

Department of Psychology Graduate Program

GOALS OF THE GRADUATE PROGRAM

Our graduate program's overall goals are to inculcate in students the independence, skills, and content knowledge that will result in their becoming productive research scientists. Among the types of independence we aim for are a sense of direction, self-motivation, self-evaluation, and the ability to acquire new skills and knowledge on one's own. Key skills to be acquired are communicating ideas and research findings by writing and speaking, synthesizing existing research and theory into a coherent framework, and utilizing a variety of methodological techniques. Our program also seeks to foster the desire for scientific and social progress that motivates the research process. Ultimately, the training we provide is meant to produce a mature, creative researcher and scholar who will make significant contributions to our field.

The particular content knowledge and methodological skills each researcher needs will vary considerably. Students should become authorities in the area of their particular research focus, and they should be experts in related research. They should be broadly and deeply trained in the substantive domain of psychology within which their research lies (e.g., cognitive, cognitive neuroscience, developmental or social/personality psychology). They should appreciate and understand central issues and know about the important research findings in that domain.

Students should be able to teach in the general area of their research as well as their specific interests. We provide training in teaching, so that our students will be able not only to contribute to existing knowledge but also to teach others to appreciate, critically evaluate and utilize existing knowledge.

We also wish to provide a sense of community and common endeavor for students. We provide opportunities for shared experiences within the graduate program through classes, brown bags, and informal activities.

Accomplishing the Goals

The role of the advisor and committee members

The major way in which the program accomplishes its goals is through the committee structure. Each committee consists of a primary faculty advisor and two or more other faculty members. Advisors can be members of the Psychology department faculty or faculty who hold courtesy appointments that allow them to supervise a Ph.D. program. At least two committee members should come from the Psychology department faculty. Additional faculty from other departments at Carnegie Mellon or from the University of Pittsburgh, and occasionally other schools, may also be asked to join a student's committee.

These committees help students develop their research and educational plans. They serve as

constant resource persons as the student makes progress on his or her research. They discuss projects as they unfold, give advice on solving problems, read and comment on papers, and they attend and critique talks the student presents. The committee also plays a central role in evaluating the student's progress and providing feedback on that progress both to the student and to the rest of the faculty in the department.

Other faculty members, of course, also play a role in advising and guiding each student's progress, albeit not as central a role. They teach courses that students take, they may be consulted at any time, they will attend talks and comment on them, and all faculty are present at the regularly scheduled evaluations of all students.

The role of courses, colloquia, and research meetings

Our program provides a number of mechanisms for students to acquire basic knowledge of the content of psychology. Course work is an important one. The number of courses required of *all* students is small. All students must take a brief "immigration course" at the beginning of their first year, where they hear talks on faculty members' research programs. All students also take a two-semester "core course" which covers major findings in the four research areas represented in the department-- cognitive psychology, cognitive neuropsychology, developmental psychology and social/personality psychology. All students are required to take a graduate statistics course and a course in research methodology as well. While these courses are the only required ones, the student is also expected to take additional courses in statistics, methodology, computer programming and computer simulation as deemed necessary by the student and his or her committee. The student is also expected to take and actively participate in a number of advanced seminars.

In addition to regularly scheduled classes, there are several other ways in which students can become broadly knowledgeable about research in psychology. The department sponsors a regular colloquium series, which students are expected to attend regularly. Post-docs and other graduate students will also be presenting talks on a regular basis, and we urge students to attend these presentations as well. Finally, faculty and students often organize regular research meetings and seminars, and we strongly urge our graduate students to attend those meetings relevant to their interests and to actively participate.

The role of teaching

While our primary goal is to produce outstanding researchers, we want those researchers to be able to teach others as well. Thus we require all students to serve as teaching assistants during their graduate career. If appropriate, a student may serve as the principal instructor in a course. We view this not only as training for teaching but as a mechanism to force clearer thinking about

research ideas and to acquire and/or master knowledge within given domains of psychology. We also encourage our students to utilize the services of the University Teaching Center by attending seminars on teaching when they are offered and seeking out advice and evaluation by their staff members whenever it seems potentially useful for purposes of improving teaching skills.

