Master-level Business Analytics & Digital Transformation
Course 1: Introduction to Business Analytics

Details of the course:
Business Analytics is a methodical exploration of an organization's data to understand the business and make decisions. The tools provided by business analytics allow organizations to understand their past and current performance, and to plan effectively for the future. This methodology uses evidence-based, data-driven, quantitative methods to conduct predictive modeling, operational and statistical analysis to improve business decision-making.

Those taking this course will be able to:

- Identify and comprehend the basic methodologies and tools of data analysis in a business context
- Demonstrate an understanding of the use of data and data analytics in understanding and solving business problems and finding new business opportunities.
- Evaluate the usefulness of business analytics tools and methods in various business contexts.
- Effectively use business analytics in order to engage with the world and the information available to them in new and more expansive ways, by converting data into value-added information and commercial knowledge.
- Develop business analytics skills to views how operations can operate more efficiently and through this, increase the competitive edge of the companies in which they work.
- Critically examine how business analytics are used to track key performance indicators to understand the current business performance (descriptive), analyze trend data to assess the probability of future outcomes (predictive) and use past performance to generate recommendations on how to handle potential future situations.
- Understand how businesses can use statistical functions to conduct data mining and predictive modeling. The process includes aspects of business intelligence, trying to answer a range of questions from “What happened?” to “Why did it happen?” and “What might happen in the future for us to respond to?”

Course Outline
Introduction to business analytics; Describing and Summarizing Data; Sampling and Estimation; Hypothesis (or relationship) testing; Regressions; Using Data Analysis in business decision-making

Mode/dates of delivery
July 2020: Online only
Course 2: Digital Business Strategy and Transformation

Details of the course:
For the past two decades, the pace of change in business caused by the progression of digital technology has been increasing exponentially. This technology is shifting the balance between customers and companies and between new start-ups and more established firms. Digitally based start-ups are challenging formally safe markets for companies several multiples larger than them, and customers continue to benefit from the increasing availability of information and choice. Digital tools and technology are also improving the economics of business in several ways providing strong motivation for companies to engage in digital transformation.

You will have completed by the end of this course:

• Understand the impact of digital technology on business and commerce today.
• Identify changes in customer expectations and engagement with products and businesses and formulate potential approaches to dealing with these.
• Understand how digital technology is changing the face of their industries, and should be able to identify not only the dangers and challenges they face, but also spot the opportunities that are being created.
• Critically assess how best to integrate new technologies into their old processes, whether to put an immediate focus on technology at the core of their business going forward or integrate it more peripherally into their current business practices.
• Develop an understanding of changing customer expectations around products and services are forcing companies to pursue new business models and alternative revenue streams.
• Build an insight into the key aspects of digital businesses and how to guide organizations through the essential process of integrating this into their practice.

Course includes: The core domains of digital transformation; Understanding and leveraging customer networks; Focusing on Platforms rather than products; Data as an asset; Innovating like a start-up; Adapting your Value Proposition & Mastering Disruptive Business Models.

Mode/dates of delivery
July 2020: Online Only
Details of the course:

AI is in the process of transforming business thinking and performance beyond the natural ability of humans. Information technology has moved beyond process automation towards developing human-like insights and value creation. Emphasis will be given to fundamentals and business contextualization rather than specific software tools or programming environments.

On completion of this course, you will be able to:

- Explain Artificial Intelligence (AI) and its impact on business.
- Classify and differentiate the work and impact of various subfields of AI including Machine Learning, Deep Learning and Natural Language Processing.
- Provide a practical grounding in artificial intelligence (AI) and its application in business particularly that part of computer science involved in creating computer systems that perform tasks that require human intelligence.
- Develop the ability to apply scientific methods and models of machine learning to their own business contexts.
- A basic understanding of the key principles, techniques and applications of Artificial Intelligence such as Machine Learning, Deep Learning and Natural Language Processing.
- Critically examine issues that include knowledge representation, logic, problem solving, perception and robotics.

