columbia.edu>

Synopsis: The Sponsored Projects Administration Office (SPA, formerly RA or Research Administration) offers a list of granting agencies and search engines for additional funding opportunities. In addition, SPA handles administrative aspects of research grants. Students applying for a research grant must always do so through SPA and follow the specifications of SPA detailed in the above website.

NSF Graduate Research Fellowships http://www.nsf.gov/funding/education.jsp?fund_type=2

Synopsis: The National Science Foundation (NSF), to ensure the "vitality of the human resource base of science, mathematics, and engineering in the United States and to reinforce its diversity" offers

approximately 900 graduate fellowships each year, including awards for women in engineering and computer and information science. Fellowships provide three years of support for graduate study leading to research-based master's or doctoral degrees in the fields of science, mathematics, and engineering supported by the NSF and are intended for students in the early stages of their graduate study (either first or second year students; see the guidelines for more details). The fellowship also provides a one-time travel grant for fellows who need to do research abroad for at least three continuous months. Additionally, NSF will consider further support for foreign travel and subsistence for fellows who will conduct research with a host country investigator. **ALL STUDENTS WHO QUALIFY ARE EXPECTED TO APPLY FOR THESE FELLOWSHIPS, MORE THAN ONCE IF POSSIBLE.** (You can apply in both your first and second years of graduate school in most cases.) **Deadline:** early November

EPA Star Award <http://epa.gov/ncer/rfa/>

Synopsis: The Science to Achieve Results (STAR) Program has four formal solicitation periods during the year -- January, April, August, and October. Check the website for a partial listing of upcoming topics. STAR Requests for Applications invite research proposals from academic and non-profit institutions located in the U.S., and state and local governments. All forms necessary for completing an application are noted in the announcement and are available on their site.

Deadlines: January, April, August, and October

NSF 00-95 DOCTORAL DISSERTATION IMPROVEMENT GRANTS

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5234

Synopsis: The National Science Foundation awards Doctoral Dissertation Improvement Grants in selected areas of the biological sciences. These grants provide partial support of doctoral dissertation research to improve the overall quality of the research, to allow doctoral candidates to conduct research in specialized facilities or field settings away from the home campus, and to provide opportunities for greater diversity in collecting and creativity in analyzing data than would otherwise be possible using only locally available resources. Approximately \$750,000 per year is currently spent on doctoral dissertation improvement awards and this is expected to remain constant. Proposals whose focus falls within the scope of the Ecology, Ecosystems, Systematics, or Population Biology programs in the Division of Environmental Biology (DEB), or the Animal Behavior or Ecological and Evolutionary Physiology programs in the Division of Integrative Biology and Neuroscience (IBN) are eligible. Please note that DEB programs generally do not support research in marine ecology. The duration and grant amount are flexible but must be justified by the scope of work and documented in the proposal. Grants are typically awarded for 24 months.

Deadline: Third Friday in November

APPENDIX 1: E3B GRADUATE STUDENT TEACHING GUIDELINES

Requirements

In fulfillment of the requirements for the Ph.D. degree, all E3B students must gain teaching experience as part of their graduate training. It is hoped that this experience not only serves as a foundation for graduate students who go on to careers in teaching but is also of value in preparing students to make effective oral presentations at professional meetings, seminars, and colloquia. Moreover, learning to give clear explanations and to answer questions in introductory courses contributes substantially to a graduate student's understanding of fundamental concepts in the field.

To "teach" means to lead a laboratory or recitation section or to assist in teaching a lecture course. Students are expected to start teaching in their second year and generally complete their teaching by the end of their third year, before advancing to candidacy. Students with sufficient experience and maturity are allowed to start teaching in the second term of the first year. All TAs must be in good academic standing and registered (for residence or extended residence) during the semester in which they teach.

