

# Research Honors and Independent Research Guide

Department of Psychology, The College of Saint Rose  
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## What are Independent Research and Research Honors?

### Independent Research:

The Department of Psychology recognizes the importance of developing excellent research skills and the value that pursuing independent research may afford students, especially those seeking careers that may involve research. To that end, the Department of Psychology has established two courses [Independent Research I (PSY 493) and Independent Research II (PSY 494) described in more detail below] which provide students with an opportunity to complete an intensive independent research project outside of what might be completed in their normal coursework. While the department currently requires students to acquire extensive research experience through the PSY 295 and PSY 299 sequence, the Independent Research courses give students an opportunity to pursue research interests in a more self-directed manner. The expectation is that the student will produce a high quality manuscript by the end of the Independent Research sequence which will be defended orally at The College of Saint Rose and which may be submitted for publication to a scholarly journal in the appropriate field or sub-discipline.

### Research Honors Concentration:

Many students majoring in Psychology at The College of Saint Rose have produced some truly exceptional research projects. In order to recognize and reward such excellence, the Department of Psychology has developed a Research Honors Concentration in Psychology which falls under the umbrella of the School of Mathematics and Sciences Research Honors program. The Research Honors in Psychology combines a number of research-based courses, many of which are required for the major, with some minimum GPA and course-grade requirements. The Research Honors Concentration will be awarded to those students who meet these requirements, as discussed below, and who demonstrate excellence in their pursuit of hypotheses in an area of psychological science.

## Eligibility and Program Requirements

### Independent Research Requirements:

In order to enroll in the Independent Research course sequence, students must first have successfully completed Research Methods I and Research Methods II and must secure a faculty research advisor for their project. Advisors must be full-time tenured or tenure-track faculty in the Department of Psychology at The College of Saint Rose.

### Research Honors Concentration Requirements:

In addition to the Independent Research Requirements stated above, students interested in pursuing Research Honors must meet other general requirements established by the School of Mathematics and Sciences and specific requirements established by the Department of Psychology.

#### School of Mathematics and Sciences Requirements:

- Students must file an “Intent to Pursue Research Honors” document with the Dean of the School of Mathematics and Sciences.
- Students must select a research honors project advisor from their department.
- Students must sign up for Honors Candidacy in the Mathematics and Sciences for Psychology at the academic advising office. This concentration will appear on their academic progress report and academic transcript as, “Research Honors in Mathematics and Sciences – Department of Psychology.”
- Students must earn a grade of B or higher in the departmental courses required for research honors.
- Students must have a minimum overall GPA of 3.0 at the time of graduation.
- At the conclusion of the research honors project, students must submit their thesis in a format appropriate for a scholarly journal in their discipline. Copies of this thesis will be maintained in the office for the Dean of Mathematics and Sciences and in the Neil Hellman Library.

#### Department of Psychology Requirements:

- PSY 295 Research Methods and Statistics I – Quantitative Methods – Grade  $\geq$  B
- PSY 299 Research Methods and Statistics II – Design and Analysis – Grade  $\geq$  B
- PSY 493 Independent Research I – Grade  $\geq$  B
- PSY 494 Independent Research II – Grade  $\geq$  B
- PSY 495 Directed Research – Grade  $\geq$  B (minimum of 3 credit hours)
- PSY 498 Senior Seminar in Psychology: Research in Psychology – Grade  $\geq$  B
- Overall GPA  $\geq$  3.0 at the time of graduation
- Psychology GPA  $\geq$  3.2 at the time of graduation

Students who appear to meet the requirements for Research Honors will be recognized during the spring academic convocation ceremony (i.e., it is expected that some students may be completing PSY 494 during the spring semester of their senior year). However, the official degree will be conferred based upon the student's final transcript and the assessment of these requirements at that time.

