

**PSY 100 Participant Pool  
Student Handbook**



**Summer 2011**

## Rationale for Participation in Experiments

Much of the data comprising psychological knowledge comes from experiments that employ human participants. The nature of such data and the experimental situations in which such data are obtained are not always what they appear to be from the outside looking in, that is, from reading chapters in Psychology textbooks. Serving as a participant in such experiments can enhance your understanding of the process of psychological experimentation.

For this reason, we provide students with opportunities to earn course credit for participating in up to four different experiments chosen from among a specific group of experiments offered throughout the term. Each such experiment takes usually no more than one hour in total length, though a few might take longer or be divided into two briefer sessions. The Department has selected these particular experiments to maximize potential educational value to the participant.

Note that there are additional experiments in the Department, not in this special group, that are available through the year for paid or voluntary participation. Participation in these additional experiments, however, does not earn course credit.

There are several concepts relating to research and experimental design that are important for you to understand before you participate in any experiment. These concepts are outlined in the *Glossary of Experimental Design Terms*, which are located near the end of this handbook. **We urge you to review this glossary before you sign up for your first experiment.** Note that these concepts will be discussed more fully in class when we cover research methodology.

## Procedures for Participation in Experiments

Beginning in mid-May for PSY100F and early July for PSY100S, available experiments will be posted on a secure system called PSYNUP, which can be accessed from the PSY100 web site. Signing up for experiment participation can be done **only** through this site. Once you have registered, you will be able to obtain access to the experiment sign-up page at any time (instructions for registering can be found on page 2 of this document). When you are actually ready to sign up, follow the instructions below.

Be sure to make a careful note of both the time and place of your appointment. Should you forget the time or place, simply log on to PSYNUP from any computer and check the time.

Once you have signed up for an appointment time, you must keep it unless you arrange a change in time with the experimenter—**in advance**. You can cancel your appointment, however cancellation is only possible up to 12 hours before your appointment. To cancel your appointment you must email or call the experimenter **at least 12 hours in advance**. If the experimenter does not answer, leave a message including your name, student number, and the date and time of the appointment you wish to cancel. We keep a record of those students who fail to show up and did not cancel their appointment in advance. Students whose names appear on this record are penalized according to the procedures described on the following pages.

## How to Register on the PSYNUP System to Sign Up for Experiments

To sign up for experiment participation you will **FIRST** have to register a password chosen by you and associate it with your student number (which serves as your login id).

To register:

1. Go to the PSYNUP page on the PSY100 Blackboard site.
2. Click on the link that says "[NEW users register here](#)".
3. This will take you to a page where you will be asked to type in your student number, your email address and a password that you choose. Remember to type in your email address very carefully, as this is the only way experimenters can reach you if they need to cancel an experiment due to illness.
4. You will only need to register once. On all subsequent sessions, when you log on you will do so by using your student number and registered password.

## Experiment Participation and the PSY100 Student Questionnaire

Once you login to PSYNUP you will see a calendar view. The calendar shows experiments that are available for you to participate in. Note that you can use the arrows next to the month name to navigate to other months. If you click on an available experiment, the side bar will display details on the study and a "signup" button. Pay special attention to the exclusions in the experiment details. These are things that exclude you from participating in a particular experiment and may be things like participation in another experiment (e.g., some experiments are very similar and so it is not helpful to either you or the researcher to participate in both), or demographic characteristic (e.g., some researchers may need participants who are left handed, or who speak a particular language).

You can sign up for any experiment you see in the calendar view, as long as you meet the exclusion criteria. When you pick an experiment be sure to record the location and time of your appointment. The sidebar will also show you any appointments you have already made.

In addition to the regular sign-up method through PSYNUP, some experimenters may decide to telephone you. Students who completed the optional PSY100 Student Questionnaire at the beginning of the term and who indicated their willingness to be invited to participate voluntarily in certain studies conducted by the department might be contacted by email or phone (rather than through the sign-up procedure described above). Being contacted directly in no way requires you to accept the invitation. If you are contacted by email and do choose to participate in the experiment, please check the list of approved phone experiments listed on PSYNUP to ensure it is a legitimate PSY100 experiment.

If you are contacted to participate in an experiment not listed on PSYNUP, **do not take part in it and report this immediately to the PSY100 Participant Pool coordinator (psy100pool@psych.utoronto.ca)**. *Please note that since very few experimenters invite participants and you should not wait until the last date possible to participate, in the hope that you might be invited to participate in an experiment.*

**IMPORTANT:** Experiments are posted **throughout the term**. Keep checking for new postings if you are unable to sign up right away.

