GRANDE ECOLE PROGRAM: NEW MAJOR AVAILABLE IN FALL 2014

"Management of Digital Business and Information Technology"

(100% taught in English)

7 modules of 30 hours: **210 hours** (contact hours)

This course combines business, technology and management theory and practice. It provides participants with the theoretical and practical knowledge for a range of IT-related careers, such as management/information systems consulting, IT project management, chief information officers, data and analytics specialists, and many others. A combination of these areas is imperative for developing contemporary and future leaders. The business segment looks at broader issues relating to technology management which include international and national government policy on the digital economy and society. Topics include how industry and commerce is funded for R&D and development of the global IT industry. Regulation and compliance of personal data flows across international borders is an important issue. Other topics include business model development for new products and services. The management segment considers topics which relate management and information systems theory to practice. These include, knowledge management, global IT outsourcing, strategic IS planning and evaluation, IS project management and data science. Management roles including, the Chief Information Officer (CIO) are considered. The technology segment looks at the hardware and software of information and communications technology. This includes mainframe, PC and Internet, and how these technologies may pose 'disruptive' change within society. Cloud computing and mobile healthcare are two examples examined, not only in terms of technical factors, but also in relation to business and management issues.

	Course	Professor
1	Foundations in Information Systems and Technology Management	W. Currie
2	Consulting in Strategic Management of IT	W. Currie
3	Information Systems Strategy and Planning	A-C Le Du
4	Business Information Systems & Applications	A.C Le Du
5	Business Models and IT	A.C Le Du
6	Managing Business Transformation and Change	W. Currie
7	Digital Business and Big Data	W. Currie

1. **Foundations in Information Systems and Technology Management - WLC**

This introductory module explores five decades of business computing. It tracks the development of the mainframe computer in the 1960s/1970s, through to the personal computer (1980s) and to the Internet (1990s) and beyond. It considers how the role of the Chief Information Officer (CIO) has changed from technology-focused to strategic business-focused, interacting with other 'C' Level roles. This module aims to give participants an appreciation of the changing nature of business technology and how governments, industries and organizations need to respond.

2. **Information Systems Consulting - WLC**

This module tracks the development of the information systems consulting industry. It provides a practical understanding of how information systems consulting assignments are developed. It uses case studies to demonstrate the application of information systems consulting methods and tools in a range of industries, including financial services and healthcare. Participants are encouraged to develop lateral thinking techniques to enhance decision-making on complex societal, economic and technical problems.

3. **Information Systems Strategy and Planning – ACLD**

The recent move from being "technology-focused" to being more "strategic business-focused" drives organizational transformations. Participants should gain understanding of the dynamics between IS strategy, Business strategy and Organizational processes. Planning for design, development and implementation of Information Systems today, will hence require to consider the digital nature of the business. This module will address how IS Strategy and Planning has moved from being "cost-focused" (intra-organizational view) to being a "value-added-activity" (inter-organizational view). Concepts like value chain, strategic alignment and organizational transformations are being critically analyzed in order to assess the contemporary firm's capabilities and challenges.

4. **Business Information Systems & Applications – ACLD**

This module aim to provide an overview of enterprise software solutions (ERP, CRM, SRM, SCM…), and typical Enterprise Architectures (centralized Vs decentralized, Service-Oriented-Architectures, Software-As-A-Service…). Participants should gain understanding of the contextual conditions under which each solution would be appropriate, as well as the technological enterprise architecture that could enable effective and efficient adoption and use. This module is an opportunity for the participants to meet with key actors in the IS/IT business (software editors, integrators, business consultants and solution architects). The overall objective is to develop functional analytical skills, but participants will also be given some hands-on experience, as well as an introduction to both pre-sales and post-sales consultants' role and responsibilities.

