

Master of IT in Business

Course Description

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A. Banking Technology & Operations

(For FS track students : A.1A & A.1B is compulsory, minimum 4 other A course units)

A.1A Banking Business & Processes

The financial services industry offers products and services to institutional and individual customers to enable them to save and invest surplus funds, obtain financing for ongoing business and personal needs, manage financial risk, and pay and receive money. Customer assets held in bank accounts, transactions involving these accounts, and related information and privacy require total and continuous security and protection. This course introduces: (1) banking products and services that are developed and offered to meet customer needs; (2) banking processes inside the firm and in the market that enable the delivery of financial services solutions to customers, as well as the controls, reporting and management tools used for safe operations; and (3) leading ideas from technology and operations management that enable insightful managerial analysis of real-world products and services, processes and systems, and market and industry business problems.

A.1B Banking Enterprise Architecture

This course examines the role of Enterprise Architecture in implementing a bank's business strategy while minimizing the overall IT cost for the bank. In today's market where the speed of doing business is rapidly increasing, and customers are becoming increasingly more sophisticated, banks are challenged to provide faster and better services, anytime, anywhere. Technology, as a business enabler, has become a key consideration of any bank's strategy.

Going forward, banks that do well in adopting technologies that enhance customer experience will have a competitive advantage. At the same time, banks are continuously challenged to reduce the complexity of their applications technology and infrastructure, in order to better manage the overall year-on-year IT costs to the bank.

As a natural consequence of a growing bank, organizations tend to become "silo-ed", with each business unit having its own dedicated tech & ops functions. While this organizational model is meant to be more agile in terms of time-to-market, the down-side effect is that bank-wide technology and platform standards are harder to enforce, resulting in higher overall IT costs for the bank.

As a means to control complexity, banks strive to minimize the number of different technologies that they use, by establishing bank-wide technology standards, and governance processes to enforce those standards. Technology obsolescence is yet another challenge, as legacy applications tend to be inflexible to change and costly to maintain. As such, there is a need to balance both modernization and consolidation agendas.

An Enterprise Architecture bridges the gap across silos, aligns to the overall business strategy of the bank, and allows the bank to be agile, while minimizing IT costs through platform standardization. A well run Enterprise Architecture practice will improve a bank's competitive advantage with measurable results; increased revenue, speed to market, product & service innovation, improved agility, reduced cost.

Emphasis is placed throughout the course on analysing real-world situations using case studies, in particular large-scale change scenarios such as; core banking system replacements, and bank mergers whereby multiple vendor products need to coexist.

A.2 Retail Banking Technology & Operations

Students will view and analyse selected retail banking products and services, and view them from the solutions and architecture perspectives, spanning the front to the back office.

These solutions include core banking, branch platforms and delivery channels such as ATM, internet and mobile banking. The design and flow of different types of consumer payment systems - cheque, debit and credit cards and stored value facilities will be examined. This course does not involve hands-on programming and low-level implementation. Students will gain in-depth knowledge on system and application architecture and functionality, through in-class lectures and walkthroughs and demonstrations provided by vendors. Topics such as customer analytics, security and retail banking technology trends will also be included.



A.3 Corporate Banking Technology & Operations

This course explores corporate and institutional banking (C&I) and architecture. It begins by reviewing core principles of solution development including systems architecture and business process management. These considerations are then examined in different C&I business contexts. Specifically, the product areas of cash management, trade finance, corporate treasury and derivatives are covered. The later part of the course examines other types of C&I solutions, such as customer relationship management, channels, and risk management. Emphasis is placed throughout the course, on analyzing real-world situations using case studies and gaining hands-on experience with banking systems.

A.4 Financial Markets Technology & Operations

This course reviews the technology architectures and solutions that support financial market transactions. The product lifecycle and trading flows for equities, bonds, foreign exchange, futures, and other derivatives are compared. Likewise, the function of and interactions between core trading systems - market data, order routing, position management, clearing and settlement, and risk management - are also analyzed. The course will provide hands-on exercises with trading system technology. It will also explore current issues, such as the design of event-driven architectures and high-performance systems.

