

Psychology 291
BASIC RESEARCH METHODS

Fall 2009

Lectures/Labs: Tues. and Thurs. 8:30 – 10:20, AL 116

In PSYCH 291 we introduce you to the fundamental concepts and procedures that researchers use to address questions about psychological processes. This course will enable you to make more informed evaluations of research evidence, help you learn to design your own research, and prepare you for future courses in statistics and more advanced methods courses (e.g., PSYCH 392-398). This course is for second-year psychology students. All other students must have the permission of the course instructors and the psychology undergraduate advisor.

Instructors

Professor Joanne V. Wood	Professor John G. Holmes
PAS 3042	PAS 3047
Office hours: Each lecture will be followed by an open office hour (until 11:20) by the instructor who presented the lecture. If these times do not suit you, please speak to the instructors about arranging an appointment.	

Teaching Assistants

Head TA:	TAs:		
Amanda Hogle	Joanna Anderson	Nathaniel Barr	Olivia Lin
PAS 3045	PAS 3046	PAS 4044	PAS 4043
Office hours:	Office hours:	Office hours:	Office hours:

Course UW-ACE Web Page

Postings on the course ACE page include: the course syllabus, office hours, handouts for lectures, on-line activities, announcements, and so forth. On your browser, type in: <http://uwace.uwaterloo.ca>. Provide your Quest/UWdir userid and password, and then click on PSYCH-291. Problems? Read the instructions attached near the end of this outline.

Lectures

You are responsible for all material presented in lectures, including any announcements. Most of the lecture material will *not* be covered in the book.

Lab Sessions

Normally, class sessions will begin at 9:00, but when we have a lab session, class will begin at 8:30. In the lab sessions, demonstrations will be presented and graded exams and assignments will be returned to students. You are responsible for all material presented in lab sessions, including any announcements. Lab sessions are scheduled as indicated on the enclosed schedule. However, we may modify this schedule—rescheduling sessions or adding sessions—if necessary. Any such changes will be announced in class.

Graded assignments and exams will be returned to students either through ACE or during lab sessions. If you receive feedback through ACE, please print it out and bring it to the lab session. In the lab session, the correct answers and the marking scheme will be presented. If materials are distributed in lab session and you fail to pick them up, you may pick them up during TA office hours, but the TAs will not review the marking schemes with individual students. **Attend the lab sessions if you want to understand the marking!**

Contacting Instructors

All students are encouraged to seek information and help from instructors and TAs during scheduled office hours. We are here to help. We have scheduled a variety of office hours throughout the week, but if none of these suit your schedule, talk with an instructor or TA immediately before or after lecture to schedule an appointment. Any questions concerning lecture material, the readings, assignments, and administrative matters (e.g., exam timing conflicts) can be handled during office hours. Short, procedural questions can be sent to the course email address: psych291@uwaterloo.ca, but please save long, detailed questions for office hours. TAs will check email during their office hours. **PLEASE DO NOT SEND EMAIL MESSAGES TO THE INSTRUCTORS' OR TAs' PERSONAL EMAIL ADDRESSES. Due to the class size, we cannot handle email messages or visits to our offices outside of our scheduled office hours.**

Course Requirements

Required Reading:

Stanovich, K. (2010). *How to think straight about psychology*. 9th Edition. Allyn & Bacon Publishers.

Both the seventh and eighth editions may be used instead of this new version. They are substantially the same.

Note that there is almost no overlap between this book and the lecture content.

Assignments: The assignments are designed to expose students to a procedure, a method, or an issue in the research methods of psychology. 33% of the final grade in this course is associated with the two assignments. On the assignment due date, you must **SUBMIT AN ELECTRONIC COPY THROUGH THE COURSE ACE PAGE BY 1:00 PM. Your assignment must be in Word format.** The file name must have a “.doc” or “.docx” as a suffix. No other formats (e.g., WordPerfect) are acceptable. In class, a TA will demonstrate how to submit the assignment. In addition, you may get help submitting the assignment from a TA during office hours. **You are personally responsible for getting confirmation from the ACE system that the paper has been received successfully.** If your assignment has not been submitted properly, for whatever reason (e.g., you submitted the wrong file by mistake, you used the wrong format), you will receive a mark of 0 on the assignment, or, if you notify us of the mistake before the assignment marking is covered in class, it will be marked as a late assignment.

