



## **B7676: Leading in a Data-Driven World – Developing Quantitative Intuition (QI)**

*(Revised: March 2024)*

Time: June 9<sup>th</sup> – June 13<sup>th</sup>  
(9:00am-5:30pm)

### **Instructors**

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### **Teaching Assistant**

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Office Hours: By appointment

## **Course Description**

In this workshop-style course, professors Frank, Magnone, and Netzer build on their rich experience from Amazon, American Express, Deloitte, Google, IBM, and Microsoft as well as academia to share a framework called Quantitative Intuition (QI). QI is a set of rapid response tools designed to enable you to build the skills to make confident decisions in a data-driven world, without needing to be a math whiz.

The challenge in today's world is not the lack of information but the judgment to use it. What distinguishes the person who consistently makes smart decisions? Successful decision-makers quickly sort through information by asking essential questions to be fierce interrogators of data not from a statistical perspective but from a validity perspective, putting the data in the context of the problem, and synthesizing the information leading to an effective decision. Bringing these parts together is at the heart of the Quantitative Intuition framework—the key is learning to strike the right balance between data intelligence and human judgment so you can move forward with confidence.

We will not teach data analysis software tools. Rather, students will learn to formulate critical business questions to effectively frame issues and change the dialogue with their stakeholders. The course is aimed at managers and aspiring managers in all facets of business (e.g., consulting, marketing, strategy, product management, and finance) who seek to equip themselves with pragmatic skills to be successful in our data-driven world to make faster, smarter decisions.

An important aspect of this course is that it bridges theory and practice. Oded Netzer is the Vice Dean for Research and the Arthur J. Samberg Professor of Business at Columbia Business School; he also works at Amazon as an Amazon Scholar. Christopher Frank is a corporate executive formerly at American Express and Microsoft and Paul Magnone is the Head of Global Strategic Alliances at Google and previously at IBM and Deloitte Consulting. Together they have developed and passed the knowledge of Quantitative Intuition to thousands of students and executives. Together, they have written the successful book “Decisions Over Decimals: Striking the Balance Between Intuition and Information”.

## **Course Format**

This block week class will be taught in a workshop style using a combination of lectures, guest speakers, 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 the Quantitative Intuition framework 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.

## Summer 2024 – Tentative Class Schedule

Session	Topics
Day 1 – <b>Why QI</b> Sunday, June 9	<ul style="list-style-type: none"> <li>• Introduction to QI</li> <li>• Understanding your biases</li> <li>• A model of yourself is better than yourself</li> <li>• Effectively framing the issue</li> <li>• Group project work time</li> </ul>
Day 2 – <b>Precision Questioning</b> Monday, June 10	<ul style="list-style-type: none"> <li>• How to ask data-driven questions</li> <li>• The decision moment</li> <li>• The art of guesstimating - the Fermi method</li> <li>• Group project work time</li> </ul>
Day 3 – <b>Pattern Recognition</b> Tuesday, June 11	<ul style="list-style-type: none"> <li>• Interrogating the data</li> <li>• Synthesis vs. Summary</li> <li>• Simulation exercise</li> <li>• Group project work time</li> <li>• Reception</li> </ul>
Day 4 – <b>Parallel Processing</b> Wednesday, June 12	<ul style="list-style-type: none"> <li>• 3D storytelling</li> <li>• Data visualization</li> <li>• Hiring for QI</li> <li>• Group project work time</li> </ul>
Day 5 - <b>Practicum</b> Thursday, June 13	<ul style="list-style-type: none"> <li>• Group presentations</li> <li>• Conclusions</li> <li>• Course finale</li> </ul>
Monday, June 24	<b>Individual assignment due date</b>

## Required Material

Required reading on Canvas

## Student Evaluation

Class Participation - 25% (individual)

In-class project - 40% (groups of 2-4) – Type A

Project - 35% (Individual) – Type C

## Class Participation and Attendance

Your class participation / class preparedness grade will be based on:

**Attending class, being on time, and present** – Much of the learning will occur during class discussions, and regular attendance is required in order to receive credit for class participation. Presence means being in class for students on campus. Arriving late to class will be counted against your attendance grade.

**Participating in class** – Your conduct and behavior in class, including the quality of your comments - 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. Students should be prepared at all times to comment in any class session. Class members may be randomly selected for participation (i.e., cold called) during case discussions. Evaluation of class participation is based upon the quality (not the quantity) of your comments, as reflected by their relevance, insightfulness, and coherence. Attendance is a necessary but not sufficient condition for participation. Asking interesting and insightful questions will count toward your class contribution as they are core to being a good manager and leader. If you do not actively participate, you will receive a low participation grade even if you attend every class.