Nanyang Technological University
Nanyang Business School

BC3406 Business Analytics Consulting
Semester 2, 2017-18

This course develops competencies for a career in business analytics consulting. Business analytics consulting is career option that provides incumbents an opportunity for challenging work, continued self-development, and access to important professional networks. These opportunities are available in large global organizations that practice in a variety of business settings and business disciplines, and in small firms offering niche/boutique services. In addition, many businesses have developed internal consulting organizations to provide consulting related services within the organization and often in conjunction with consulting services offered by third party firms.

Learning Goals
In this course, you will:
- be introduced to consulting frameworks and methods;
- learn best consulting practices through business cases;
- consolidate analytics and consulting skills through a data hackathon.

Method of Instruction
Class will meet weekly in a seminar-style session that is between 3 to 4 hours in duration.

BC3406 adopts a flipped classroom and a cooperative method of learning. As such, the instructors will play a facilitating role where students take a self-directed learning approach to content and where they express their points of view and analysis in class discussions.

Readings. A critical skill in consulting is the ability to read materials quickly, and to extract important and relevant information. The goal is to find the important terms and ideas, and to skim the rest of the article to get the key insights.

Case Analyses. Cases facilitate the anchoring of knowledge to a real-world context. Students are expected to read, think and analyse each case before class. The prescribed readings for the week and other external materials form resources that students may draw from. You are strongly urged to work through the *Case Analysis Coach* (see e-learning component below) before attempting the case analysis.

Each case analysis requires a formal executive brief that should be about 3 pages, single spaced. This brief should provide a concise description of critical issues, problems, quantitative and qualitative analyses of the case, and conclusions or recommendations. **Submit each case analysis via NTULearn by 5:00 pm on the Tuesdays before class**.

Class Participation. Sessions are more valuable when there is a diversity of opinions based on different interpretations and perspectives. You are expected to make *significant* contributions during class and case discussions. The assessment of class participation includes: quality of comments, application of readings to discussions, and sharing of key, pertinent information from external readings (e.g. other courses, newspapers and journals).

To gain a deeper understanding:
1. Review the assigned readings before each class to develop a cogent analysis and solutions that are backed by logic and common sense. I recommend that team members work together to prepare for the in-class case discussions.
2. Support and defend your arguments with evidence obtained from the assigned readings, the assigned case, and your own research.
3. Prepare to voice support for and tactfully oppose the opinions of other participants.
4. I expect you to spend about 1 to 2 hours per week completing the required readings and about 3 to 4 hours for each case brief.

Data Hackathon and Teamwork. You will work closely with your teams in a data hackathon. As in actual consulting teams, your team will be a mix of members with multi-disciplinary functional and technical skills. The most effective teams achieve superior performance by first discussing personal backgrounds, expertise and experiences. Such teams go on to develop a common direction, aligning goals and motivation towards that direction, and are committed towards achieving superior quality of performance.

The data hackathon is a relatively risk-free environment and is the last opportunity to work on improving your teamwork and interpersonal skills. Your team members will evaluate you on your teamwork and interpersonal skills. Your data hackathon report will be assessed on meeting the client's requirements and on the quality of recommendations.

You will be required to enter into a non-disclosure agreement with the client(s).

Experts. Industry experts will provide "war stories" and recommend best practices from their careers in the consulting profession. A variety of issues and topics in consulting, including practice areas, change process and professional skills will be covered. I urge you to make the best and full use of this opportunity to learn about the profession vis-à-vis your goals, motivations and interests.

Resources Required for this Course
Prescribed textbook:
- Block, Peter. *Flawless Consulting: A Guide to Getting Your Expertise Used*. San Francisco: Jossey-Bass/Pfeiffer, 2011.
  - Block, Peter. *Flawless Consulting*, www.flawlessconsulting.com, 2016.

Journal articles available through NTU Library's e-journals database:
- Week 1:
  - Dominic Barton; David Court. *Making Advanced Analytics Work For You*. **Harvard Business Review**, 2012, Vol. 90 Iss. 10, pp. 78-83.
  - David A. Nadler. *Confessions of a Trusted Counsellor*. **Harvard Business Review**, 2005, Vol. 83 Iss. 9, pp. 68-77.

- Week 2:
  - Christian Madsbjerg; Mikkel Rasmussen. An Anthropologist Walks into a Bar.... **Harvard Business Review**, 2014, Vol. 92 Iss. 3, pp. 80-89.
  - Frank van den Driest; Stan Sthanunathan; Keith Weed. *Building an Insights Engine*. **Harvard Business Review**. 2016, Vol. 94 Iss. 9, pp. 64-14.

- Week 3:
  - Scott Berinato. *Visualizations That Really Work*. **Harvard Business Review**, 2016, Vol. 94 Iss. 6, pp. 92-100.
  - Robin Hogarth; Emre Soyer. *A Picture's Worth a Thousand Numbers*. **Harvard Business Review**. 2013, Vol. 91 Iss 6, p. 26
  - Gary A Williams; Robert B Miller. *Change the Way You Persuade*. **Harvard Business Review**, 2002, Vol. 80 Iss. 5, pp. 64-73.