Late assignments—Assignments submitted electronically after 1 pm but before 5 pm on the due date will be deducted 5%. Beyond that, marks will be deducted at a rate of 10% per day past the due date (that’s 10% of the possible total). A late assignment will not be accepted after corrected versions of the assignment have been handed back to the class.

On-Line Activities: We have five on-line activities/tutorials that will be accessible through the ACE web page: (1) Interpreting Graphs, (2) Correlations and third variables, (3) Regression to the Mean, (4) Interactions, and (5) Mediation. All students must access these activities (ACE will record who accesses these activities), and complete the quizzes that are presented. These activities will be made available on ACE about a week before they are due to be completed. Each online activity will be worth 1% of the final course grade. However, students will vary in how much time they spend using these activities, depending on their prior exposure to these topics and on their motivation to learn the topics.

Research Participation: Students may earn extra credit of up to 4 points (over the 100% total of their final course mark) through participating in the REG/SONA Psychology Participant Pool, with 2 credits available before the midterm and 2 after.

Quizzes: Two in-class, short, multiple-choice or short-answer quizzes will assess students’ knowledge of (1) Basic Concepts and (2) Interactions. These quizzes together count for 12% of the final grade.

Exams: Midterm and final exams will consist of multiple choice questions and short essay questions. The midterm will cover all lectures and assigned readings from the beginning of the course through October 27; the final will cover all lectures and assigned readings after the midterm (i.e., the final will not be cumulative). Each exam counts for 25% of the course grade.

For each exam, you will receive a list of possible short essay questions about one week before the exam date. We will select the actual questions for the exam from this list.

Questions about exam content (e.g., “will x be on the exam?”) should be asked (1) during class or (2) to the instructors (not the TAs) during office hours prior to the last class before the exam, so that answers can be given to the whole class. The reason for this restriction is that it is unfair for some students to have information about exam content that is not available to the rest of the class.

Weighting of requirements for course grades

	Date due	Weight in final grade
On-line activities:		
Interpreting graphs	Sept 22	1%
Correlations	Oct 9	1%
Regression to the mean	Oct 15	1%
Interactions	Nov 23	1%
Mediation	Dec 2	1%
Quiz on basics of research design	Oct. 8	8%
Quiz on types of interactions in factorial designs	Nov 26	4%
Assignments:		
1 – correlational and basic experimental designs	Oct. 20	15%
2 – designing a factorial experiment	Dec 7	18%
Midterm exam	Oct 29	25%
Final exam	exam period	25%

Illness/Emergencies

Students who are requesting accommodation for course requirements (assignments, midterm tests, final exams, etc.) due to illness should do the following:

- seek medical treatment as soon as possible and obtain a completed UW Verification of Illness Form: http://www.healthservices.uwaterloo.ca/Health_Services/verification.html
- submit that form to the instructor within 48 hours.
- inform the instructor by the due date for the course requirement that you will be unable to meet the deadline and that documentation will be forthcoming.

In the case of a missed assignment deadline or midterm test, the instructor will either:

- a) provide an extension, or
- b) under special circumstances, waive the course component and re-weight remaining term work as he/she deems fit according to the goals of the course.

In the case of a missed final exam, the instructor and student will negotiate an extension for the final exam which will typically be written as soon as possible, but no later than the next offering of the course.

In the case of bereavement or a crisis in your personal or family life the instructor will provide similar accommodations to those for illness. Appropriate documentation to support the request will be required.

It is imperative that you inform us of any illness or crisis **before** the exam or assignment due date takes place. If you must cancel at the last minute, please leave a message at psych291@uwaterloo.ca or at 888-4567, x36512. **If you run into difficulties with course material, or keeping up with deadlines, talk with a TA or with the instructors as soon as possible; do not wait until it becomes a crisis.** For example, if you tell us during Week 8 that you're having trouble, it is more credible and we can be more helpful than if you suddenly ask for an exam postponement in Week 12.

Academic Integrity

Plagiarism is the use of someone else's words or ideas as if they are one's own. It includes the use of quotations without proper referencing. All students must complete their assignments and papers on their own. Copying someone else's assignment (or portion thereof), or allowing someone to copy your assignment, are prohibited. Cheating on examinations or assignments and plagiarism will result in a grade of zero for the course and will be reported to the Chair of the Department of Psychology and to the Dean of the Faculty of Arts. Additional disciplinary action could include probation, suspension, or expulsion.

