



**SGH  
PGAHI**

POSTGRADUATE  
ALLIED HEALTH INSTITUTE

# Biostatistics for Research (SPSS) Advance

## 22 – 25 May 2023

### Introduction

This course is an extension of the Biostatistics for Research (Basic/Intermediate) course. This course provides participants with practical skills and equips them with deeper knowledge in biostatistical concepts and analyses techniques.

### Prerequisites

- Participants who have previously completed the Biostatistics for Research (Basic/Intermediate) Course.
- SPSS software is required for participants to practice at their own time after the course.

### Course Objectives

At the end of the course, participants will understand and apply common advance biostatistical analysis necessary for journal publications.

**(NB: Navigation of the SPSS live will not be available during the course. SPSS step-by-step guide will be included in the course notes for all participants.)**

### Course Outline

#### 1) Numerical outcomes

- Linear Regression
- General Linear Models (GLM), Mixed Linear Models

#### 2) Categorical outcomes

- Multinomial and Ordinal Regression

#### 3) Matched Case Control

- Conditional Logistic Regression
- Direct vs Propensity matching

#### 4) Generalized Linear Models

- Odds Ratios (OR) vs Relative Risk (RR)
- Modified Cox
- Poisson Regression

#### 5) Generalized Linear Mixed Models (GLMM)

#### 6) Repeated measures analysis

- General Linear Model, Mixed Model
- Generalized Estimating Equations

#### 7) Count data: Poisson regression, Weighted regression

#### 8) Principal Component analysis

#### 9) Factor and Reliability analysis

### Target Audience

Healthcare professionals, clinicians and researchers who wish to deepen their knowledge and skills in biostatistical concepts and analyses techniques, and/or publish in peer-reviewed journals.

### Course Details

Date	: 22 – 25 May 2023
Duration	: 4 half-days
Time	: 9.00 am – 12.30 pm
Device required	: Laptop/ Desktop (with microphone, speaker and webcam)
Platform	: Zoom Cloud Meetings (Meeting details will be provided at a later date)
Fee	: S\$630 (SingHealth) S\$700 (Regular) (the prevailing GST applies)

### Teaching Faculty

**Dr Chan Yiong Huak** received his PhD in Mathematics from the University of Newcastle, Australia (1993) and presently is the mentor of the Biostatistics Unit in the Yong Loo Lin School of Medicine, National University Health System, of which he was the head (2004 – 2015). Prior to his previous appointment, he was the head of Biostatistics and Data Management (1997 – 2004) in the Clinical Trials & Epidemiological Research Unit (CTERU), National Medical Research Council (NMRC). Actively involved in conducting research and statistical courses to help researchers in their aims of publication and to enhance their understanding of statistical knowledge. Authored/co-authored more than 500 publications, he also serves as the Specialty (Biostatistics) editor for the Singapore Medical Journal, a committee member of both the Product Vigilance Advisory Committee (PVAC) and the Medicines Advisory Committee (MAC), Health Science Authority (HSA) of Singapore.

### Registration

To register (Internet access is required), scan the QR code or click on the web link. Registration closes on **27 April 2023, Thursday**.



<https://www.form.gov.sg/63d76b1fa35c3400116f472c>

Upon registration, you agree to PGAHI [Terms & Conditions](#).

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