

### **TOM AREA**

### **Course Calendar**

Period 3 (Jan-Feb 2020)	Campus	Credit
Identifying New Business Models	FBL / SGP	0.5
Social Media Analytics	FBL / SGP	0.5
SPSD: Creative Thinking	SGP	1

Period 4 (Mar-Apr 2020)	Campus	Credit
Analytics for Responsible Management	FBL / SGP	0.5
Analytics for Retail and Travel (ART)	FBL / SGP	0.5
Competitive Supply Chains	FBL / SGP	1
Creating Value in Health	FBL	0.5
Management of Services	FBL / SGP	0.5
Product Management in a Digital World	SGP	1
Strategies for Product and Services Development	FBL	1

Period 5 (May-June 2020)	Campus	Credit
Business Sustainability Thinking	FBL/SGP	0.5
Platform technology - Business Model disruption	FBL	0.5



#### **IDENTIFYING NEW BUSINESS MODELS**

Campus	Period	Credit
FBL	Jan. – Feb. (P3)	0.5
SGP	Jan. – Feb. (P3)	0.5

#### **Course Overview:**

Identifying New Business Models (INBM) is an experimental workshop that combines three novel approaches to Innovation/Entrepreneurship: Business Model Innovation, Idea Tournaments and Lean Startups. Business Model Innovation is a novel technique to identify entrepreneurial opportunities via innovating the business models in existing competitive industries. Idea Tournaments is a process that leverages the wisdom of the crowd for entrepreneurial opportunity generation, selection and refinement. Lean startup philosophy prioritizes tasks to limit entrepreneurial risk. Taken together, these approaches are in contrast to the conventional serendipitous, solitary process of entrepreneurship and instead provide a systematic risk-limiting pathway to realizing entrepreneurial outcomes.

As a class, we will follow these techniques and jointly start one or more new ventures. We will use these principles to generate about 1000 new business opportunities and through a variety of selection mechanisms, we will filter and develop these opportunities until a handful of outstanding business concepts remain. Students who have entrepreneurial passions will be encouraged to take these concepts forward with a team of classmates in P4/P5.

Alumni of this course have gone on to develop multiple successful businesses and have realized significant financial gains from the ideas generated and developed during this course.



#### **SOCIAL MEDIA ANALYTICS**

Campus	Period	Credit
FBL	Jan. – Feb. (P3)	0.5
SGP	Jan. – Feb. (P3)	0.5

#### **Course Objectives:**

Management gurus have implicit incentives of coining new frameworks/buzz words every few years or so. Some of these frameworks radically shape the future of businesses, some become the flavor of the day but die out eventually, and some get relabeled/re-phrased/re-buzzed every now and then but never really go up or out. The latest buzz word that is getting a lot of attention is "big-data".

What is big-data? The first-order answer is that it is tons of data! And to some extent this answer makes sense --- rapid growth in technology has enabled us in collecting, storing, and analyzing large amounts of data with modest investments in computing power. But this answer covers only the tip of the ice-berg. The important question is: other than the usual sources such as RFID, CRM, etc., is there a new source generating loads of data? And the obvious answer to this question is: the Web 2.0 revolution, which has created a platform for end users to communicate back with the internet, creating loads of user-generated-content (UGC) which has provided enterprises with partial access to the minds of their customers creating unprecedented opportunities.

Why do people share their likes/dislikes, where they had dinner, what movie they saw, their relationship status, sometimes their most intimate personal information, etc. is a mystery to many. How long will this phenomenon last? Perhaps with more awareness and concerns of privacy, end users may be less inclined to share their intimate personal information, but may still continue to share their opinions and less intrusive personal details. Maybe with time UGC will diminish significantly taking us back to the days of "regular-data". But no business, small/ big, old/new, can ignore what big-data means for them today. This is a very new field --- most organizations today are "data rich" but "knowledge poor". In this course we will try and take a first step towards understanding data generated via social media.



#### **SPSD CREATIVE THINKING**

Campus	Period	Credit
SGP	Jan. – Feb. (P3)	1

#### **Course Objectives:**

Innovating is vital to sustain corporate growth. Yet, it too often remains an elusive goal for many companies. Creativity is fundamental when producing innovations, yet it is typically left unmanaged. SPSD: Creative Thinking is a course series that will teach you how to use your creative potential to create innovations in organizations.

