Cognitive Psychology

Cognitive Program Requirements

Course Work

In addition to the courses required by the department, the Cognitive Program requires that students take four cognitive core courses and three electives as described below. Students are also expected to participate in Cognitive Brown Bag throughout their graduate careers.

Four Cognitive Core Courses

PSCH 553: Cognitive Psychology of Memory and Attention
PSCH 554: Cognitive Psychology of Language
PSCH 555: Cognitive Psychology of Thinking
PSCH 557: Cognitive Psychology of Skill and Knowledge Acquisition

Electives

The three required electives are intended to extend and deepen students' understanding of cognition, broadly construed. Faculty in the cognitive program offer seminars on specific topics, rotating these offerings across the members of the program. As well, a number of cognitive program faculty offer courses in other programs or departments that may be appropriate to meeting the goal of these four electives. To aid in the planning process, the Cognitive Program chair will distribute a list of all courses that

will automatically fulfill the electives when requesting the spring Annual Review materials.

The following courses satisfy the goals of these three electives. At least two of a student's three electives should come from this list.

PSCH 510: Introduction to Cognitive Science

PSCH 558: Seminar in Cognitive Psychology (topics and instructors rotate across cognitive program faculty; may be taken multiple times)

PSCH 459/5XX: Graduate Course in Cognitive Methods

PSCH 594: Advanced Special Topics in Psychology (topics and instructors rotate across psychology department faculty. When cognitive faculty offer this course it does not require any further approval process.)

Approval of courses not on the list. Students may use courses other than those listed above to fulfill the cognitive elective requirement but these must be approved in advance. Students should submit information on courses they wish to take in fulfillment of the three elective requirement as part of the spring Annual Review in the section related to planning for the next academic year. Students will be notified of the program's review of proposed courses, including whether additional information is needed to make a decision.

If the approval process does not occur in conjunction with the annual review, the following approval processes are required and need to be completed prior to the end of the add/drop period each semester.

1. For courses taught by faculty in the cognitive program, the student submits the title/topic of the course along with a statement from the instructor of the course indicating that the course fulfills the goal of the four electives. This information along with a statement from the student's advisor indicating approval of the course as one of the four electives is submitted (by the student) to the Cognitive Program Chair who signs off on the request and places the information in the student's electronic file and passes the information on to the rest of the faculty and students in the Cognitive Program and to the graduate program coordinator.

2. For courses taught by faculty beyond those in the cognitive program and that are not on the list of approved courses circulated by the program chair, students submit to their advisor, the title, course description and syllabus or list of topics with a statement from the instructor of the course indicating that the student may enroll in the course. If the advisor approves, a statement indicating this along with the course information and instructor approval are submitted (by the student) to the Cognitive Program Chair who distributes the materials via email to the faculty in the cognitive program. If the majority of the program faculty agree with the request, the Chair signs off on the request and places the information in the student's electronic file and passes the information on to the rest of the faculty and students in the Cognitive Program and to the graduate program coordinator.

Cognitive Brown Bag Requirement

Students are required to register for **PSCH 559: Current Topics in Cognitive Psychology (Brown Bag)** every semester throughout their time in the program. Participation in a once-a-week convening of those that comprise the Cognitive Program Community is an important venue for professional growth, building presentation confidence, and learning to "respond on one's feet" to questions about a research study or program. As with any other requirement, students can petition to request a waiver from the brown bag requirement on a semester basis due to conflicts with other demands (teaching responsibilities, courses). The waiver request should be submitted to the Cognitive Program Chair before the start of the semester and **at least** one week prior to the add/drop period and will be considered in a timely manner by the program faculty as with all other waiver requests. The waiver request should include the student's year in the program, the milestones completed, the reason for the waiver, whether the waiver has been discussed with and approved by the adviser, and whether a waiver for Brown Bag has been requested and approved for a prior semester. (If so, provide the semester.)

First Year Research Apprenticeship

The Cognitive Program First Year Research Apprenticeship is typically completed by option 1 as stated in the Department Handbook (pg. 19):

1) completion of a first-year project that is separate from, or preliminary to, Master's thesis work, concluding with an APA-formatted research report that includes plans for moving to the MA Thesis Prospectus in a Conclusion section.

It has been rare for Cognitive students to satisfy the first year research apprenticeship with option 2:

2) conduct of research leading to the MA Thesis, concluding with an APA-formatted report that highlights the study's rationale, hypotheses, subjects, design, measures, and expected analyses and results.

