

Graduate Student Handbook  
Department of Psychology & Communication Studies  
University of Idaho

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## Table of Contents

Introduction.....	3
Degree Requirements.....	5
Curriculum.....	6
Electives.....	9
Comprehensive Exam .....	13
Study Plans.....	15
Master’s Thesis.....	16
Assistantships.....	19
Research Expectations.....	20
Internships.....	21
Conference Travel.....	22
Human Factors Faculty.....	23

## Introduction

The purpose of this handbook is to provide graduate students in psychology with a general overview of the requirements and procedures for earning a master's degree in psychology. Additional information about rules and requirements can be found in the general catalog under "College of Graduate Studies."

We offer a master's in experimental psychology with an emphasis in human factors psychology. Students must complete 30 credits and a thesis or comprehensive exam to attain the degree.

## Mission and Vision

Psychology is both a life science and a social science that seeks to describe, explain, and predict behaviors and mental processes, and design interventions that facilitate optimal functioning. Communication Studies is a social science discipline that considers how people verbally and nonverbally communicate at the individual, societal, and cultural levels. Both disciplines are vital to understand and address the complex challenges that individuals and institutions face.

The mission of the Department of Psychology and Communication Studies is as follows:

- At the undergraduate level, we will offer a quality educational experience that prepares students for further graduate and professional education or that allows them to enter the workforce with a solid liberal arts and sciences background. Across our diverse course offerings, we will emphasize analytical and problem-solving skills that will serve our students well in whatever they choose to do in the future.
- At the graduate level, we will offer internationally competitive masters-level training in applied Experimental Psychology, with an emphasis in Human Factors Psychology. Human factors psychologists specialize in human-technology interaction, ergonomics, biomechanics, and safety. Our goal is to prepare our students either to enter industry or public service as practitioners or to continue their studies at the doctoral level.
- Across both the undergraduate and graduate levels, we will provide distance education to meet the needs of students in diverse life circumstances, and will provide students with academic advising and mentoring that facilitates their academic achievement and professional advancement.
- We will facilitate the intellectual development and scholarly pursuits of our students and faculty by providing them with equipment, space, and other resources needed to pursue their interests and share their findings. We will support research and teaching that meets the needs of our communities and solves applied problems.
- Our faculty will provide service to their university, their communities, and their professions; and our faculty will actively help their students to become involved in

service learning, internal and external internships, student associations, and professional societies.

- We will support the professional development of our faculty and staff.
- We will foster a healthy, safe, open, and welcoming environment for all students, faculty, and staff.
- Finally, we will continuously and rigorously assess our success in meeting our mission, and revise our efforts accordingly.

## Degree Requirements

The program is designed to be flexible in meeting the needs of students with specific interests in different aspects of human factors and experimental psychology. The one constant among the many possible perturbations is that your program of classes must meet the Graduate College Degree Requirements.

College of Graduate Studies Requirements for a master's degree:

- 30 credit hours of which 18 or more are 500-level classes, and the remaining hours are comprised of 400-level classes within psychology or 300-400 level classes outside of psychology
  - Can only take a maximum of 9 credits at the 300-level, but these courses must be outside the department -- 300-level courses in psychology do not count toward your degree
- A cumulative GPA of 3.0 or above
- Successful completion of thesis or non-thesis (comprehensive exam) requirements

## Curriculum

If you have not completed all the deficiency classes, you should take these first. These classes are:

- Cognitive Psychology (300-level or greater, at UI this is Psyc 325 or Psyc 525)
- A Computer Programming Class that teaches a high-level programming language (e.g., C/C++, Fortran, Java, advanced HTML, Visual Basic, Python, Matlab) and covers concepts such as basic data types, looping, arrays, logical branching.
- An undergraduate Behavioral Research Methods class (200-level or greater, at UI this is Psyc218)
- An undergraduate Statistics class (200-level or greater) covering topics such as probability, descriptive statistics, basic inferential statistics (chi-square, correlation & regression, t-tests, one-way ANOVA); at UI this is Stat 251

The following classes form the "core" of the required graduate course work (consult your advisor regarding the order in which you should take the courses).