5. **Business Models and IT – ACLD**

Organizations are challenged by high-velocity markets, evolving customer demand and expectations, globalized competition, and hence an on-going need for revising their Business models. This module will focus on how different business models will require different approaches of managing the global IS solution. A business model is not the strategy of the company, but should rather support the strategy. This module will introduce participants to a theoretical framework, permitting to define and develop business models. Illustrations, through the usage of case studies, will then help participants to analyze different business models that have been successful in driving and creating corporate value, stakeholders commitment, and customer satisfaction, through an efficient Management of Information Systems (MIS). Thus, the core question is rather how MIS can be leveraged in different business models in order to ensure both value creation and sustainability

6. Managing Business Transformation and Change – WLC

This course examines the theory and practice of business transformation and change. It considers current perspectives and classic ideas from academia and practice. It considers how industries, market, management practices and capabilities and skills have changed, using case studies across a range of commercial and not-for-profit sectors. It analyses the societal, market and technical conditions which lead to managing change in organizations. It considers the reasons underpinning disruptive change and how firms need to developed balanced teams of skills and expertise for program and project management.

7. Digital Business and Big Data – WLC

This course looks at the growth in digital business. It focuses on business models which transform existing companies from manual processes to digital processes. Examples are provided across a range of industry and not-for-profit sectors including financial services, manufacturing, retailing and healthcare. The emerging topic of 'big data' is examined in terms of market growth, business opportunity and practical, case study examples. Students will work individually and in teams. They will be assigned case studies and prepare team presentations for class discussion.and in teams. They will be assigned case studies and prepare team presentations for class discussion.

Syllabus – Course overview

COURSE N°1 - Foundations in Information Systems and Technology Management [FIST]					
Wendy CURRIE		**Foundations in Information Systems and Technology Management**			
Learning goals		ANALYSE / DECIDE / ACT / INFLUENCE			
Learning objectives		Define the four 'Eras' of Business computing Analyse how IT change has created new challenges for managers Analyse the role of the CIO from a technology to a strategic position Understand the composition of the IT organization Evaluate opportunities and threats from emerging technologies Influence IT stakeholders Lead strategic IT change			
Aim of the course		This introductory module explores five decades of business computing. It tracks the development of the mainframe computer in the 1960s/1970s, through to the personal computer (1980s) and to the Internet (1990s) and beyond. It considers how the role of the Chief Information Officer (CIO) has changed from technology-focused to strategic business-focused, interacting with other 'C' Level roles. This module aims to give participants an appreciation of the changing nature of business technology and how governments, industries and organizations need to respond.			
Tackled concepts		Mainframe Computing Mini Computing Personal Computers The Internet 'C' Level Roles and Responsibilities		Strategic Planning and IT Global ICT Outsourcing IT Evaluation and Audit Large Scale ICT Programs and Projects Societal Impact of ICT	
Learning methods		Lectures, case studies, videos, teamworking, exercises and assignments			
Assignments		Students will work individually and in teams. They will be assigned case studies and prepare team presentations for class discussion. The rationale for this course is that students gain a deep appreciation of how five decades of business computing has posed continious challenges on the IT organization, where the role of the CIO (previously IT director or manager) has moved from a technical position to a strategic role, where executive and managerial skills are combined with business acumen. In addition, the emerging global IT outsourcing market has meant that IT contracts are more complex, where the CIO needs to engage with more IT stakeholders. Students will be given a range of case studies where they will develop analytical skills for understanding complex business and IT issues. Students are expected not simply to describe the material in the case studies, but to analyse and present recommendations to the class. All students are expected to participate in these sessions.			
Evaluation		Continuous Assessment	60%		
		Final Exam	40%		
Bibliography		Case studies and other materials will be distributed at class.			
Number of ECTS credits		4			
Schedule		10 sessions of 3 hours. Last session: team presentation			
N°	Type				
1	Course	Four Eras of Business Computing			
2		Models and Frameworks for understanding large scale ICT Change			
3		Government Policy and ICT			
4		The IT Organization			
5		Strategic Planning and IS			
6		IT Evaluation and Audit			
7		Global IT Outsourcing I			
8		Global IT Outsourcing II			
9		Electronic Commerce and the Internet			

