

**PSY1020A Experimental Design  
Course Outline**

Instructor	Teaching Assistant
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**Course Description**

This course is designed to help students acquire understanding about the conceptual principles underlying psychology research (psychology experiments in particular). It enables you to understand psychology research both from a consumer perspective and from a researcher perspective. Topics include finding research ideas, research ethics, internal validity, external validity, various experimental and non-experimental designs (and the corresponding statistical analyses), and research evaluation. These topics are illustrated with many past empirical studies. Thorough understanding of basic statistical analyses (e.g., PSY1010) is presumed.

**Objectives**

After taking this course, you would:

1. understand the conceptual principles underlying psychology research;
2. be able to evaluate psychology research;
3. be able to design psychology research;
4. be able to perform statistical analyses often used in psychology experiments.

**Assessment Methods**

1. Team Project 30%  
In a team of 5, you will design an experiment to test a novel hypothesis you derive from a theory of your choice. You will also analyze a hypothetical dataset corresponding to your experiment design. At the end of the course you will report your experiment in a presentation. This project purposes to help you develop the ability to evaluate and design psychology experiments. This ability is vital in future when you are conducting your own research or consuming knowledge generated by other researchers. You are to work in teams so that workload and ideas can be shared. Please refer to the "Team Project Guidelines" for more details.
2. Assignments 25%  
There will be 2 assignments. You will be presented to some experiment situations and provided with the corresponding datasets. You will select appropriate statistical analyses, perform them, and report the results. These assignments purpose to help you develop the ability to perform statistical analyses often used in psychology experiments. This ability is vital in future when you are conducting your own research or reading experiment reports by other researchers. Please refer to the "Assignment Guidelines" for more details.
3. Quiz 15%  
The quiz purposes to check your understanding of the course materials. It covers the topics taught in Lectures 1-5. Please refer to the "Quiz Guidelines" (to be distributed in due course) for more details.
4. Examination 30%  
The final examination purposes to check your understanding of the course materials. It covers all the topics taught in the course. Please refer to the "Examination Guidelines" (to be distributed in due course) for more details.

**Tutorials**

Kevin and Jenny will provide conceptual and statistical consultation services, particularly in relation to the team project. Also, there will be 5 tutorials on SPSS operations. Tutorial attendance is compulsory and will be recorded.

**Schedule**

Date	Tutorial Tue, 0900-1015, ELB 203 / Tue, 0830-1015, SB 349 *	Date	Lecture Thur, 1430-1615, ELB 308
8 Jan 2008	<i>No tutorial</i>	10 Jan 2008	1. Introduction (Chapter 1)
15 Jan 2008	<i>No tutorial</i>	17 Jan 2008	2. Research idea; Research ethics (2, 3)
22 Jan 2008	1. Introduction	24 Jan 2008	3. Internal validity I (6, 7, 8)
29 Jan 2008	2. Consultation	31 Jan 2008	4. Internal validity II (6, 7, 8)
5 Feb 2008	3. Consultation	7 Feb 2008	<i>Holiday</i>
12 Feb 2008	<i>Holiday</i>	14 Feb 2008	5. Experimental designs I (10, 11, 12)
19 Feb 2008	4. SPSS operations *	21 Feb 2008	6. Experimental designs I (10, 11, 12)
26 Feb 2008	5. <b>Quiz</b>	28 Feb 2008	7. Experimental designs I (10, 11, 12)
4 Mar 2008	6. SPSS operations *	6 Mar 2008	8. Single-case/Quasi experimental designs (13)
11 Mar 2008	7. Consultation	13 Mar 2008	9. Non-experimental designs (4, 5)
18 Mar 2008	8. SPSS operations *	20 Mar 2008	10. External validity (8)
25 Mar 2008	9. SPSS operations *	27 Mar 2008	11. Other issues; Evaluating research
1 Apr 2008	10. Consultation	3 Apr 2008	12. <b>Presentation</b>
8 Apr 2008	<i>No tutorial</i>	10 Apr 2008	13. <b>Presentation</b>

### Textbook

Smith, R.A., & Davis, S.F. (2007). *The psychologist as detective: An introduction to conducting research in psychology* (4th Ed.). New Jersey: Pearson Education.

(An older edition of this book is now on reserve at the Chung Chi College Library.)