Course outline: Introduction to Artificial Intelligence; Cognitive Science and AI; Emergent Intelligence; Neural Networks and Deep Learning; Machine Learning in Business; Natural Language Processing in Business; Robotics in Business; Artificial Intelligence in Business and Society; The Future of Artificial Intelligence.

Mode/dates of delivery
August-September 2020: Online or in person at Asoke campus

Pre-requisite: Foundation course/s need to be taken before enrolment for this course can occur
Course 4: Fintech

Details of the course:

This course aims to provide students with an understanding of the major areas of FinTech, including artificial intelligence (A.I.), Blockchain (including cryptocurrencies), Cloud Computing, and Big Data. Students will be able to not only gain a better understanding of how these technologies work, but how they are being applied in today’s financial services industry by both startups and incumbents.

On completion of this course, you will be able to:

• Evaluate the impact that key technologies have on current finance developments.
• Familiarise yourself with relevant use cases
• Identify of the critical role played by data, including elements of a sound organisational data strategy
• Appreciate FinTech-specific risks, including strategic / operational / regulatory considerations associated with the use of these solutions
• Gauge the outlook for the global FinTech industry and the implications for the future of financial services, including changes to customer behaviour the broader competitive landscape

Course outline: IT environment and enabling technologies; Data and cyber security; Artificial Intelligence; Cloud Computing; Challenger banks; Open banking, and 3rd party integrators; Peer to peer finance; Blockchain; Cryptocurrencies; Retail investing and trading; Regulations, covering the statutory and regulatory restrictions on the use of data, together with a brief overview of international finance constraints.

Mode/dates of delivery
September 2020: Online or in person at Asoke campus

Pre-requisite: Foundation course/s need to be taken before enrolment for this course can occur
Details of the course:

The world is currently in the midst of a significant transformation on several levels including social, environmental and industrial. This course aims to focus on the latter shift and takes students through underlying factors that are driving it. Specifically, this course aims to explain how the new era leverages the connectedness and communication between computers and other digital systems and resources to create Cyber Physical Systems (CPS). It will also detail how Industry 4.0 (I4) has independent exchange of information via the sensors, smart machines, storage systems and production facilities that make up the Industrial Internet of Things (IIOT).

On completion of this course, you will be able to:

- Describe the 4th Industrial Revolution and the various levels of transformation that it entails
- Articulate and appraise the socio-economic shifts driving the transformation
- Critique current business approaches to the transformation
- Construct effective and meaningful approaches to the transformation in business that show a clear understanding on the challenges being faced.
- Critically examine how autonomous analysis of data allows the development of predictive models to anticipate and take action to prevent irregularities and breakdowns, and automate a range of other complex tasks without human intervention.
- Examine how a range of technologies are transforming industry today, from Big Data and Analytics, Augmented Reality and Simulation, through to Autonomous Robots, Cybersecurity and Additive Manufacturing (3D Printing).
- Demonstrate how application of these new technologies is a significant challenge, especially companies that are currently profitable with an Industry 3.0 model and do not see an urgent need for change yet.

Course outline: Megatrends Driving the Fourth Industrial Revolution; Socio-Economic Shifts; Business Shifts; Geo-political Shifts; The Individual

Mode/dates of delivery
October-November 2020: Online or in person at Asoke campus

Pre-requisite: Foundation course/s need to be taken before enrollment for this course can occur
Course 6: Big Data Analytics

Details of the course:

Today, as more and more data is produced, collected and collated, proper understanding of what the data can tell us now requires more complex tools and integrated approaches than ever before. The exponential increase in processing power available to us means that through the processes of big data analytics we can examine large and varied data sets, also known as big data, and uncover hidden patterns, unknown correlations, market trends, and customer preferences. These techniques and tools provide a means to analyze data sets and draw conclusions or make informed business decisions.

On completion of this course, you will be able to:

- Describe and appraise the influence of big data in today's business context.
- Understand how various business problems might be solved with big data tools and methodologies.
- Apply big data methods in management decision making
- Develop big data strategies
- Examine and critique big data handling and management processes.
- Explain how datasets can provide useful business intelligence are of a volume, velocity or variety so large that they are difficult to store, manage, process, and analyze the data using traditional data processing tools.
- Develop an understanding of how this data and these techniques continues to grow and expand, with new applications being developed and discovered every day.