## Debriefing, Testing, and Receiving Credit for Participation

Marks for experimental participation are structured in the following way. You will receive **one mark** for each of the experimental credits that you receive, for a possible total of **three full (3) mark**, the maximum amount possible. When you participate in an experiment, you will receive an experimental credit. Most experiments are worth one (1) credit each, however there are a few that are worth two (2) credits.

You earn the credits as follows: At the conclusion of the experiment in which you have just participated, the experimenter will explain the purpose of the experiment and the rationale behind its particular design. You will also receive a "debriefing sheet" that explains the experiment in detail. When you judge that you understand the experiment and feel ready to answer a brief test question about it, the experimenter will then ask you a test question about the experiment. If you answer the test question correctly, your participation is complete, and the experimenter will issue you a signed 'proof of participation' sheet to indicate that you have satisfied this requirement. If you do not answer the test question correctly, you will have the opportunity to study the debriefing sheet further and can arrange to receive another test question. You may repeat this process—not too many times, we hope—until you answer the test question correctly.

Once you have correctly answered the test question at the conclusion of each experiment, and have received three (3) credits, you have maximized your experiment participation opportunity. **Please retain your signed 'proof of participation' sheets.** Should an administrative error occur, these sheets are your proof that you have indeed earned the experiment participation credits. Once you have completed the experiment the researcher will submit your credit to the PSYNUP system and it should appear in your PSYNUP account – it may take the researchers up to two days to register your credit so do not be alarmed if it does not appear immediately. If after two days your credit has not appeared, please send an email with the experiment number, date, and time of your participation to [psy100pool@psych.utoronto.ca](mailto:psy100pool@psych.utoronto.ca)

You can earn no more than a total of three marks for experiment participation. However, if you would like further research experience as a participant, we encourage you to sign up for experiments advertised on other bulletin boards in Sidney Smith, on the fourth floor and on the ground floor opposite the elevators.

## Option to Participate as an Observer Rather Than as a Participant

Although we encourage you to participate as a subject, you may, if you wish, avoid actual participation as a subject while still earning experiment participation credits. To do this, sign up for each selected experiment exactly as outlined above and, upon arriving at the experiment, **immediately** inform the experimenter that you intend to participate "only as an observer." **Should you choose to participate only as an observer you must inform the experimenter at the beginning of the experiment.** As an observer, you will not actually produce any real experimental data. Instead, you will be "walked through" the experiment as though you were a participant, but no data will be collected. You are under no pressure to do anything more than learn what it is that participants in this experiment do and why they are asked to do it. Please note, however, that you are still required to answer the test question at the conclusion of the experiment to receive credit.

Please be aware that, at any time during any experiment, it is your right to stop participating altogether, or to change from participant to observer.

## Penalty for Missing an Experiment

We consider it a grievous discourtesy to fail to keep an appointment. Students who fail to keep an appointment and have not cancelled their booking in advance (by at least 12 hours prior to your appointment) to cancel will be penalized as follows: (We hope this never applies to you!)

Failing to show up for an experiment results in the subtraction of one mark (1) from your maximum total of three experiment participation marks, for each experiment that you miss. If this does happen to you, you will need to complete one additional experiment for each no-show. For example, if you receive three credits and miss one experiment, your final grade would be 2. To attain a grade of 3 (the maximum grade possible) you must then complete one additional experiment.

Please note that if you do not complete the experiment participation opportunities by the deadline stated below and your credit for participation is a negative value, then the experiment participation component of your grade will be zero out of the maximum total of three; that is, we will not assign a negative value for this portion of your course grade.

## Questions or Problems Concerning Participation

If you have any questions about an experiment, address them directly to the experimenter or to the experimenter's faculty supervisor. Direct further questions or problems to the PSY100 Participant Pool Coordinator ([psy100pool@psych.utoronto.ca](mailto:psy100pool@psych.utoronto.ca)), particularly if something occurs that does not seem fair or proper.

## Participation Deadlines

You must complete the experiment participation opportunities (participating in an experiment **and** passing the test, for up to four experiments) **no later than the last day of classes**. We recommend that you plan to participate in experiments throughout the semester as we simply cannot guarantee opportunities for those who delay participation until the last few days of the term.