Our current expectation is that students will serve as teaching assistants or instructors during three semesters of their graduate career.

Feedback on graduate students' performances as TAs is provided both by the instructor of the course and by students in the course. When graduate students elect to teach their own courses, a faculty sponsor serves as a resource for that student in planning the course, dealing with problems that arise, and helping the student to evaluate and to learn from this experience.

Requirements/Expectations in the Program by Year

Overseeing the advising process

Our advisor and committee process is overseen by the director of the graduate program and the department head.

General points

All full-time students are expected to be in residence throughout the academic year and during the summer months as well if they are accepting a summer stipend. (A two week summer vacation and all official university holidays are automatically granted to all students. Other absences must be approved by the student's committee.)

We admit only students intending to complete our Ph.D. program. As such there is no distinction between our Masters program and our Ph.D. program, no formal transition between programs, and no qualifying exams for the Ph.D. program.

There follows a description of the expected course to the Ph.D. degree. Students who are taking a five-year program through the CNBC or the PIER program will have an adjusted schedule to reflect their participation in additional courses and requirements.

FIRST YEAR

The immigration course

Early in the first year the student takes part in an intensive two-week immigration course, which begins with an introduction to the department and continues with a series of lectures that introduce the students to research of all faculty members in the psychology department.

Choosing an advisor and committee

Students should strive to choose a faculty advisor by the end of September and certainly by mid-October. Then, together with that advisor they should choose at least two additional faculty members to serve on their committee by the end of October. The committee members are typically drawn from the psychology department; however, students may also include appropriate faculty from other departments within CMU or the University of Pittsburgh.

The advisor provides an intellectual resource for the student, fosters the student's growth in research expertise and knowledge of the field and guides the student to the best work possible. The advisor also serves as the head of the student's supervisory committee and, with that committee, plays an important role in evaluating the student's work.

At any time the student may initiate a change in committee members. This may be done by soliciting a committee member, being approved by that individual, and notifying the prior individual of the change. It is required that the student discuss the change with the advisor as a preliminary to any action. Under exceptional circumstance, the student may also change advisors. This may be done by first discussing the issue with a potential new advisor, being

approved by that individual, and notifying the current advisor of the change. It is strongly suggested that the student discuss the change with the current advisor as a preliminary to any action. The impact of a change on the student's financial support should be discussed with the Head of the department.

Getting going on the first year project

The student, in consultation with his or her advisor, conducts a *minimum* of one research project, the design of and conduct of which is commensurate with a publishable program of research. The project need not produce publishable results -- experiments often do fail. We strongly urge students to become involved in research as soon as possible after entering the program.

Often students feel that they must come up with an original idea, on their own, for their first year project. While it is certainly permissible to come up with your own idea for a first year project and, *given approval by your advisor and committee*, to proceed to carry it out, this is not what the faculty expects in your first year. Indeed taking this approach may cause you (and perhaps your advisor) considerable anxiety! Rather, we expect that you will work out a mutually agreeable topic and research plan with your advisor. In this regard, adopting a project suggested by your advisor is perfectly permissible and, in fact, encouraged. So too is it permissible to blend some of your interests with those of your advisor to come up with a research plan. Again we would emphasize that getting involved in research *as soon as possible* is what is important, and in the first year, that should take precedence over coming up with your own ideas. (You will have plenty of time and plenty of encouragement to come up with additional ideas and to carry out additional research as you move along in the program.)

Students also are strongly encouraged to conduct more than one research project, so long as taking on additional projects does not interfere with the quality of those initiated earlier.

A paper based on the first year project is due on the first Monday following the university's commencement in May. On that day it should be given to all your committee members. What this means is that you should have given a draft of this paper to your advisor (at least) considerably prior to this date, leaving time for him or her to comment upon it and for you to revise it prior to this date. (Keep in mind that sections of the paper such as the introduction and methods can be written and turned in for comments long before the final paper is due.)

Other course work

In the fall semester of the first year the student takes either a graduate research methods course or a graduate course in statistics, depending on availability. The alternative course is taken during the following year.

