**City University of Hong Kong**
**Course Syllabus**

**offered by Department of Social and Behavioural Sciences**
**with effect from Semester A 2018/2019**

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## Part I Course Overview

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| **Course Title:** | **Research Design & Analysis in Psychology** |
| **Course Code**: | **SS5780** |
| **Course Duration:** | **Two semester** |
| **Credit Units**: | **6 credits** |
| **Level**: | **P5** |
| **Medium of Instruction:** | **English** |
| **Medium of Assessment:** | **English** |
| **Prerequisites**: *(Course Code and Title)* | **MSSPSY Students : NIL**<br>**Non-MSSPSY Students : SS2023 Basic Psychology I or its equivalent** |
| **Precursors**: *(Course Code and Title)* | **Nil** |
| **Equivalent Courses**: *(Course Code and Title)* | **Nil** |
| **Exclusive Courses**: *(Course Code and Title)* | **Nil** |

## Part II Course Details

### 1. Abstract

This course aims to provide essential training in research designs and quantitative methods commonly employed in psychology. Upon completion of the course students should be able to plan a psychological research study, to conduct the study in operation, to analyse the observation, and to report and communicate in a professional manner.

### 2. Course Intended Learning Outcomes (CILOs)

*(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)*

| No. | CILOs | Weighting (if applicable) | Discovery-enriched curriculum related learning outcomes (please tick where appropriate) | | |
|---|---|---|---|---|---|
| | | | *A1* | *A2* | *A3* |
| 1. | explain major theories and principles of research methodology in psychology; | 20% | ✓ | | |
| 2. | use appropriate research designs and statistical methods in the investigations of human behaviour; | 20% | | ✓ | ✓ |
| 3. | execute quantitative analysis on behavioural data by hand and to manage and analyse them with the help of computer; | 25% | | ✓ | ✓ |
| 4. | organize, synthesize, and differentiate the research literature for the planning of an investigation in an area of psychology; and | 20% | ✓ | ✓ | ✓ |
| 5. | report, criticize, and communicate the research findings in a professional manner. | 15% | ✓ | ✓ | ✓ |
| | | 100% | | | |

*A1: Attitude*
*Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.*

*A2: Ability*
*Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.*

A3: *Accomplishments*
*Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.*

## 3. Teaching and Learning Activities (TLAs)

*(TLAs designed to facilitate students' achievement of the CILOs.)*

| TLA | Brief Description | CILO No. | | | | | | Hours/week (if applicable) |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | | |
| Lectures | Focus on explaining pertinent concepts and practices in research methodology and statistical analysis | ✓ | ✓ | ✓ | | ✓ | | |
| Practical Labs | Practical hands-on training in data manipulation and data analysis using computer software | | ✓ | ✓ | | | | |
| Workshops | Group project preparation and consultation | | | | ✓ | ✓ | | |

## 4. Assessment Tasks/Activities (ATs)

*(ATs are designed to assess how well the students achieve the CILOs.)*

| Assessment Tasks/Activities | CILO No. | | | | | | Weighting | Remarks |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | | | |
| Continuous Assessment: 100% | | | | | | | | |
| Short Assignment (20%) | | | ✓ | | | | 20% | |
| Term Paper (30%) | | ✓ | | ✓ | ✓ | | 30% | |
| Quiz (40%) | ✓ | ✓ | ✓ | | | | 40% | |
| Practical Participation (10%) | | | ✓ | | | | 10% | |
| Examination: 0% (duration: , if applicable) | | | | | | | | |
| | | | | | | | 100% | |