A.5 Trading Technology & Operations

Time-to-market, liquidity seeking, complex event evaluation, dark pools, algorithmic trading and risk – these are a few of the battle fields where firms operating in the financial services industry find themselves competing on a daily basis.

Despite the common behaviour, financial institutions operating in the investment sector are among the most intensive and innovative users of information and technology. Electronic trading represents the edge of the industry technology where time is measured in sub millisecond units and volumes are measured in millions of orders.

This course provides an introduction to the relevant technology, software design principles, risk-related implications of the electronic trading world. Focus would be placed on equities and equities related world with particular accent on the time-to-market strategies for market access and algorithmic trading. The objective of the course is to highlight the common trends in architecture and design of the IT application systems in the electronic trading world. Each module will also have specific references to risk and its associated dependencies.

A.6 Payment Technology & Operations

Payments are a big part of our personal and business lives. “Under the hood” of payment transactions are the products, the companies, the legal framework, the technology we rely on to facilitate the timely and uninterrupted exchange of value from one entity to another. In times of crisis, the importance of having a robust, efficient, and secure national and even global payment systems that market participants can rely on is even more pronounced.

Payment, both small and large value transactions, is marked by a rapid shift from paper-based to electronic. This course “Payment Technology & Operations” takes a unique, integrated look at the payment/e-payment landscape, viewing consumer, business and wholesale payments as a continuum. It presents a description of the changing environment and delineates the dynamic e-payment scene, helping us understand the possibilities as well as the limits to change. It covers payments for individuals, organizations and banks, and all of their possible permutations.

The course is aimed at students who are interested in knowing more on both ‘domestic’ and international payment systems and more particularly those who aspire to be T&O (technology and operations) staff and managers, business analysts and product managers.

A.7 Assets Management Technology & Operations

Asset Management firms are operating in a specific “eco-system” ruled by the fiduciary duty to clients, large pool of Assets Under Management (AUM), enhanced regulatory environment and significantly more intensive and innovative use of information and technology. The increase of conventional AUM of the global fund management industry to \$85.2 trillion in 2012, the asset diversification (conventional funds, alternative funds, private wealth funds) and large product offering (equities, fixed income, FX) prompted asset management firms to invest significantly more in technology, development and information processing.

This course provides a description of the technology used at different levels of the business managing the respective asset classes and products, including applications and their business requirements, describing the evolution of needs and existing products offered and critical needs and inefficiencies of different business groups or functions inside an asset management firm. It will focus on how information processing and technology have enabled better investment procedures, more robust risk management platforms, increased transparency and capacity of reporting to investors and regulatory bodies. The course will make distinction between the asset management technology and processes and the investment banks’ ones.

A.8 Lifecycle Implementation of Banking Products

All banking products go through the lifecycle stages of i) product design & set up, ii) customer engagement, iii) customer order acquisition, iv) transaction fulfilment, v) maintenance, vi) reviews, and vii) product wind-down & phase out.

In the other courses in the Banking Processes, IT & Architecture series, we assume the product already exists, and we focus on the various aspects of product execution ranging from ii) customer engagement through to vi) product and customer reviews.

In this course, we look at the complete lifecycle of a banking product, with special emphasis on the design & set up tasks that are required for product creation, as well as on the product wind-down and phase out tasks that are part of product retirement.

The nature and complexity of the processes and requirements for product creation and product retirement can be quite different, depending on the particulars of the type of product and type of customers involved. To give students an overview of this landscape, we look at selected examples across retail banking, wealth management, corporate & institutional banking, and capital markets. For these examples, we examine the processes, data and systems associated with planning, designing and setting up a new product, as well as technology and operational issues related to scaling up and transitioning to steady state execution, and to eventually winding down and retiring the product.

A.9 FS Operational Risk I : Foundation & Framework

Operational risk is risk arising from a financial institution's business functions and from the practical implementation of the management's strategy. It can be defined as the risk of loss resulting from inadequate or failed internal processes, people, systems and management or from external events.