Teaching Assignments

Teaching assignments are made by the DIRECTOR A&F in conjunction with the Chair and the Director of Graduate Studies. Students may submit their preferences for TA-ing particular courses, and efforts will be made to match the TA to the course s/he desires. Forms will be sent out to students by the DIRECTOR A&F in early spring of each year requesting preferences. However, a perfect match is not always possible. In making Teaching Assistant assignments, we take into account student and faculty preferences, special skills, and previous assignments, in the context of the needs of the student's educational program and the department's instructional program. The number of TAs assigned to each course is based on anticipated enrollment together with the demands of the course and the teaching style of the instructor.

Responsibilities

All teaching is overseen by a faculty member. Duties of teaching assistants vary, depending on the course, and may include:

- Attending lectures and doing assigned readings
- Meeting with the professor
- Setting up electronic classrooms and laboratories
- Preparation of instructional aids and web pages
- Aiding in the preparation of exams
- Grading exams and papers
- Holding office hours for students
- Conducting review sections
- Leading discussion or lab sections
- Offering guest lectures

Each graduate student is required to teach the equivalent of 3 semesters in total. The variance in this number is a function of the availability of TAs, the courses taught (some require greater commitments than others), and in some occasions, the previous teaching experience of the student. The department

strives for equity across students in teaching duties over their entire studentships. Teaching Assistants should expect to devote 15-20 hours per week to their teaching-related duties.

Training

1. A seminar, conducted by GSAS, will be held at the beginning of the year for all students who are doing their first teaching assignment. Attendance is mandatory. At the seminar various aspects of graduate student teaching will be discussed and suggestions made for improving teaching and learning (both for the benefit of the TAs and the undergraduate students).
2. The department may hold additional TA training sessions. The major purpose of these sessions is to discuss departmental support to, and duties required of, the student TAs. We also try to provide TAs with resources for solving problems that may arise.
3. There are no other department wide sessions throughout the semester, but TAs for all classes should meet regularly with instructors to discuss the material and ways to present it.
4. Teaching Assistants must be proficient in English or pass the International Teaching Fellows Course offered by the American Language Program.

Evaluation

Course evaluations are given out in every course at the end of every semester. They include an extensive section for evaluating the TA. Some instructors conduct additional surveys and/or discussion sessions with their TA to obtain more information. The results of all surveys and/or evaluations are given to the TA.

A questionnaire is filled out by each faculty member evaluating the TA at the end of the semester. This information becomes part of the student's file.

TAs will be asked to evaluate the departmental TA-training seminar, so that it remains responsive to their needs.

Grievance Procedure

In the event that a TA believes that he or she is being treated unfairly, he or she should bring the grievance to the attention of the Director of Graduate Studies or the Chair. Should the grievance not be resolved at this level, it may be brought to the Assistant Dean for Graduate Teaching at GSAS.

Appendix 2: Consensual Romantic and Sexual Relationships Policies

As of July 2012 it is the policy of Columbia University that no faculty member (this includes all graduate research and teaching assistants) shall have a consensual romantic or sexual relationship with a student over whom he or she exercises academic or professional authority. This also pertains to students with whom the faculty member has had previously consensual romantic or sexual relationship in the past.

Such relationships pose a threat to academic professionalism in situations where they compromise, or appear to compromise the faculty member's judgment of students or lead to perceived preferential treatment of one student over another. Further, because of the power differential, these relationships are susceptible to being characterized as non-consensual or coercive, especially when they end, opening up the possibility of a charge of sexual harassment or sexual assault.

Should you enter into such a relationship with a student, you must immediately alert the Course Instructor and Dept. Chair as to the existence of this relationship and recuse yourself from all academic decisions and activities affecting the student. You must also cooperate in making alternative instructional and supervisory arrangements necessary to protect the student against academic or financial hardship. If a TA fails to disclose a consensual romantic or sexual relationship, the Department and University will, upon discovering it, take all necessary steps to ensure compliance with this policy, including, where appropriate, disciplinary action.