### Online Resources

CUForum: <http://cuforum.cuhk.edu.hk> (communication platform for this course)

Online learning centre: [http://wps.prenhall.com/hss\\_smith\\_psychologist\\_3/](http://wps.prenhall.com/hss_smith_psychologist_3/) (resources for self-learning and self-test)

### Suggested References

1. Abelson, R.P. (1995). *Statistics as principled argument*. New Jersey: Lawrence Erlbaum Associates.
2. Abelson, R.P., Frey, K.P., & Gregg, A.P. (2004). *Experiments with people: Revelations from social psychology*. New Jersey: Lawrence Erlbaum Associates.
3. Reis, H.T., & Judd, C.M. (2000). *Handbook of research methods in social and personality psychology*. New York: Cambridge University Press.
4. Rosenthal, R., & Rosnow, R.L. (2008). *Essentials of behavioral research: Methods and data analysis*. Boston: McGraw Hill.
5. Warner, R.M. (2008). *Applied statistics: From bivariate through multivariate techniques*. Los Angeles: Sage Publications.

(These suggested references are now on reserve at the Chung Chi College Library. These references serve as good complements to the course materials and the textbook.)

### Suggested Journals

1. Journal of Experimental Psychology
2. Psychological Science

(These suggested journals publish quality empirical research reports. They provide good examples on how psychologists conduct experiments. They also serve as a good reference for your team project. Reference articles on other issues in psychology research or psychology experiments will be suggested in due course.)

### House Rules

By taking this course you agree to abide by the following:

1. Turn off your mobile phone during lectures and tutorials.
2. Do the readings (including textbook chapters, lecture and tutorial notes, and suggested references) on your own, and keep pace with the lectures and the tutorials.
3. Assignments must be submitted by the deadline stated. Noticing that you may experience unexpected hindrances to your assignment submission (e.g., traffic congestion, printer failure), there will be a two-hour grace period. Assignments submitted after the deadline and the grace period will be marked down by 10% for every 12 hours (or part thereof) thereafter.

### Your Feedback

We cherish very much your opinions about this course. Two course evaluation exercises, one in the middle and one at the end of the course, will be conducted. You will be asked questions such as "what do you like about the course?" and "which part(s) of the course need to be improved?"

At other times, please feel free to write your opinions on a piece of paper and put it in the PSY1020A collection box in the lift lobby, 3/F, Sino Building (Please be reminded that you do not need to put down any identifying information, and that you need to specify the course code). Alternatively, you are welcome to talk directly to Kevin or Jenny through any means.

### Academic Honesty

Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at <http://www.cuhk.edu.hk/policy/academichonesty>. Students are required to submit a statement acknowledging that they are aware of these policies, regulations, guidelines and procedures and pledging to be honest in their academic work.

Any assignment (i.e., project, essay, or paper) that shows evidence of plagiarism will be marked down severely. In simple terms, plagiarism is copying passages and/or ideas from other sources without referencing those sources. Moreover, when you report someone else's ideas/findings you must put it in your own words and not merely copy full sentences or parts of sentences from the source article. It is your responsibility as a scholar-in-training to cite the ideas and work of others correctly. Please visit the following websites for discussions of how to recognize and avoid plagiarism.

<http://ec.hku.hk/plagiarism/introduction.htm>  
<http://www.indiana.edu/~wts/wts/plagiarism.html>  
<http://www.hamilton.edu/writing/style/plagiarism/plagiarism.html>

If you commit plagiarism in an assignment, and it is your first offence in the course, the penalty will range from a minimum of a single letter grade reduction in score on the assignment to a maximum of failure on the assignment. A second offence within the same course will result in a minimum penalty of a single letter grade reduction in the course grade to a maximum penalty of course failure. The specific penalty applied is up to the discretion of the professor. In all cases of plagiarism, the student's name will be recorded in a central database maintained by the general office. If a student is referred for plagiarism in more than one course, or more than one instance in the same course, the student's case will be forwarded to the university administration for follow-up action.

Please sign the following and submit it in the first tutorial.

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I promise that all assignments submitted to this course across the entire semester will be original except for source material explicitly acknowledged. I also acknowledge that I am aware of University policy and regulations on honesty in academic work, and of the disciplinary guidelines and procedures applicable to breaches of such policy and regulations as contained in the website <http://www.cuhk.edu.hk/policy/academichonesty>.

Signature	_____
Date	_____
Name	_____
Student ID	_____
Course Code	PSY1020A
Course Title	Experimental Design