Master's Thesis Process

Purpose and Scope

A primary purpose of the Master's thesis is for students to demonstrate that they can use theory, previous empirical findings, and research methods to design, carry out, and discuss a research study. The scope and design of the thesis project should allow for the reasonable expectation of completion within the first two years of graduate study.

There are two additional functions of the Master's project and process: evaluative and professional development.

Evaluative. The Master's thesis provides evidence of students' progress with respect to the knowledge, skills, and competencies needed to earn the doctoral degree. Accordingly, the Master's thesis involves all phases of a research project, including the collection and analysis of original data or of existing data when the proposed project

fulfills the spirit of proposing, justifying, and testing a novel idea as determined by Advisor and Thesis Committee.

Professional development. The Master's is an opportunity for students to develop critical reasoning skills in response to critiques and feedback from multiple sources comprising the cognitive and psychological sciences community. Not only is responding to feedback essential to conducting publishable research, but interactions with faculty and researchers beyond those on the Master's committee can provide a broader basis for recommendations and potential collaborations during but more importantly upon completion of the doctoral program.

The Master's thesis and process at UIC makes important contributions to the development of research, content, and dispositional preparedness for the competitive job market. Accordingly, the Cognitive Program expects all students admitted to the PhD program to complete a UIC Master's thesis.

Proposal Process

The Cognitive Program requires a formal Prospectus meeting for the Master's thesis. The student is encouraged to meet with potential committee members when there is a reasonably clear sense of the project to determine their interest in serving on the committee and seek their input on further development of the project. As the project is refined, the student is encouraged to update the committee members along the way. As indicated in the body of the Handbook, once the student and Advisor have identified the committee members, the student completes the Departmental **Committee Members and Prospectus Approval Form Part 1** and secures DGS approval of the Master's thesis Committee members. This must occur at least one week prior to the Prospectus defense meeting. Once the DGS has approved the committee composition, they will return the form to the student who should then bring that form to the proposal meeting.

When the student and his or her advisor agree on a project, and that the research proposal describing it is ready for review, the proposal is distributed to the committee members. This should be done *at least two weeks prior to the meeting*. The research proposal includes:
   a) an introduction to the relevant background literature sufficient to motivate the proposed study
   b) a description of the hypotheses to be tested
   c) enough detail of the methodology to allow the committee to judge feasibility and potential issues with the tasks, stimuli or design
   d) proposed methods of data analysis, again to allow the committee to evaluate feasibility and appropriateness.

Although a student is encouraged to engage in a thorough review of the literature in their chosen area, the introduction to the research proposal should be focused on motivating the study to be done, similar to the introduction to a journal article that reports original research in the area being proposed in your study. It is often the case that an introduction of 7 – 10 pages is appropriate. For the problem being proposed the introduction may need to be longer or a shorter introduction may suffice. The goal for the methods and analysis

sections is to be as complete as possible in order to receive informed feedback from the committee on the proposed procedures, materials, design, and analytic methods.

Proposal Meeting
The goal of the proposal meeting is for the student to present the motivation, design, and hypotheses for their study, and for the committee to provide consultation and suggest modifications where appropriate. The Advisor should take minutes during the meeting, and send a follow-up memo of understanding after the Proposal meeting for approval by the Committee, specifying the changes or modifications being required by the Committee to either the project or the Prospectus as well as the process for approval of the changes (e.g., who approves the changes). *The draft of the memo should be done as quickly as possible, but within a week of the meeting. The committee should review the memo within a week of receipt.* The final version of the memorandum is shared with the student and the committee members. The memorandum of understanding should reflect what the student, advisor, and committee have agreed to regarding the Thesis work. This includes the nature and extent of written revisions.

The student should bring the Departmental Committee Members and Prospectus Approval Form to the proposal meeting so that Part 2 – Prospectus Approval – can be completed. Part 2 includes specification of revisions and the process by which revisions will be approved. In some cases, committee members may want to see a revised proposal in which case they would not sign Part 2 of the form at the time of the proposal meeting. In other cases, they may leave approval of any revisions up to the chair of the committee, in which case they would sign and date Part 2.

Final Thesis
The style of the main body of the thesis should be similar to a manuscript that could be submitted for journal publication. However, students and advisors may wish to include additional materials in Appendices, such as archives of exact stimuli, details of pilot studies, supplementary analyses, etc. The Program's goal is that the Master's thesis may result in a publication, usually as part of a series of experiments that may include the first year project or follow up studies.

