

# CPSY 501 Fall 2010 Syllabus

<b>Instructor</b>	<p><u><a href="#">Dr. Sean Ho</a></u>  <u><a href="mailto:twu@seanho.com">twu@seanho.com</a></u>  (604) 513-2121 x3209, Neufeld 5  Office hours: Wed-Fri 2-4pm</p> <p style="text-align: right;">Class location:  F 9am-12pm, CanIL 115 lab  <a href="http://cpsy501.seanho.com/">http://cpsy501.seanho.com/</a></p>
<b>Description</b>	<p>An examination of common parametric and non-parametric statistical techniques used in psychological research, and of principles of accurate application and interpretation of those techniques (e.g., effect size; power; sample size; implications of violations of test assumptions). Topics focus on multiple regression, different models of analysis of variance and covariance, and also include categorical data analysis, meta-analysis, and an introduction to interpretation of multivariate statistics.</p>
<b>Objective</b>	<p>An emphasis is placed on applied data analysis and accurate conceptualization, rather than statistical theory. Students in this course will:</p> <ol style="list-style-type: none"> <li>1. Building on a first course in statistics, be able to describe the place of statistics in making sense of data and building models of psychological phenomena.</li> <li>2. Be able to determine what statistical procedures are appropriate and inappropriate to use when analysing a given set of data.</li> <li>3. Conduct a variety of statistical analyses using SPSS, and correctly interpret the results.</li> <li>4. Understand statistical concepts and procedures as applied to reading and interpreting empirical research, especially as applied in psychotherapy research.</li> <li>5. Evaluate and critique interpretations of their own and others' statistical analyses, especially as presented in journal articles in the field.</li> </ol>
<b>Software</b>	<p>The group project and most of the assignments will require analysis of data, using <a href="#">SPSS (PASW) 17</a>. This is available on the computers in the Wong Research Centre, in the CanIL computer lab classroom, and in other labs on campus. If you wish to purchase a licence for SPSS on your own computer, see <a href="http://cpsy501.seanho.com/buying-spss.html">cpsy501.seanho.com/buying-spss.html</a> for more info. If you own a different version of SPSS, note that the output files may not be readable by other versions; you may need to export to PDF or HTML format.</p> <p>We will also be using the <a href="#">GPower3</a> software for power analysis. This is also installed on campus computers, and also freely downloadable for installation on your own computers. If you are familiar with other power analysis software, you may also use that.</p>
<b>Policies</b>	<ol style="list-style-type: none"> <li>1. <b>Attendance</b> is expected for every class. Course <b>readings</b> are to be completed prior to the class for which they are assigned.</li> <li>2. The intent of holding lectures in the computing lab is so that students can try out analyses in SPSS during lecture. The <b>computers</b> in the instructional lab should only be used for <b>class-related work</b>, not for personal use.</li> <li>3. One objective of the course is to prepare you for scholarly research writing in proper <b>APA style</b>. As a consequence, later homework assignments and especially the project manuscript must be written in 6th Edition APA style, especially following the conventions for statistical formatting. Students should also be focusing on professional language, format of tables and figures, and referencing. For grading policy, see the CPSY program manual.</li> <li>4. All assignments are to be submitted electronically, via <b>myCourses</b>. If there is a problem with myCourses, email it to me. You can also try scanning in your papers and emailing me the scans. If all those won't work, you may submit a hard-copy directly to me, however it is your responsibility to ensure that I receive it on-time. If you need to submit hard-copies to me outside of classtime, bring it to the Neufeld receptionists' office and have a staff member timestamp it and send it to me.</li> </ol>

