# Capstone Honors Research Seminar

**Instructor:** Dr. Rob Stewart  
**Contact Information:** LD151  317 278-1815  
**Prerequisites:** (1) B305 (statistics) and (2) B311 (introductory laboratory), in addition to maintaining eligibility for Departmental Honors  
**Required Readings:** PDF files accessible through Oncourse  
**Recommended:** *APA Publication Manual. 5th Edition (2001)*

**Oncourse:** This course will use the OncourseCL system to disseminate course-related information and grades, and as a way for us to communicate with each other. Because you have all registered for different sections of “B499” for your research, we have created a separate “Capstone Honors Research” Oncourse shell so that we can all access the same site throughout the year. Check Oncourse for course announcements, and to access articles through the Resources folder.

**Seminar Description:** The Capstone Honors Seminar is for students who are completing an individual research project under the mentorship of a faculty member in the Department of Psychology for Honors Thesis Research (B499) credit. The goals of the seminar are 1) to enhance critical thinking skills, 2) to promote independent scholarship, 3) to facilitate the creation of an outstanding honors thesis, and 4) to promote the development of professional skills, particularly the ability to present yourself and your ideas more effectively. Class meetings are devoted to presentations, discussions of assigned readings, and to “mini-seminars” facilitated by faculty members.

While you do not have to officially be enrolled in either the University or the Departmental Honors program to participate in the Capstone Honors Research Seminar, students are strongly encouraged to consider applying to the Honors program. To graduate with Honors in Psychology, students must earn at least 24 credit hours of Honors work, which must include: 1) 6 credit hours in honors Psychology courses (including “H-Option” courses); 2) 6 credit hours from honors courses outside of Psychology. 3) 3 credit hours of B499 – Capstone Honors Research. In addition, students must maintain a minimum grade of “B” (3.0) in Honors courses, a minimum (overall) GPA of 3.3, with a minimum GPA of 3.5 in Honors and Psychology courses. For more information, contact the Honors Program Office (LY 3140, 274-2660).

**Learning Objectives:** A *capstone* course is a graduation requirement for all undergraduate students at IUPUI. Just as a “real” capstone is the very last stone to be placed in a near-finished building structure, the capstone experience is taken during the senior year after all (or almost all) other requirements within the major have been completed. All psychology majors must take a capstone laboratory or practicum (BA students only), and students interested in applying to graduate school are strongly encouraged to complete an independent honors thesis (B499) to fulfill the capstone requirement. The capstone experience also should help seniors to realize that completion of the psychology major is simply one step in a journey of life-long learning, and that complicated issues related to psychology are best understood through a multidisciplinary perspective.

The goal of the Capstone Honors Research experience is to help psychology majors to synthesize the knowledge, skills, and understanding that they have gained through their psychology courses, and to apply their skills and acquired knowledge in carrying out an independent research project. The Capstone Honors Research experience has 12 *specific learning objectives* that represent six IUPUI *Principles of Undergraduate Learning*. Students are expected to master the following specific objectives:
Principle | Specific Learning Objective
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**Intellectual Depth and Adaptiveness** | 1. Describe and carry out the steps of the research process
2. Describe and evaluate research from across multiple subfields of psychological science

**Critical Thinking** | 3. Describe the advantages and disadvantages of different research designs.
4. Critically synthesize and review literature related to a particular research question.

**Application and Integration of Knowledge** | 5. Describe and apply concepts related to research methods, statistics, testing/measurement, and core areas of psychology related to a particular research question.

**Communication Skills** | 6. Verbally present research pertinent to a particular topic in psychology, and facilitate a discussion related to this presentation.
7. Translate an idea into a research proposal, including a written synthesis of the results from relevant research pertinent to your topic.
8. Convincingly argue the merits of your proposed idea through a written grant proposal to UROP.
9. Write a research report using APA format
10. Communicate your results to others through an oral presentation of your research at a local or national conference.

**Quantitative Skills** | 11. Conduct appropriate statistical analyses on research data

**Values and Ethics** | 12. Identify and evaluate ethical issues in research

While the capstone research experience will probably be one of the most challenging things you’ve ever done, we hope that it also will prove to be among the most intellectually stimulating, rewarding, and fun. In order for this to happen, it is **critical** that you accept responsibility for your own learning and commit yourself to “owning” this experience and engaging yourself completely in your research. This is **NOT** an experience that you can take “from the sidelines.” You will be **DOING** research and creating new knowledge for the field, as well as spending a lot of time analyzing and critiquing research that already has been done. Both seminar attendance and time in your mentor’s laboratory are **essential** in order to complete this course successfully. Your failure to attend seminar or to engage yourself in seminar activities will negatively impact your grade, and could jeopardize the success of your research project.