When the student and the advisor think a written draft of the completed project is ready for oral defense, the draft is disseminated to the committee. *Committee members are asked to provide feedback within two weeks on whether the draft is ready for defense, and if there is agreement, a meeting is scheduled.* Committee members can also ask for revisions to the draft if they feel a meeting would not be productive with the current version of the report.

At least three weeks prior to the defense, students must complete the Graduate College **Committee Recommendation Form,** *signed by the student's Advisor and the DGS.* The student turns the form in to the Graduate Program Coordinator who sends it to the Graduate College. The Graduate College indicates approval of the committee by delivery of the **Examination Report Form** to the Graduate Program Coordinator, who keeps it until the MA thesis defense.

At the defense, the student provides a brief overview of the completed study. The committee may question the student about the project's goals, issues of design and data analysis, and matters of interpretation. The committee may also ask for clarifications or modifications to the final thesis. The Advisor should take minutes during the meeting, and send a follow-up memorandum of understanding after the defense meeting for approval by the Committee, specifying any changes or modifications being required by the Committee to pass the Master's thesis.

Timeliness of Feedback. Feedback is an important part of the learning process and faculty are expected to respond to the proposal and the final thesis paper within two weeks of receipt of these documents. (This timeframe applies only during the Fall and Spring semesters.) Feedback is sent to the thesis Committee chair who synthesizes the feedback and shares it with the committee. The result of this process can be to proceed to oral defense or have the student revise the document prior to oral defense. These decisions should reflect the views of the majority of the committee members.

Credit for a Prior Master's Degree

Transfer of credits earned in a Master's program prior to entering the Cognitive program is possible. See section 2B of the Handbook for the general process. The Department handbook also states that "Students who have completed an experimental Master's thesis in Psychology may also request a waiver of the Department's requirement to complete a Master's research project at UIC." It should be noted that the Cognitive Program grants such waiver requests *only in very rare cases* because the program regards the UIC Masters process as one that provides essential mentoring in high quality research practices and thus essential preparation for the PhD thesis. Nevertheless, if a student wishes to request a waiver of the UIC Masters, the procedure is as described in the Department handbook.

Preliminary Examination

In accord with policies of UIC's Graduate College and the Department of Psychology, the Cognitive Program has established the following requirements and processes for completing the Preliminary Examination and recommending a student for formal Advancement to Candidacy for the doctoral degree. Oversight and monitoring of these requirements and processes rests with the Program Chair. It is also the Program Chair's responsibility to communicate with the candidate regarding the recommendations of the Program.

Process Components
There are four major components of the Cognitive Program Preliminary Examination Process leading to recommendation for Advancement to Doctoral Candidacy:

(a) Developing a Preliminary Paper proposal;
(b) Writing the Preliminary Paper;
(c) Oral Defense of the Preliminary Paper;
(d) Summative Review by program faculty of the student's academic credentials and accomplishments, including outcomes from committee review of the Preliminary Paper and its Oral Defense.

Committees.
There are two major committees with separate roles in the overall process:

The Preliminary Examination Committee. This committee is composed of all faculty in the Cognitive Program, with 5 required to sign the Committee Recommendation Form. In the case that five program faculty (including two tenured) are not available, the Department Head and/or the Director of Graduate Studies can serve as ex officio members.

The Preliminary Paper Review Committee. This committee is composed of at least three and at most four faculty members. One member may be from outside the program, the Psychology Department, or the University if approved by the Program Chair (the outside member must bring relevant expertise to the committee). The student's advisor is expected to be a member of the committee unless unusual circumstances (e.g., sabbatical) prohibit committee membership. **The student, after consultation with the advisor, submits a tentative title along with recommendations for Preliminary Paper Review Committee members to the Program Chair**, who will then invite their participation, identifying the Committee Chair. A*s part of accepting the invitation, faculty will commit to providing timely feedback as long as the proposal is distributed within the first 12 weeks of the Fall or Spring semesters.* The program strongly recommends that all students attempt to complete the proposal process within the Fall and Spring semesters, so that timely feedback can be received.

The Preliminary Paper

Purpose

The purpose of the Preliminary Paper component is for students to demonstrate their ability to write a paper that addresses a particular problem or issue by connecting theories and evidence. Demonstrations of this skill could include using theories to interpret empirical findings, such as by discussing possible theoretical constructs or cognitive mechanisms that may explain different patterns of results, using an analysis of empirical findings to revise existing theories or develop new theories, using existing theoretical constructs to derive novel empirical predictions, or identifying possible designs for future empirical studies that would allow one to test between alternative theoretical explanations. Summarizing a literature or a set of studies that were intended to test a specific hypothesis is insufficient. The product must represent an original contribution, making connections or drawing conclusions that have not been previously

made. Further, the student needs to demonstrate the ability to articulate their reasoning when making points or drawing conclusions, for example by providing enough information about any particular study that is serving as evidence to justify the students' novel claims about it. Thus, the student should not just assert conclusions but should lay out their reasoning of how they arrived at that conclusion.