## Selecting an Advisor and Committee

Students must complete Appendix A establishing both a faculty research advisor and a committee. Regardless of whether a student wishes to pursue Research Honors or would simply like to complete an Independent Research Project, all students are required to obtain a faculty research advisor and committee. The research advisor does not have to be the student's academic advisor, but must be a full-time tenured/tenure-track faculty member in the Psychology Department who can assist them with the process (not necessarily the project) and work with them as a liaison to the department. It is the student's responsibility to seek out a research advisor BEFORE enrolling in Independent Research I. The research advisor may serve as an advisor for up to 3 Independent Research Projects at a time, unless special permission is obtained from the department chairperson. Even if a faculty member is advising only 1 research honors project, she/he may ask the student to seek out another faculty member who may not have any research advisees so that the responsibilities are shared by all full-time tenured/tenure-track faculty in the department. A potential research advisor may request additional information from the student prior to rendering a decision (e.g., general proposal of anticipated research project, academic transcript, writing sample, etc.) to serve as the research advisor. Once a faculty member has committed to be the research advisor for the Independent Research Project, she/he will be expected to serve as the advisor for the student during both Independent Research I and Independent Research II courses, unless special circumstances arise and a change in advisors is agreed upon by the student and both faculty members.

When selecting a research advisor for the project students should consider the interests of the different faculty in the Department of Psychology. In order to help students, a list of the full-time tenured/tenure-track faculty and their interests is provided below:

Dr. Kathleen Crowley, Professor of Psychology

Gender Development  
Gender and the Media  
Psychological Perspectives on Parenting  
Child Development  
History, Systems, and Culture in Psychology Psychology, Social Science, and Diplomacy

Dr. Nancy Dorr, Professor of Psychology

Social and Personality Aspects of Health and Well-Being  
(including, but not limited to, stress, coping, mindfulness, HPV prevention/screening, alcohol use, media campaigns, persuasive attempts for changing health attitudes, targeting health behavior change in college students)

Social Psychology

(including, but not limited to, terror management theory, prejudice, effect of prejudice/discrimination on the targets)

Aging

(including, but not limited to, health and well-being of the elderly and attitudes toward the elderly)

Dr. Robert Flint, Professor of Psychology

Behavioral Neuroscience

Learning, Memory, and Amnesia

Behavioral Pharmacology

Cognitive and Behavioral Impact of Stress

Psychoneuroimmunology

Dr. Donna Reittinger, Professor of Psychology

Pediatric Palliative Care

Family Issues During the Terminal Illness of a Child

Holocaust

Dr. Ann Zak, Professor of Psychology

Love, Trust, and Intimacy in Romantic Relationships

Social Interactive Technologies and Dating

Romance and the Workplace

The student's Independent Research Project Committee will be comprised of all available (i.e., not on leave, sabbatical, or otherwise off campus for the semester) full-time tenured and tenure-track faculty in the Department of Psychology. In the event that some faculty are unavailable, the committee must contain a minimum of three faculty from the Department of Psychology. All available faculty will be automatically included. The Faculty Advisor will serve as the liaison between the student and the committee which will review and evaluate the student's work. In the case of multidisciplinary projects, the student may request to have up to two tenured or tenure-track faculty, from outside the Department of Psychology at Saint Rose, serve on their committee. If a student wishes to have a faculty member from outside the Department of Psychology on their committee, she/he must complete Appendix B prior to completing Appendix A.

## Independent Research and Honors Course Descriptions

Listed below are the course descriptions for the Independent Research courses as well as the additional courses required of students seeking Research Honors.

### **PSY 295      Research Methods and Statistics I - Quantitative Methods 4**

An introduction to psychological research strategies and statistical applications. Topics to be covered include an overview of the most commonly used descriptive and basic inferential statistics that are used in psychological research, basic research design and an introduction to using SPSS for analyzing and understanding data. Prerequisites: successful completion of PSY 110 with a C or better. Students must achieve an appropriate score on the Mathematics Placement exam. Co-requisite: Students must have completed already (with a C or better) or be concurrently enrolled in PSY 111. Fall

### **PSY 299      Research Methods and Statistics II - Quantitative Methods      4**

A continuation of PSY 295. This course involves further examination of psychological research strategies and statistical applications. In this course, students will be required to complete a psychological study that includes a review of the relevant literature, hypothesis formation, data collection, data analysis and interpretation, and submission of a final report that conforms to the format detailed for manuscripts in the Publication Manual of the American Psychological Association (Fifth Edition). Fulfills writing-intensive requirement. Prerequisite: successful completion of PSY 295 with a C or better. Spring