**Requirements and Grading:** The majority of the requirements for Capstone Honors Research involve the specific tasks necessary for planning, carrying out, and reporting the results of the particular study that you and your research mentor develop. The seminar meetings are intended to structure this experience similarly across the many laboratories in which students are working, and to ensure that the curricular objectives of the capstone experience are met. Through interactions with your mentor and in the laboratory, you will be acquiring lots of **specific** knowledge about a relatively narrow research question. In Friday seminar meetings, we will be attempting to integrate this specific knowledge with other domains of knowledge within psychology, as well as with other disciplines in the biological sciences, health sciences, or social sciences. The specific requirements for the seminar are intended to help continue to move you forward on your research project, as well as accomplish particular capstone learning objectives that are more difficult to achieve in the laboratory. Finally, the requirements are intended to insure that all participants meet the requirements for UROP (Undergraduate Research Opportunities Program), and enable you to graduate with an undergraduate research designation on your transcript (see attached pages for more information).
Your Capstone Honors Research (B499) grade will be based on BOTH your individual research project (assessed by your primary faculty advisor: 70% of your course grade) and on your participation in the Friday seminars (assessed by Dr Rob Stewart): 30% of your course grade). Your mentor will give you feedback concerning your performance in the lab (or out in the field). We will use the Oncourse gradebook to provide you with feedback concerning your participation in seminars (your mentor will also receive a semester report of your seminar progress in December and in April). There is a total of 100 seminar points. Specific requirements are listed below:

1) **Discussions (30 points).** Research has shown that students learn best when they take an active role in their learning (i.e., when they discuss what they are reading, practice what they are learning, and apply concepts and ideas). Therefore, a portion of almost every seminar will be devoted to discussions of current research from a wide array of subfields in psychology. Faculty speakers will identify a research article they would like to discuss. Discussion facilitators should post questions for students to consider one week in advance of the scheduled discussion date.

*Participation in 6 of the 8 scheduled discussions will be worth 2 points (2 – good contributions; 1 – fair contributions; 0 – no contribution). In addition, you will be asked to facilitate TWO discussions during the academic year (9 points each). It is likely that “discussion facilitators” will work in teams of 2 or 3. If you are a discussion facilitator, we ask that you coordinate with the other facilitator(s) to email “reflection questions” through Oncourse one week in advance of our meeting to help guide our reading. “Facilitation points” will be deducted if questions are not posted in a timely manner. In OncourseCL, the easiest way to disseminate these questions is through the “Messages” link on the left-hand side of the screen. Please refer to the title of your article in your message.*

2) **Annotated Outline (10 points).** You will turn in an annotated outline of your research proposal on 9/19. This is an outline of the Introduction and Method sections of your research proposal, supplemented with brief descriptions of relevant research and references. We will ask you to turn in abstracts (that you have written) of at least 10 articles or chapters that you consider to be related to your research question.

3) **UROP Proposal (20 points).** You must apply for funds to support your research through the Undergraduate Research Opportunities program. For guidelines, please review the UROP website: [http://www.urop.iupui.edu/](http://www.urop.iupui.edu/)

4) **Personal Statement (10 points).** In order to obtain feedback on your Personal Statement (typically required when applying to graduate or professional schools), a draft of this statement is due on November 14. Guidelines for preparing personal statements will be presented in the seminar, and samples are included in the “Resources” section of Oncourse.

5) **Research Proposal Presentation (10 points).** Each participant will be asked to make a brief (7-10 minute) presentation on their research proposal. To accommodate everyone, seminar will continue until 2:00 on this day (you’re welcome to bring your lunch).

6) **Data Analyses Plan (10 points).** We would like you to generate a data analyses plan and submit it for review. In this plan you should list all preliminary analyses (e.g., factor analyses, reliability analyses) that you will do and then for each hypothesis list out the statistical test you will use and what evidence you would need to provide support for each hypothesis.

7) **B103 Presentation (10 points).** During the spring semester, you and at least one partner will make a brief (10-15 minute) presentation to B103 (Orientation to the Psychology Major) students concerning your research experience. Beginning students are often told that it is important to get involved in research in order to prepare for graduate training in psychology. This is an opportunity for such students to learn from your own experiences. During this presentation you should address, a) how you became interested in research, b) how you connected with a mentor, c) what your project(s) entail, and d) the positive and negative experiences you’ve had throughout the research process.