It is relatively straightforward for an organisation to set and observe specific, measurable levels of market risk and credit risk. In contrast however, it is relatively difficult to identify or assess levels of operational risk and its many sources. Historically, organisations have accepted operational risk as an unavoidable cost of doing business.

In this course, we look at the complete lifecycle of a banking product, with special emphasis on the design & set up tasks that are required for product creation, as well as on the product wind-down and phase out tasks that are part of product retirement.

The objectives of the course are to enable students to develop and maintain the operational risk management framework, policies and standards with emphasis on how to devise and update a framework based on the key elements like governance, policies, processes and procedures along the what, where, when, how and who dimensions. Students will also learn to develop, implement and maintain operational risk methodologies and tools and create and sustain awareness of operational risk management thought an institution. The course will also cover the relevant legislations, regulations and codes of practice.

A.10 FS Operational Risk II : Technology & Systems

Operational Risk is inherent in all banking activities, not only in the business it conducts but also from the fact that it is a business - an employer, owning and occupying property, and holding assets, including information, belonging to itself and its clients. A blogger once remarked, without an operational risk management system, a bank is like driving blind in a blizzard of incidents that increases its potential for losses and diminishes its performance.

Today more than ever, it is vital that a bank's management has the information, tools and answers they need to fulfill their fiduciary duties. No operational risk framework is designed to eliminate risk per se but, rather, to contain it within acceptable levels as determined by senior management. It is therefore absolutely essential to ensure that a bank has sufficient information, in a timely manner, for making informed decisions about additional controls, adjustments to controls, or risk mitigation efforts.

This course examines the information, the knowledge needed in managing operational risk on a bank-wide basis. It focuses on the components of risk infrastructure needed to enable banks to systematically collect, manage and distribute real-time risk content *. The course will look into the data, the models that transformed the data into information, as well as the knowledge needed to interpret and translate information into decision and action. The course will challenge students to think Operational Risk Oriented Architecture that brings together the necessary data, models, processes and solutions.

* Risk content ranges from price data, position/exposure information, alerts from security agency, to business continuity policies, emergency response procedures, control standards, facilities and IT assets, baselines, threats/vulnerabilities.

A.11 Financial Services Analytics in Practice

This course is designed for Financial Services Analytics students to bridge the gap between analytics techniques and the applications, focusing on financial institutions. Using current applications of analytics in the banks, to facilitate discussion and labs and inviting industry leaders as guest speakers, the course will allow students to understand how domain knowledge in financial services interacts with the different areas of the analytics value chain.

At the end of the course, students would be able to identify potential areas and challenges in the implementation of analytics, allowing them to propose valuable analytics solutions that are actionable by the financial institutions.

Financial Services Analytics track students would take this course towards the end of their program when they would have acquired analytics techniques and proficient use of analytical tools.

Objectives

- Bridge the gap between analytics techniques and domain knowledge during implementation of solutions..
- Provide a more thorough view of the analytics value chain from collection of data to validation and how domain knowledge interacts with each of these stages

B. Analytics Technology & Applications

(For AT students : B.1 and B.2 are compulsory; select 3 other B course units)

B.1 Analytics Framework & Business Context

While each service sector has its unique flavour of processes and operations, there are commonalities in most of the business processes of this sector. This course introduces the students to the service industry processes and stakeholders (both internal and external) that are working to meet customer needs. The concept of Unified Service Sector process framework, a framework to manage service sector industry operations, will be introduced and few industry specific frameworks will be examined and expanded as part of the course. Healthcare, Retail, Airport Operations and Telco are the service sector industries that are covered at varying level of detail.

The course will use lectures, class discussions, assignments and external speakers to cover the material and provide introduction to service industry business processes and data management.

