B7676
Developing QI:
Responsive Decision Making Through Quantitative Intuition (QI)
(Revised: June 29, 2018)

Time: October 1st – October 5th
(9:00am-5:00pm)

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Office Hours: By appointment

Course Description

The goal of this workshop-style course is to teach the systematic framework to make smarter decisions under uncertainty -- an emerging area called quantitative intuition™. Quantitative intuition is the ability to make decisions with incomplete information via precision questioning and business acumen driven by pattern recognition. This requires a parallel view of the issues that matter rather than just a logical sequence of thoughts to see the situation as a whole.

Information is essential to making intelligent decisions, but more often than not, it overwhelms us in today’s data-rich environment. The pace of business demands decisions to be made at a faster rate, however these decisions are often made by consensus reflecting a flight to safety rather than an insightful decision acting as a catalyst for change. To make bold decisions, the manager needs the skills to quickly extract the relevant bits from the fire hose of information.
This course will focus on the skills needed to develop quantitative intuition, namely how to gather, understand, and find value in data across the business continuum. Additionally, once the relevant data is found, we will spend time to become proficient in extracting meaningful insights and develop a set of pragmatic communication techniques to influence change. We will not teach data analysis software tools. Rather, students will learn to formulate critical business questions to effectively frame issues. The practical lessons taught will topple conventional wisdom that you need to be a numbers whiz to make sound, fact-based decisions. The course is aimed at managers and aspiring managers in all facets of business (e.g., consulting, marketing, strategy, product management, and finance) who wish to equip themselves with pragmatic skills to be successful in our data-driven world through precision questioning and quantitative intuition.

**Course Format**

This block week class will be taught in a workshop style using a combination of lectures, guest speakers, simulation via an immersion experience tool, and in class exercises. The instructors will teach the class jointly providing a bridge between theory and practice. An important aspect of the course involves getting hands-on experience with data-driven decision making through multiple practical exercises. Throughout the course the students will also work on a group project that will provide an opportunity to integrate the steps in developing quantitative intuition discussed in class. Class sessions will be devoted to exploring the material through analysis of cases and applying the concepts to real world situations. Finally, the group project and final individual assignment will allow you to get first hand experience in the quantitative intuition framework.

**Required Material**

1. Required reading on Canvas

**Student Evaluation**

Class Participation - 25% (individual)
In class project - 35% (groups of 2-4) – Type A
Project - 40% (Individual) – Type C
Class Participation and Attendance

1. To a large extent, learning in this class is related to your willingness to expose your insights and viewpoints to the critical judgment of your classmates. Thus, to make the learning process much more beneficial and enjoyable for both you and us, each one of you is expected to contribute to class discussions. This includes preparation for class by reading the text and cases, and presenting your opinions or summaries of material covered in class. The basis for class participation is quality, not quantity.

2. Attendance is a necessary but not sufficient condition for participation. If you do not actively participate, you will receive a low participation grade even if you attend every class.

Classroom Etiquette:

Out of respect for the other students in your class, it is important for you to focus your full attention on the class, for the entire class period. Most students observe proper decorum, but it takes only one person’s behavior to distract the entire class. Columbia Business School students have complained to the school about students who use class time for other purposes or act in a distracting manner. Class will be conducted using the same rules of decorum that would apply in a business meeting. These rules include the following:

- Arrive to class on time.
- Once you have arrived, you should leave the classroom only if absolutely necessary. Leaving to make or take phone calls, to meet with classmates, or to go to an interview, is not considered appropriate behavior.
- If for some reason you must be late for class or leave early, please let one of us know.
- If you know in advance that you will miss a class, please let one of us know.
- Many people find that it is convenient to take notes on laptops. However, laptops can also act as a powerful distraction. Use of laptops for non-class purposes during class time has been a particular source of student complaints at Columbia. We ask that you do not use laptops during class (apart from the class activities for which we will need to use laptops) if this is a problem for you let’s discuss.

- Turn off your cell phone, Smartphone and any other communications device during class.

Feedback

Your feedback is important for the success of this course. Please feel free to talk to any of us, drop us a note or send us an email to share your views with us.
Written Assignments

There is one course assignment to be completed individually as a project write-up. The purpose of the assignment is to illustrate the material covered in class. The assignment will be due on August 18th. Details of the individual assignment will be provided in class.

Group Project

The objective of the group project is to provide students with experience in applying the concepts and methods learned in class over the course of the class. We will provide you with a real world business problem. During the week we will give each group time to work on your project, applying the material covered in class that day to your project. At the end of the week, each group will present their analysis and findings from their group project, highlighting how they applied responsive decision making to the data-driven problem provided. Each group will also submit a short deck of the final presentation.
## Fall 2018 – Tentative Class Schedule

<table>
<thead>
<tr>
<th>Session</th>
<th>Topics</th>
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| Day 1 – Why QI                | • Introduction to QI  
• Understanding your biases  
• A model of yourself is better than yourself  
• Emerging sources of data and tools |
| Monday, October 1              |                                                                        |
| Day 2 – Precision Questioning | • How to ask data-driven questions  
• Consider customer needs  
• Pinpointing actions and growth opportunities  
• Developing a richer dialog  
• Group project work time |
| Tuesday, October 2             |                                                                        |
| Day 3 – Pattern Recognition   | • Interrogating the data  
• The art of guesstimating - the Fermi method  
• Group project work time |
| Wednesday, October 3           |                                                                        |
| Day 4 – Parallel Processing   | • Synthesis vs. Summary  
• Data visualization  
• 3D storytelling  
• Group project work time |
| Thursday, October 4            |                                                                        |
| Day 5 – Practicum             | • Group presentations  
• Conclusions  
• Course finale |
| Friday, October 5              |                                                                        |
| Friday, October 19             | **Individual assignment due date**                                    |