## 5. Assessment Rubrics

*(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)*

| Assessment Task | Criterion | Excellent (A+, A, A-) | Good (B+, B, B-) | Fair (C+, C, C-) | Marginal (D) | Failure (F) |
|---|---|---|---|---|---|---|
| 1. Short Assignment (20%) | Able to criticize research designs and statistical methods in the investigations of human behaviour and effectively communicate research findings followed APA guidelines. | Strong evidence to indicate understanding of appropriate designs to observe human behaviours as well as communicating and reporting research findings in a professional manner. | Evidence of understanding appropriate designs to observe human behaviours and knowing how to communicate and report research findings in a professional manner. | Evidence of capacities of analysing behavioural data but not be able to interpret and report research findings in a systematic way. | Show some knowledge in observing human behaviours from relevant designs. | Little evidence of ability or knowledge in research methodology in psychology. |
| 2. Term paper (30%) | 1) Understand and explain major theories and principles of psychological concepts;<br>2) Use appropriate research designs and statistical methods to investigate human behaviour;<br>3) Report, criticize, and communicate the research findings in a professional manner. | Strong evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation, communicating and reporting research findings in a professional manner. | Evidence of competencies in managing and analysing behavioural data arising from various designs, applying appropriate designs and strategies in the process of observation; ability to communicate and report research findings in APA format. | Able to manage and analyse behavioural data arising from various designs, apply appropriate designs and strategies; report research findings in a systematic way. | Sufficient knowledge in handling behavioural data arising from relevant designs to enable the student to progress without repeating the course. | Little evidence of ability or knowledge in research methodology in psychology, which necessitates repeating the course before proceeding to independent research. |
| 3. Quiz (40%) | Understand statistical methods in the investigations of human | Strong evidence of ability or knowledge in | Understand most concepts and applications of | Understand concepts of statistics but cannot | Show some understanding of statistical methods. | Little evidence of ability or knowledge in statistical methods. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | behaviour. | statistical methods. | statistical methods | successfully apply them to real situations. | | |
| 4. Practical Participation (10%) | Attend all tutorial sections, be highly involved all class activities, and complete all assignments and practices in class. | Attend all tutorial sections, be highly involved all activities in class, and submit all assignments and practice questions by deadlines. | Attend 80-90% of tutorial sections and be engaged in all class activities, and submit all assignments and practice questions by deadlines. | Attend 60-80% of tutorial sections and participate in all class activities, and submit all assignments and practice questions by deadlines. | Attend 60% of tutorial sections and show a moderate level of engagement in class activities, and submit work by deadlines. | Do not attend tutorial classes regularly and fail to submit work by deadlines. |

**Part III Other Information** (more details can be provided separately in the teaching plan)

**1. Keyword Syllabus**

*(An indication of the key topics of the course.)*

*Research designs, descriptive and inferential statistics, normal distribution, analysing differences between means, analysing correlation, non-parametric tests of categorical data, power and effect size, analysis of variance, one-way and factorial models, fixed and random effects, randomized block design and within-subject design, polynomials and planned contrast tests, post-hoc tests, introduction to multivariate analyses including general linear model, multiple regression, partial correlations, exploratory factor analyses, report writing, research ethics*

**2. Reading List**

**2.1 Compulsory Readings**

*(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)*

NIL

**2.2 Additional Readings**

*(Additional references for students to learn to expand their knowledge about the subject.)*


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|---|---|
| 1. | Coolican, H. (2009). Research methods and statistics in psychology. London: Hodder & Stoughton. |
| 2. | Gravetter, F., & Wallnau, L. (2013). Statistics for the behavioral sciences. Canada: Wadsworth. |
| 3. | Gravetter, F., & Forzano, L. B. (2009). Research methods for the behavioral science. Canada: Wadsworth. |
| 4. | Smith, R. A., & Davis, S. F. (2010). The psychologist as detective. New Jersey: Pearson. |
| 5. | Norusis, M. J. (2005). SPSS 13.0 Guide to data analysis. NJ: Prentice Hall. |
| 6. | http://www.ats.ucla.edu/stat/spss/default.htm |
| 7. | http://www.socialresearchmethods.net/ |
| 8. | http://davidmlane.com/hyperstat/index.html |
| 9. | http://www.wadsworth.com/psychology_d/templates/student_resources/workshops/workshops.html |
| 10. | http://www.statsoft.com/textbook/stathome.html |
| 11. | http://www.apastyle.org/apa-style-help.aspx |