B.2 Data Analytics Lab

This course is about data analytics techniques and data-driven business knowledge discovery. It aims to convey the principles, concepts, methods and best practices from both statistics and data mining, with the goal of discovering knowledge and actionable insights from business data. In this course, students will be exposed to a collection of data analytics techniques and gain hands-on experiences in using these techniques. Student will focus their attention on the use and valuation of these techniques and solution to discover new knowledge from data and how to make data-driven decisions in an intelligent and informed manner. You will be also trained to understand the statistics rigour and data requirements of these techniques. Techniques discussed in this course form the foundation of the subsequent courses.

B.3 Customer Analytics & Applications

The goals of this course are for students to (a) develop a strong understanding of the concepts and techniques of customer focused and data driven analytics, and supporting systems and (b) apply that understanding in creating cutting-edge business analytics applications and IT solutions for service industry companies to gain customer insights. This includes using these applications and solutions to analyse customers' attitudes, behaviour, profitability and risk. This involves topics such as i) customer focused analytical reasoning, ii) methods and applications to support analytic tasks and analytic challenges in specific industry contexts, iii) evaluating and improving the usefulness and usability of data analytics applications. Several case studies on customer focused data analytics and related IT projects are studied. Emerging "next-practices" of real time, adaptive data analytics in the context of customers are explored. Linkages across processes, data, operations, analytics, technology and architecture are highlighted.

B.4 Operations Analytics & Applications

Every service sector business is faced with operations related problems including demand forecasting, inventory management, distribution management, capacity planning, resource allocation, work scheduling, and queue & cycle time management. This course is build on the processes that are learnt in "Service Sector Processes & Data Framework".

In this course, students will be exposed to the Data and Decision Analytics Framework which helps the analyst identify the actual cause of business operation problems by collecting, preparing, and exploring data to gain business insights, before proposing what objectives and solutions can and should be done to solve the problems. Such a framework combines identification of the root causes by data analytics, and proposing solutions supported by decision analytics.

The objectives of this course are for students to (a) develop a strong understanding of the theory, concepts and techniques of operations management and data driven analytics, and (b) apply that understanding in creating cutting-edge business analytics applications and IT solutions for service industry companies to gain operation insights and business improvements. Students will apply the Data and Decision Analytics Framework to solve several operations focused case studies. This framework is an expansion of a typical operations management solution methodology to include data analytics so as to exploit the linkages across processes, data, operations, analytics and technology, to offer businesses alternative solutions to operations problems.



B.5 Big Data: Tools and Techniques

Big Data has become a key consideration when organizations today develop strategic outlook of the consumer and market trends. Big Data sets have become an enabler to organizations in developing strategies and plans to develop compelling product and services and differentiated customer experiences at low cost by optimizing operations and processes.

Business analytics today increasingly leverages not just the traditional structured data sets to answer business questions, but also the newer forms of Big Data that can help answer new questions or even answer old questions in newer ways. Big Data is helping provide richer and newer insights into questions analytics has been answering by modeling for a richer customer and operations scenario.

As such, it is incumbent on practitioners of advance analytics to be intimately familiar with technologies that help store, manage and analyze these Big Data streams (sensor data, text data, image data etc.) in an integrated way along with more traditional data sets (e.g. CRM, ERP etc.)

This course is intended to equip students with an appreciation and a working knowledge of Big Data technologies that are prevalent in the market today along with how and when to use Big Data technologies for specific scenarios. This course will provide a foundation to the Hadoop framework (HDFS, MapReduce) along with Hadoop ecosystem components (Pig, Hive, Spark and Kafka). The course will also cover key Big Data architectures.

B.6 Visual Analytics & Applications

In this competitive global environment, the ability to explore visual representation of business data interactively and to detect meaningful patterns, trends and exceptions from these data are increasingly becoming an important skill for business practitioners. Drawing from research and practice on Data Visualisation, Human-Computer Interaction, Data Analytics, Data Mining and Usability Engineering, this course aims to share with you how visual analytics techniques can be used to interact with business data from various sources and formats, explore relationship, detect the expected and discover the unexpected without having to deal with complex statistical formulas and programming.