**Psyc 444 Sensation & Perception\*** -- fundamental processes and variables in sensory, perceptual, and cognitive experiences of humans. Prereq: Psyc 218.

**Psyc 446 Engineering Psychology\*** -- application of principles of experimental psychology to analysis of interaction of the human operator with machine systems and work environments; emphasis on psychological aspects of human performance. Prereq: Psyc 218 or Stat 301 or permission.

**Psyc 512 Research Methods** – philosophy of research, types of design, data analysis, research report. Prereq: Psyc 218 or equivalent, or permission

**Psyc 513 Advanced Research Methods** – types of research designs and data analyses; use of mainframe computer packages for data analysis. Prereq: Permission.

**Psyc 509 Human Factors in Engineering Design** – application of psychological principles to engineering and design; the design process; display and control design; work station layout and system integration; environmental factors; safety; and mental workload.

**Psyc 561 Human-Computer Interaction** -- overview of human-computer interaction (HCI) topics, including user models, dialog, display design, usability, software development, groupware, and multimedia. Recommended preparation: Psyc 446.

**Psyc 562 Advanced Human Factors** (capstone class) -- review of topics and theories germane to human factors such as performance measurement systems, design specifications, research issues, controls and displays, human reliability, and illumination. Prereq: Psyc 446, and Psyc 513 or Stat 401; or permission.

\*If you have taken equivalent classes as part of an undergraduate curriculum, you may petition the faculty to waive these requirements. Additional electives can then be used to fill in the credits

### Additional Courses

#### **Psychology 500 Master's Research and Thesis**

Maximum of 10 credits can count toward your degree  
The number of credits, up to 10, to be used toward your degree will be determined by your major professor. Before signing up for thesis credits (Psyc 500) discuss with your major professor the number of credits you should take and when to take them.

Once you start taking thesis credits, you must keep taking thesis credits until you are finished. For example, if you start taking thesis credits in the summer after your first year, you would need to take thesis credits every semester after that until you complete your degree.

#### **Psychology 502 Directed Study**

These credits are designed to allow you to study a topic in more depth. You need to find a faculty member who is willing to supervise your directed study.

These credits may also be used for research. Some faculty will have their students sign up for these credits, as opposed to the Psyc 599 credits described below. Your major professor determines the number of directed study credits that can apply to your degree.

#### **Psychology 598 Internship**

If you have an internship, you can sign up for internship credits. You are not required to take internship credits if you have an internship. Consult with your major professor to determine if you

should get an internship and if you should register for internship credits. Your major professor determines the number of internship credits that can apply to your degree.

Students are responsible for obtaining internships. If interested in an internship, talk to the faculty about possible opportunities. In addition, check with the Career Center and Human Factors and Ergonomics Society (HFES) for possible listings.

**Psychology 599 Non-thesis Master’s Research**

These are research credits. If you are working with a faculty member on their research, you will usually sign up for these credits. You must get instructor permission to register for these credits. Maximum of 5 credits can count toward your degree (you can take more than 5 credits, but any credits over 5 will not count toward the 30 credit requirement for your degree).

A full-time student needs to be enrolled in 9 credits. A typical course plan might look like this:

<b>Fall (first year)</b>	<b>Spring (first year)</b>
Psyc 512 Research Methods	Psyc 513 Advanced Research Methods
Psyc 509 HF in Engineering Design	Psyc 446 Engineering Psychology
Psyc 561 Human Computer Interaction	Psyc 599 Research

<b>Fall (second year)</b>	<b>Spring (second year)</b>
Psyc 500 Thesis (3 cr.)	Psyc 500 Thesis (3 cr.)
Psyc 552 Ergonomics & Biomechanics	Psyc 562 Advanced Human Factors
*Psyc 525 Cognitive Psychology	*Psyc 444 Sensation & Perception

\*Optional

Some students take courses during the summer after their first year. See the section on “Summer” for more information.

