

**University of Massachusetts, Amherst
Department of Geosciences**

Graduate Student Manual for the Ph.D. Program in Geosciences

August, 2011

Preface

The purpose of this manual is to provide graduate students in the Ph.D. program in Geosciences at the University of Massachusetts with the information necessary to navigate the series of requirements for the acquisition of the Ph.D. degree. *Please use this manual, which provides department-specific information, in conjunction with the Graduate Student Handbook provided by the University.* You, the graduate student, are responsible for making sure that you have accumulated adequate credits, that they are the “right kind” of credits, and that you have submitted the proper forms along the way to the Graduate Program Director. Do not hesitate to ask your advisor or the graduate program director about any aspect of the requirements that lead to the Ph.D. degree.

All formal progress toward a graduate degree, except course work, is recorded on forms originating in the Department or in the Graduate School. The student should make sure that any action (such as the selection of a guidance committee) is duly recorded by the Graduate Program Director. The manual provides details about each of these actions that need to be recorded by submission of one form or another.

General Information

General Requirements for the Ph.D. Degree:

All candidates are expected to have a background approximately equivalent to this University’s M.S. degree in geology or geography, although this by no means precludes individualized programs for those entering with special strength in another discipline. All candidates should be familiar with the current M.S. degree requirements. Additional requirements for the Ph.D. are as follows:

- Course work or independent study deemed necessary to prepare the candidate for the preliminary comprehensive examination
- Ph.D. candidates are expected to gain some experience in teaching
- Fulfillment of the language requirement (THIS IS CURRENTLY UNDER REVIEW)
- Enrollment in the seminar *Developing a Research Proposition* (Geosciences 797A) during your first semester of residence

- Enrollment during each semester of residence in the Professional Seminar (GEO 701), and at least one oral presentation of your research results in this seminar (this requirement can be waived if you have presented research results at a conference in your discipline).
- During your first year of residence, passage of the preliminary comprehensive examination based upon a research proposition (described below).
- With the exception of enrollment in GEOSCI 701 every semester and GEOSCI 797A in your first semester, no coursework is required of Ph.D. students. The departmental requirement for Ph.D. students is 10-27 dissertation credits.
- The University requires that a Ph.D. student be enrolled as a full-time student (that is, enrolled for at least 9 credits) for two consecutive semesters

A General Chronological Description of Your Program:

All incoming students are given an interview with the entire Geosciences faculty on arrival. The student should establish a Guidance Committee within the first month or so of arrival. This committee may or may not consist of the same people that the student chooses to be on his or her dissertation committee.

A yearly review is made of each Ph.D. student's progress toward the degree. This annual review takes place each year in February.

All students should become very familiar with the requirements and feel free to discuss them with their guidance committees, the program director, or with any of the faculty. Faculty advisors will help students understand and meet the requirements, but it is the responsibility of the student to make steady progress and to keep track of it. This includes, for example, the submission of the program of study, the writing of the proposition, the writing of the dissertation proposal, the scheduling of the thesis defense, and the submission of the forms necessary for marking progress in the degree program.

Guidance Committee Early in the first semester of residence the candidate should propose a guidance committee. The guidance committee consists of at least three graduate faculty members. The committee will conduct a semesterly review of the candidate's program and progress. The composition of the guidance committee can be changed by petition at any time.

Semesterly Review At some point in each semester, the advisor or the guidance committee will review the candidate's progress in the format of an interview. The candidate will be asked to show evidence that acceptable progress toward the stated goals is being made.

Annual Review In February of each year, the faculty will review the candidate's progress by hearing and questioning the report of the advisor. The guidance committee will be asked to affirm to the faculty whether or not satisfactory progress is being made. If progress is considered unsatisfactory, the candidate will typically receive a letter from the graduate program director, voicing concern about the lack of progress. The candidate should meet with the advisor or with the full guidance committee shortly before the annual review takes place, to clarify the progress to date.

GPA Requirements In keeping with Graduate School policy on academic dismissal, a student whose grade point average (GPA) falls below 2.8 in any semester is placed on automatic departmental warning. A student who's GPA falls below 2.8 a second time is subject to automatic academic dismissal. At this point, the Faculty may ask the student to explain, in writing, why dismissal would be inappropriate.