Over the first two years, depending on the course schedule, the graduate student also takes the department's three core courses in psychology. These courses cover the areas of cognitive/cognitive neuroscience, developmental, and social/personality/health psychology. Students are encouraged to audit an additional seminar in their first fall semester. It is expected (though not required) that during the semester in which the research methods/statistics class is not taken, the student will enroll in a graduate seminar.

During the Spring semester, first year students will also be enrolled in a class in which they practice and work on their “brown bag” presentation (see below).

Grades in each of these courses (excluding the immigration course which carries no grade) must be a **B** or above. Failure to achieve this standard will be noted in a faculty evaluation of the student's performance in the program, described below. If a student receives a grade below B in any course, he or she may be placed on probation, and/or required to re-take the course(s) to achieve a grade of B or above, or may be terminated from the program.

Serving as a Teaching Assistant

Students may begin fulfilling their teaching requirement during their first year. If they serve as a teaching assistant during the fall semester, they are not expected to audit an additional seminar. If they choose to serve as a teaching assistant in the spring semester, the expectation that they take an additional seminar is not as strong, though it is still encouraged.

Teaching assignments are made by the director of the graduate program in consultation with a committee that includes the department head. They take into account: a) the needs of the department (first priority), b) student advisor and committee members' preferences, and c) instructor preferences. Prior to each semester, graduate students will receive a form to fill out, on which they should indicate whether or not they would like to serve as a TA in the following semester and for which courses they would most like to TA. The process will be explained in more detail before the student chooses the courses they would prefer to TA. We cannot guarantee that students will be assigned to the courses they most prefer nor that instructors will receive their preferred TA, although as already noted we certainly take those preferences into account. We strongly urge students to TA for faculty members other than their advisors. We also encourage students to TA in different courses.

Presenting the first year research to the department: First required public presentation

At some point in the latter part of the spring semester (typically in April or early May), the student presents his or her first-year research project (or one project, should more have been accomplished) to the department in what is known as a "brown bag" presentation. Students describe the project's rationale, results and implications in an informal hour-long seminar. As described earlier, students also write up the project in a journal-type format. Students distribute this paper to all members of their committee for feedback and evaluation. Writing up each year's research and presenting it in a seminar is expected to contribute to students' skill in oral and written communication.

Activities during the summer

By May 31, the student must submit to, and have approved by his or her committee, a plan for research activity to be performed over the summer. Such plans may include data collection, surveying the literature, and/or writing an article or articles based on research completed during the first year. It is expected that this activity will be performed while the student is in residence

at Carnegie Mellon. Absences totaling more than two weeks in duration must be approved in writing by the advisor. Such absences, depending upon the circumstances, may result in a reduced summer stipend. Decisions about summer stipends are made by the department head. Note that the intent of our policy stating that absences should total no more than two weeks is that students should take no more than a two-week break from active involvement in psychology. Thus, attendance at psychology conventions, workshops or courses taken at other universities (when approved by one's committee) will not count against this two week period.

SECOND YEAR

Continuing research

Research should continue at a vigorous pace during the second year. Once again, in consultation with the advisor, the student conducts a *minimum* of one research project of a standard commensurate with a publishable program of research. Again, the outcome need not be publishable, but the quality of the design and conduct of the study should be high. Again, we emphasize this as a *minimum* requirement. Doing a series of inter-related studies is preferred. Again, the student presents a research project to the department members at a brown-bag seminar in the spring. Second-year students are expected to fulfill this requirement earlier in the spring than are first year students.

Second required public presentation

Second-year students should plan on presenting a research project to the department late in early March or April (leaving time for the first-year students to do so later on in the spring.)

Course work

It is expected (though not required) that students will enroll in two courses during each semester of their second year. One of these courses will be the research methods or the statistics course, depending on which of these two courses has already been taken during the first year. Depending on scheduling, the student may be completing the core-course sequence by taking one or two core courses in the second year. The other courses may be advanced seminars in areas in which the student is interested or may be additional statistics, computer programming, linguistics courses or whatever courses are deemed useful to the student's development as a scholar and a researcher by that student and his or her committee. Again our expectation is that students will achieve grades of B or above in these courses, and again failure to do so will be noted in an evaluation of the student, described below.