	<ul style="list-style-type: none"><li>5. Assignments are due by the start of class (<b>9am</b>) on their due dates.</li><li>6. <b>Late</b> submissions are penalized 5% per 24hrs or portion thereof. The timestamp on the myCourses dropbox will be used to ascertain when an assignment was submitted. For example, a homework assignment turned in anytime between 9am Fri (when it is due) and 9am Sat (the calendar day after) will be penalized 5%. The late penalties continue to accrue over weekends and holidays.</li><li>7. Students are encouraged to form study groups and discuss class assignments together. Students are also recommended (but not required) to form teams to do the semester-long data-analysis project. However, for homework assignments, it is expected that each person's assignment reports will be <b>individually</b> written, showing unique differences in language, insights, and formulation of the results.</li><li>8. A <b>teaching assistant</b> is available during class time and during her office hours to consult and assist students with using SPSS. It is not the TA's responsibility to review students' work, or to help students figure out which procedures to use in the assignments. Students should contact the instructor for assistance with understanding course concepts or assignment questions.</li></ul>																
<b>Data Analysis Project</b>	As a research preparation course, this course is constituted in large part by a semester-long data analysis project, culminating in a sizeable research paper with detailed statistical analysis, presented in proper APA style. The project will involve working together in groups of 2 to 3 people (students who wish to work solo should check with the instructor) to conduct and write up a <i>new</i> analysis of a <i>pre-existing</i> data set. Students are encouraged to form groups and obtain data usable data sets as soon as possible. Groups must have their plans for their project approved by the instructor before proceeding. See separate hand-out for additional information on the requirements and different steps for the project. Together, the various parts of the group project are worth 45% of the course grade.																
<b>Textbook</b>	Field, A. (2009). <i>Discovering statistics using SPSS for Windows</i> (3rd ed.). Thousand Oaks, CA: Sage. ISBN 1847879071. This is a new edition, updated for SPSS 17.																
<b>Marking</b>	<p>Letter grade assignment follows the TWU percentage to grade equivalents except that <math>\geq 85\%</math> and <math>&lt; 95\%</math> is an A; 95% and above is an A+.</p> <table><tr><td><b>HW Assignment 1</b></td><td>10%</td></tr><tr><td><b>HW Assignment 2</b></td><td>15%</td></tr><tr><td><b>HW Assignment 3</b></td><td>15%</td></tr><tr><td><b>HW Assignment 4</b></td><td>15%</td></tr><tr><td><b>Data Set Description</b></td><td>5%</td></tr><tr><td><b>Project Data Meeting</b></td><td>5%</td></tr><tr><td><b>Ethics Forms</b></td><td>3%</td></tr><tr><td><b>Final Project Manuscript</b></td><td>32%</td></tr></table>	<b>HW Assignment 1</b>	10%	<b>HW Assignment 2</b>	15%	<b>HW Assignment 3</b>	15%	<b>HW Assignment 4</b>	15%	<b>Data Set Description</b>	5%	<b>Project Data Meeting</b>	5%	<b>Ethics Forms</b>	3%	<b>Final Project Manuscript</b>	32%
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<b>Math Advice</b>	<p>Many undergraduate students have had negative educational experiences with math or stats, and some people feel frustrated or anxious with the prospect of working with numbers. It helps some people to think of statistical procedures as decision-making tools, rather than as math problems. Understanding how the different procedures are designed help to answer specific research questions is the central step in learning how to use statistics.</p> <p>We suggest that you study together and use each other as resources to help each other understand the concepts that are taught, and how to use SPSS: in the real world, you will probably have colleagues with whom you can consult when you are confronted with difficult clinical cases in your counselling practice. Treat your statistics learning in the same way. And in the same way that you cannot have a colleague do your counselling sessions for you, we expect everyone to write up their assignments individually.</p>																

	<p>It may help to keep you motivated if you remember that part of being a good counsellor means staying up to date with the latest developments in your area of practice. To be able to evaluate this literature effectively, you need to know how the authors came up with their conclusions. For a majority of published studies in counselling psychology and related fields, this requires an understanding of statistics and data analysis.</p>
<b>Disabilities</b>	<p>While every effort is made to accommodate special needs, unless students who have disabilities register with the Equity of Access Office at the beginning of each semester and identify themselves to the professor of the course within the first two weeks of the semester, the professor is not obliged to make concessions on either the nature of required assignments or the due dates thereof.</p>
<b>Weather</b>	<p>In case of inclement weather, the TWU campus conditions will be announced on local radio stations and posted on the TWU website at <a href="http://www.twu.ca/conditions">www.twu.ca/conditions</a>.</p>
<b>Academic Integrity</b>	<p>Academic integrity is a core value of the entire TWU community. This includes, but is not limited to, avoiding all forms of plagiarism and cheating. TWU has a strict policy concerning plagiarism, and all offenses are recorded in University files. A tutorial describing plagiarism and how to avoid it has been prepared by TWU Librarian William Badke: <a href="#">(PPT file)</a>, <a href="#">(14 min flash)</a>, <a href="#">(8 min flash)</a></p>
<b>Additional Resources</b>	<p>There are numerous additional resources that can be used to supplement the material in the required text. Some of these resources are optional, and each is intended for students in different specific situations.</p> <p>If you are not already familiar with how to write and present information in psychology documents, seriously consider purchasing the APA publication manual now. Marks will be deducted for failure to use APA format in assignments and the final project. Pay particular attention to (a) the format of tables (pp. 147-176), (b) statistical notation and formatting (pp. 136-146); and (c) citation/referencing details (pp. 215-281).</p> <ul style="list-style-type: none"> <li>American Psychological Association. (2009). <i>Publication manual of the American Psychological Association</i> (6th ed.), Washington, DC. ISBN 1-4338-0561-8.</li> </ul> <p>If you are uncomfortable with statistics and quantitative reasoning, or it has been a long time since you completed your basic stats course, you may want to consider purchasing the following text, which provides one kind of introductory information:</p> <ul style="list-style-type: none"> <li>Kranzner, G., Moursund, J., Kranzler, J. (2006). <i>Statistics for the terrified</i> (3rd ed.). Upper Saddle River, NJ: Prentice Hall. ISBN 0132328860.</li> </ul> <p>If you are less-than-fully-comfortable with computers, and want more detailed, step-by-step instructions than Field provides for using SPSS, then you might find the following work-book useful (note, however, that it was written for SPSS 15, not SPSS 17:</p> <ul style="list-style-type: none"> <li>Pallant, J. (2007). <i>SPSS survival manual</i> (3rd ed.). Allen &amp; Unwin. ISBN 1741762421.</li> </ul> <p>The use of multivariate statistics is quite common in counselling psychology, although there are also are frequent problems arising in journal publications. To get you started:</p> <ul style="list-style-type: none"> <li>Grimm, L. G., &amp; Yarnold, P. R. (1995). <i>Reading and understanding multivariate statistics</i>. Washington, DC: APA. [QA278 .R43 1995]</li> <li>Grimm, L. G., &amp; Yarnold, P. R. (2000). <i>Reading and understanding MORE multivariate statistics</i>. Washington, DC: APA. [QA278 .R32 2000]</li> </ul>