Paper Proposal

The student should consult with his or her advisor and potential members of the Preliminary Paper Review Committee when preparing the paper proposal. The goal of the proposal is to provide the committee with a clear understanding of the intended product. It is expected that the student will have become familiar with the literature prior to initiating the proposal process in order to facilitate the identification of possible questions to address in the paper. The student's advisor and/or committee chair will review drafts of the proposal before it is submitted for approval. The proposal should contain a summary of the major elements of the final paper, including:

1. PROBLEM: a clearly stated problem, question, or issue that will be addressed,
2. THEORY AND EVIDENCE: a description of the cognitive constructs or theories or mechanisms that will be brought to bear on the question, and the bodies of empirical research that will be considered,
3. CONTRIBUTION: a description of how the final paper will make an original contribution to the cognitive literature, and
4. BIBLIOGRAPHY: a bibliography/reading list of the literature the student expects to use. The exact reading list will likely undergo adjustments as the project develops. The proposed bibliography/reading list is intended to provide the committee with an understanding of the scope and quality of the sources that will be read and considered, even if not all are cited in the final product.

Students should use these four headings in their proposals. Proposals are limited to no more than 3000 words, not including references (approximately 10 double-spaced pages).

Proposal Acceptance.

After committee invitations have been accepted and the student's committee chair believes the proposal is ready for official consideration, **the committee chair will distribute copies of the proposal to each committee member and to the Program Chair for review**. The committee reviews the paper proposal and provides written feedback to the committee chair. The purpose of the feedback is to point out strengths and weaknesses of the proposal and the overall acceptability of the project. The committee chair provides a synthesis of the collective comments to all members of the committee who then indicate to the committee chair their disposition regarding status of the proposal.

Three outcomes are possible:
(1) accept as is
(2) accept pending minor revisions
(3) postpone acceptance pending major revisions

During the Fall and Spring terms, committee members must give feedback within the two-week window or the committee chair will move forward without it and acceptance of the proposal will be assumed.

If the paper proposal is accepted as is by all members of the committee, then available feedback is provided to the student and the Program Chair is informed by the committee chair of the collective agreement by committee members to allow the student to proceed with the paper writing process. At this point the Program Chair initiates and oversees signing and submission of two forms: the **Committee Recommendation Form** for the Preliminary Examination, a formal University document, and the **Preliminary Agreement form**, an internal Cognitive Program document.

The Prelim Agreement form indicates the start and end dates of the 10 week writing period, along with the title of the paper, the committee, date of submission of the proposal to the committee and date of acceptance of the proposal by the committee. The student and the Program chair each sign and retain copies of this internal form, which is also sent to the committee members and the Graduate Program Coordinator.

The Committee Recommendation form includes student information (name, UIN, department and program). Note that the title of the preliminary paper should not be filled in; since this same form is used for masters and dissertation there is a space for title but this should be left blank. The form also specifies the five members of the Cognitive Program who will sign off on the **Examination Report form** advancing the student to candidacy. Typically, these are the members of the Prelim Paper Review Committee, the Program Chair, and one or two other faculty in the Cognitive Program. Note that although the Preliminary Paper Review committee may include faculty who are not members of the Cognitive Program, the Prelim Exam and Advancement to Candidacy Examination Report form must be signed by 5 faculty who are members of the Cognitive Program. In other words, if there are members of the prelim paper review committee who are not members of the Cognitive Program they should not be listed on the Committee Recommendation Form. The Program Chair sends the completed Committee Recommendation form to the Graduate Program Coordinator who then sends it to the Graduate College.

If the paper proposal is accepted pending minor revisions, then the student must submit a revised proposal to the committee chair within a time limit to be set by the committee, usually two weeks. The proposal is considered accepted when the committee chair has verified that all requested revisions have been made, has distributed copies of the revised proposal to all committee members, and has notified the Program Chair that there is collective agreement by committee members that the student should be allowed to proceed with the paper writing process. At that point, processes and forms initiated by the Program Chair and described in the above paragraphs are set in motion.