For advice or assistance on the appropriate course of actions, faculty members, graduate students and students are directed to the University policy statement:
Columbia University EOAA Policy on Consensual Romantic and Sexual Relationships Policy
<http://eoaa.columbia.edu/consensual-romantic-relationships>

Appendix 3

Update on Funds for Conference Travel and Research

There are limited funds available for student travel to conferences (M.A. and Ph.D. students), for preliminary doctoral research, and for Ph.D. internship supplies through departmental funds. It is anticipated that travel funds will be available each academic year. However, increases in the number of students applying may exhaust funds earlier than expected. Therefore, it is advantageous to apply early in the year. There will be a deadline for the last applications for travel funds, usually set in April. The DIRECTOR A&F will send out an announcement in spring semester regarding the exact date. Ph.D. students planning preliminary research in the summer may have to plan for reimbursement in Fall following their travel. This would occur only if the demand in a given year for funds is unexpectedly high, so that we must and are able to roll these disbursements into the next year's budget. We do expect that funds to support these activities will continue to be available. As always, finding outside funding is a great idea, and we encourage you to look actively for such support. If you would like to use funds, we will ask you to submit a proposal. If you can do this by mid-May, you will have a better chance of receiving funding. However, you might also receive funding if you submit a proposal later -- that will depend on how many people have proposals ready and when, and thus how much of any available money is 'spoken for'.

Your proposal should make it clear whether you are seeking funding for preliminary research, conference attendance, or likely internship expenses (be aware that the latter are paid to the intern supervisor, not directly to you). For preliminary research funding, the proposal should explain what the research project is (where, how long, what the goals are, how it relates to your dissertation work), whether it has been approved by your committee (please list members' names), and it should include a reasonably detailed budget justification. ***There is a cover page that should be attached to your proposal for preliminary research funds.* Please download the form from the E3B website here: <http://e3b.columbia.edu/resources/>**

Please keep in mind our instructions about preliminary research funds

There are no similarly detailed instructions for the conference travel or internship funds, so keep the following in mind. For conference travel, let us know when and where the conference is located and whether you will be presenting (poster or oral) at the conference. For internships, describe the general internship activity, let us know what kinds of supplies the funding would support, and what the total cost would be.

We will review the proposals before the summer, and may at that time be able to say something about proposals that definitely cannot be funded. A proposal might not be fundable if it doesn't fit within the funding guidelines. That could mean that the items being funded are inappropriate or poorly justified, or that the work is not really preliminary. A proposal might also be unfundable because there are too many other proposals with higher priority: while we hope our budget will be approved with a funding level that is adequate for all legitimate requests, it can happen that there are more proposals than funds in any given year. Such mismatches happen because students do not always ask for funding at the same time in their careers, while our budgets assume an average number of students requesting funding in any given year.

We will recognize some priorities, all else being equal: for preliminary research expenses, we will give more senior students an edge. For conference travel, we will favor students who are presenting their

own research. These priorities, together with a sense of what the 'demand' for funding will be, should allow us to put the proposals in one of two groups: (1) proposals that will almost certainly not be funded this year, and (2) proposals that have a reasonable chance of funding, pending budgetary approval. While having your proposal fall into group (1) would surely be disappointing news, a definite 'no' is still useful for planning, as you know with certainty that you'll need to find alternative sources.

We strongly encourage everyone, even those with proposals in Category 2, to look for alternative sources to fund research (both preliminary and internship-related) and conference travel. Applying for grants certainly increases your chance of receiving them, and showing success in raising funds is an important addition to your developing record as a scientist. Further, it is an advantage to you in securing departmental funding if that funding matches outside funds.

Please submit your proposals to the DIRECTOR A&F by the announced date.

Appendix 4

Detailed Instructions for Travel Reimbursement

A. Travel & Business Expense Report (T&BE Report)

Columbia has specific rules for filing T&BE reports to ensure compliance with the IRS. For timely reimbursement, you must review and adhere to these rules. **T&BE reports are audited by Columbia's Internal Audit department and the IRS.**

A T&BE report must be completed by a fellow as soon as s/he returns from a University trip. The form must be signed by the traveler as well as by the DIRECTOR A&F. Per diem can be paid only if stipulated in a grant or contract.