COURSE N°2– Business Information Systems & Applications [BISA]					
Anne-Christine Le Dû		**Business Information Systems & Applications**			
Learning goals					
Learning objectives					
Course description		This module aim to provide an overview of enterprise software solutions (ERP, CRM, SRM, SCM…), and typical Enterprise Architectures (centralized Vs decentralized, Service-Oriented-Architectures, Software-As-A-Service…). Participants should gain understanding of the contextual conditions under which each solution would be appropriate, as well as the technological enterprise architecture that could enable effective and efficient adoption and use. This module is an opportunity for the participants to meet with key actors in the IS/IT business (software editors, integrators, business consultants and solution architects). The overall objective is to develop functional analytical skills, but participants will also be given some hands-on experience, as well as an introduction to both pre-sales and post-sales consultants' role and responsibilities.			
Tackled concepts		Business Information Systems Enterprise Architectures Vertical solutions (industry templates)		ERP/MRP/SCM/CRM/SRM Modelization and configuration Proof-of-concept (IS prototype)	
Learning methods		Lectures, professional return on experience (ROX) and hands-on exercises (lab sessions).			
Assignments		Participants will work in a project team, simulating the "proof-of-concept" phase of an ERP solution. Teams are required to present their work and run a demonstration of their prototype at the last session.			
Evaluation		Continuous Assessment	60%		
		Final Exam	40%		
Bibliography		TBD			
Number of ECTS credits		4			
Schedule		10 sessions of 3 hours			
N°	Type				
1	Course	Introduction: Global footprint - Business Information Systems overview			
2	Course/ROX	Enterprise architectures and vertical solutions – Testimony: Pre-Sales SCM Consultant			
3	ROX	Testimony: ERP Project Manager (Middle market vertical solution)			
4	ROX	Testimony: ERP/APS Project Manager (Global multinational solution)			
5	IT-lab	ERP hands-on 1/4 – introduction to modeling			
6	IT-lab	ERP/MRP hands-on 2/4 – configuration basics			
7	IT-lab	ERP/CRM hands-on 3/4 – configuration advanced			
8	IT-lab	ERP/CRM hands-on 4/4- adjust, test and go-live			
9	ROX	Testimony: Post-Sales Consultant (Responsibilities, challenges, project experiences…)			
10	Course	Team presentations-subject TBD (critically analyse key takeaways…)			

COURSE N°3 - Consulting in Strategic Management of IT [CISM]					
Wendy CURRIE		**Consulting in Strategic Management of IT**			
Learning goals		ANALYSE / DECIDE / ACT / INFLUENCE			
Learning objectives		Identify and define consulting 'problem' Decide appropriate methods and tools used for analysis Organise and divide team roles and responsibilities Implement academic and professional knowledge Influence stakeholders Recommend consulting solutions to the client			
Course description		This course examines the theoretical and practical issues within the IT and management consulting industry. It demonstrates how the fast-moving world of information and communications technology (ICT) creates ongoing challenges for 'C' Level management (e.g. Chief Information Officers). It considers the relationship between business models and IT in achieving corporate objectives, and the role of the IT consultant in this process.			
Tackled concepts		'C' Level interaction across business functions and with external suppliers Senior Relationship Management Cloud Computing Mobile Health Financial Services Regulation		Electronic Health Governance, Risk and Compliance Best practice IT Evaluation IT Audit	
Learning methods		Lectures, case studies, interactive games and exercises			
Assignments		Students will work individually and in teams. They will be assigned case studies and prepare team presentations for class discussion. Students are expected to present their recommendations in a simulated management and IT consultancy environment, where presentation skills are equally important as the content of the presentation. Students are expected not simply to describe the material in the case studies, but to analyse and present recommendations to the class. All students are expected to participate in these sessions.			
Evaluation		Continuous Assessment	60%		
		Final Exam	40%		
Bibliography		Cases Studies will distributed either before or at each session.			
Number of ECTS credits		4			
Schedule		10 sessions of 3 hours			
N°	Type				
1	Course	The International Information Systems Consulting Industry			
2	Course	Changing Business Models in Information Technology and Consulting			
3	Online	Types of Consulting Projects : Request for Proposals			
4	Online	Developing a Consulting Project			
5	Course	New Emerging Technologies : Cloud Computing			
6	Course	The Global IT Outsourcing Market			
7	Online	Developing Consulting Talent			
8	Course	Consulting in the Commercial Sector: Financial Services			
9	Course	Consulting in the Not-for-Profit Sector: Public Health			
10	Course	Team Presentations			