Course outline: Types of Big Data Analytics; Characteristics of Big Data; Domain Specific Big Data: Analytics Flow for Big Data; Big Data Patterns: analytics architecture components and design; Databases; Real Time Analysis; Data Visualization

Mode/dates of delivery
January-February 2021: Online or in person at Asoke campus

Pre-requisite: Foundation course/s need to be taken before enrolment for this course can occur
Course 7: Storytelling Using Data

Details of the course:
This course enables an advanced understanding of stories created with data as crafted across diverse contexts, from advertising to entertainment, to strategic consulting.

You will examine various case studies of creative digital stories to understand whether and how their telling is effective, and how stories and meaning are shaped in different contexts (with a key focus on data visualisation) that include social media, interactive dramas, computational fictions, mobile media, virtual reality, augmented reality, and other forms of digital media.

On completion of this course, you will be able to:
• Understand how that impulse plays out in today’s shifting technological landscape. You will create dashboards that help you identify the story within your data, and you will discover how to use Storypoints to create a powerful story to leave a lasting impression with your audience.
• You will balance the goals of your stakeholders with the needs of your end-users, and be able to structure and organize your story for maximum impact.
• You will create a compelling narrative to be delivered in a meeting, as a static report, or in an interactive display online.

Course outline:
Planning and Preproduction: Aligning your Audience, Stakeholders, and Data; Key Metrics, Indicators, and Decision Triggers; Dashboard and Storytelling with Data; Tell the Story of Your Data

Mode/dates of delivery
February 2021: Online or in person at Asoke campus

Pre-requisite: Foundation course/s need to be taken before enrolment for this course can occur
Course 8: Global Data Management

Details of the course:

Data Management is the process of ingesting, storing, organizing and maintaining the data collected and created by the organization. The course aims to explain why data management is an essential function, not only for digital organizations whose business models are purely based on leveraging data, but for any large organization that collects data on its customers and business processes. It will also develop a deep understanding of the planning and development of policies and practices that allow organizations to leverage the value of data in gaining new insights into their customers, products and services.

On completion of this course, you will be able to:

- Describe and explain the global data management process
- Discuss the lifecycle of data and explain how it interfaces with business processes
- Understand data governance and architecture and compare and contrast architectural frameworks
- Critique various metadata strategies
- Critically assess how the data management process involves the management of data throughout its lifecycle and ensuring its effective use to meet strategic organizational goals and build competitive advantage.
- Explain how these processes involve separate disciplines covering the whole cycle of data management. This may begin with the development of an organizations data architecture, which provides a blueprint for the data platforms and databases that are being used. Database administration is another core function, supported by database design, data security, and data governance.
- Detail how digital companies support the data and information needs of the business, its customers, its staff and business partners. They will understand how best to capture, store, protect and ensure integrity of the data owned by the organization.

Course outline: Essential Concepts in Data Management; Ethics in Data Handling and Management; Data Governance; Data Architecture; Business Drivers of Data Modeling and Design; Data Storage and Operations; Metadata Strategies and Architecture

Mode/dates of delivery
March-April 2021: Online or in person at Asoke campus

Pre-requisite: Foundation course/s need to be taken before enrolment for this course can occur
Course 9: Agile Thinking for Digital Transformation

Details of the course:

The word Agile has strong links to the development of a mindset for digital mindset/skills. Agility is about moving fast, but it’s also about moving nimbly and accurately. As businesses undertake the challenges of digital transformation the tendency is often to embrace speed over agility. The reasons for this are understandable. Speed means shorter timelines, fewer resources expended and potentially lower costs. But an approach that by prioritizes speed runs the risk of losing the immediate and long-term benefits that agility brings. Digital Transformation concerns the use of digital technology to solve business problems and make business processes more efficient and effective. Previous courses on this program highlights how cutting-edge technologies such as cloud computing, the Internet of Things, and AI are altering various business landscapes. However, Digital Transformation also requires a full change in mindset and reconsideration of how a business serves its customers and delivers value to them through their products. In this digital age, customers expect their organizations to respond faster than ever before, with technology like the web and social media giving them a bigger voice and more choice.