## A Glossary of Experimental Design Terms

The purpose of this glossary is to define some of the fundamental concepts of research design with which you should be familiar **before** you sign up for your first experiment.

### **Hypothesis:**

...a proposition or an assumption that one attempts to verify (or refute) through experimentation or observation. An example of an hypothesis might be: "Students study more effectively in quiet than in noisy environments."

### **Experiment:**

In an experiment, the experimenter deliberately manipulates one or more variables (factors) in order to determine the effect of this manipulation on another variable (or variables). An example might be measuring the effect of noise level on participants' memorization performance of a list of standard nonsense syllables (such as ZUP, PID, WUX, *etc.*).

### **Independent Variable:**

...the "treatment" variable that the experimenter hypothesizes "has an effect" on some other variable. (See **Dependent Variable**, below). In the example above, the independent variable would be the level of noise (in this case with three levels: low, medium, high). In an **experiment**, the independent variable is directly manipulated by the experimenter. But in an **observational study**, or when **naturalistic observations** are used, the independent variable is not directly manipulated by the experimenter, and the levels of the independent variable occur naturally and are already given when the study begins.

### **Dependent Variable:**

...the variable that the experimenter hypothesizes is "affected by," or "related to," the independent variable. It is the "outcome" or "effect" variable. Examples would be a measure of the participants' performance, their change in attitude, or change in activation of a particular brain region resulting from changes in the independent variable. In the example described earlier, the dependent variable might be the number of nonsense syllables recalled correctly.

### **Experimental Group and Control Group:**

In some experiments, the levels of the independent variable consist of only two: a treatment-present condition and, for comparison purposes, a treatment-absent, or no-treatment, condition. The group receiving the treatment-present condition (one of the two levels of the independent variable) is called the experimental group, and the group receiving the treatment-absent, or no-treatment, condition (the other level of the independent variable) is called the control group.

### **Confounding Variable (or Confound):**

A confound is any factor that may affect the dependent variable, and which varies between experimental conditions. The presence of a confound means that one cannot conclude that it was the independent variable which affected the dependent variable, because it may well have been the differences in the confounding variable between conditions. For example, imagine you are testing whether alcohol affects how much people are attracted to others. However, the experimental condition involving alcohol takes place in a bar, whereas the control condition not involving alcohol takes place in a bowling alley. If the people in the bar are more attracted to those around them than the people in the bowling alley, you cannot conclude that it was because of the alcohol

consumption in the bar. There are many other differences between bars and bowling alleys that could have an effect on how attracted people are to others. Confounds must be controlled for, for example, through randomization or by holding them constant.

#### **Control Variable:**

One can prevent the effects of a specific, identifiable error variable from clouding the results of an experiment by holding this error variable constant. For example, if all participants are the same age, then variations in age cannot act as an error variable. A variable that is thus held constant is called a control variable. (Of course one can then no longer generalize the results to those of ages other than the age selected for the experiment.)

#### **Null Hypothesis and Alternative Hypothesis:**

The null hypothesis refers to the statement that changes in the independent variable **have no effect** on the dependent variable and that therefore whatever difference was found between the experimental and control groups simply occurred by chance through the influence of random error variables. The alternative hypothesis refers to the statement that changes in the independent variable really **have an effect** on the dependent variable and that the difference in performance between the experimental and control groups was greater than what would be expected by chance through only the influence of random error variables. (In the example, above, the null hypothesis is that changes in noise level **have no effect** on participants' recall scores. The alternative hypothesis is that changes in noise levels **have an effect** on participants' recall scores.)

#### **Debriefing:**

In some experiments, it is not desirable that participants know the exact nature of the hypothesis being tested. (There is evidence in certain kinds of experiments that if participants know what the hypothesis is, they might, either consciously or unconsciously, respond in order to try to prove the hypothesis correct -or perhaps false! (rather than respond "naturally" and "honestly.") In such experiments the experimenter arranges to keep participants temporarily "in the dark" about the hypothesis until after the necessary data have been collected. Immediately thereafter, however, the experimenter is obligated to inform participants about the true nature of the hypothesis, why the experiment was designed as it was, and what previous investigators in the relevant areas had found. The experimenter might also ask participants to report to what extent they "saw through" the experiment and what they thought the experimenter was trying to find out. (If an experimenter has other participants yet to test in such an experiment, you may be asked to keep the information revealed in the debriefing session confidential until the conclusion of the whole experiment. Please cooperate with experimenters in this regard.)