When attempting to register for courses, you may receive a message that you lack the prerequisites. The system doesn’t recognize that you may have met the prerequisites by taking similar a similar course at a different university. Contact the instructor directly to ask if they will let you into the course.

## Electives

This is a list of some possible electives (it is not comprehensive). Consult with your major professor to identify the appropriate courses for your interests and career plans.

### Art

#### **Art 370                      Advanced Interaction Design (3 cr.)**

Advanced interaction design projects. Individual and small team design projects. Emphasis on team dynamics, project analysis and description, development and production. Focus on interactive information design projects, project management and production. Readings and assigned writings focus on current design industry issues, practices, trends, and methodologies. Prereq: Art 271-272 or permission.

#### **Art 491                      Information Design (3 cr.)**

Project-based course in theory and practice of the design of information and information visualization for use in research, teaching, and outreach. Interdisciplinary teams of students, faculty and staff will develop and produce systems that communicate complex ideas with clarity, precision, and efficiency, using the most appropriate presentation tools. Prereq: Junior standing.

### Psychology

#### **Psyc 404/504              Safety across the Lifespan**

Examines developmental trends and etiology of unintentional injuries across the lifespan within the context of epidemiological theories of risk behavior.

#### **Psyc 416/516              Industrial/Organizational Psychology (3 cr.)**

Application of psychological principles to the study of work behavior; includes topics such as personnel selection, performance appraisal, training, work motivation, teams, leadership, and job attitudes. Additional work required for graduate credit.

**Psyc 430****Tests and Measurements (3 cr.)**

Review of the major principles of test development including test construction and methods for determining test validity and reliability, some of the currently used scales, and study of scaling methods such as Thurstone scales, Likert scales, and semantic differentials. Recommended preparation: Stat 251.

**Psyc 440****Psychology of Judgment and Decision Making (3 cr.)**

This course is an introduction to the psychological study of judgment and decision-making. By examining both laboratory and real-world research, we will learn how people (both laypersons and experts) actually make decisions and judgments and how various biases and heuristics can influence their judgments and decisions.

**Psyc 526****Cognitive Neuroscience (3 cr.)**

Examine research in human and animal cognition and its neurological basis. Material covered will include the study of normal cognitive processes in humans with noninvasive behavioral and physiological techniques (e.g., reaction times, fMRI, EEG), the study of brain-injured patients, behavioral and neurophysiological research in animals, and the comparative analyses of cognitive processes across organisms. Computational approaches toward cognitive and neural processing will also be addressed. A selection of the following topics will be covered: perception, object recognition, attention, memory, spatial cognition, motor control, language, executive control, and development. Recommended preparation: Psyc 325/525.

**Psyc 545****Group Dynamics (3 cr.)**

This course will cover the empirical research regarding group dynamics, including topics of leadership, cohesion, team building, statistical analyses of group level data, problem solving, group mood, group creativity, transactive memory, information processing, and other small group processes. Additional projects/assignments required for graduate credit. Prereq: Psyc 101 and Psyc 218.

**Psyc 552****Ergonomics & Biomechanics (3 cr.)**

Principles of anthropometry, biomechanics, and work physiology applied to workplace.

## **Statistics**

### **Stat 431                      Statistical Analysis (3 cr.)**

Concepts and methods of statistical research including multiple regression, contingency tables and chi-square, experimental design, analysis of variance, multiple comparisons, and analysis of covariance. Prereq: Stat 251, 271, or 301.

### **Stat 446/Bus 446      Six Sigma Innovation (3 cr.)**

Six Sigma is a highly structured strategy for acquiring, assessing, and applying customer, competitor, and enterprise intelligence for the purposes of product, system or enterprise innovation and design. It has two major thrusts, one that is directed toward significant innovation or improvement of an existing product, process or service that uses an approach called DMAIC (Define – Measure – Analyze – Improve – Control) and a second dedicated to design of new processes, products or services. This course focuses on the innovation aspects of Six Sigma. Recommended preparation: Stat 401. Prereq: Stat 251, Stat 271, or Stat 301.