Original receipts must be submitted with all T&BE reports. Receipts must be taped to an 8x11 white sheet of paper in order by date. Write your name and social security number at the top of each sheet. Number receipts (on the side) in the same order you listed expenses in the "Expense No." column of "Description of Expenses" on the T&BE. Tape the receipts in numerical order according to the Expense No. When only part of the receipt is accounted for (instead of the whole receipt), circle the value.

If you are requesting reimbursement from another institution and need to submit forms to Columbia or the other institution, please discuss this with the DIRECTOR A&F well in advance of submission.

Please remember:

Save a copy of the flyer or registration for a conference to be included with the T&BE report.

Reimbursable amount for car travel is updated annually on AP website. Check the current rate.

Meal expenses reimbursed by government funds may not exceed \$50/day. Meal expenses supported by other gifts or grants may not exceed \$75/day per traveler. Federal regulations require that expenses that exceed \$15 breakfast, \$25 lunch, and \$40 dinner, be segregated. These expenses would be listed in the segregated column. Reimbursements cannot be guaranteed for meals in excess of the limits set.

Any alcoholic beverages on the T&BE report must be segregated.

Any fundraising activities/development activities must be segregated.

All travel must be at the lowest available commercial rate.

The reimbursable lodging expense has a maximum limit of \$300/night.

Students purchasing equipment/items in international countries must remember to:

Calculate currency conversions from OANDA.COM. (Website used by Accounts Payable.)

Save the EXACT date of the each purchase.

Conversion must be for the EXACT & TOTAL DOLLAR AMOUNT; A/P **will not** do the conversion

FORM

- 1) Fill-in SS#, Your Name, Date of Last Expense (date of last receipt), your address, Date Trip Began/Ended, Date of Earliest Expense (date of first receipt), Departure & Arrival Points, Currency Exchange Rate
- 2) Overall Purpose: write "Pre-Dissertation Fieldwork:" and a brief description, OR "Year 1, 2, etc. Conference with/without Presentation" and the title of the conference. If it's for Directed Research with a E3B faculty, write "Directed Research (1st, 2nd, or 3rd) with Dr. XXXXXX", title of project, and any other necessary description
- 3) Payee's Signature: Sign your name and date (Month/Day/Year)
- 4) Fill in Description of Expenses according to the instructions on the back of the T&E. (See the T&E

example)

5) Fill in Total Expenses

6) Less Prepaid Expense: If the total is \$350 (more than what you are allotted for) and you are only getting \$300 for a conference, write the \$50 difference here.

7) Subtotal: Total Expense minus any Less Prepaid Expenses (i.e. \$300)

8) Less Travel Advance: Enter the amount of your travel advance (i.e. \$300)

9) Amount Due University: If you were given a travel advance and the entire amount I accounted for, then you can put \$0. If there is any money remaining, write the amount that you will be returning to the University.

10) Amount Due Traveler: If you did not request a travel advance, write the total amount of the expenses here, up to the maximum amount allowed.

11) Leave everything else blank.

B. Travel Advances

Travel advances of \$100 per week, up to a maximum of \$300, may be obtained for domestic business trips of more than two weeks.

International travel advances may be obtained for the entire field trip. However, please remember that a T&BE report must be filled out upon the traveler's return and the **original** receipts must be submitted with the T&BE report. **If you are going to another country and you think you will not be able to obtain receipts, you must speak to DIRECTOR A&F beforehand.** The traveler will need to keep track of all expenses while s/he is away and keep receipts in chronological order. It is recommended that the student takes T&BE reports along on the trip, so that they can be completed weekly to keep track of expenses and receipts.

Any unused funds, or those that cannot be properly accounted for, need to be returned to the university. Any irregularities in this regard can seriously affect your account.