If acceptance of the proposal is postponed pending major revisions, then the student must submit a revised proposal to the entire committee and the Program Chair within a time limit set by the committee. The committee members review the revised proposal

and a new vote is taken. At this point, the committee members vote either "acceptable" or "unacceptable." The proposal is considered accepted if all members of the committee indicate that the revision is acceptable. Actions taken by the committee chair and Program Chair then follow the steps outlined in the paragraphs above.

If there continues to be disagreement as to acceptability of the proposal, the committee chair shall exercise discretion about whether to discuss the nature of the disagreements with the Program Chair who may then attempt to seek an appropriate resolution that will permit acceptance of the proposal. In the event that the proposal is ultimately rejected, the Paper Review Committee is disbanded. Subsequently, the student must choose a new topic, a new committee is formed, and a new proposal is processed in accord with the procedures described above. Members of the original committee may serve on the new committee. If the second (new) proposal is also rejected, the Paper Review Committee will report to the Program Chair that the student was unable to produce an acceptable proposal in the second attempt, which constitutes a de facto recommendation that the student has failed the paper writing component of the Preliminary Examination process.

Paper Completion. The student has 10 weeks to write the final preliminary paper which should be in APA format. The suggested length is between 10,000 - 12000 words not counting references, tables, or figures. (This is approximately 35-40 pages.) The paper may be no longer than 12,000 words. The writing period begins on the day specified on the internal prelim agreement form that the student and the Program Chair sign after the Chair is notified that the proposal is approved. During the writing period, the student should not seek the advice of any faculty member or student regarding the *organization or writing* of the final paper. He or she should not elicit comments from anyone on the *text* of the report. However, the student is free to discuss concepts and ideas relevant to the *content* of the project with any person as part of his/her normal, daily activities.

When the final paper is submitted, the committee members will give their evaluations of the paper to the committee chair within 2 weeks (unless the final paper is submitted less than 2 weeks before the end of the fall or spring semester or during the summer, in which case feedback may be delayed). If the paper represents the second attempt, or a revision of a first attempt, or if no more than 1 committee member considers the first attempt paper unacceptable, then the committee chair will provide written feedback to the student regarding possible areas of weakness that will be discussed in the oral. Committee members at their discretion may provide additional feedback. The student schedules the oral defense so that it occurs within 2 weeks of the receipt of the written feedback (unless the final paper is completed in summer when the scheduling of the orals may be delayed).

If the submitted paper is the first attempt and 2 or more committee members consider the paper unacceptable, then the student fails the paper-writing component of the Preliminary Examination. The Paper Review Committee then recommends either:

(a) that the student should be allowed to revise the paper and re-submit it to the Paper Review Committee within a specified time period usually not to exceed four weeks, in which case the paper evaluation process described in the previous paragraph is followed for the revised paper.

(b) that the student fails the paper-writing component of the Preliminary Examination, but should be allowed a second full attempt, in which case the new proposal may be on the same or on a different topic, and the members of the Paper Review Committee may serve on the new committee; or

(c) that the student should not be allowed a second paper writing attempt.

The recommendation is forwarded to the Program Chair. The Program Faculty either affirms the recommendation of the Paper Review Committee or decides on some alternative.

If the Paper Review Committee recommends that the student should be allowed to revise the paper (*a* above), the committee will provide feedback on the strengths and weaknesses of the first attempt. This is considered a continuation of the written portion of the Prelim Exam.

If the Paper Review Committee recommends that the student should be allowed a second paper writing attempt (*b* above), the **Examination Report Form** for the first attempt is completed indicating the failure of the first attempt. Upon approval of a second-attempt proposal, the **Internal Prelim Agreement** and the **Committee Recommendation Form** must be completed for this second attempt.

If the Paper Review Committee recommends that the student not be allowed a second paper writing attempt, and if the Program Faculty affirms this recommendation, the student fails the Preliminary Examination and this is indicated on the **Examination Report Form.**

Oral Defense. The oral defense will be centered on the specialty area as well as the written paper and has several purposes: to ensure that the student can orally present and discuss his or her views on the chosen topic; to allow committee members to query the student about aspects of the paper about which they have questions; and to ensure that the student can relate the specialty topic to related areas of Cognitive Psychology. The oral defense meeting should be scheduled for 2 hours.