Serving as a Teaching Assistant

Students who have not already served as a teaching assistant in their first year should definitely begin doing so in their second year. Other students may continue or complete their teaching requirement during the second year. The procedure for assigning TAs is described above.

Summer activities including review paper

By May 31 the student must present a written proposal for his or her summer activities to his or her advisor and committee and have the proposal approved. Summer plans may include teaching one's own course should there be a need on the part of the department and should the advisor and committee consider this to be a productive endeavor for the student. Residency requirements of the summer of the second year are the same as the first.

THIRD YEAR

Literature Review paper

The student is required to write a review paper on a topic related to his or her research interests. The advisor and committee members should be involved in the plans for this project from its inception. The advisor and committee must approve the plan for the paper no later than the student's winter committee meeting (typically in December or early January). All committee members will read the final version of the paper.

The explicit purpose of the review paper is to broaden the student's knowledge of psychology. It is a requirement that the department instituted in preference to requiring qualifying exams. The student, the advisor and the committee should keep this in mind while planning the paper. The paper should be solely authored by the student.

The review should be a quality commensurate with published review papers. The student should be the sole author of the paper and should complete the writing independently. The paper must be submitted to the student's advisor and all members of the committee by April 30th. The committee provides a formal grade for the student. Failure to achieve a grade of B or better will result in the student's being placed on probation, and/or directed to rewrite the paper to the required standard, or terminated from the program.

As already noted, the goal of the literature review is to explore a broader terrain than is ordinarily covered in a specific experimental article and to achieve wider perspective beyond that normally achieved in focused research projects. The specific nature of the paper may vary from student to student and will be established by each student in consultation with his or her advisor. Some students may attempt a literature review in the style of *Psychological Bulletin*. Others may undertake a theoretical synthesis of an area of research or the definition of a new research issue or question. Still others may take the paper as an opportunity to develop a model that covers a range of published findings. Ideally the resulting work would be submitted as a journal article, serve as a chapter in a book, and/or serve as a basis for new empirical work the student will carry out.

Note that the student need not wait until the beginning of the spring semester to start this paper and *certainly* should not wait that long to choose a topic and strategy. Also note that this paper is not supposed to consume the entire spring semester. Rather, it should be thought of as having equal weight with the continuation of the student's research program and other scholarly activities.

Continuing research

By now, students should have had considerable research experience and an ongoing program of research and writing. At some point during the prior two years, in consultation with their advisor and committee, they should have identified a dissertation topic. During the third year they should be actively continuing research in this area and should prepare a proposal describing the issues to be addressed and the approach to be taken. This proposal should be a written document in the format of an NIH RO3 grant. Links to an example of such a grant can be found below:

<http://www.psy.cmu.edu/home/programs/proposalexample1.pdf>

<http://www.psy.cmu.edu/home/programs/proposalexample2.pdf>

Third required public presentation

The students should then schedule a talk in which he or she presents the proposed dissertation topic to the committee and other members of the department. This presentation should occur during the spring or summer of the third year thereby leaving time for the faculty provide critical comments and for the graduate student to benefit from these comments and to revise the proposal as necessary. The written proposal must be given to the committee at least two weeks prior to the public presentation.

The specific research projects included in the dissertation will provide skill in planning, designing, analyzing, writing-up and presenting research. They should allow students to develop expert-level knowledge about one or more specific areas. Presentation of the dissertation proposal takes the place of the brown-bag presentations which were required in the first two years.

The committee is responsible for approving the proposal or determining that it cannot be approved. In the latter case, the student may be placed probation and/or directed to revise the proposal for approval at a later date to be determined by the committee (but no later than the spring of the fourth year). This process is then repeated until the student's proposal is approved or, if the student has previously been placed on probation, the student may be terminated from the program.

The department currently has no qualifying exam and no foreign language proficiency requirement.

Teaching

If the student has not yet completed his or her teaching requirement, that requirement is to be completed during the third year.

Coursework

Students take courses on an elective basis, choosing those courses in consultation with their

advisor and committee.

Summer activities

Again the student presents a written plan for summer activities to his or her advisor and has that plan approved by May 31. Residency requirements are the same as for prior summers.