SPSD: Creative Thinking introduces three core organizational capabilities needed to create innovations in organizations. We will discuss key frameworks and strategies to develop such innovative capabilities. The course is structured in three major blocks through which we will cover the core phases of the innovation process:

- The innovation journey (and understanding the user). In this block we not only introduce the generic innovation process but also the key organizational capabilities associated with creative thinking. One of such capabilities is understanding problems from a user-centric perspective.
- Experiencing creativity. Managing the creativity phenomenon in both small and large organizations is crucial for effective innovation. This block will be dedicated to understand and experience creativity.
- From creativity to reality. In this block we will discuss the role of prototyping when bringing creative ideas to reality.



#### **ANALYTICS FOR RESPONSIBLE MANAGEMENT**

Campus	Period	Credit
FBL	Mar. – Apr. (P4)	0.5
SGP	Mar. – Apr. (P4)	0.5

#### **Course Overview:**

Recent years have witnessed a revolution in data-driven decision-making, with a lot of opportunities but also quite a few challenges. Armed with troves of data and cheap access to computing, firms across virtually every industry have started hiring data science and analytics teams and looking for ways to use their insights in important business decisions. But despite the highly sophisticated methods for mining the data, integrating the insights into business processes has remained a rather ad-hoc exercise, often leading to unintended consequences that range from lost value to highly discriminatory, unfair or downright illegal actions (witness the recent lawsuits in the U.S. against some of the tech giants over issues of discrimination). This has left many wondering whether (black-box) analytics are completely devoid of the "human element", and whether accountability and responsibility can be imbedded in a world of data-driven decision-making.

This course aims to teach you a few core principles and techniques for how to use analytics and go from data to decisions in a more responsible fashion. We will be focusing mainly on prescriptive analytics, which is explicitly geared towards recommending decisions or action plans/strategies. We will discuss systematic approaches for building "good" prescriptive models: ensuring transparency in the assumptions, building robustness and flexibility, capturing multiple trade-offs while prioritizing the KPIs of interest, generating actions that are efficient but also equitable and fair, ensuring that plans are sustainable, etc.

These principles will be showcased through a collection of fun mini-cases that will give you a chance to implement quantitative models in software and experience first-hand how analytics and technology can ultimately drive both good and bad business decisions.



### **ANALYTICS FOR RETAIL AND TRAVEL (ART)**

Campus	Period	Credit
FBL	Mar. – Apr. (P4)	0.5
SGP	Mar. – Apr. (P4)	0.5

#### **Course Overview:**

Confidently recommend the product promotions that work best for the retail chain or hotel property you're advising. Design and analyze experiments whose results will help transform your business decision making. Create a seamless, unique journey for every customer who walks into your company's store or website. Advocate for the best strategies in your firm not based on instinct, but on hard numbers.

How? Data and analytics! Whether you work in consulting, retail, travel, financial services, healthcare, or consumer goods, analytics has become a competitive necessity for your business. Decisions no longer have to be made based solely on intuition, experience, and gut feelings. Although these factors count, it's highly likely that you're going to be asked, "What do the numbers say?" Analytics enables you to make informed decisions based on evidence, prediction, and experiments.

Companies that use analytics to optimize business decisions are far more successful than their counterparts: Caesars Entertainment, formerly known as Harrah's, changed the gaming industry landscape by using data analytics for its customer loyalty program. Amazon examines vast amounts of consumer purchasing behavior data using analytics to dominate retail. Capital One conducts more than 30,000 analytical experiments each year to test credit cards with different incentives, promotions, and advertising strategies and identifies its best customers and products. AirBnb and Uber use A/B testing and experiments to learn and make decisions at every step of their product developments.

All the major consultancies, including E&Y, PWC, McKinsey, Bain, and BCG, recognize analytics as the key to success and prioritize growth for their respective advanced analytics practices. Industry, including retailers such as Gucci, Louis Vuitton, and Burberry, is integrating analytics to provide premium experiences across the entire customer journey.

Despite the hype around data and analytics, the reality is that many companies still struggle to understand how to use analytics correctly. In fact, one of the largest challenges in analytics is to figure out which analytical tools to use. With hundreds and thousands of tools and models at a company's fingertips, the decision to dive into analytics can be overwhelming. It's hard to know where to start and which solutions to consider.