At the oral defense meeting, the student describes his or her results and conclusions based on the written paper. This is typically a brief oral presentation (10-15 minutes maximum). The committee chair may provide the student with feedback from the committee in advance of the orals. If so, the student should address the feedback in the orals. Following the presentation, the committee members discuss the written paper, the orals, and the specialty area. The discussion phase concludes with sufficient time for the committee to meet without the student for purposes of discussing the quality of the paper and oral defense, as well as any suggested feedback to the student. Each member of the committee votes "pass" or "fail". If no more than 1 committee member votes "fail", the Paper Review Committee Chair submits the signed Internal **Cognitive Division Preliminary Paper Review Report** form to the Program Chair. This report includes the

vote of each member of the Paper Review Committee, their signatures, collective comments about the quality of the paper and oral defense, and an appraisal of whether the student should be recommended for advancement to candidacy.

If 2 or more committee members vote "fail" on a second attempt then the student cannot be advanced to candidacy. If 2 or more committee members vote "fail" for the oral defense of an initial attempt at the Preliminary Examination process, the Paper Review Committee then recommends either

(a) that the student fails the paper writing and oral defense components of the Preliminary Examination process, but should be allowed a second attempt, in which case the new proposal may be on the same or on a different topic, and the members of the Paper Review Committee may serve on the new committee; or

(b) that the student fails but should not be allowed a second attempt. This recommendation is forwarded to the Division Chair.

The Division Faculty either affirm the recommendation of the Paper Review Committee or decide on some alternative. If the Paper Review Committee recommends that the student not be allowed a second attempt, and if the Division Faculty affirms this, the student fails the Preliminary Examination.

Final Review and Recommendation of Advancement to Candidacy

Following receipt of the recommendation and report from the Preliminary Paper Review Committee, the Program Chair will call a meeting of the Preliminary Examination Committee (i.e., all Cognitive Program Faculty) to discuss the candidate's cumulative record of performance in the program, and vote on endorsement for advancement to candidacy. Evidence to be considered will include course performance, research quality, productivity and originality, other professional interactions with faculty relating to scholarly activity, as well as the Report of the Preliminary Paper Review Committee and any additional feedback the Committee members wish to provide. This meeting will normally occur within two weeks of receipt of the recommendation. A positive majority vote by the Program Faculty will be followed by completion and submission of the Graduate College Examination Report form indicating successful passing of the Preliminary Examination process. In case of a negative majority vote, the form will indicate that the student failed the Preliminary Examination process.

Doctoral Dissertation

Description of the PhD Procedure

Phase 1: Proposal Approval

1. The student, in consultation with his or her advisor, identifies a topic area for a dissertation research project proposal. They also agree on a group of committee members whose expertise and affiliation fulfill departmental and university guidelines. The proposed five-person committee must include a minimum of three faculty from the Department of Psychology (two from the Cognitive Division) and one member from outside Psychology. The committee chairperson must be from Psychology and a member of the UIC Graduate Faculty.

2. The student discusses the dissertation research project with each of the proposed committee members and requests their participation on the committee. When the committee has been identified, the student completes the Department **Committee Members and Prospectus Approval Form** and submits it to the DGS for approval of the proposed committee. The DGS must approve Committee members before the Committee meets formally for the first time, which is typically the proposal meeting.

3. The student, in consultation with his or her advisor (and with input from committee members) develops a dissertation research proposal which provides:
     (a) relevant background literature sufficient to motivate the proposed study
     (b) a description of the hypotheses to be tested or the issues to be investigated
     (c) details of the research design and methodology sufficient to judge feasibility
     (d) proposed methods of data analysis
Length of the proposal will vary depending on the nature of the problem to be pursued and the complexity of the design and/or analysis plan requiring description. When the student and his or her advisor agree that the proposal is ready for committee review, the proposal draft is disseminated to the committee members and an oral defense is scheduled.

4. At the oral defense of the proposal, the student provides an overview of the proposed research project. The committee members question the student about the project and provide feedback regarding the logic of the study, issues of design and data analysis, and any concerns about the feasibility or acceptability of the project. At the conclusion of the oral defense, the student is asked to leave and the committee members discuss with the advisor any necessary changes in the study for it to be approved. The committee invites the student back and orally shares the general nature of the proposed changes. This is followed by a written summary generated by the advisor and shared with the student and the members of the committee**.** The student responds to the proposed changes, rewrites

the plan as necessary, and distributes it to the committee. It is presumed that the study will then be executed in accord with the revised plan.