### **Stat 511/Bus 531      Design for Six Sigma and Lean Management (3 cr.)**

Integration of management, statistics, and engineering principles driving design and development of, or innovation in products, processes, and systems; topics include Design for Six Sigma; lean management and manufacturing; transforming the voice of the customer from idea to reality; time-to-market compression in product development through quality function deployment. Prereq: undergraduate degree in engineering or permission.

## **Psychology at Washington State University (WSU):**

### **Psyc WS565              Physiological Psychology (3 cr.)**

Neuroanatomical, neurochemical, and other biological causes of human and animal behavior.

**Psyc WS566**

**Behavioral Pharmacology (3 cr.)**

Survey of drugs which affect brain function with emphasis on animal models and clinical applications.

**Psyc WS567**

**Behavioral Neuroscience (3 cr.)**

Advanced topics in neurochemistry, neuropsychology, and neuroanatomy, as they relate to behavior.

**Psyc WS568**

**Sensory Bases of Behavior (3 cr.)**

Sensory and physiological aspects of vision, audition, and other senses.

**Psyc WS569**

**Foundations of Neuropsychology (3 cr.)**

Foundation in brain/behavior relationships and neuropathological syndromes; preparation for advanced training in neuropsychological assessment.

## Comprehensive Exam

Students may choose\* to complete a comprehensive exam instead of a thesis. The comprehensive exam takes place in your final semester. It consists of four separate written exams – (1) basic human factors knowledge, (2) applications of human factors, (3) research methods, and (4) statistics. The four exams are administered in three parts. Students must pass each part before proceeding on to the next part.

### Part I: Basic Knowledge

This exam will contain a mix of multiple choice and short-answer items designed to assess students' understanding of basic principles in Human Factors. Items found on this exam include but are not limited to the topics of: sensation perception, cognition, training, ergonomics and biomechanics, design principles, human computer interaction, engineering psychology, and safety. It is a closed-book, two-hour exam.

### Part II: Application

The second exam focuses on the ability to integrate basic knowledge to address applied problems. This exam will consist of two or three applied situations that must be addressed by the student. This is an open-book, three-hour exam.

### Part III: Research Methods and Statistics

This element is composed of two parts: The research methods exam is a closed book test that assesses the understanding and application of research methods to both laboratory and applied research problems. The statistics exam is an open-book test designed to assess basic statistical competencies.

## **Policies**

The comprehensive exam is required of students choosing the non-thesis option. Students must enroll in Psyc 502 DS: Comp Exam (1 credit) in the semester that they plan to take the exam. Failure to take the exam after it has been scheduled will constitute a failure on the exam.

Performance in Psyc 502 DS: Comp Exam and performance on the exam are linked. That is, passing the exam will result in a passing grade for Psyc 502 DS: Comp Exam. Failing the exam will result in an F for Psyc 502 DS: Comp Exam.

An incomplete for Psyc 502 DS: Comp Exam will only be given in rare cases, such as a family emergency or a protracted health problem. Failure to adequately prepare for the exam is not an adequate reason for the granting of an incomplete.

It is the students' responsibility to contact the faculty to schedule the exam. There are no formal study materials or reading lists for the comprehensive exam. Students are encouraged to contact the faculty if they have questions about the format of the exam or how to prepare for the exam.

Consistent with university guidelines, students failing the exam may have one opportunity in which to retake the exam. A minimum time of three months is required between the tests. Failing the exam does not automatically grant the student the right to re-take the exam.

\*Off-campus students must complete the comprehensive exam. In some cases, off-campus students may be able to complete a thesis, but this requires the approval of the HF faculty.

## Study Plans

The study plan specifies the courses you must take to complete your degree. The study plan must meet the requirements for a master's degree in psychology (e.g., at least 30 credits; 18 of the 30 credits must be at the 500-level or above). For general requirements of the College of Graduate Studies, visit the website for the Office of the Registrar (<http://www.uidaho.edu/registrar>) and click on "Schedules and Catalogs" on the top of the page. Select the catalog that corresponds to the year you were admitted to the master's program. Information on general requirements of the College of Graduate Studies can be found by clicking on "College and Related Units" and then clicking on "College of Graduate Studies."

