

## **DSC4213 / DBA4811 Analytics for Consulting**

AY2021/2022 Semester 1

Instructor: Associate Professor Dr CHU Singfat  
Department: Analytics and Operations  
Office: Mochtar Riady Building, BIZ21 #08-74  
Contacts: bizchucl@nus.edu.sg (email) | 6516 3031 (Tel)

### **COURSE DESCRIPTION**

Decisions supported by timely data analyses are the norm in this “Big Data” era. They underlie strategies devised in business departments (e.g. supply chain, marketing, finance, human resources etc.), government services (e.g. health, public transport, congestion pricing etc.) and sports management (e.g. which player to recruit etc.). Analytics-savvy consultants advise these units to improve their customer satisfaction and performance metrics. This course aims to train such consultants with a holistic approach comprising critical thinking, robust analyses and persuasive communications skills towards the implementation of their findings.

### **LEARNING OUTCOMES**

Through case analyses tackled in a flipped classroom format, participants will be exposed to

- **Business Optimization Models** i.e. Productive allocation of scarce resources for optimal Planogram, Advertising Mix, Portfolio, Supply Chain Network, Cash Flow Management, Team Composition, ...
- **Decision and Risk Analyses** i.e. systematic assessment of Strategies, Risks, and Payoffs using Decision Trees and Sensitivity Analyses e.g. Make or Outsource, Lease or Buy, Benchmarking Demand Creation Strategies, ...
- **Data Visualization & Intelligence** via PivotTable & Tableau and Advanced Regression Models e.g. Profiling our best customers, What underlie worker longevity at the workplace ...

### **Software**

The course will make heavy use of 3 add-ins namely (1) [SOLVER](#), available within Excel (2) [Treeplan](#), which will be provided to you and (3) [RegressIt](#) (please download). You must bring a laptop to EVERY class in this hands-on course.

### **Sample Reference Textbook (Available in NUS Libraries)**

Business Analytics: Data Analysis & Decision Making by Albright & Winston, any edition.

Due to the COVID19 situation, the course will not adopt the above text and its bundled software suite used previously. The above reference and similar texts available in the NUS Libraries together with the course notes and additional links (e.g. [MIT Open Courseware](#), [Coursera](#), timely articles from [Harvard Business Review](#), [Mc Kinsey Analytics](#) etc.) should provide a thorough coverage.

## ASSESSMENTS

<b>Component</b>	<b>Weight</b>
6 Team Assignments	25 %
Participation & Presentation	15 %
3 Individual Case Studies	45 %
End-of-semester Team Project	15 %
<b>Total</b>	<b>100%</b>