UMS
UNIVERSITI MALAYSIA SABAH

Tajuk Kursus/*Course Title*	Data Analysis Using SmartPLS (Partial Least Squares)
Penggubal Modul/*Module Designer*	Prof. T. Ramayah Prof. Madya Dr. Stephen Sondoh Jr. @ Jude
Tarikh (Date) / *Tempoh (Duration)*	18-19 April 2018 (Bilik Komputer Khusus, JTMK)
Mata CPD / *CPD Points*	12 Points (TERAS)
Kumpulan Sasaran/ *Target Group*	(All Academic Staffs/Lecturers Grade DSDU 45/Senior Lecturers Grade DS/DU 51/52/Associate Professor Grade DS/DU 53/54/Professor VK7)
Penceramah/*Speaker*	Professor T. Ramayah (Universiti Sains Malaysia) Prof. Madya Dr. Stephen Laison Sondoh Jr. @ Jude (Facilitator)

SINOPSIS/*SYNOPSIS*

This is a 2-day workshop that will introduce the use of structural equation modeling (SEM is a family of statistical models that seek to explain the relationships among multiple variables) which is the most popular analysis software at the moment. This workshop will help academicians on how to do basic analysis using the SmartPLS software and how to present them professionally. This workshop will use practical hands on approach with real research data sets with research questions that can be answered using the data available. Some useful tips on how and where to get published will be given.

Why PLS?
Partial Least Squares (PLS; ie. SmartPLS, WarpPLS) can be an adequate alternative to CBSEM (covariance based SEM; ie. AMOS, LISREL) if the problem has the following characteristics (Chin 1998b; Chin & Newsted 1999):

- PLS makes fewer demands regarding sample size than other methods.
- PLS does not require normal-distributed input data.
- The phenomenon to be investigated is relatively new and measurement models need to be newly developed,
- The structural equation model is complex with a large number of LVs and indicator variables,
- Relationships between the indicators and LVs have to be modeled in different modes (i.e., formative and reflective measurement models),
- The conditions relating to sample size, independence, or normal distribution are not met, and/or
- Prediction is more important than parameter estimation.
- PLS is better suited for theory development than for theory testing.

At the end of the course participants will be able to:

1. Understand the basic analysis using the SmartPLS software.
2. Acquire the skills in data analysis using the SmartPLS
3. Analyze data using SmartPLS program
4. Interpret the output results from PLS software program i.e. convergent validity, discriminant validity, structural Model analysis & evaluation, Moderating Effect Analysis and Mediating Effect Analysis
5. Write papers based on PLS.
6. Assist new lecturers in producing research papers with higher-level analysis.
7. Some useful tips on how and where to get published will be given.

KANDUNGAN KURSUS/*COURSE CONTENT*

Module 1:

1. Basics of SEM (Structural Equation Modelling)
2. Formative vs Reflective Measurement
3. Second Order Factors
4. Measurement Model Evaluation
    - Convergent validity – three approaches:
        - Factor loadings.
        - Variance extracted.
        - Reliability.
        - Discriminant validity
        - Cross Loadings

Module 2:

1. Structural Model analysis & evaluation
2. Moderating Effect Analysis
3. Mediating Effect Analysis
4. Interpretation the output results from SmartPLS program

TENTATIF KURSUS/*COURSE TENTATIVE*

Day 1 :

08:00 am – Registration
08.30 am –
10.00 am – *Morning Break*
10.30 am –
12.30 pm – *Lunch Break*
2.00 pm –
4.30 pm – *Tea Break*

Day 2 :

08:00 am – Registration
08.30 am –
10.00 am – *Morning Break*
10.30 am –
12.30 pm – *Lunch Break*
2.00 pm –
4.30 pm – *Tea Break*