### **PSY 493      Independent Research I      3**

Students will develop an empirical research prospectus which, upon completion, will be submitted to their advisor for departmental approval as described in the Independent Research Guidelines available on the Psychology Department web page. Upon approval of the prospectus, students will acquire permission to conduct their research from the appropriate oversight committee (IRB or IACUC) and will accumulate the materials necessary for data collection. This course is open to all students meeting the prerequisites, but has been designed specifically for students seeking Research Honors in Psychology. Students must take Independent Research I and Independent Research II in consecutive semesters unless specific permission is otherwise obtained. Students must select a primary advisor who will oversee the project during both semesters and must earn a grade of B or higher in order to be eligible for Research Honors. Course Prerequisites: PSY 299 and permission of a project advisor from the Psychology Department. Research honors Requirements: A minimum GPA of 3.2 overall and in Psychology at the time of graduation and a grade of B or higher in this course. (3 credits)

### **PSY 494      Independent Research II      3**

PSY 494 Independent Research II (3 credits) Students will collect and analyze their data, compose a publication quality manuscript, and do a public oral presentation and

defense of their research project proposed in Independent Research I. Students should consult the Independent Research Guidelines on the Psychology web page for details regarding this course. Independent Research II is open to all students meeting the prerequisites, but has been designed specifically for students seeking Research Honors in Psychology. Students must take Independent Research I and Independent Research II in consecutive semesters unless special permission is obtained. Course Prerequisites: PSY 493 and permission of a project advisor from the Psychology department. Research Honors Prerequisites/Requirements: A grade of B or higher in PSY 493 and a minimum GPA of 3.2 overall and in Psychology at the time of graduation is required.

**PSY 495      Directed Research      1-6**

Students must make specific arrangements for Directed Research with a full-time faculty member in the Psychology department prior to registration.

**PSY 498      Senior Seminar in Psychology: Research in Psychology      3**

This course is designed to provide Psychology majors with a capstone experience. Each student in this course will be required to successfully complete and present a project on a significant question or topic that is being addressed by psychologists currently working in the discipline. Students will also prepare for the department's comprehensive examination that will provide an outcome assessment of each student's accomplishments within the major. Students must pass the comprehensive exam to successfully complete this course. Fulfills writing-intensive requirement. Prerequisite: PSY 299 completed with a C or better. Successful completion of this seminar, with a C or better, is required for graduation. Open only to senior Psychology majors. Fall

# Independent Research I (PSY 493) Guidelines

Independent Research I (PSY 493) involves five major parts. First, students must develop a general/broad research idea. Second, students must conduct an extensive literature review and establish a comprehensive list of references. Based on these references and their readings, students must then formulate a more specific research idea and generate one or more testable hypotheses. Fourth, students will be required to write a research prospectus, detailing the proposed research project in appropriate APA format. Lastly, the student will complete and submit a research protocol to the appropriate oversight committee (IRB or IACUC) in order to acquire approval to begin data collection during the subsequent term. Each part of the project has been described in detail below, and a sample timeline for completing PSY 493 during a traditional fall or spring semester is provided in Appendix C.

## 1. Development of a General/Broad Research Idea

As students begin to consider potential topics for research they should think about career goals as well as the content of the courses they have enjoyed and performed particularly well in. Conduct some broad-based literature searches using PsycINFO, skimming over the various abstracts of articles, and generate three or four potential topics. Acquire some sample articles associated with each topic (recent review articles are sometimes good) and read through them to help you narrow down the general area of research. If you need assistance with conducting literature searches, don't hesitate to ask one of the reference librarians in the Neil Hellman Library.

It is possible, and even likely, that students may have already discovered one or more areas of interest based upon research they completed in Research Methods II, Directed Research, or other research courses. It is completely appropriate, and even encouraged, that students consider developing independent research projects that are related to these established interests. Likewise, projects may be logical extensions of that earlier research. In the event that a student wishes to build upon prior research they have conducted, it is critical that they clearly describe how the proposed independent research project will be different from their prior work.