Substitutions Proposals to satisfy a given departmental degree requirement in some alternate manner should be made by petition to the guidance committee and the faculty, through the graduate program director.

In Your First Year as a Ph.D. Student...

Things to do during the first year to move along in the Ph.D. program:

1. Get an advisor – this will probably be arranged prior to your arrival
2. Establish a guidance committee consisting of your advisor and two other faculty members and arrange a meeting with this committee. Complete **Ph.D. Form 1** and give to the Graduate Program Director.
3. Put together a Program of Study based on discussions with your guidance committee. This must be done and approved by the faculty before you can move on to the qualifying exam. This is a 1-2 page document containing:
 - A summary of your academic degrees, including major, school, degree, and date.
 - A listing of pertinent courses, both undergraduate and graduate, that you have taken
 - A list of proposed courses you plan to take here. (Remember, there are no course requirements other than GEO 701; these are courses that you need or want to take).
 - The title of your Ph.D. proposition.
 - A proposed “examination committee” of five faculty members to read your proposition and to conduct the oral examination on the topic.
 - Probable topic of dissertation research (one sentence, general).

Once this is done, give the Program of Study to your advisor or to the GPD along with **Ph.D. Form 3**, and it will be brought to the whole faculty at a faculty meeting for approval. For ease in dissemination please supply your Program of Study as a pdf so it

can be emailed to faculty prior to discussion and voting of the faculty. Since faculty meetings can be infrequent, do this sooner rather than later!

4. Propose 3 potential topics to your Guidance Committee that you could use as a proposition for your Ph.D. preliminary comprehensive exam, which consists of submitting a written paper, making an oral defense of the proposition described in the paper, then answering questions related to the paper by an examination committee. The proposition topic should be stated as a declarative statement that can be defended through reasonable investigation (e.g., “Earthquake frequency increases during spring tides” or “How could Doreen Massey’s conceptions of place be used to challenge conventional notions of what constitutes the geography of the ‘Pacific Northwest?’”). Your guidance committee will select which of the three topics will be developed into a proposition and defense.
5. The scope of the topic is wide open. It may be related to research you will pursue as a dissertation, but it does not have to be. It may be related to previous work (for example, your master’s thesis), or it may be something quite new to you. It is NOT a dissertation proposal or outline (that comes later!), but rather is a statement to be defended.
6. Write a Research Proposition and take the Preliminary Comprehensive Exam.

The Research Proposition and Preliminary Comprehensive Exam

Writing a Research Proposition and standing a Preliminary Comprehensive Exam must be taken during the first year of enrollment in the Ph.D. program. The exams will be administered at two regularly-scheduled times during the academic year, normally in March and October, but no later than May 1 or December 1, respectively. Students beginning their studies in September should plan to take the examination during the Spring cycle. This will allow time for initial program planning, development of the proposition, and a semester of courses to enrich the student's background knowledge in relevant subjects. In special circumstances, students may petition the faculty for a one-semester delay in the examination, but no further extensions are permitted. Failure to stand for the preliminary exam during the allotted time frame will result in termination of degree candidacy. Results of the exam will be expressed as: pass, pass with conditions, fail with retake, or fail with no retake. If a student receives a fail with retake, she or he will be permitted to retake the examination again during the next regularly scheduled cycle. Only one re-examination is permitted.

The Preliminary Comprehensive Examination will be administered by a committee of at least five graduate faculty members proposed by the candidate and the guidance committee, and appointed by the department head. This committee should consist of your advisor and four other faculty, some of whom are in areas close to your topic, and others in fields greatly removed from your own. Members of the guidance committee are typically, but do not have to be, members of the examination committee. All members of

the examination committee must be present during the entire examination. Other members of the Geosciences graduate faculty may also take part in the oral examination, and vote on the result, provided that they are present during the entire examination.