The course consists of three major components, namely: lecture, lab exercise and visual analytics project. The lecture component allows students to develop a comprehensive understanding of the principles, techniques and best practices of data visualisation and to expose students to various real world applications of visual analytics. In the lab session, students will gain hands-on experiences on using data visualisation toolkits and web-based data document programming libraries to design data visualisation. Finally, students will apply the understanding and skills learned in building cutting-edge visual analytics tools and systems using real world data. This component may involve: (i) advancing the theory of visually-enabled analytical reasoning, (ii) developing new methods to support analytic tasks in specific domains, (iii) applying existing methods and tools to analytic challenges in these domains, or (iv) evaluating and improving the usefulness and usability of visual analytics applications.

B.7 Text Analytics & Applications

Recent advances of technologies have enabled much easier and faster ways to generate and collect data, of which unstructured textual data account for a large proportion, especially on social media. Textual data contain much valuable information for businesses, such as consumer opinions, which can help improve products and services, and users' personal interests, which can guide targeted advertising. However, textual data are inherently different from structured data. How to extract value out of the large amount of unstructured and oftentimes noisy textual data is a challenge many businesses face nowadays. This course will introduce to the students the fundamental principles behind text analytics algorithms and some of the latest emerging technologies for solving real-world text analytics problems. Students will acquire knowledge and skills in text analytics through lectures, class discussions, assignments and group projects using real-world datasets.

B.8 Social Analytics & Applications

In today's globally connected, online and mobile world, social media platforms are fast becoming the dominant means of communication and it is revolutionizing the way businesses communicate with their customers. Further, gamification seems to be the latest buzz word – this trend is growing within social media marketing. It has huge potential for business – Gartner reports that “By 2015, 40% of Global 1000 organizations will use gamification as the primary mechanism to transform business operations.” A new report by Markets and Markets predicts that the gamification market will grow from the \$400+ million market today to some \$5.5 billion by 2018. Many popular social media platforms such as Facebook and Twitter allow for instant, real-time multi-way communication. Collecting and analysing data from multiple online sources require an Information Technology infrastructure. The data collected from online create a gold mine for businesses that want to understand and predict consumer and market behaviour. By leveraging sophisticated computing technologies, big data analytics can produce actionable insights valuable to the core operations of the business. This course will explore emerging methods and applications for understanding online user behaviour on popular social media platforms.

B.9 Mobile Analytics & Applications

This course is meant for students who wish to develop their knowledge in machine learning techniques and applications. It aims to convey the principles, concepts, techniques and algorithms in the fields of machine learning. Students are not expected to develop complex machine learning algorithm, but will be expected to create applications using existing machine learning algorithms to solve business problems.

B.10 Predictive Analytics using Simulation

Historically, analytics has referred to the use of statistical or data mining techniques to analyze data in order to determine what happened and why. Predictive analytics focus on what could happen in the future and typically uses statistical techniques, regression analysis, or machine learning algorithms to train a model to predict future outcomes. Predictive analytics attempts to make sense of data by finding patterns or fitting statistical models while simulation modeling attempts to mimic reality. Simulation can be used to analyze systems that have not yet existed. "What if" analysis concerning the system can be posed to assess the impact of various alterations to the system. Simulation modeling provides the ability to look into the future, predicting what can or will happen. As such, simulation can be used for modeling systems that are too expensive to build or too dangerous to experiment with in practice.

Simulation modeling can help to maximize the effectiveness of decision making by examining alternative outcomes and scenarios, before, during and after process implementation or execution. Powerful simulation software that allows realistic 3D models to be built with ease and support data analysis without needing sophisticated knowledge of statistics are available and increasingly more organizations are embracing such technology.

This course covers the modeling and simulation of the structure and behavior of real-world systems using discrete-event simulation techniques. You will be introduced to the application and theoretical background of simulation modeling. Topics includes modeling of manufacturing and materials handling systems and service systems through simulation. Theoretical topics include random variable generation, queueing theory, model verification and validation, design of experiments and statistical analysis of input and output data. An advance simulation package Flexsim will be utilized for modeling complex problems.