- Week 4:
    - W Brian Arthur. Where is Technology Taking the Economy? McKinsey Quarterly, Oct. https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/where-is-technology-taking-the-economy
    - Ellen R. Auster; Trish Ruebottom. *Navigating the Politics and Emotions of Change*. **MIT Sloan Management Review,** 2013, Vol. 54 Iss. 4, pp. 31-36.
    - Jeffrey D. Ford; Laurie W. Ford. *Decoding Resistance to Change*. **Harvard Business Review**, 2009, Vol. 87 Iss. 4, pp. 99-103.

- Week 5:
    - Brett Danaher; Michael D. Smith; and Rahul Telang. *Copyright Enforcement in the Digital Age; Empirical Evidence and Policy Implications*. **Communication of the ACM**, 2017, Vol. 60 Iss. 2, pp. 68-75.
    - Vijay Khatri; Carol V. Brown. *Designing Data Governance*. **Communication of the ACM**, 2010, Vol. 53 Iss. 1, pp. 148-152.

- Week 13:
    - Arthur N. Turner. *Consulting Is More Than Giving Advice*. **Harvard Business Review**, 1982, Vol. 60 Iss. 5, pp. 120-129.
    - Stijn Viaene; Annabel Van den Bunder. *The Secrets to Managing Business Analytics Projects*. **MIT Sloan Review**, 2011, Vol. 53 No. 1, pp. 65-69.

Required e-learning module to be purchased from Harvard Business Publishing (HBP):
- Robert D. Austin; Robert L. Kelley. *Case Analysis Coach*. Product: 4380-HTM-ENG (RRP: USD$5).

Required cases from HPB that can be purchased from the NBS Undergraduate Programme Office (UPO) front counter at USD$1.74 each:
- Steven D. Charlier; Martin M. Brennan. *SkillsForTomorrow: A Management Team in Crisis.* 2013. Ivey Publishing. Product: W13331-PDF-ENG (RRP: USD$4.25)
- Anton Ovchinnikov; Phillip E. Pfeifer; Nathan Call. *Nils Baker*. 2012. Darden School of Business. Product: UV6484-PDF-ENG (RRP: USD$4.25)
- Caren Scheepers; Maxine Jaffit; Jabu Maphalala. *Technology Driven Transformation at Comair Limited*. Ivey Publishing. Product: W15070-PDF-ENG (RRP: USD$4.25)

Optional Reference Texts
- Simon Chesterman. 2014. *Data Protection Law in Singapore: Privacy and Sovereignty in an Interconnected World*. Academy Publishing

Course Assessment
There are multiple assessment components in this course:
Individual Assessment (Case analyses, class participation)	40%
Team Assessment (Data hackathon and peer review)	60%

Total	100%

Instructors/Experts:

Associate Professor	Mr. Gino K. George	Dr. A Lee Gilbert
Damien Joseph	Director of Analytics	Trainer and Coach
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Lecture Schedule

Session	Topics	Cases/Assignments	Readings/Guest
1 18 Jan	Consulting and the Consultant: • The Consulting Process • Consulting Industry • Consulting as a Career	- Case Analysis Coach (e-learning video, 90 mins)	- Block Ch 1-3, 7 - Barton & Court 2012 - Nadler 2005 - Experts: Dr A Lee Gilbert, Mr Gino George
2 25 Jan	The Business Analytics Process • Problem and Requirements analysis • Hypotheses development • Metrics and Measures • Analytic models • Competitive Intelligence	- Nils Baker	- Block Ch 10-13 - Madsbjerg & Rasmussen 2014 - Van den Driest et al 2016 - Expert: Mr Gino George
3 1 Feb	Communication of Insights • Traditional: Reports, Presentations • Current: Self-service visualizations	- Tableau (e-learning) - SAS Viya (e-learning)	- Berinato 2016 - Hogarth & Soyer 2016 - Williams & Miller 2002 - Expert: Dr A Lee Gilbert
4 8 Feb	Change Management	- Technology Driven Transformation at Comair Limited	- Block 8-9 - Auster & Ruebottom 2013 - Ford & Ford 2009
5 15 Feb	Data Governance • Frameworks • Laws and ethics • Data security, privacy and protection Team Building	- SkillsForTomorrow: A Management Team in Crisis - Submit non-disclosure agreement	- Khatri & Brown 2010 - Danaher et al 2017 - Chesterman Ch 1-4, 8 - Data Governance Institute Framework
6 22 Feb	Hackathon Briefing • Understanding the Problem • Understanding the Data	Discussions with stakeholders on case and problem	- Hackathon partners
7 1 Mar	Hackathon: Clinic – Data and Analytics	- Discussions with stakeholders on problem and data	- Hackathon partners
8 Mar	Recess Week		
8 15 Mar	Hackathon: Clinic – Data and Analytics	- Discussions with stakeholders on data and findings	- Hackathon partners
9 22 Mar	Hackathon: Engagement for Insights	- Discussions with stakeholders on data and findings	- Block Ch 14-17 - Hackathon partners
10 29 Mar	Hackathon: Engagement for Insights	- Discussions with stakeholders on data and findings	- Hackathon partners
11 5 Apr	Hackathon: Evaluations of Submissions	- Additional workshop on storytelling for top four teams only	- Hackathon partners - Expert: Dr A Lee Gilbert
12 12 Apr	Hackathon: Finals and Presentations		- Hackathon partners, experts, and faculty
13 19 Apr	Course debrief • The consulting engagement • Project management		- Block Ch 4-6 - Turner 1982 - Viaene & Bunder 2015