The process leading up to the Preliminary Comprehensive Exam is described below:

1. Write at least three statements or questions that could form the topic of your proposition. For many, your topics should be as statement that represents a research problem yet unresolved. For others, particularly those working in human geography, your topics may be a question about how a major theoretical perspective can or should be extended into a new area of empirical investigations, and what new theoretical and empirical insights will merge. You and your committee will jointly select one topic that will be the focus of your proposition defense.
2. Write your proposition. Guidance for this process will be part of Geosci 797A *Developing a Research Proposition*. Your proposition is limited to 10 pages of text, double-spaced, not including tables, diagrams, and references. Please have fellow students, friends, spouses, etc read your paper for clarity, logic, and grammar. However, the work should be yours alone; it will be the basis for your preliminary comprehensive examination. To this end, you should not involve your advisor or other faculty as you are formulating the proposal, developing arguments, and fine-tuning your presentation.
3. To develop your research problem or advance your theoretical argument, you should present background and pertinent information, and ways you might investigate the problem empirically. You do NOT have to solve the problem, but rather present the methods to do so, and arguments to support your contention. You are required to take sides on the topic; this does not have to be the “right” side, just the one that you will defend.
4. Distribute the Research Proposition to your Examining Committee. They have up to 3 weeks before the exam deadline each semester to read your proposition, and to meet as a committee (without you) to discuss it. They may request partial or complete rewriting at this stage. Once acceptable to your examining committee, you move on to the Preliminary Comprehensive Exam. At this point you may discuss the topic with various faculty members to get their objections and/or suggestions. Rewriting of the proposition must occur within the semester deadlines.
5. Schedule the Preliminary Comprehensive Exam. This may be the most difficult part of the whole process! You need to get all five examiners and yourself in one place for at least 2 hours before the end of the semester deadline as outlined on page 4. It is best to check out committee members’ travel schedules early in the whole process and roughly sketch in a time line for all this. These exams are

NOT conducted during the summer unless it is an exceptional case and all 5 examiners agree to it.

6. Take the Preliminary Comprehensive Exam. Begin with a SHORT (20 minutes or less) presentation of your topic. You then will be questioned by your committee. Anything even remotely related to your paper is fair game, but remember that the purpose of this activity is not to see how many facts you can spew out, but rather to try to see how well you think creatively about theory and research, how you approach a specific problem, and how well you relate topics.
7. Results of the exam: The committee decides between the options of Pass, Pass with conditions, Fail with retake, or Fail with no retake. Conditions usually involve additional coursework in an area in which you appear to be weak. Retakes can be scheduled to occur in a short time (several weeks), or in the next semester. Only one retake is allowed. If the second retake is unsuccessful, you are permanently out of the program. When you have passed the exam and fulfilled all the prescribed conditions, give the completed **Ph.D. form 4** to the Graduate Program Director, who will report the results to the Graduate Dean.
8. This procedure, the writing of a proposition and its oral defense is what is often called “Prelims” or “Preliminary Exams” or “Qualifiers” in other programs. The Graduate School refers to this as the “Preliminary Comprehensive Exam” or “Comps”. Once passed, you are now a candidate for a PhD.

The Language Requirement

AS OF SUMMER 2011 THIS REQUIREMENT IS UNDER REVISION. DO NOT DO ANYTHING ON THE LANGUAGE REQUIREMENT UNTIL FURTHER NOTICE!

A reading knowledge of one foreign language at the journal level is required for the Ph.D. degree. A foreign language is defined by the Graduate School as a language other than a candidate’s native language, in which there is a significant body of literature relevant to one’s academic discipline. The fulfillment of the language requirement forms part of the Program of Study to be approved by the guidance committee and the faculty (see above section). The requirement may be met in any of the following ways:

- a. By completion of the fourth semester language course at a college or university.
- b. By passing a journal translation exam administered by a University faculty member and certified by the Graduate Program Director. This exam will be administered as follows:

1. Identify a faculty examiner inside or outside the Department.
 2. In consultation with the examiner, develop a timeline for completing the exam.
 3. Prepare for the exam by studying an appropriate scientific article.
 4. On the day of the exam, bring along an article that you have been reading.
 5. The examiner will select a passage from the article you have been reading, and will ask you to translate some passages orally by sight.
 6. The examiner will give you a second article that you have not seen and will ask that you give a brief synopsis of the abstract.
- c. By enrolling in and passing a language course, possibly a journal translation course, at the University at or above the fourth semester level.
- d. By passing at the intermediate level the Graduate School Foreign Language Test, which is administered three times yearly by the Graduate School; the passing grade for the intermediate level is set by the Graduate Council.