The courses that make up your study plan will be decided based on discussions between you and your major professor. The College of Graduate Studies would like you to submit your study plan by the end of your first semester of study. This is not always feasible, but it is a good idea to submit your study plan by the end of your first year. Note that you can always make changes to the study plan prior to graduation (as long as your major professor approves the changes).

You will enter your study plan in VandalWeb. Below is a description of the process, as described on the Registrar's webpage:

"Study plans are entered on [VandalWeb](#) and then reviewed by your Major Professor, your department, the College of Graduate Studies, and the Office of the Registrar's. After your proposed study plan is approved a degree audit that is personalized to your unique program will be produced.

To start the process of designing and submitting a study plan:

1. Meet with your major professor/program advisor and identify what classes will make up your study plan.
2. Enter these classes into the *Educational Planner* in your degree audit and Save your plan.
3. Check your VandalMail for messages as your plan is reviewed and approved.

If you need to make changes to your study plan after it has been approved, use the Change of Study Plan form in [VandalWeb](#)."

Tutorials on completing the study plan can be found at the [Registrar's Degree Audit webpage](#).

## Master's Thesis

The thesis is a research project carried out by the student and directed by the student's major professor. Students interested in pursuing a master's thesis should meet with the HF faculty to discuss research interests and determine an appropriate fit.

### Thesis Committee

The thesis committee consists of three faculty, two from the student's department (chair and inside member) and one from outside the department (outside member; a faculty member with an adjunct appointment would be considered an inside member). The chair of the thesis committee is the student's major professor. The major professor must be part of the graduate faculty and at least one of the other members must be on the graduate faculty (a list of graduate faculty can be found at the end of the UI Catalog).

The major professor and student determine the selection of committee members. The inside member is typically a faculty member who has expertise on the thesis topic. The outside member is someone who can provide useful feedback on the thesis. A faculty member in statistics, for example, may be chosen as the outside member if the thesis involves complex statistical analyses. Usually, this person will have a general familiarity with social science research methods and/or interests in areas related to the thesis topic.

### College of Graduate Studies Policy: Thesis Credits

All master's degree programs require a minimum of 30 credits. Some master's degree programs may require more. Additional work may be stipulated in individual cases to meet particular objectives or need for additional background. Courses used toward an undergraduate degree, professional development courses, or courses on a professional development transcript are not available to be used toward a graduate degree.

No more than three credits of workshop or workshop equivalent courses may be used toward the graduate degree.

Credit in course 500 (Research and Thesis) cannot be counted toward a non-thesis master's degree. Although no limit is imposed on the number of credits that may be earned in course 500 (Master's Research and Thesis) for degrees with thesis, only a maximum of 10 credits in course 500 in the major of the degree can be used to fulfill master's degree requirements (a lower limit may be set by the program). Up to five credits of course number 599 are allowed to count towards a non-thesis master's degree; however, if a thesis option exists for the program, no more credits of 599 are allowed toward the non-thesis master's degree than half the number of credits allowed for course number 500 toward the department's master's degree.

## College of Graduate Studies Policy: Appointment of Major Professor and Committee for All Degree Seeking Graduate Students

All degree seeking graduate students should either select or be assigned a major professor as soon as possible following enrollment in the program. For nonthesis master's students or specialist students, it is suggested this be done no later than the end of the first semester. For thesis master's students and doctoral students, it is suggested this be done no later than the end of the second semester. The major professor must be a member of the UI Graduate Faculty.

The committee, if required, is recommended by the major professor and the student and approved by the graduate program unit's administrator and the dean of the College of Graduate Studies. At least one-half of the members of the committee must be members of the UI Graduate Faculty. A faculty member may not serve on a committee for a student who is seeking a degree higher than the faculty member has attained. A graduate program unit's member who has an adjunct/affiliate appointment to another program unit cannot be considered an outside committee member for a student in the faculty member's primary unit. Refer to the additional appointment requirements under each degree heading.