## 2. Literature Review

Once students have selected the general area for the research project, they should conduct a thorough review of the literature acquiring articles through interlibrary loan if necessary. As 'ideal' articles are acquired, students should make note of the key terms used to index those papers and do additional literature searches using those terms. Articles should be carefully read and critically analyzed in order to provide enough insight for the development of a novel hypothesis.

It is difficult to say how many articles should be reviewed and included in the final manuscript, since the available literature on different topics may vary greatly. However, students should strive to review 40-60 papers as they narrow their topic

down. While this is simply a recommendation, the prospectus should cite at least 30 sources and students should keep in mind that faculty will expect the student to be an expert with respect to their topic. Faculty may consult the literature themselves when reviewing the student's work and when formulating questions for the student's oral defense of their project during Independent Research II.

### 3. Specific Research Idea and Testable Hypothesis(es)

Formulate a specific research idea in 2-3 sentences and present the hypothesis(es) that you plan to test in your experiment. As students proceed through this process, they should keep in mind that the project they propose needs to be 'doable'. This means that students should consider the time commitment that will be required to complete the project, the need and availability of equipment and supplies, and the potential financial obligation that completing the project might impose.

There are a number of potential sources from which students might find financial support, although these are often competitive and require planning ahead on the student's part. The College of Saint Rose now offers Summer Undergraduate Research Grants which include a stipend and campus housing for one summer session. If the student is a member of Psi Chi – The International Honor Society for Psychology, she/he may apply for one of the student research grants offered through that organization.

### 4. Research Prospectus

Students will generate a research prospectus, written in proper APA format, proposing the planned research project. The prospectus should include a comprehensive introduction containing a **thorough** review of the literature on the topic and related issues, and a clear presentation of the research hypothesis(es). There should be a detailed and comprehensive methods section with the appropriate subsections. Students should include the number of participants/animals planned for the study overall and per group/condition and any specific sample characteristics or restrictions. The materials/apparatus subsection of the methods should include a detailed description of all necessary materials (including vendors) and all major equipment (including suppliers). If the necessary materials for the proposed project are not currently available at Saint Rose, students are responsible for determining the feasibility of acquiring those materials (e.g., cost of materials, time to acquire the materials, acquisition requirements – some psychological assessments require a M.A. or Ph.D. to acquire and administer). The procedure subsection of the prospectus should provide a detailed description of the procedure that will be employed in the project. The results section should indicate the type(s) of statistical analyses that will be conducted following data collection, any critical comparisons/relationships that will be examined, and the expected statistical results. In order to ensure that students fully understand their project design, data collection process, and means of analysis, students should set-up the appropriate SPSS spreadsheet, input 'sample' data, and run one or more

'practice' analyses. Lastly, the discussion section of the prospectus should provide a hypothetical interpretation of the results should they support the student's hypothesis(es) and importantly, consider alternative interpretations.

One complete draft of the prospectus may be submitted to the faculty research advisor for feedback no later than the beginning of the 12<sup>th</sup> week of the semester, and the faculty advisor will return the draft prospectus within 7 business days, unless an alternative timeline is mutually agreed upon by the faculty advisor and the student. At the same time, copies should be submitted to the committee members for their optional comments. Committee members must provide their feedback within the same timeframe as the faculty research advisor in order for changes to be incorporated into the final draft of the prospectus.

It is critical that the final draft contain revisions based on the faculty research advisor's comments. Failure to revise the manuscript in accordance with the advisor's suggestions will result in significant penalties. Grading of this final draft of the prospectus will be based largely on how well the student has revised the manuscript in accordance with the faculty research advisor's comments. The final draft of the prospectus must be submitted electronically to the faculty advisor by the beginning of the 15<sup>th</sup> (last) week of the semester. The faculty advisor will grade the prospectus using the grading rubric outlined below under Assessment of Independent Research I.