5. When the proposal has been approved by the committee, the committee members complete the previously DGS-approved Department **Committee Members and Prospectus Approval Form.** As well, the student enters the names of the committee members on the Graduate College **Committee Recommendation Form** and turns it in to the Graduate Program Coordinator. This initiates a degree-check by the Graduate Program Coordinator. Upon certifying that the student has completed (or is In process of completing) all the requirements for the degree, the Graduate Program Coordinator forwards the **Committee Recommendation Form** to the Graduate College for formal approval. The Graduate College approval is indicated by the **Examination Report Form** being sent to the Graduate Program Coordinator who places the form in the student's file until the defense of the completed project.

6. The student carries out the research project described in the original proposal, amended as necessary to reflect changes forwarded in writing following the proposal orals.

Phase 2: Dissertation Defense

1. When the student and his or her advisor think that a written draft of the completed dissertation research project is ready for oral defense, the dissertation draft is disseminated to the committee. The committee members are asked to return feedback within 2 weeks. Two matters of concern are to be addressed in each committee member's feedback. The first is whether the document is of sufficient quality to be defended orally. (If 4 of the 5 committee members agree, the orals can be scheduled and the process moves to Step 4.) The second is what changes/clarifications, minor or major, are needed in the document prior to holding the oral defense.

2. After all the feedback has been received, the advisor provides to the student an appropriate synthesis of the feedback and any necessary changes. If the advisor thinks that the requested revisions are mutually contradictory, excessive, or unjustified vis-à-vis the original proposal, then the advisor can call a meeting of the committee. The committee meets without the student present to consider the collective requests for revision and how to resolve any differences of opinion. Following this process the advisor provides feedback to the student about necessary revisions. (This step should not normally be needed.) The student works on appropriate revisions and when the advisor deems the revised product to be sufficiently responsive and complete, the student distributes the revised draft.

3. If, within two weeks of receiving the revised draft, a committee member thinks that the product is still not of sufficient quality to be defended, then he or she informs the

advisor to that effect. If at least two members of the committee are of this opinion, the oral defense is not scheduled. The committee members can then provide additional feedback on the document which the advisor synthesizes and passes along to the student. The process goes back to step 2. The cycle of review of the draft by committee members followed by subsequent revisions and re-review by the committee can occur a maximum of two times before an oral defense must be scheduled.

4. Once the committee agrees to an oral defense, the student is required to submit the Title, Abstract, Names of Chair and Committee, and time, date and location of the defense to the department's Graduate Program Coordinator two weeks in advance so that it can be publicly announced.

5. At the oral defense, the student provides an overview of the completed research project. The committee members question the student about the project's goals, issues of design and data analysis, and matters of interpretation. At the conclusion of the oral defense, the student is asked to leave. The committee members then vote on approval and discuss any further changes in final written product. The advisor shares these changes with the student in writing, copying the members of the committee. It is presumed that committee discussion at the orals will result in the need for additional revisions and clarifications in the final document. It is expected, however, that any such proposed revisions will be minor, that the **Examination Report Form** indicating approval of the dissertation can be signed at the meeting, and that the committee can assign to the advisor the responsibility of verifying that appropriate final revisions have been made**.** In the event that major revisions are requested, no vote is taken at the time of the orals nor are any forms signed. The advisor shares the changes requested by the committee in writing, copying members of the committee. The student is allowed one revision cycle to address the concerns of the committee.

6. Upon completion of the final changes a vote is taken if still necessary and the signed **Examination Report Form** is submitted using the date of the oral defense as the date of completion.

Refer to the main body of the Psychology Graduate Handbook for completing the process of filing the actual dissertation with the Graduate College and of graduating with the PhD.

Requirement Checklist for Cognitive Psychology

I.   General Departmental Requirements

____ Advisor-approved First Year Research Apprenticeship Report
____ Committee-approved MA Proposal
____ Approval of Proposed Minor
____ Committee-approved MA Thesis
____ Graduate College--Approved MA Degree
____ Preliminary Examination Proposal
____ Program-approved Preliminary Examination
____ Graduate College--Admission to Candidacy
____ Committee-approved Ph.D. Proposal
____ Committee-approved Ph.D. Dissertation
____ Major Program Requirements
____ Minor Area Requirements
____ Two semesters 50% TA (or equivalent) in first 4 years and TA orientation class
____ Graduate College--Approved Ph.D. Degree

II. Department Course Requirements

____ PSCH 505 Advanced History of Psychology (3 hours – is currently under consideration for removal from the course requirements beginning Fall 2021)
____ PSCH 507 Emerging Research Issues (1 hour fall, 1 hour spring)
____ PSCH 508 Colloquium on Teaching Psychology (1 hour, fall)
____ PSCH 541 Introduction to Computing in Psychology (1 hour, spring)
____ PSCH 543 Research Design and Analysis (4 hours)
____ PSCH 545 Multivariate Analysis (3 hours)
____ PSCH 591 Research Apprenticeship (2 hours-fall)
____ PSCH 591 Research Apprenticeship (2 hours-spring)
____ PSCH 598 Thesis Research (3 hours-fall)
____ PSCH 598 Thesis Research (3 hours-spring)
____ PSCH 599 Dissertation Research (12 hours)
____ Students must complete 32 semester hours of course work for the MA
____ Students must complete 96 semester hours of course work for the Ph.D.