FOURTH YEAR

During the fourth year the student conducts the dissertation research, writes the dissertation, and submits it to his or her committee. A copy of the dissertation is also made available to all faculty members in a public place. The dissertation is defended in an oral examination by the advisor, committee and all interested faculty. Graduate students are also invited to attend and to ask questions. Carnegie Mellon University has ruled that dissertation defenses must take place during the academic year. A document describing the university regulations for dissertations is available from the graduate director and on the department's web site.

Note: students cannot schedule a dissertation defense after August 10th, and all required changes to the dissertation must be made before September 25th. Students who do not complete these changes before this date may be liable to pay tuition fees for the fall semester.

YEAR FIVE

Special programs with the Department of Psychology carry additional requirements that mandate a fifth year. Admission to these programs must be obtained in the student's first or second year. The time table for years 1-3 in these programs is identical to that described above. Years 4 and 5 follow a timetable described in program materials. There is no fifth year allocated for students who are not admitted to special programs. The status of those students who have not completed their dissertation in their fifth year is described below.

Monitoring Student Progress

The advisor and committee have the primary responsibility for guiding and fostering the student's research activities and course work. The department appoints one faculty member to be the director of the graduate program. The director's informal role is to serve as a conduit between the students and the faculty in regard to the program. A staff member appointed by the department head works with the director and maintains a file of the student's completion of program requirements. A list of requirements and due dates, as described above, is at the end of this document. A similar list is maintained in the student's file.

At the end of each semester, the faculty as a whole meet to review each student's performance, and results of the review are communicated to the student in a letter from the program director. This meeting serves to monitor the student/advisor relationship and to assure that the students are treated equitably in the evaluation process. The meeting also serves to bring to the faculty's attention failures to meet formal requirements, and it allows faculty to determine whether the student is progressing adequately in research activity.

By the date of the meeting, students must have filed with the graduate staff member documents indicating completion of each of the requirements due by that date. These documents include identification of advisor and committee (first year only), statement of committee meeting date(s) and brown bag date, list of completed courses, and summer plans and papers. The papers must have been approved by the student's advisor at the time of submission, and the summer plans must have been approved by the advisor and committee. The advisor's signature is required for these documents. For any requirement that is due by the meeting date but has not yet been met, the student must submit to the graduate program director a letter from his or her advisor that approves the delay. Delaying a requirement should be done only if the advisor and committee feel it is in the student's best interests. Delays should be of minimal length and should not be repeated.

Fulfilling requirements by the due date, or having an advisor's letter approving any delay, is necessary for the student to be in good standing at the faculty review. Should a student have failed to meet requirements without formal approval on file, or should he or she give evidence of failing to achieve the requisite research focus and quality, the faculty will take steps to remedy the situation. These steps will be communicated to the student in a semi-annual evaluation letter, which will also include a clear designation of whether the student is in "Good Standing," "Good Standing with Concerns," or "On Probation." These steps taken may include one or more of the following: communicating faculty concerns to the student, placing the student on formal probation, establishing requirements that constitute contingencies for the student's remaining in the program, and terminating the student from the program. Contingencies must be met within a particular time period, and probationary status is also established for a specified period (both periods are usually one semester). At the end of the specified period, the faculty will re-evaluate the student and if concerns remain, will take one or more of the steps described above.

Changes in Student Status

The student may register for ABD (all but dissertation) status in accordance with University policy, which will result in reduced tuition.

If a student reaches the end of the fourth year without obtaining the Ph.D. degree, he or she will be designated as a delayed completion student. The faculty may approve delayed completions for some students. At the discretion of the head, such students may be allowed to retain office space, equipment and access to the department's subject pool for a fifth year. It is unlikely that approval would be granted for more than one academic year.

Students beyond the fifth year, or those who are not approved for delayed completion after the fourth year, may continue to pursue the Ph.D. degree, in accordance with University rules and subject to their having an advisor and committee who agree to oversee their progress. Their pursuit will not be facilitated by office space in the department, use of departmental equipment or access to the subject pool.

Student Rights

Role in department governance

Graduate students select one or two representative who attend faculty meetings (subject to invitation by the department head), communicate student concerns to faculty, the program director, and/or the head, and attend meetings of subcommittees of the department subject to faculty approval.