This course will provide hands-on experience in the application of analytics to rich datasets. You will learn to quantitatively identify and evaluate business opportunities that create value. Instead of delving into specific methods or statistical models, we will focus on emerging analytics tools and approaches such as A/B testing and experiments that can be implemented with trending business topics in such industries as retail, travel, and hospitality.



#### **COMPETITIVE SUPPLY CHAINS**

Campus	Period	Credit
FBL	Mar. – Apr. (P4)	1
SGP	Mar. – Apr. (P4)	1

#### **Course Overview:**

Given the continuous lowering of tariff barriers, transportation costs, and barriers to entry, firms have developed a global footprint to take advantage of low cost arbitrage and access to global markets. Today's supply chains are complex and ubiquitous and they are constantly reconfigured to deal with the growing importance of globalization, offshore sourcing, intensifying competition, and time and quality competition.

In this course, we will study how to manage supply chains (end-to-end production and distribution processes) to improve a company's competitive performance (cost, time, quality, variety, risk). Although supply chains were traditionally viewed as cost centers, they are often viewed today as a source of sustainable competitive advantage. Accordingly, we will adopt a value-creation approach to supply chain management and identify strategies for value creation and capture, such as aggregation, disintermediation, and infomediation. Our value-creation approach will revolve around two pillars: incentive alignment and supply network coordination.

The approach will be strategic, cross-functional, and analytical. As a common theme, we will emphasize pragmatism and relate various management innovations to their management fundamentals.



#### **CREATING VALUE IN HEALTH**

Campus	Period	Credit
FBL	Mar. – Apr. (P4)	0.5

#### **Course Description and Objectives:**

Health care is facing a number of challenges due to a complex combination of medical, social, technological, economic, and other factors. These challenges will not be solved overnight: but they do open the door for solid and creative thinking to address them.

Creating Value in Health explores the complex context of health care delivery, and critical challenges that the whole health sector (providers, pharma, medtech, policy, payers ...) are thinking about to improve value: health outcomes that matter to patients in a financially sustainable way. Focus will be on how the care delivery system works, how efforts are being made to improve it, and how it might be changed for the better. We will be taking a business model innovation and process improvement perspective which will give key insights for those wishing to enter or go deeper into this sector. We will explore how management and medicine interact in the trenches in implementing real sustainable change.

Upon completion of the course, participants will

- gain a better understanding of the complexities, tensions, and sometimes misaligned incentives associated with both treatment and health creation,
- understand current trends in focusing on value and accountability in health care delivery,
- understand new trends and opportunities to innovate in both public and private sector health care organizations.

These are core competencies for anybody who will go into health care, be it in pharmaceutical, medtech, biotech, health investment, insurance, or consulting with a health focus; be it for incumbents or innovators. The course is also appropriate for individuals who wish to gain an understanding of how an important complex service system (there is not more complex system than health delivery) can be managed, improved, and innovated.



#### **MANAGEMENT OF SERVICES**

Campus	Period	Credit
FBL	Mar. – Apr. (P4)	0.5
SGP	Mar. – Apr. (P4)	0.5

#### **Course Overview:**

Enabled by the recent advances in technology, services are playing an ever-increasing role in the global economy. Whether one looks at technology firms (e.g., Uber, Amazon) or more established firms (e.g., airlines, hotels), it is hard to ignore the increasingly important role that service processes (processes that involve customer interaction) are playing in creating and transforming business models.

In this mini-elective, we will build on the POM core class and focus on the special role of service processes in creating innovative business models. Although the topic of service management is vast, we will limit our focus on core operations and technology strategies that enable service firms to create and capture value and potentially redefine their business models in their industries.

In particular, we will explore the economics and strategies of service concepts such as servicization, globalization, customer experience, automation, self-service, and two-sided service markets. We will also spend a significant time on the disruptive role of the information economy in enabling innovation in services through service industrialization. We will adopt an end-to-end process and cross-functional perspective on service value creation. Pedagogically, this course will visit concepts from technology and operations management, marketing, and strategy.