III. Major Area Course Requirements

Core Courses
____ PSCH 553: Cognitive Psychology of Memory and Attention
____ PSCH 554: Cognitive Psychology of Language
____ PSCH 555: Cognitive Psychology of Thinking
____ PSCH 557: Cognitive Psychology of Skill and Knowledge Acquisition
____ PSCH 559 Current Topics in Cognitive Psychology (Brown Bag) all semesters

Electives

At least two and up to three courses from the following list.

_____ PSCH 510: Introduction to Cognitive Science

_____ PSCH 558: Seminar in Cognitive Psychology (topics and instructors rotate across cognitive program faculty; may be taken multiple times)

_____ PSCH 459/5XX: Graduate Course in Cognitive Methods

_____ PSCH 594: Advanced Special Topics in Psychology (topics and instructors rotate across psychology department faculty. When cognitive faculty offer this course it does not require any further approval process.)

Students may use a course other than those listed above to fulfill one cognitive elective requirement but it must be approved in advance.

___ Other Approved Elective

IV. Minor Requirements (Specify area, course # and titles, if opting to complete a minor)

___ Area: _____

___ Course #1: _____
___ Course #2: _____
___ Course #3: _____
___ Course #4: _____
or   ___ Brown Bag (2 semesters): _____

A Sample 4-year Course Schedule for Cognitive Psychology

Year 1--Fall Semester

Department	507	Emerging Research Issues	1
	508	Colloquium on Teaching in Psychology	1
	543	Research Design and Analysis	4
	591	Research Apprenticeship	2
Major	554	Cognitive Psychology of Language	3
	559	Current Topics in Cognitive Psychology (Brown Bag)	1
		TOTAL	12

Year 1--Spring Semester

Department	507	Emerging Research Issues	1
	545	Multivariate Analysis	3
	541	Introduction to Computing in Psychology	1
	591	Research Apprenticeship	2
Major	553	Cognitive Psychology of Memory and Attention	3
Major/Minor	LST**	Elective Cognitive Course/Minor Course (If completing)	3
	559	Current Topics in Cognitive Psychology (Brown Bag)	1
		TOTAL	14

Year 2--Fall Semester

Department	598	Thesis Research	5
Major	557	Cognitive Psychology of Skill and Knowledge Acquisition	3
Major/Minor	LST**	Elective Cognitive Course/Minor Course (If completing)	3
	559	Current Topics in Cognitive Psychology (Brown Bag)	1
		TOTAL	12

Year 2--Spring Semester

Department	598	Thesis Research	5
Major	555	Cognitive Psychology of Thinking	3
Major/Minor	LST**	Elective Cognitive Course/Minor Course (If completing)	3
	559	Current Topics in Cognitive Psychology (Brown Bag)	1
		TOTAL	12

Year 3--Fall Semester

Department	505	Advanced History of Psychology (encouraged for COG)	3
Department	596	Independent Study (Prelim)	5
Major/Minor	LST**	Elective Cognitive Course/Minor Course (If completing)	3
	559	Current Topics in Cognitive Psychology (Brown Bag)	1
		TOTAL	12

Year 3--Spring Semester

Department	596	Independent Study (Prelim)	5
Major/Minor	LST**	Elective Cognitive Course/Minor Course (If completing)	3
Major/Minor	LST**	Elective Cognitive Course/Minor Course (If completing)	3
	559	Current Topics in Cognitive Psychology (Brown Bag)	1
		TOTAL	12

Year 4--Fall Semester

Department	599	Dissertation Research	6
	587	Practicum in Instruction in Psychology (recommended)	3
Major	559	Current Topics in Cognitive Psychology (Brown Bag)	1
		TOTAL	10

Year 4--Spring Semester

Department	599	Dissertation Research	6
	587	Practicum in Instruction in Psychology (recommended)	3
Major	559	Current Topics in Cognitive Psychology (Brown Bag)	1
		TOTAL	10

** Course is from a list of elective and minor courses from which the student may choose.