Periodically, a qualified person with a particular expertise is requested to serve on a student's committee on a one-time appointment. The person must have written approval from the dean of the College of Graduate Studies in advance of the individual's committee participation. In this case, the person would not have to meet the rules of appointment and would be considered an outside member to the committee. Should the person be recommended for multiple committees, he/she would need to be approved as an affiliate faculty member and, therefore, would then be considered a member of the department recommending affiliate membership and would serve as an inside member on that unit's student's committees. It is the intent of the Graduate Council that this privilege be used sparingly and only when the situation indicates its necessity.

### Thesis Proposal

The thesis proposal refers to the introduction, methods, and proposed analyses of a research project (the exact format may differ across faculty; consult with your major professor regarding what they expect the proposal to include). The proposal should be in the format specified by the College of Graduate Studies (see [Handbook for Writing Theses and Dissertations](#)). The thesis proposal typically requires numerous drafts before it is ready. Your major professor will tell you when the proposal is ready to be presented at the thesis proposal meeting.

A formal thesis proposal meeting is not required by the College of Graduate Studies. It is common practice in our department to hold a thesis proposal meeting. It provides an opportunity to get feedback from one's committee regarding the project. This allows for changes to be made prior to collecting the data and, thus, greatly enhances the likelihood of successfully defending one's thesis.

## Thesis Defense

The thesis defense meeting occurs after completing your thesis project. Your thesis will consist of an introduction, methods, results, and discussion. When your major professor is satisfied with your paper, you will be given permission to schedule your thesis defense. You will distribute final copies of your thesis (check with the [Handbook for Writing Theses and Dissertations](#) to ensure format is correct) to all your committee members and find a two-hour block of time when everyone can meet. It is customary to give committee members two weeks to review your thesis before the meeting is held.

Before your defense meeting (typically a few days before the meeting), you will need to get the signatures of your major professor and all committee members on the "[Request to Proceed with Final Defense of Thesis/Dissertation](#)" and submit this form to the College of Graduate Studies. They will issue you a "Final Defense Report," which you should give to your major professor.

## Typical Timeline to Complete a Thesis

- 1st Semester (Fall)- learn about faculty research programs and begin work in a research lab (typically for Psyc 599 or Psyc 502 credit or as a paid research assistant). This will provide you with experience in research techniques and introduce you to faculty research interests.
- 2nd Semester (Spring)- continue gaining pre-thesis research experience, arrange a thesis advisor (major professor) who will aid you in determining your thesis topic, and begin drafting your thesis proposal
- Summer-session - continue gaining pre-thesis research experience and working on proposal
- 3rd Semester (Fall) - finish and defend your thesis proposal. Aim to have a completed first-draft of your proposal to your advisor by the end of September and to defend the proposal by November. Start data collection by mid-November.
- 4th Semester (Spring) - Finish data collection and analysis by the end of February, complete thesis by the end of March, defend thesis in April.

## Assistantships

Teaching assistantships are an important aspect of undergraduate instruction. The department awards teaching assistantships to qualified graduate students to help offset some of the students' costs and to assist with the instructional mission of the department. Typically, students are provided with an assistantship of between 10 to 20 hours a week (20 hrs a week is the maximum allowed by the university). In exchange for the assistantship, we expect students to perform their assistantship duties in a timely and responsible manner.

Teaching assistantships vary in terms of duties and time commitment. Not all assistantships reflect equal amounts of work. Workloads may fluctuate greatly over the semester, with the highest workloads typically occurring around test time. The key to being successful is to manage one's time properly.

Assistantship assignments are usually made the week before classes begin. Once assistantship assignments have been made, students should set up a meeting with their instructor/supervisor to clarify duties and responsibilities. The meeting should address some of the following questions:

1. What kinds of activities do you want me to perform?
2. How many hours a week do I need to be at my desk in the department?
3. Will we have a regular meeting time? If not, how frequently should I check in with you?
4. How will you contact me regarding duties you want me to perform?

The goal is to ensure that students are aware of the instructor's expectations regarding assistantship performance. The faculty will evaluate students' assistantship performance at the end of the academic year. Performance as an assistant will determine whether students receive an assistantship in their second year.