#### PRODUCT MANAGEMENT IN A DIGITAL WORLD

Campus	Period	Credit
SGP	Mar. – Apr. (P4)	1

#### **Course Overview:**

Product managers (PMs) in a digital world handle the entire product-life cycle of digital products. This course exposes, in a highly experiential way, some of the key challenges PMs face and the managerial levers PMs must master to cope with them considering the high level of uncertainty and complexity associated with managing digital products from their genesis to their sunsetting. Students will be put into interdisciplinary teams to face and manage some of the typical product management challenges a PM must tackle. Hence, student teams will carry out the following challenges:

- Define and develop a minimum viable (and lovable) product (MVP)
- Assess the various risks sources to product delivery and performance
- Develop and execute a detailed product launch plan
- Define and implement the metrics to track after launching the product
- Develop a product road map after a post-launch evaluation
- Design and size the product organization to sustain the product roadmap

The course will be taught by an interdisciplinary team with both academic and industry expertise in the development and management of product-based organizations.



#### STRATEGIES FOR PRODUCT AND SERVICES DEVELOPMENT

Campus	Period	Credit
FBL	Mar. – Apr. (P4)	1

For most firms, product and service innovation is critical. Intel makes more than half of its revenues with products younger than 4 years. Product Development is central to the firm and Strategies for Product and Service Development is about making innovation happen in a firm. At some point in your career (as a line manager, as a consultant helping a line manager, as an entrepreneur, or even as a private equity manager) you will need to deal with product and service development challenges. This course will prepare you to identify and tackle such managerial challenges. You will learn how to effectively integrate strategy, marketing, design, and manufacturing decisions not only by discussing state-of-the-art frameworks/tools for effective product development in large organizations but also by developing a new product or service idea in a course project.

Strategies for Product and Service Development is intended to provide you with:

- Comprehension of the managerial and operational challenges associated with each stage of the product development process
- Proficiency with a set of managerial tools and methods for effective product and service development
- Recognition of the role of multiple disciplines in developing new products and services and the need for their successful integration
- Competence to manage interdisciplinary tasks in order to achieve a common goal



#### **BUSINESS SUSTAINABILITY THINKING**

Campus	Period	Credit
FBL	May. – June. (P5)	0.5
SGP	May. – June. (P5)	0.5

#### **Course Overview:**

The social and environmental impact of businesses has become a central issue in modern society. Communities are demanding higher standards of air, water, and soil quality. Climate change is constantly on the news. Consumers are becoming more aware and conscious of the social impact of business practices. Even though the technology and products to address many of today's global environmental and social challenges already exists, there is a lack of processes and strategies needed to deliver these solutions to those who most need them.

The first goal of this course is to provide students with a toolset that will allow them to analyze, evaluate, improve, and create business models that address some of the major challenges faced by humankind. This year we will focus on a few topics: building a circular economy, scaling the operations of a profitable business that address a social challenge, industry self-regulation, digital transformation, and managing operations that respond to a humanitarian crisis. The second goal of the course is for students to design sustainability goals for an industry they are interested in, and to propose and evaluate profitable business models that achieve these goals.

All of the topics covered in this class follow a common thread: they pertain to innovative business models that are "extreme" versions of business models found in traditional settings. For example, replacing an incumbent polluting tech with a green tech is much more difficult than introducing a new product with no equivalent incumbent. When building a social enterprise in a developing country, the uncertainty and risk are much more amplified than in developed economies. Responding to humanitarian crisis requires a level of operational speed and coordination that can rarely be found in a traditional setting. Analyzing these salient "extreme" features will help students better understand key tradeoffs in operations management, and will give them tools that can be used in their future careers.

#### Who should take this class?

- If when you look at major global challenges you think that there might be business opportunities (and not just charity) among the solutions for these challenges, then this course is for you.
- If doing business in some of the most extreme and exciting places in the globe seems like an interesting adventure, then you could benefit from this class as well.
- If you suspect that maximizing ROIC might not be incompatible with environmental and social responsibility, but you want to understand how to do this, this course if for you too.
- If some day you want to design companies, industries and economic systems that are socially and environmentally sustainable, your journey starts here.



### PLATFORM TECHNOLOGY - BUSINESS MODEL DISRUPTION

Campus	Period	Credit
FBL	May. – June. (P5)	0.5

**Course Overview:** 

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