How to Avoid Plagiarism and Other Written Offences: A Guide for Students and Instructors (<http://watarts.uwaterloo.ca/~sager/plagiarism.html>).

The Faculty of Arts requires that the following message be included on all syllabi distributed in the Faculty of Arts:

- **Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. [Check www.uwaterloo.ca/academicintegrity/ for more information.]
- **Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.
- **Discipline:** A student is expected to know what constitutes academic integrity [check www.uwaterloo.ca/academicintegrity/] to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, www.adm.uwaterloo.ca/infosec/Policies/policy71.htm. For typical penalties check Guidelines for the Assessment of Penalties, www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm.
- **Appeals:** A decision made or penalty imposed under Policy 70 (Student Petitions

and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm.

- **Note for Students with Disabilities:** The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

Avoiding Academic Offences:

http://arts.uwaterloo.ca/arts/ugrad/academic_responsibility.html

Message from Heather Smith

It is your responsibility to check e-mail regularly for important and time sensitive messages. You should use your UW account for all e-mail correspondence to UW personnel for reasons such as identification, reliability, and security. Note that higher priority may be given to e-mail received from UW accounts versus other accounts such as hotmail, yahoo, etc. See "Official Student Email Address" for further details:

<http://www.adm.uwaterloo.ca/infocist/emailuse.html>

The home page for the psychology department: <http://www.psychology.uwaterloo.ca/>

Schedule for Term

Class begins at 8:30 on Lab days and at 9:00 on all other days.

Date	Inst- ructor	Topic	Required reading	Labs, assignments, due dates
Sept 15	HS, CE, JH, JW	Orientation for psych majors Introduction to course	Stanovich preface	
Sept 17 & Sept 22	JH	Philosophy and history of science	Stanovich Ch. 1, Ch. 2, Ch. 12	Sept 22 – “Interpreting graphs” on-line activity must be completed by 11 pm
Sept 24 & Sept 29	JW	Basics of research design	Stanovich Ch. 6	Sept 25 – <i>Materials for Basics Quiz will be available on ACE. Read and bring these to the quiz on Oct 8.</i>
Oct 1 & Oct 6	JH	Nonexperimental designs	Stanovich Ch. 4 Stanovich Ch. 5 pp. 73-80	Oct 7 - <i>Assignment #1 will be posted on ACE.</i>
Oct 8, <u>8:30</u> <u>start</u> Oct 13, Oct. 15	JW	Threats to internal validity	Stanovich Ch. 5 pp. 80 – 84	Oct 8 – Basics Quiz – arrive at 8:30– <i>Bring the materials.</i> Oct 9 – “Correlations” on-line activity must be completed by 11 pm Oct 15 – “Regression to the mean” on-line activity must be completed by 11pm
Oct 20, Oct 22, Oct 27 <u>8:30</u> <u>start</u>	JH	Measurement	Stanovich Ch. 3	Oct 20 – <i>Assignment #1 due by 1 pm</i> Oct 27 – LAB– arrive at 8:30– <i>return of Assignment #1 with explanation of grading</i>
Oct 29	MIDTERM EXAM from 9:00 – 10:20 in AL 116.			

HS = Heather Smith, Psychology Undergraduate Services Officer
 JW = Professor Joanne Wood

CE = Professor Colin Ellard, Undergraduate Chair
 JH = Professor John Holmes

Date	Inst- ructor	Topic	Required reading	Labs, assignments, due dates
Nov 3, Nov 5, & Nov 10 <u>8:30</u> start	JW	True experimental designs	Stanovich Ch. 7	Nov 10 – LAB– arrive at 8:30– <i>return of midterm exams with explanation of grading</i>
Nov 12, Nov 17, & Nov 19	JH	Complex experimental designs	Stanovich Ch. 9	Nov 19 – <i>Assignment #2 will be posted on ACE.</i>
Nov 24	JW	Interpreting results	Stanovich Ch. 8	Nov 23 – “Interactions” on-line activity must be completed by 11 pm
Nov 26, Dec 1, & Dec 3	JW & JH	Mediation and confounds	Stanovich Ch. 10 & 11	Nov 26 – <i>Quiz 2 on interaction types</i> Dec 2 – “Mediation” on-line activity must be completed by 11pm Dec 7 – <i>Assignment #2 due by 1 pm</i>
Exam period	FINAL EXAM – time to be scheduled by Registrar *			

* According to the Faculty of Arts, student travel plans are not acceptable grounds for granting an alternative final examination time (see <http://www.registrar.uwaterloo.ca/exams/finalexams.html>).