Form

1. Fill-in your SS#, Date (Month/Day/Year), payee: *your name*, your address, travel dates, destination and itinerary
2. Purpose: write "Pre-Dissertation Fieldwork:" and a brief description, OR "Year 1, 2, etc. Conference with/without Presentation" and the title of the conference.
3. Amount: depending on what it is for (see above)
4. Traveler's Signature: sign your name
5. Date: Month/Day/Year
6. Traveler's Name: print your name
7. Title: write "Ph.D. Fellow"
8. Leave everything else blank

C. Check Request Form

1. Date (Month/Day/Year)
2. Payee: Institution (i.e. American Museum of Natural History) – also write "Attn: *your Directed Research supervisor's name*"
3. Address: Institution
4. Tax Identification Number: Institution
5. Description of Service: write "Directed Research (1st, 2nd, or 3rd) with Dr. _____", title of project, and any other necessary description.
6. If the check is to be mailed, provide a self-addressed envelope.
7. Amount: up to \$500

8. Leave everything else blank.

Further clarification for complying with policies

Travel Advance

All receipts for travel advances MUST be submitted to the department within two weeks of the return from your trip. (Note that 'return from your trip' means the time you return to New York from your travels. Even if your plane touches down in New York, and you immediately continue on to visit your family, or attend a conference, or anything else, the return date is when you first landed in NYC. This is a university policy.)

The receipts must be presented in the format set forth in the Student Handbook. These are regulations mandated by the University's Accounting department. We have to submit the travel and business expense forms along with supporting documents in the correct format no later than four weeks from the last day of trip. For E3B to ensure the timely submission to Accounts Payable, we need you to get all documentation to us within the two week period after your return. This policy holds for faculty as well students.

While we are hopeful that there will not be a need to implement this consequence, students who don't adhere to the deadline will have the amount of the travel advance deducted from the subsequent stipend check and the amount of the advance will effectively be lost to the student. This decision was arrived at after much discussion. We are confident that with everyone's cooperation, this will never need to occur

Conference Reimbursement

Students who anticipate requesting conference travel reimbursement must notify the DIRECTOR A&F at the time they register for the conference, giving the conference name, the student's expected participation level (just attending, poster, oral presentation) and anticipated dates of travel (or conference dates). All receipts for conference travel reimbursements MUST be submitted to the department within two weeks of the return from your trip (see section above to see what counts as 'returning'). The receipts must be presented in the format set forth in the Student Handbook and in a new handout information sheet that will be distributed to all students and faculty. As with the Travel Advances, these deadlines will allow us to comply with regulations that are mandated by Accounts Payable.

Again, to ensure compliance with these policies, any travel and business expense form submitted after the two week grace period will not be processed. Students who have not registered their intent to attend a conference in advance risk not receiving reimbursement. In turn, we will endeavor to see that all reimbursements are processed in a timely fashion so that you will receive any money due for conference travel as quickly as possible. Having anyone wait for weeks or months to get reimbursed is not acceptable. If your reimbursement is unacceptably delayed, please contact the DIRECTOR A&F.

While these new deadlines give you a little less time to organize your receipts and accounting, and the consequences of not doing so may seem harsh, in the long run these measures will ensure that everyone is reimbursed quickly and that the funds budgeted for pre-dissertation, conference travel, and internships will be available for the fiscal year in question. Having these funds is a privilege, and (we think) well worth working for.

In the meantime, if you have any questions or need help in correctly completing your T&BE reports, see the Handbook, check the Controller's website, or stop by the E3B office.

Appendix 5: Application for Pre-dissertation Research Travel Funds

COVER PAGE

Background: Pending the availability of funds, Ph.D. students in their first 2 years can apply for up to \$3,000.00 for one field trip that may serve as a feasibility study to plan one's dissertation research.

Under no circumstances will these funds be released to students who have already commenced dissertation research: these funds are for exploratory, pre-dissertation work. In the same spirit, funds will not be paid for equipment (this should come out of research grants).

Note: For this expense, it is possible to request a Travel Advance. Please submit the forms to the DIRECTOR A&F at least 2 weeks in advance (and more if it is near closing of the fiscal year), and be sure you are informed about what kinds of expenses are allowed. After your trip, a Travel and Business Expense report must be made, along with supporting documentation (original receipts!) for how the advance was spent. It is essential that you keep meticulous and accurate records, along with original receipts, and that you turn these in within 2 weeks of your return.