COURSE N°4 – Information Systems Strategy and Planning [ISSP]					
Anne-Christine Le Dû		**Information Systems Strategy and Planning**			
Learning goals					
Learning objectives		Define IS/IT strategy Analyze competitive advantages of IS/IT Identify organizational and technological capabilities Define and propose strategic choices Decide and plan for Strategic Information Systems (SIS)			
Course description		The recent move from being "technology-focused" to a "strategic business-focus" drives organizational transformations. Participants should gain understanding of the dynamics between IS strategy, Business strategy and Organizational processes. Planning for design, development and implementation of Information Systems today, will hence require to consider the digital nature of the business. This module will address how IS Strategy and Planning has moved from being "cost-focused" (intra-organizational view) to being a "value-added-activity" (inter-organizational view). Concepts like value chain, strategic alignment and organizational transformations are being critically analyzed in order to assess the contemporary firm's capabilities and challenges.			
Tackled concepts		IS/IT strategy IS/IT and Business Strategy Strategic IS/IT planning Organizational and Technological capabilities		Exploitation Vs Exploration strategies Institutionalization of IS/IT Organizational transformation (OT) Strategic Information Systems Planning Methodology	
Learning methods		Blended learning approach. In-class sessions will mix lecture, and case study teamwork. On-line sessions will require participants to work individually, analyze content and build problem-solving skills.			
Assignments		Each on-line session is an opportunity to learn more, to discuss specific themes and questions, as well as propose a solution framework for a given context. Participants contributions are being evaluated.			
Evaluation		Continuous Assessment	60%		
		Final Exam	40%		
Bibliography		TBD			
Number of ECTS credits		4			
Schedule		10 sessions of 3 hours			
N°	Type				
1	Course	Introduction: What is IS/IT strategy ?			
2	On-line	Industry impact of IS/IT strategy			
3	Course	Strategic alignment models: benefits and limits			
4	On-line	Exploitation vs exploration strategies			
5	Course	Design and develop a Strategic Information System (SIS)			
6	On-line	Assess organizational and technological capabilities			
7	Course	Paradoxal effects of business routines and strategic awareness			
8	On-line	Organizational transformation			
9	Course	Strategic Information Systems Planning Methodologies			
10	Course	Conclusion: A roadmap for assessing and developing a SIS			

COURSE N°5 – Business models and IT [BMIT]					
Anne-Christine Le Dû		**Business models and IT**			
Learning goals					
Learning objectives		Define a business model Analyze value propositions/ value chains Design transactional distribution channels (information flows) Evaluate high-velocity business models in web 2.0 environment			
Course description		Organizations are challenged by high-velocity markets, evolving customer demand and expectations, globalized competition, and hence an on-going need for revising their Business models. This module will focus on how different business models will require different approaches of managing the global IS solution. A business model is not the strategy of the company, but should rather support the strategy. This module will introduce participants to a theoretical framework, permitting to define and develop business models. Illustrations, through the usage of case studies and professional return on experience, will then help participants to analyze different business models that have been successful in driving and creating corporate value, stakeholders commitment, and customer satisfaction, through an efficient Management of Information Systems (MIS). Thus, the core question is rather how MIS can be leveraged in different business models in order to ensure both value creation and sustainability.			
Tackled concepts		Business models Strategic choices Value creation		Value Chain/network Processes/activites Information flows	
Learning methods		Lectures, case studies, professional return on experiences (ROX)			
Assignments		Participants will work in teams on different case studies (session 1, 2, 4, 5, 7). Each session will conlude with a team presentation that will be assessed.			
Evaluation		Continuous Assessment	60%		
		Final Exam	40%		
Bibliography		TBD			
Number of ECTS credits		4			
Schedule		10 sessions of 3 hours			
N°	Type				
1	Course	Introduction: Defining a business model			
2	Course	Business models and IT/IS alignment			
3	ROX	Business models and value creation: ROX (TBD)			
4	Course	Business models and web 2.0			
5	Course	Business-to-Business models: virtual supply chains			
6	ROX	Business-to-Business models: ROX B2B (TBD)			
7	Course	Business-to-Consumer models : transactional distribution channels			
8	ROX	Business-to-Consumer models: ROX B2C (TBD)			
9	ROX	Business models evaluation: ROX Digital strategy and CRM (TBD)			
10	Course	Conclusion: A roadmap for IT/IS as a sustainable competitive advantage			