Information for Students Using UW-ACE

ANGEL is a web-based course management system that enables instructors to manage course materials (posting of lecture notes etc.), interact with their students (drop boxes for student submissions, on-line quizzes, discussion boards, course e-mail etc.), and provide feedback (grades, assignment comments etc.). The degree to which UW-ACE is utilized in a particular course is left to the discretion of the instructor and therefore, you may find a large variance in how UW-ACE is being used from one course to another.

1. Logging Into UW-ACE

Since UW-ACE is a web-based system, you will need a browser. Although you may have success with other Web browsers, we strongly recommend that you use the following for best access results:

2. Choosing a Browser

ANGEL is designed to support the widest variety of client-side operating systems and client-side browsers through its limited use of client-side technologies. While ANGEL products generally function well in many browsers, the following are formally supported and tested:

- With PCs running Windows OS: Internet Explorer, Firefox and Mozilla
- With Macs running OS X: Firefox and Mozilla

Testing is performed on the latest generally available versions for the above platforms and browsers with each General Release of ANGEL products, ensuring full support at that time. For additional information on browser support please visit <http://support.angellearning.com>.

Note: Internet Explorer for the Mac will **not** work with ANGEL.

3. Locating UW-ACE on the Web

Once you have started up your browser, type in the following URL:

<http://uwace.uwaterloo.ca> or go to the University of Waterloo's homepage and select the **UW-ACE** hyperlink

Provide your Quest/UWdir userid and password. Once you have logged in, you should see a list of your UW-ACE courses under the Courses header bar. Clicking on the course name will take you to that course.

4. Checking Your Userid and Password

Your password can be checked by going to:
<http://ego.uwaterloo.ca/~uwdir/UW-Passwd.html>

If your password check fails, you can unlock your password and receive a new one by going to:
<http://ego.uwaterloo.ca/~uwdir/UnLock.html>

If you still can not get on after checking and resetting your password, please confirm with your instructor that you are on the class roster. Only students with courses using UW-ACE will have access to the site.

5. **Getting Help.** A UW-ACE student guide can be found by selecting **Help**  on left hand panel of the UW-ACE home page, and selecting the hyperlink **ANGEL 7.2 Student Guide -- Quickstart Overview Guide**.

Additional queries can be sent to uwacehelp@ist.uwaterloo.ca.

**Research Experiences Group (REG)
Participation in Psychology Research: Guidelines for Psychology 291, Fall 2009**

Experiential learning is considered an integral part of the undergraduate program in Psychology. Participation in research is one example of this. A number of undergraduate courses have been expanded to include opportunities for Psychology students to volunteer as research participants enabling them to learn first-hand about psychology research and related concepts. Many students report that participation in research is both an educational and interesting experience.

Since experiential learning is highly valued in the Department of Psychology, student participants may earn a "bonus" grade of up to 4% in this course through research experience (i.e., the maximum possible final grade is 104%).

This can be done in two ways. First, you may participate in studies conducted by students and faculty in the Department of Psychology. Participation is worth 0.5 participation credits (percentage points) for each half-hour of participation. Researchers will record student's participation and the REG Coordinator will advise the course instructor of the total credits earned by each student at the end of the term. Second, if you do not wish to participate in research, you may choose an alternative approach to earning the same number of credits; this is explained below in "Alternative to participating in research."

Please note that all Psychology studies have undergone prior ethics review and clearance through the Office of Research Ethics.

Educational focus of participation in research

To maximize the educational benefits of participating in research, students will receive feedback information following their participation in each study detailing the following elements:

- Purpose or objectives of the study
- Dependent and independent variables
- Expected results
- References for at least two related research articles
- Provisions to ensure confidentiality of data
- Contact information of the researcher should the student have further questions about the study
- Contact information for the Director of the Office of Research Ethics should the student wish to learn more about the general ethical issues surrounding research with human participants, or specific questions or concerns about the study in which sh/he participated.