Deadline for submission: _____

Earliest expected release dates for funds if approved _____

Please submit cover page to the Director of Administration and Finance, but submit the proposal itself electronically.

Proposal Title: _____

Committee's Signatures indicating that the following proposal has been read, approved, and is in accordance with the policy that requested funds will be for preliminary research travel, not for dissertation research already commenced.

Advisor: _____

Committee member: _____

Committee member: _____

PLEASE DO NOT WRITE IN THIS SPACE

Reviewer comments:

Recommended funding:

Funds to be allocated:

Proposal Text (no more than 4 pages, 12 pt. font, single spaced).

Please specify:

1. the work you will undertake
2. how the work relates to your developing dissertation project
3. why this work is preliminary
4. provide a detailed and justified budget.

NOTE: If a form/request is incomplete or is not filled-out appropriately, it will be returned to you to be corrected. This can delay processing.

Appendix 6: E3B Computing Essentials

1. Columbia University Information Technology (<http://www.columbia.edu/cuit/>)

CUIT is your first stop for all things computing at Columbia: computer support, software and training. CUIT offers antivirus and other software to all Columbia students.

Each student also has a free print allowance of 20 pages per week from any CUIT public printer (in computer labs and libraries). You can set up your computer to print remotely to any of the CUIT printers; see the CUIT webpage to find out how. If you are TA-ing a course, you can apply for a free TA account, which allows up to 100 pages of printing per week and 80 MB of network storage space (regular accounts allow 20 MB); see the CUIT webpage for information and download the application form. You can also purchase a \$35 semester account upgrade which will allow you to print 100 pages a week

<http://cuit.columbia.edu/cuit/cuit-public-computing-facilities/printing/printing-quotas>

E3B has a poster printer that you can use for a small fee. Speak to the administrative assistant for details and refer to the “Poster Printer” section in the first pages of the Graduate Handbook.

2. SSOL

Manage your student account and check grades online (Student Services Online, or SSOL: <https://ssol.columbia.edu/>), check course availability via the online Directory of Classes, check final exam schedules and academic calendars via the Registrar’s page, check the University Events calendar, etc. To navigate to most student services, select the “Students” link on the left side of the university homepage.

3. CU Security

Keep your laptop safe! Columbia Security (lower level of Low Library) offers computer locks (approximately \$25), PC Phone Home and Mac Phone Home software (if your computer is stolen, the software sends a message revealing the user’s location the first time the computer goes online), and free identification engraving. Theft of unattended laptops is prevalent in libraries, coffee shops, restaurants and other public areas so don’t let your electronics out of your sight in public. There have also been a number of thefts from E3B offices and display cabinets, so don’t assume that your equipment is secure if left unattended in the department – always lock your computer, even in your office.

4. The departmental listserves and E3B electronic bulletin board

E3B graduate students have set up two ways to communicate with one another electronically. The departmental listserves allow a student to send a mass e-mail to a group of student e-mails simultaneously. To send an e-mail to all E3B M.A. students, use the address e3bma@cvmc.ais.columbia.edu; to send to all E3B Ph.D. students, use the address e3bphd@cvmc.ais.columbia.edu. Please note that the listserves **do not allow sending attachments** (this is a University Computing policy); postings that contain attachments are automatically deleted by the system. Please use the listserves judiciously in order to avoid filling people’s inboxes unnecessarily – reserve for announcements of a time-sensitive nature.

5. Library resources

The CU library website offers a number of essential tools for conducting research, including electronic databases, e-journals, and interlibrary loan requests. You can also manage your CU library account (e.g., renew books, check due dates and fines, etc.) online. The main library portal can be accessed at: [_](#)

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

Learning these tools now will save you a lot of time later!

Columbia's e-journal holdings are extensive; you can find many articles you need (at least in terms of recent articles) without leaving your desk. Many e-journal sites include options for downloading citations in EndNote format that can be imported directly into your EndNote library. The library website also has e-books available for viewing.