## Research Expectations

Graduate students are expected to be actively involved in research activities. In your first year, you should talk to faculty about their research interests and find a faculty member to work with. Working in a faculty member's lab will familiarize you with a research area and help you formulate a topic for your thesis.

## Internships

Internships are not required as part of the program. Students may choose to go on an internship to learn new skills and bolster their resume.

## Conference Travel

### Graduate Student Travel Grant Policy

- (1) Travel money is a privilege
- (2) The department will endeavor, if possible, for all second year students to receive \$200 to defray travel expenses to authorized conferences (such as HFES).
- (3) In addition, all graduate students are eligible to apply for a limited number of competitive travel grants (maximum award per academic year = \$500). These competitive travel grants will be reviewed by the graduate faculty in the student's area of emphasis. For example, HF faculty will review travel grant proposals from HF students. The graduate faculty will then send on their recommendations to the department chair; the chair will make the final funding decisions.

Students must apply for departmental travel grants at least 2 weeks prior to the beginning of the scheduled travel. Also, students must complete the UI travel form prior to their scheduled travel (travel form can be obtained from Emily).

## Human Factors Faculty

### Core Faculty

**Brian Dyre** (Ph.D., 1993, University of Illinois)

My research uses computational modeling and behavioral and physiological measures to conduct basic and applied research on visual perception. Particular emphasis is on issues related to the control of locomotion and piloting of vehicles, including illusions related to weather phenomena, displays supporting navigation and real-time control, simulation, and mental workload and attentional allocation in cockpits and unmanned-aerial-vehicle (UAV) workstations.

I direct the Idaho Visual Performance Laboratory (IVPL) at the University of Idaho. Research from this lab is conducted in the areas of visual perception of motion, visual navigation, perceptual judgments, and virtual displays.

**Steffen Werner** (Ph.D., 1994, University of Göttingen, Germany)

Dr. Steffen Werner conducts basic research in the areas of high-level visual cognition, spatial cognition, and attention. He is particularly interested in understanding long-term visual and spatial memory, as well as the integration of different sources of information during spatial tasks. His applied research interests lie in the areas of Human-Computer Interaction (e.g., user authentication, security, innovative display technologies), driving research (in-vehicle navigational displays, driver distraction), and neuroergonomics (e.g., neurological indicators of mental workload).

Dr. Werner's laboratory includes the Idaho Driving Simulator facility – a 700 sqft space that includes the front cab of a small pick-up truck, 3 large-screen projection displays to create a wide Field-of-View simulation environment, multiple graphics workstations, and a one-channel DriveSafety simulator. In addition, the lab includes a head-mounted stereoscopic display with head-tracking for immersive virtual reality displays, a 12-foot diameter circular research environment with mobile (rotating) walls (a human analog of the Morris water maze), and a number of personal computers that are used to present stimuli for cognitive experiments.

**Benjamin Barton** (Ph.D., 2005, University of Alabama at Birmingham)

My research concerns lifespan developmental factors affecting risk for unintentional injuries and injury prevention. My primary focus is the influence of developing cognitive skills on pedestrian safety during middle childhood. Other areas of interest include biking safety in children and adults, and driving behaviors among adolescents and elderly. I direct the Idaho Child Safety Lab located in the Continuing Education building on the University of Idaho campus.

**Rajal Cohen** (Ph.D., 2008, Pennsylvania State University)

Dr. Cohen studies the interconnectedness of cognition, posture, and action, with a special interest in principles that apply across the spectrum from high performance to dysfunction.

**Russell Jackson** (Ph.D., 2007, University of Texas)

Dr. Jackson's research investigates how the environments in which humans evolved may have shaped how we navigate and perceive our environment. His work focuses on human factors applications in the navigation of environmental hazards. He uses virtual reality methods and live outdoor testing in order to determine how perception and navigation adapt to risks such as falling.

Affiliated Faculty

**Curt Braun** (Ph.D., University of Central Florida)

**Ronald Boring** (Ph.D., Carleton University)