## 5. Research Protocol

The final task to be completed during the Independent Research I course is the submission of a research protocol to the appropriate oversight committee (Institutional Review Board for human participant research or the Institutional Animal Care and Use Committee for non-human animal research). Students will be required to submit the actual testing instruments, if applicable, for human subject research so copies of such materials should be acquired as soon as possible. The Faculty Advisor must review and approve the protocol form prior to its submission to the review board.

### Assessment of Independent Research I

APA Format (10 points)  
Writing Quality (20 points)  
Abstract (5 points)  
Introduction (25 points)  
Participants/Subject (15 points)  
Materials/Apparatus (15 points)  
Procedure (20 points)  
Results (25 points)  
References (15 points)  
Total = 150 points

The grade for Independent Research I will be submitted by the research advisor and will be based on the research prospectus and will be graded using the following rubric.

The IRB/IACUC protocol must be submitted to the appropriate committee for review before the final grade for PSY 493 will be filed at the end of the term. If the protocol is not submitted, it is assumed that the student will accept and pay for an "incomplete" in the course, allowing for an additional 30 days of the next term to complete this assignment. Once the protocol has been submitted, the grade for PSY 493 will be processed.

The research advisor has the right to implement penalties in the event that the student fails to submit the completed rough or final drafts of the prospectus in a timely manner allowing for sufficient time for the faculty research advisor to grade the assignments.

## Independent Research II (PSY 494) Guidelines

Independent Research II (PSY 494) is comprised of five major parts. The parts include data collection and analysis, completion of the manuscript and submission for feedback from their faculty research advisor, revision of the manuscript based on the faculty research advisor's comments and submission to the committee, a public oral defense of the project, and revision of the final manuscript incorporating comments from the committee. Each of these parts are described in more detail below. A sample timeline for completion of PSY 494 is shown in Appendix D.

### 1. Data Collection and Analysis

Having acquired approval from the appropriate oversight committee the previous term, students must implement their study and collect their data. As data collection proceeds, students should maintain an up-to-date SPSS spreadsheet so that analyses of these data may be completed in a timely fashion as soon as collection is complete. There should not be any need to investigate the manner with which data should be analyzed, as that should have been determined and stated in the prospectus.

### 2. Completion of the Manuscript and Submission to Faculty Research Advisor

Once the final data analyses are completed and the results have been interpreted, the student must incorporate these into their manuscript. The manuscript must then be reworked, accounting for these data in the Abstract, Results, and Discussion sections. Students may also find that the Introduction may need to be reworked in order to provide the appropriate focus/support for the results of the study. This complete draft will be submitted to the faculty research advisor for feedback which will be provided with 7 days unless an alternative timeline is mutually agreed upon.

### 3. Revision of Manuscript and Submission to Committee

The student will address the feedback and comments from the faculty research advisor and put together a final draft of the manuscript which must be sent electronically to the faculty research advisor who will distribute the document to the student's committee. At this time the faculty research advisor will also facilitate the scheduling of the oral defense so that all committee members can be present.

### 4. Oral Defense

The oral defense will be open to the campus community and students are encouraged to invite family and friends. For the oral defense, students will be required to make a 20-30 minute formal oral presentation of their study using PowerPoint. While all committee members will have read the manuscript, the presentation should cover all aspects of the

project (e.g., sufficient review of the literature, methods, results, interpretation, and broader meaning/application). Following the presentation, the student will be asked to respond to questions about their project posed by their committee. The faculty research advisor will serve as chairperson of the committee and will oversee the question/answer portion of the oral defense. Once the committee is finished, the general audience will be given an opportunity to ask questions as well. Once all questioning has been completed, the audience will be dismissed and the student will be asked to wait while the committee deliberates in order to determine the student's grade based on the manuscript and the oral defense of the project.

## 5. Final Manuscript Revisions

Each of the faculty sitting on the student's committee will be asked to provide written comments on the manuscript and, if such comments are made, will be required to submit them to the student at the completion of the oral defense. The student will then be required to revise their manuscript in accordance with these suggestions before submitting a final version to their faculty research advisor. The faculty research advisor will have copies made/bound for placement in the Neil Hellman Library and the School of Mathematics and Sciences.