8) **Final Poster Presentation (10 points).** We will conduct a departmental poster session on May 1st as a forum for you to present your research (and receive well-deserved congratulations from other faculty, students, and staff!). Guidelines for poster presentations will be presented in seminar. The poster session will run from 12-1:30 and will be held in a place to be determined at a later date.
Procedures for Capstone Honors Research

1. Identify a primary faculty member to work with.
2. Develop your ideas with your primary advisor.
3. Together with your primary advisor, identify another faculty member to serve on your research committee.
4. Obtain agreement from this person to serve on your research committee.
5. Develop your research proposal with your primary advisor. (note – this proposal is DIFFERENT from your UROP grant proposal)
6. The proposal should be a 10-page (minimum) written description of the pertinent literature, method section, and anticipated method of data analysis.
7. Obtain written approval of your proposal from both of your advisors.
8. Obtain human subjects (IRB) approval, if necessary, only after step 7 has been completed.
9. Begin collecting data, only when all above steps are completed.
10. After data collection, write up a complete paper in a form that would be appropriate for submission to a typical journal outlet.
11. Select a time for presentation of the work (This presentation should be on a par with a typical presentation at any local, regional, or national professional or student conference). At the regional or national conferences this presentation may be a poster or paper presentation. Similarly, poster or paper presentations are appropriate at other regional student conferences (e.g., MPA). However, presentations at a local (i.e., on campus) undergraduate research conference must be a paper (i.e., oral) presentation.
12. Obtain final approval of the honors research project from your two research advisors.
13. Follow the graduate student procedures for typing, binding, and filing a copy of the research.

Additional Notes:

- Your role in the project should be one in which you, as a student, contribute to the development of the idea and the methodology. A project that is given to you by a faculty member does not qualify as an honors research project.
- This type of project typically requires 5-10 hours per week for approximately a year.
Approval Form for Capstone Honors Research

Student’s Name: ____________________________________________________________

I. Enrollment: The signature below gives written authorization for the above named student to enroll in course B499.

____________________________________________        ______________________
Faculty Advisor Signature     Date

II. Research Proposal: The signatures below indicate that this student has successfully prepared a written proposal of honors research.

____________________________________________        ______________________
Faculty Advisor Signature     Date

____________________________________________        ______________________
Secondary Advisor Signature    Date

III. IRB/IRC Approval: The signature below indicates that this student has obtained IRB/IRC approval through IUPUI Research Compliance Administration or that this approval is not necessary.

____________________________________________        ______________________
Faculty Advisor     Date

Approved Study Number: ________________

IV. Final Defense: The signatures below indicate that this student has completed all of the requirement of the capstone research, including writing a successful paper, presenting this work, and filing copies of the capstone research as indicated in the graduate student guidelines.

____________________________________________        ______________________
Faculty Advisor Signature     Date

____________________________________________        ______________________
Secondary Advisor Signature    Date
Undergraduate Research Opportunities Program

http://www.urop.iupui.edu/

How to Obtain a Transcript Notation for Research

Undergraduate research students may receive the transcript notation on their academic transcript concurrent with the awarding of the degree by fulfilling a set of requirements listed below. The notation will read:

Research Proficiency Demonstrated through IUPUI Undergraduate Research Program awarded with Degree

Such a transcript notation provides obvious evidence of a student's participation in independent laboratory and scholarly and research other creative work. The notation will certify and spotlight research proficiency or successful completion of some other creative activity.

UROP has established a program of requirements that must be fulfilled to qualify for transcript notation. The requirements are as follows.

▷ Students must register for and complete five credits of formal research (B499 and B492) in their departments or units. The definition of research credit will be left up to the student's department or unit but should conform to the general definition of research and consist substantially of an independent project by the student.

▷ Students must prepare a substantial written product from the research. This could include a senior thesis or journal publication. Other appropriate activities to the discipline may be substituted for this, for example, an art exhibit or other performance. Substitutions must receive prior approval from the UROP Director.

▷ Students must attend an outside professional meeting in a discipline at the state, regional, or national level. Attendance at other professional events will be considered as appropriate to the discipline. The student's faculty mentor will certify attendance. Students will be encouraged to present their work at a professional meeting or other event.

▷ Students must participate in at least one annual UROP symposium. Students must present at least one oral paper to receive transcript notation. If appropriate to research and creative activity in the discipline, other types of presentations may be acceptable at the discretion of the UROP Director and with the recommendation the student's faculty mentor.

▷ Students must prepare a Research Portfolio, which may be in an electronic form. The Research Portfolio is prepared with the student's faculty mentor and must be submitted four weeks prior to the student's anticipated graduation date.