Appeal of termination

Should a student be terminated from the program, he or she may write a letter to the graduate program director, seeking readmittance. This letter should contain evidence that the student has remediated deficiencies that led to the termination and should also outline a plan for completion of the Ph.D. The faculty will act on this letter at a meeting within two weeks of receipt during the academic year, or within the first two weeks of the following semester should the letter be received when the University is not in regular session.

Grandfather policy

This document formalizes policies that have been implicit if not explicit in the department's practices in the past. It applies to students at all years in the program. Further changes in the document will be subject to a grandfather rule, in that students will be governed by the rules in effect when they entered the program or the later rules if they should so choose.

Review/redress for academic conflicts

Should an academic conflict arise, the student may request a meeting with the director of the graduate program and the department head to discuss resolution.

Financial Aid

The department uses a number of sources of aid to fund graduate students, including tuition allocations from the administration, training grants, research grants and departmental fellowships for tuition and stipend. Students are very strongly encouraged to seek outside funding for tuition, stipends, research and travel. Such funding reduces the burden on research grants, training grants and department funds. Information about fellowships available from external agencies can be obtained from the graduate program director. From these various sources, the department typically has been able to provide four years of tuition and four twelve-month stipends for all students (including four summers beginning with the summer following the end of the first year and continuing through the summer following the fourth year). Students entering the program will be informed in advance as to expected funding levels. However, the department cannot guarantee funding of tuition and stipend for all students for four years. The department will inform students in writing about any change in anticipated financial support as soon as information is available. If funding must be reduced, it becomes the student's responsibility to locate alternative funding.

It is expected that students' focus during the graduate years will be on progress toward the Ph.D. To that end, tuition and stipends are granted with the understanding that the student will not be employed outside the department (without approval from both the advisor and the department

head). Outside employment includes not only taking on a regularly scheduled job but also repeatedly taking on jobs for pay on an ad hoc basis such that the work is detrimental to the student's making good and efficient progress in his or her coursework, research or teaching. Given that 12-month stipends are provided, the condition of not accepting outside work extends to the summer. However, students may elect to forego their stipend during the summer months in order to work. We strongly urge that any employment be related to their Ph.D. program.

Funding For Travel

The department has in the past been able to allocate some funding for student travel to research related events. The amount of this funding is subject to yearly allocations by the head, and funding may be treated as competitive. The graduate program director will have information about travel funding at the beginning of each academic year. The following rules apply to travel funding:

- 1) Students can receive travel support for a total of 3 years, beginning in the late spring of their first year. (This policy acknowledges the fact that many conferences are scheduled in April and May.)
- 2) Students have access to an amount A in a year they don't present and an amount B in a year they do present. Presenting includes speaking, presenting a poster, or co-authoring a spoken paper or poster. Amounts A and B are set at the beginning of each year.
- 3) Students can split the money across conferences within a year. For example, they can receive A for one conference at which they do not present and then add the residual amount (B-A) in a later conference at which they present. Or they could split amount A across multiple conferences at which they did not present.
- 4) The close of the Spring semester ends that year's period of travel allowance, and the amount available to the student is reset at that point to the established rate for the new year. Funds that are unused at the close of Spring semester will not be added to the next year's travel allowance.

Exceptions to these policies are rare. Any request for variance must be made in writing at least two weeks prior to the conference in question with copies of that request going to the head and graduate director. To reduce the burden on travel funds, we encourage students to cooperate in driving to nearby conferences, sharing rooms, etc.

We also note that student funds are available through the graduate student organization, American Psychological Association, and other societies (such as the Society for Personality and Social Psychology), and we encourage students to apply. Sometimes students receive general fellowships that include funds for travel. Since we strongly encourage students to apply for outside fellowships, we do not consider that fact that they have such funds available to "count against" them in terms of their priority in receiving departmental funds. Decisions on providing departmental travel funds in such cases will be made on a case-by-case basis (taking into account the student's plans for paper presentations, workshops, etc. as well as the department budget). Our overall intent is that such students should be rewarded for their initiative in securing such funding by being able to participate in more funded psychology-related travel than would otherwise have been the case.

University Benefits for Graduate Students

University benefits for graduate students are described in University documents.