How to sign up for studies:

Once you are registered in this course, you will get an account on Sona (our web-based Study Sign-Up system) at <http://uwaterloo.sona-systems.com> and you will receive an email with your UserID and Password. IF YOU DO NOT RECEIVE this email, please report this to regadmin@uwaterloo.ca immediately.

- 1) Log On to Sona: User ID is your Quest ID (eg. j2smith)
Password is your Student ID (eg 2001234)
- 2) Human Subjects/Privacy Policy: Please Read/Acknowledge
- 3) Prescreen Questionnaire: Please take 10 minutes to provide this demographics information. There is no credit for this and you may decline if you wish however completing it will increase your eligibility for studies.
- 4) Sign-up for Online Surveys and/or Lab studies:
 - a. Go to "Studies" page to view the list of available studies.
 - b. Click on the Titles of studies that are eligible for this course.
 - c. Read the Study Information page.

- d. For Online studies: Click on “View Timeslots” and/or “Participate”.
 - e. For Lab studies: Click on “View Timeslots” to set up lab appointments.
- 5) **Feedback and Credits:** Upon completion of the study you will receive feedback about the study hypothesis, design and predictions. Within 48 hours you will be granted the credit. Credits will be converted to grades and added to your final grade at the end of the term.

Mass Testing Survey (for 1.0 participation credit):

Researchers often select participants based on their responses to the measures in this survey. Completing it increases your eligibility for other studies. Note that you can only do this survey if you have completed the Prescreen questionnaire. Doing both Prescreen Questionnaire and Mass Testing Survey helps you (by providing more qualifying studies) and it helps researchers (by identifying more qualified participants). The Mass Testing Survey will be available until Tuesday October 20 at which time it will go offline, so please try to complete it before that date.

Study Restrictions and Important Dates:

- i) The first day to start participating in studies is Tuesday September 14.
- ii) The study must be eligible for a credit in this course (as noted in the Eligibility Requirements column on your Studies page).
- iii) Only 2 of your credits for this course can be for Online studies.
- iv) You should try to spread your participation out over the term i.e., if you wait until late in the term there may not be enough studies available for you.
- v) The last day to participate for credit is Friday December 4.
- vi) The last day to participate for remuneration/pay is Tuesday December 22.

Denial of access to studies: Completing studies that you have signed up for!

It is very important that you complete the studies that you have signed up for. For Lab studies this means showing up for the scheduled appointment. For Online studies this means completing the survey before the deadline that is posted in the timeslot. Please note that a study sign-up is a firm commitment to the researcher running the study so if you cannot keep the lab appointment or complete the survey before the deadline, please cancel the Sign-Up or contact the researcher in advance. Failure to attend 3 (THREE) Lab and/or Online studies that you have signed up for without providing adequate prior notice to the researcher may result in denial of access to further studies. Details are provided on the FAQ page on your Sona account.

For information, instructions, help with login problems etc. please contact:

REG website: <http://www.arts.uwaterloo.ca/~regadmin/regparticipant>
REG Coordinator: regadmin@uwaterloo.ca

Alternative to participating in research

Students are not required to participate in research, and not all students wish to do so. As an alternative to participation in research, students may submit short reviews (1½ to 2 pages) of journal articles relevant to the course material. Each review article counts as one percentage point. You should contact your TA to get approval before writing the review. To receive credit, you must follow specific guidelines. The article review must:

- Be submitted before December 4. Late submissions will NOT be accepted under ANY circumstances.
- Be typed
- Fully identify the title, author(s), source and date of the article. A copy of the article must be attached.
- Identify the psychological concepts in the article and indicate the pages in the textbook that are applicable. Critically evaluate the application or treatment of those concepts in the article. If inappropriate or incorrect, identify the error and its implications for the validity of the article. You may find, for example, misleading headings, faulty research procedures, alternative explanations that are ignored, failures to distinguish factual findings from opinions, faulty statements of cause-effect relations, errors in reasoning, etc. Provide examples whenever possible.
- Clearly evaluate the application or treatment of those concepts in the article.

- Keep a copy of your review in the unlikely event we misplace the original.

Students may complete any combination of a) participation in research or b) article review up to a total of 4 credits (i.e., 4% grade).