B.11 Marketing Analytics & Applications

Marketing is "the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (American Marketing Association, 2013). Especially, business environments are now more dynamic and rapidly changing than ever. Even if we are now able to access and utilize various types of marketing data assets thanks to the recent technological development, such 'data abundance' has made it further difficult and challenging to design and articulate effective marketing strategies. For marketers in all kinds of industry, it's important to get 1) an overall landscape picture of data analytics for marketing decision making, and 2) a framework to integrate various data analytics works, and 2) a capability to translate data analysis into actionable insights and strategies. This course aims at offering students these key assets for marketing analytics by focusing on three key phases of marketing activities: 1) Analytics for marketing 'planning', 2) Analytics for marketing 'execution', and 3) Analytics for marketing 'measurement'. This course also discusses cutting-edge practices of digital marketing analytics.

B.12 IoT Technology & Applications

In the near future, we can envision a world in which billions of devices can sense, communicate, and collaborate over the Internet, in the same way that humans have interacted and collaborated with one another over the World Wide Web. This vision is now known as the Internet of Things (IoT). The knowledge created from these interconnected objects can potentially offer new anticipatory services to improve our quality of lives, and can be applied to various application domains - such as smart cities, homes, transport and healthcare.

In line with worldwide efforts to realize smart cities through IoT technologies, this course is intended to equip students with the state-of-the-art in IoT technologies, to enable them to conceptualize practical IoT systems to realize citizen-centric applications.



C. Information Technology Management

C.1 Cybersecurity Technology and Applications

This course provides an introduction to cybersecurity. The focus is on fundamental concepts, system design principles, basic cryptographic techniques, protocols, access control models, firewalls and intrusion detection systems. While the emphasis is on foundations, case studies will be given that examine how these ideas can be used to protect existing and emerging applications, such as secure electronic transactions, secure e-banking, and data confidentiality and privacy in cloud computing.

C.2 Spreadsheet Modelling for Technology & Operations Decisions

Very often, managers need to quickly make important decisions related to managing IT investments, assets, operations and projects. Understanding how to analyze trade-offs between alternatives is difficult to do without a good model. This course focuses on using Microsoft Excel as a spreadsheet tool to build such decision models and to perform business analysis. Students will be able to analyze trade-offs and understand the sensitivity impact of uncertainties and risk. The key emphasis of this course is on developing the art and intuition of modeling, more so than just learning about the long list of available models, in the context of managing IT resources and operations.

C.3 IT Project & Vendor Management

IT projects never go according to plan and project managers must exercise good judgment and effective management skill to ensure success. Students will learn of the many decisions and tradeoffs that project managers make daily, namely managing schedules, team dynamics, resource scheduling, quality issues, schedule delays, cost overruns, to name a few. Students will be introduced to best practices promoted by Project Management Institute (PMI) and documented in "A Guide to the Project Management Body of Knowledge" (PMBOK® Guide).

Case studies of real world IT projects, computer-based simulation games and role playing negotiation exercises will be used in class to help students understand and practice project management skills of managing conflicts, responding to unexpected project problems and negotiating a win-win contract agreements between client and vendor.

IT projects inevitably involve vendors, and increasingly IT operations and IT infrastructures are outsourced to third-party service providers. The ability to manage vendors and negotiate favorable contract terms are essential skills for project managers. Determining when to use and how to select a vendor effectively can make or break even the most carefully planned projects. Students will learn and practise activities that are essential to effective vendor management.

C.4 Global Sourcing of Technology & Processes

Standardising business processes, advances in information and communication technologies, and the continuous improvement of the capabilities of IT service providers around the world, among other factors, have led to an intense impetus to "strategise" IT sourcing. In this course we will investigate how enterprise IT services are (out/in) sourced in the financial services industry. We will also draw relevant examples and lessons learnt from other industries.