On completion of this course, you will be able to:

- Demonstrate a strong understanding of the skills and mindset required to help their individual relationship to the digital transformation process & at a corporate level also
- Design and implement effective implementation of mindset tools such as agile thinking
- Use various data collection techniques to assist agile thinking

Course outline: The relationship between mindset development and digital transformation; Loop mindset techniques (OODA); Overcoming obstacles; Data Collection Techniques to assist agile thinking; Agile thinking and design thinking; Agile and problem scenarios

Mode/dates of delivery
June-July 2021: Online or in person at Asoke campus

Pre-requisite: Foundation course/s need to be taken before enrolment for this course can occur
Course 10: Digital Marketing & Consumer Analytics

Details of the course:

This aim of this course is to offer a high-level practical guide to leveraging data techniques to improve insights about customers and users. It will also explain the relevance for professional in all industries as marketing is no longer restricted to an organization’s marketing department but diffused throughout a company.

On completion of this course, you will be able to:

- Understand and demonstrate use of the principles of consumer behaviour.
- Use dependent variable techniques to understand consumer behaviour and design effective digital marketing strategies in response to the results.
- Integrate big data analytics and AI into understanding and responding to new and developing consumer needs.
- Critically assess how any professional at a senior level in a medium to large organization is required to understand the needs of the final consumer of the services or products produced by their company.
- Examine how senior leaders need to understand who purchases their products and services, and how purchase decisions are made and more broadly, the attitudes, perceptions and lifestyles of their users.
- The aim is to build content that examines different perspectives that consumers and users should be the focal point of business strategy and product design.
- Demonstrate new ways of understanding their customers and thinking about solving marketing and other business problems.
- Investigate both inter-relational and dependency-driven analytics and modeling to solve these problems.
- Realistic business scenarios will be used to create practical understanding of the concepts within the business context.

Course outline: Principles of Consumer Behaviour and Marketing Strategy; Dependent Variable Techniques; Inter-relationship techniques; Leveraging Big Data Analytics in developing Consumer Insights.

Mode/dates of delivery
June-July 2021: Online or in person at Asoke campus

Pre-requisite: Foundation course/s need to be taken before enrolment for this course can occur
Introducing Some of The Faculty

**BENJAMIN QUINLAN:** CEO and Managing Director of Quinlan & Associates. An outstanding public speaker and corporate trainer, Benjamin has worked at PWC, UBS, Oliver Wyman and Deutsche Bank (positions included Head of Strategy for Equities Business).

**HAN FUENG:** Vice President of Corporate Strategy at Huawei (2013-to date). Prior to Huawei, he spent a decade at Samsung in a variety of leadership roles including most recently Director of Global Strategy and Head of Digital Media & Mobile Communications Practices.

**KEVIN PEREIRA:** Kevin finished has a business degree from the Wharton School at the University of Pennsylvania and also has an MBA from INSEAD. He started his career in Private Banking with Citi in New York and after completing his MBA, worked at a technology startup in Myanmar building internet infrastructure. He is currently a Managing Director for Blu Artificial Intelligence, an AI consulting firm based in Hong Kong.

**VINCENZO CARRIERI:** Vincenzo completed his EMBA from HKUST and has a long history of working in the FMCG industry. He is currently Regional Director at Canali. His work focuses on the way consumer analytics is being used to change business decision-making, especially in marketing.

**LAKEESHA K. RANSOM:** Over twenty years of experience working with educational, corporate, not-for-profit, and governmental organizations and teams. Previously, she was a senior manager for a Fortune 50 consumer retail company and cultivated initiatives in collaboration with the World Economic Forum.

**SAM HANNA:** Sam has led and worked with several Fortune 500 companies over a 30-year period at senior Executive and CEO levels at Shell, Allied Signal, Honeywell in ASEAN and China leading these organisations to achieve record results during his tenure.