When you have fulfilled your language requirement, **fill out Ph.D. form 2** and give it to the Graduate Program Director who will have the official formD.1 forwarded to the Graduate Dean.

Public Lecture

Every PhD. Candidate is expected to present at least one public lecture, usually as part of GEO 701. This can be done at any time during your tenure in the program. Presentations are encouraged at national and international meetings, and in extenuating circumstances can substitute for the GEO 701 seminar. Due to the longer format (40-45 minutes) in GEO 701 this is an excellent opportunity to present a more detailed presentation of your research. When completed, give Ph.D. form #7 to the Graduate Program Director.

The Dissertation Committee

As soon as you have passed the preliminary comprehensive exam, a dissertation committee should be established. The committee will be appointed officially by the Graduate Dean upon nomination by the graduate program director. The committee is composed of at least three graduate faculty members: the chairperson (your advisor), at

least one other member from your department, and one member from outside the department but within this university. This ‘outside member’ is NOT meant to be a person in your field but from another institution. Rather, the outside member is a person from outside of your field and must be a UMass faculty member. You can also have a person (or more than one person) in your field from other institutions on the committee. However, they do not fulfill the requirement that one member be from outside of your field of expertise. Please make sure that all of your proposed committee members are members of the UMass Graduate Faculty before you make the request to appoint them to your committee. This requires paperwork on the part of your advisor, including having the Graduate Program Director request one time Graduate Faculty status for the person. All members appointed to the Dissertation Committee are expected to read the dissertation and to attend the oral defense.

When you and your immediate advisor have decided who will be on your committee, **fill out Ph.D. Form 5** in this manual and give it to the graduate program director, who will submit the committee to the Graduate Dean. The committee has been officially constituted when the Graduate Dean sends formal notification of its formation to each committee member, to the graduate program director, and to you.

The Dissertation Proposal

The dissertation proposal (also known as the dissertation prospectus or the dissertation outline) should be prepared after you have passed the preliminary general comprehensive exam and have established your dissertation committee. The proposal describes the research to be conducted, analyzed, and presented in the dissertation. The title page must be prepared as the format suggested in the *“Guidelines for Master’s Theses and Doctoral Dissertations”*, available on the Graduate School webpage, and must be signed by each member of the dissertation committee when each has approved it. Keep in mind that the proposal will typically go through a few revisions as each committee member suggests improvements to it. Faculty members have a three-week grace period to read the proposal after you hand it to them. There is no page limit on the proposal, but most are on the order of 10-20 pages, double-spaced, including diagrams, tables, and references. It is expected that the research may alter, diverge, and or metamorphose during your subsequent work, and the proposal is not considered to be a synopsis of your dissertation. Allow a few months for the process of approval of the dissertation proposal. When it is approved, bring it to the Graduate Program Director, who will also sign the proposal. Give one copy to the Graduate Program Director and take the original to the Graduate School. ***This copy must be received at least 7 months prior to the dissertation defense.***

Defense of the Dissertation Proposal

When the dissertation proposal has been approved by all members of the dissertation committee, and the proposal has been submitted to the Graduate School, the next step is to schedule the defense of the dissertation proposal. This defense should take place no later than the second year of your Ph.D. program (or well before you plan to defend the dissertation). The defense of the proposal is an opportunity for the dissertation

committee and other interested members of the faculty to focus on your research plan and on the broader implications of your project, and to provide guidance about research directions that you should pursue, or not, during the dissertation research. All members of your dissertation committee must be present for the defense of the dissertation. The committee decides between the options of Pass with distinction, Pass, Pass with conditions, Fail with retake, or Fail with no retake. When you have passed the exam and fulfilled all the prescribed conditions, give the completed **Ph.D. Form 6** to the Graduate Program Director.

The Dissertation

The dissertation must be formatted in the style and format mandated by the University, and summarized in the handout “*Guidelines for Master’s Theses and Doctoral Dissertations*”, available on the Graduate School Website. Final dissertations can be submitted electronically, but it is much easier to begin the process with the correct formatting. Many dissertations consist of already published or in review journal articles. Check with the graduate school if these chapters need to be reformatted. All members of the dissertation committee must provide preliminary approval of the dissertation before a dissertation defense is scheduled. This does not mean that the document has to be in its final form at this point; it has to be ‘defendable’ as defined by the dissertation committee. A copy of the dissertation must be placed in the department office, and made available to the entire department for one full week prior to the dissertation defense. The final version of the dissertation must be approved and signed by all members of the dissertation committee and by the department head. A sample cover page is available in the Graduate School Handbook. The Graduate School is the final arbitrator of what is an acceptable dissertation. The original dissertation and one copy are required by the Graduate School, and the department also requires one copy. Fees must be paid to the Graduate School to cover binding and microfilming costs.