Columbia also subscribes to a large number of online literature search databases. You can search for particular databases, or browse by subject area. Some particularly useful databases are:

- ☐ ISI/Web of Science and Biological Abstracts (general)
- ☐ Zoological Record (zoology)
- ☐ Agricola (plant and agriculture references)
- ☐ ProQuest Digital Dissertations (available through the databases menu) has abstracts of Ph.D. dissertations. Dissertations are available as PDF files for dissertations published after 1997; some are available free of charge, others require credit card payment.

Many of these databases allow you to directly access PDF files for articles Columbia has in its online holdings. If you don't know how to search using Boolean operators, we highly recommend learning to do so. The library's short course on "Database Searching Essentials" is a good place to start.

Another good online resource is Google Scholar (<http://scholar.google.com>), which allows searches of scholarly literature online and includes links to PDF files of articles where possible.

You can request books online that are unavailable at Columbia by using:

Borrow Direct (books from a smaller network of libraries)

Science Fast Track (articles) and

Interlibrary Loan (books and articles). Before submitting a request, check the online library catalog (CLIO) to make sure that Columbia doesn't have the book (including e-books). Articles (or books) that may not be available electronically or available at all from Columbia may be available through the American Museum of Natural History catalogue <http://libcat.amnh.org/>. Although you won't be able to download the files unless you visit or are affiliated with AMNH, colleagues might be able to get them for you.

6. Computing classes

Both the library and CUIT offer short workshops for learning software, web design, etc. Particularly useful courses teach you to use EndNote (bibliographic software useful for storing references and creating bibliographies automatically – the software is a free download from Columbia), Adobe Photoshop (graphics software, useful for preparing images and figures for manuscripts and web pages), and Adobe InDesign (desktop publishing software great for making posters) – if you don't know how to use these programs, especially EndNote, we would highly recommend learning. Course listings for library offerings <http://library.columbia.edu/research/workshops.html>

7. Courseworks (<http://courseworks.columbia.edu>)

Courseworks is Columbia's online course management software. Instructors can post syllabi, contact info, assignments, articles and other documents, and grades for students to access. Class e-mail and discussion capabilities allow easy communication between students. For many classes, Courseworks is the primary means of outside-the-classroom communication between the instructor and students, so check your course pages carefully and often. If you are the TA for a course, you will most likely be expected to post assignments, syllabi, and reading files to Courseworks; the Center for New Media

Teaching and Learning (CNMTL) offers instruction and workshops to teach you how http://ccnmtl.columbia.edu/our_services/overview/for_instructors.html

Note that the 'post multiple files' option can speed up posting files under the 'class files' section if you're TA-ing.

8. Funding sources, Office of Projects and Grants <http://spa.columbia.edu/>

*Note that all grant proposals must go through Sponsored Projects Administration (SPA) – this means planning and executing your proposals early, because this process takes a while.

APPENDIX 7: Poster printer instructions, (Posted October 2015)**Revised Instructions for Poster Printer**

1. Face the poster printer, and locate the network cord on the left (looks like a phone cord). Don't use the built-in USB!
 - a. The network plugs on the wall right next to the printer (the southern side of the room) don't work. The plugs on the northern side of the room do though. You may need to move the printer to the northern side of the room (as well as the chairs and table out of the way) in order to plug it in
2. Now open your laptop.
3. Go to <http://128.59.233.81>
 - a. If this does not work it just means the IP address has changed. Look at the screen on the printer for the IP.XXX.XX.XXX.XX and change the http to reflect those numbers
4. Select the main tab:
5. Enter your uni in the user name slot
6. Go to advanced settings
7. Go to resizing: "custom"
 - a. Choose size: enter in the largest dimension you need and select if that is width or length.
8. Upload your file (at the top of the page)
9. Your poster may take a moment to begin printing. If you notice an error as it begins to print, stop your poster with the red X button on the printer. Stop it as soon as you notice any problem, as you're charged for the paper and ink you use (even on mess ups!)
10. Pay Administrative Assistant in CASH \$2 per square foot of poster paper you printed