Students will develop an understanding of the core issues involved in a variety of sourcing strategies (out/in/co-sourcing), the industry best practices in managing IT sourcing (through case-studies and guest lectures), and the emerging governance schemes for IT sourcing. The other side of sourcing will be analysed, that is, the vendor's perspectives on managing sourcing relationships and how they deliver their promise of low-cost and high-quality services. Students will have the opportunity to practise forming sourcing decisions - writing Request For Proposals (RFPs), bidding on RFPs, designing contracts, and the like.

D. General Management for Technology & Operations

D.1A Financial Accounting

The course aims to equip students with basic knowledge of accounting basics and the ability to better understand a set of financial statements. The course covers issues such as accrual versus cash systems of accounting, measurement difficulties, and timing judgment involved with assets, liabilities, revenues and expenses amongst others. Equipped with the language of business and students will hence enhance their communications with the finance people and will be able to justify project implementation on the basis of cost-benefits analysis as well as discounting the cash flows.

The course also provide students with the essential skills needed to improve analytical skills through problem solving using accounting information such as fixed versus variable costs and the use of this distinction to conduct a Cost-Volume-Profit (CVP) Analysis. Students are also required to understand relevant costs for decisions such as make versus buy and segment analysis. The course will also introduce students to costing systems, performance measures, cost allocation, planning and performance budgets, and how these accounting tools help organisations to be more effective.

This is a half module delivered once a week over 7 weeks.

D.1C Management Accounting for Technology & Operations Managers

This course helps students understand why management accounting is important for daily business decision, and how managers can use management accounting to plan, evaluate and control operations of organisations. It also aims to provide appropriate management accounting knowledge for IT and operations specialists in the financial and service sectors.

Students are required to link class learning to their work experience and share it with their cohort. Through interactive contributions from all participants, all students should increase their understanding and exposure of management accounting practices and their potential impacts on individual and company performances.

This is a half module delivered once a week over 7 weeks.

D.2 Strategy & Organisation

This course is designed to help students understand how the development of strategies and the organizational changes and leadership necessary to create competitive success. A key aspect of strategic success is execution, without which ideas remain only ideas and not vehicles for value creation. The topics of execution by way of the organization, management and change leadership will be discussed in detail. Lectures, case studies, readings, simulations, tools and their practical use, as well as class participation will be the primary vehicle to create the appropriate learning environment. The outcome of this course will be an effective theoretical and practical understanding by the students of strategic analysis, formulation, execution, and the role and practice of leadership, management and organization.

D.3 Finance for Technology & Operations Managers

Students will be exposed to key financial concepts and tools commonly used by managers in making sound financial decisions. These include ratio analysis, time value of money, risk-return trade-off analysis, capital budgeting, stocks, bonds, and option pricing. In addition, the course also covers the terminology, characteristics and features of various financial instruments transacted in the financial services industry. This helps the students interact effectively with the finance professionals in the different product areas.



E. Capstone Project (equivalent to 2 course units)

E.1 Internship

Students may do a Financial Services Operations & Technology related internship in a company for 6 months. The internship will enable the students to apply and integrate what they have learnt and give them the opportunity to gain real-world working experience in Financial Services Operations & Technology. Internship is done during the school term. Students will do their internships during the day and attend classes in SMU in the evenings on days when classes are scheduled. Internship may involve payment from company, and the stipend amount is to be agreed between the student and the company.

Internships are available on a competitive basis. To successfully clinch an internship, students are required to undergo the company's selection process which may include interviews and assessments.

E. 2 Capstone Project

The general effort required for the Capstone Project is minimum 182 hours per student. The capstone project will enable the students to apply and integrate what they have learnt and give them an opportunity to delve in greater depth, into one or more of the topics covered in the courses. Faculty supervisors will be assigned to guide the students. Desirable length of project would be around 6-10 months, 6 months (Full Time), 10 months (Part Time).

Capstone projects are available on a competitive basis. To successfully clinch a capstone project, students are required to undergo the capstone project sponsor's selection process which may include interviews and assessments. In some cases, capstone projects may include compensation to the student either in the form of an allowance or a scholarship.