The Dissertation Defense

The dissertation defense (also known as the final oral examination) must be announced in the online version of the *Weekly Bulletin* to allow interested graduate faculty and other to attend. The Office of Degree Requirements must receive written notification of the scheduling of a final oral examination **at least four weeks prior to the date of the defense**. This is accomplished when the Graduate Program Director receives information of the defense time and date and forwards it to the Graduate School. The time and place of the defense must be posted on the UMass In the Loop Web site (<http://www.umass.edu/loop/weeklybulletin/>). The examination must be held on the campus of the University of Massachusetts at Amherst. All members of the dissertation committee must be present at the defense. *Except in unusual circumstances, dissertation defenses will not be scheduled after the first week in June or before the last week in*

August. When you successfully complete your dissertation defense, give the completed **Ph.D. Form 8** to the Graduate Program Director, who will inform the Graduate School.

Doctoral Degree Eligibility Form

The Degree Eligibility Form or “Green Sheet” can be obtained from the department office. It is also available online at the Graduate School webpage. It must be completed by all doctoral degree candidates and signed by the Graduate Program Director and by the Department Head. You should verify the accuracy of the information on the form with your permanent record. The completed form, along with all fees and signatures must be received by the Office of Degree Requirements by the posted deadline (typically December 15, April 15, August 31, but check with the Graduate School). These deadlines are strictly observed and will not be extended. Degrees cannot be and are not awarded retroactively.

University of Massachusetts
Department of Geosciences

Ph.D. Flow Sheet

| | Semester | Form | Comments |
|--|----------|------|---------------------------|
| Appointment of Preliminary Advisor | 1 | - | At introductory interview |
| Selection of Guidance Committee | 1 | 1 | |
| Completion of Foreign Language Exam | 1 or 2 | 2 | |
| Submittal of Program of Study and Selection of Examination Committee | 1 or 2 | 3 | |
| Preliminary Comprehensive Exam: Written Proposal Submitted Scheduling of Examination Date Abstract Circulated to Faculty Examination | 1 or 2 | 4 | See form for timetable |
| Selection of Dissertation Committee | 3 | 5 | |
| Submittal of Dissertation Prospectus | 3 to 4 | 6 | |
| Dissertation Research & Writing | 3 to 8 | - | |
| Public Lecture | 3 to 5 | 7 | |
| Dissertation Defense Scheduling of Date Reading Copy Placed in Office Clearance for Defense Defense | 6 to 8 | 8 | |
| Final Dissertation Submitted to Graduate School | | | |
| Department Check-Out | 8 | 9 | |

Department of Geosciences

Ph.D. Form 1: Selection of Guidance Committee

Each candidate will propose, as early as feasible in the first semester of residence, a guidance committee of at least three graduate faculty members. Please consult with your advisor and prospective members, and return this form to the Graduate Program Director.

Student Name _____

Preliminary Guidance Committee

Chair _____

Member _____

Member _____

Approved:

Graduate Program Director

Date

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Ph.D. Form 2: Completion of Foreign Language Exam

All Ph.D. candidates must pass a language exam at the “journal level” to show that they comprehend the basics of the language. This exam involves translating an appropriate journal article or part thereof in writing and submitting the results to a member of the faculty or professional staff who is competent in the language.

Student Name _____

Please attach a copy of the results of the examination to this form and submit to the Graduate Program Director. The GPD will submit the appropriate form D.1 to the Graduate School.

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Ph.D. Form #3: Program of Study and Examination Committee

The program of study should be developed in consultation with your guidance committee as early as possible, preferably during the first semester in residence. The program should include the subject of the research proposal to be defended as the preliminary examination. At the same time, an examination committee should be proposed. This consists of five faculty members selected in consultation with your guidance committee.