COURSE N° 6 - Managing Business Transformation and Change [MBTC]					
Wendy CURRIE					
Learning goals		ANALYSE / DECIDE / ACT / INFLUENCE			
Learning objectives		Use appropriate tools in decisions making Assess risks and implication of decisions Define and propose strategic choices Implement academic and professional knowledge Influence stakeholders Bring change and innovation within the company			
Aim of the course		This course examines the theory and practice of business transformation and change. It considers current perspectives and classic ideas from academia and practice. It considers how industries, market, management practices and capabilities and skills have changed, using case studies across a range of commercial and not-for-profit sectors. It analyses the societal, market and technical conditions which lead to managing change in organizations. It considers the reasons underpinning disruptive change and how firms need to developed balanced teams of skills and expertise for program and project management.			
Tackled concepts		Tactical and strategic change Culture change Decision making Diagnosing change Dialectical Models Enquiry action framework		Evolutionary change Incremental change Metaphorical analysis Stakeholder analysis Stakeholder mapping Structural change	
Learning methods		Lectures, case studies, videos, teamworking, exercises and assignments			
Assignments		Students will work individually and in teams. They will be assigned case studies and prepare team presentations for class discussion. Students are expected to present their recommendations in a simulated management and IT consultancy environment, where presentation skills are equally important as the content of the presentation. Students are expected not simply to describe the material in the case studies, but to analyse and present recommendations to the class. All students are expected to participate in these sessions.			
Evaluation		Continuous Assessment	60%		
		Final Exam	40%		
Bibliography		Nic Beech and Robert Macintosh (2012) Managng Change: Enquiry and Action, Cambridge University Press. Case studies and other materials will be distributed at class.			
Number of ECTS credits		4			
Schedule		10 sessions of 3 hours			
N°	Type				
1	Course	Introduction to Managing Change			
2	Course	Theories, Concepts and Ideas			
3	Online	Disruptive Change			
4	Course	Strategic Leadership and Management			
5	Online	Change Management Programs and Projects			
6	Course	Stakeholder Analysis			
7	Course	Managing Teams			
8	Course	Resistance to Change			
9	Online	Evaluating the Effectiveness of Change Programs			
10	Course	Team Presentations			

COURSE N°7 - Digital Business and Big Data [DBBD]					
Wendy CURRIE		**Digital Business and Big Data**			
Learning goals		ANALYSE / DECIDE / ACT / INFLUENCE			
Learning objectives		Identify and define terminology of digital business and big data Assess the market growth and business opportunity Analyse case study material, including academic and practitioner reports Identify and evaluate the impact of digital business Analyse benefits and barriers of 'big data' to society, organizations and individuals			
Aim of course		This course looks at the growth in digital business. It focuses on business models which transform existing companies from manual processes to digital processes. Examples are provided across a range of industry and not-for-profit sectors including financial services, manufacturing, retailing and healthcare. The emerging topic of 'big data' is examined in terms of market growth, business opportunity and practical, case study examples. Students will work individually and in teams. They will be assigned case studies and prepare team presentations for class discussion.			
Tackled concepts		Digital business Technological determinism Business transformation Innovation and change		Big data Data analytics Next generation technologies Business sustainability	
Learning methods		Lectures, case studies, videos, teamworking, exercises and assignments			
Assignments		Students will work individually and in teams. They will be assigned case studies and prepare team presentations for class discussion. Students are expected to present their recommendations on various aspects of developing digital business and using big data. As with all new concepts and ideas, there are no simple answers or solutions to how organizations can exploit digital business and big data. Students therefore need to think creatively and imaginatively which extends beyond simply describing the material in the case studies, but also to providing detailed analysis. All students are expected to participate in these sessions.			
Evaluation		Continuous Assessment	60%		
		Final Exam	40%		
Bibliography		Cases Studies will distributed either before or at each session.			
Number of ECTS credits		4			
Schedule		10 sessions of 3 hours			
N°	Type				
1	Course	Introduction to Digital Business			
2	Course	Tech Trends (Cloud, Mobile, Social Media, Data Analytics and Cyber-Security)			
3	Course	Digital Business Transformation			
4	Online	Digital Business and IT Strategy			
5	Course	Business Process Transformation			
6	Online	Technology Innovation			
7	Course	Big Data I : Market Growth			
8	Online	Big Data II : Business Opportunity			
9	Online	Big Data III : Case Study Examples			
10	Course	Team Presentations			