## Submission for Publication

Although it is not a required component of the course, the faculty strongly encourage students to attempt to publish their manuscript. There are a number of different outlets for undergraduate student work. Students should discuss possible options with their faculty research advisor who will be able to assist them with this process.

## Assessment of Independent Research II

The grade for Independent Research II will be determined by the committee immediately following the student's oral defense. While faculty all have different areas of expertise, and thus may have different opinions regarding the student's performance, the final grade will be a committee decision. Faculty on the committee will all have read the student's manuscript and witnessed the student's oral defense, and the student's grade will be based on these two assignments. The final grade will be filed by the faculty research advisor only after the final manuscript revisions have been made and an electronic copy of the final manuscript has been received.

Appendix A

Designation of the research advisor, committee members, and student's acknowledgment of the requirements of the independent research course sequence and research honors requirements.

Date:

Term/Year Independent Research I: \_\_\_\_\_

Anticipated Term/Year Independent Research II\*: \_\_\_\_\_

\*Students are expected to complete Independent Research I and II in consecutive terms. This may be done from fall to spring semesters, spring to fall semesters, spring semester to summer I or summer II sessions, summer I to summer II session or fall semester, or summer II to fall semester. Special permission must be obtained from the Faculty Advisor if the student does not plan to complete these 2 courses in consecutive terms.

Student's Name (Print): \_\_\_\_\_

Student's Signature: \_\_\_\_\_

Faculty Advisor's Name (Print): \_\_\_\_\_

Faculty Advisor's Signature: \_\_\_\_\_

List of Committee Members:

Print Names Below

Signature

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Appendix B

Request for Committee Member(s) from Outside the Department of Psychology

Faculty outside of the Department of Psychology must be full-time tenured or tenure-track faculty at The College of Saint Rose. As a committee member, faculty will be expected to provide feedback on the final manuscript and will be expected to attend the final oral defense of the project.

Justification of Need for Outside-the-Department Faculty:

Faculty Name (Print)	Department	Faculty Signature	Project Advisor's Approval
_____	_____	_____	_____
_____	_____	_____	_____

## Appendix C

### Independent Research I – Sample Timeline for Spring or Fall Semesters\*

- Week 1 – Brain storm potential research topics and review the literature.
- Week 2 – Review the literature, narrowing down the topic.
- Week 3 – Finalize the research topic and conduct detailed literature reviews. Acquire copies of all relevant articles.
- Weeks 4-6 – Continue reading the literature and begin to determine the variables you are interested in and potential hypotheses you'd like to address.
- Week 7 – Write research prospectus. This is a complete research proposal written in APA format
- Week 8 – Write research prospectus.
- Week 9 – Write research prospectus.
- Week 10 – Write research prospectus.
- Week 11 – Write research prospectus.
- Week 12 – Submit completed research prospectus to research advisor for feedback.
- Week 13 – Revise research prospectus. Begin IRB or IACUC protocol.
- Week 14 – Revise research prospectus. Complete and submit IRB or IACUC protocol form.
- Week 15 – Submit final version of research prospectus electronically to research advisor.

\*Students should be aware that the timeline maybe highly accelerated if this course is taken during the summer.

## Appendix D

### Independent Research II – Sample Timeline for Spring or Fall Semesters \*

- Week 1 – Prepare all materials for data collection and set up SPSS data sheet(s) for data entry.
- Weeks 2-10 – Data collection, analysis, and interpretation.
- Week 11 – Submission of manuscript, updated appropriately in accordance with the results, to the faculty research advisor.
- Week 12 – Revision of the manuscript in accordance with the faculty research advisors feedback and distribution of the final manuscript to the committee.
- Weeks 13-14 – Schedule of and completion of the oral defense.

\*Students should be aware that the timeline maybe highly accelerated if this course is taken during the summer. In addition, if the course is taken during the summer, the student may be required to accept an incomplete until all faculty on the committee return during the fall semester and an appropriate time for the oral defense can be scheduled.