Attach this form to your program of study and submit to your Advisor.

Student Name _____

Examination Committee

Chair _____

Member _____

Member _____

Member _____

Member _____

Program and Committee Approved by Faculty:

Date

GPD

Department of Geosceinces

Ph.D. Form #4: Proposal and Comprehensive Examination

This form should be signed by your Advisor (Committee Chair) in the appropriate places, and the completed form submitted to the Graduate Program Director.

Student Name _____

a. Written research proposal delivered to examination committee:

_____ _____
Date Committee Chair

b. Approval of proposal by examination committee:

_____ _____
Date Committee Chair

c. Examination scheduled to occur at least TWO WEEKS after approval of proposal by examination committee:

Date, Time & Place of Examination: _____

_____ _____
Date Committee Chair

d. Abstract of proposal and announcement of examination circulated to faculty at least ONE WEEK prior to examination:

_____ _____
Date Committee Chair

e. Result of examination:

_____ _____
Date Committee Chair

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Ph.D. Form #5: Selection of Dissertation Committee

The dissertation committee (at least 4 members) should be selected by the candidate in consultation with the preliminary guidance committee as soon as a dissertation topic has been chosen. This will normally occur during the semester of, or following, the preliminary comprehensive examination. Submit this completed form to the Graduate Program Director.

Student Name _____

Proposed Dissertation Committee

Chair _____

Member _____

Member _____

Additional Member _____

Outside Member _____

Approved: _____
Date Advisor

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Ph.D. Form #6: Submittal of Dissertation Prospectus and defense

The dissertation prospectus must be approved and signed by the dissertation committee and the Department Head or GPD and submitted to the Graduate School at least 7 months prior to the expected date of the defense. Attach a copy of the signed prospectus to this form and submit to the Graduate Program Director. Deliver the signed original to the Graduate School, where it will be logged in.

Student Name _____

Date Submitted _____

Defense of the Dissertation Proposal:

Date of Defense:

Committee members present: _____

Outcome: _____
(Pass with distinction, Pass, Fail with retake, Fail no retake)

Advisor: _____

Signature: _____

Department of Geosciences

Ph.D. Form #7: Completion of Public Lecture

Each student is required to give an oral presentation concerning the progress of research toward the dissertation. This is usually done in Geology 700 "Professional Seminar", but a talk at a professional meeting can also be used to fulfill the requirement. Fill out this form, have it signed by your advisor, and submit it to the Graduate Program Director.

Student Name _____

A lecture on the topic:

was presented on

_____ Date

at _____. This lecture satisfies the requirement for an oral presentation of the preliminary results of research for the Ph.D. dissertation.

Signed: _____
Advisor

Date

Department of Geosciences

Ph.D. Form #8: Dissertation Defense (Final Public Oral Examination)

The date of the dissertation defense will be scheduled ONLY after all members of the dissertation committee have examined the dissertation and given their approval. The Graduate Program Director must forward information on the defense to the Graduate School at least FOUR WEEKS prior to the scheduled date

Student Name _____

a. Scheduling of Defense

Title of Dissertation

Date and Time of Defense _____

Location _____

Approved: _____
Date Committee Chair

b. Announcement of approved examination date placed in faculty mailboxes at least TWO WEEKS prior to defense:

_____ Date _____ Committee Chair

c. Reading copy of dissertation placed in main office at least ONE WEEK prior to defense:

_____ Date _____ Committee Chair

d. Result of examination: _____

_____ Date _____ Committee Chair

Department of Geosciences

Ph.D. Form #9: Department Check-Out

Final processing of the degree will depend upon fulfilling the remaining obligations to the Department and the Graduate School. Obtain the signatures on the form below and bring it, along with an original and one copy of the completed "Green Sheet", to the Graduate Program Director and Department Head for final clearance. Bring the signed original green sheet to the Graduate School.

Student Name _____

a. All Departmental equipment has been returned.

_____ Date _____ Equipment Quartermaster

b. Laboratory or other workspace has been cleared.

_____ Date _____ Committee Chair

c. Samples have been properly archived or discarded.

_____ Date _____ Committee Chair

d. All keys to the Department and copier card have been returned. Fees for binding of the dissertation have been received.

_____ Date _____ Department Administrator