Course Code MCOM-581	**Course Title** Emerging Technologies	**Credits /ECTS** 10
Department Management & MIS	**Semester** Fall/Spring	**Prerequisites** None
Type of Course Elective	**Field** MIS/Communication	**Language of Instruction** English
Level of Course 2nd Cycle	**Year of Study** 1-2	**Lecturer** Dr. Soulla Louca
Mode of Delivery Integrated (Face-to-face & technology enhanced learning)	**Work Placement** N/A	**Office** EU 109
Course Days/Times TBA	**Course Venue** TBA	**Student Consultation Hours** TBA
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Objectives of the Course:

The digital revolution is driving innovation and scientific progress, and interrelationships between science, technology, business environment and society are becoming increasingly complex. Effective corporate E-Business strategies demand on an in-depth understanding of the various technology solutions that enable electronic business. This course is designed to provide students with an understanding of the theoretical issues related to the application of technologies in every aspect of the business environment through the provision of a panorama review of the current and emerging technologies involved in a contemporary enterprise such as Web 2.0/3.0 and Social Media, Service Oriented Architecture, Cloud and Grid Computing, pervasive computing, mobile computing and RFID. We will examine how these new technologies impact industry, corporate strategy, and competitive dynamics, and create organizational efficiencies. In particular it will look at the issues of the social needs for security in a cloud environment, as well as the benefits of cloud as a provider of network facilities and the metamorphosis of fixed to variable costs for business. They will be exposed to the concept of value creation and business innovation through the new technologies.

Learning Outcomes:

Upon completion of this course students are expected to be able to:

1. Appreciate the fundamentals of technological innovation.
2. Be aware the major emerging technologies such as cloud computing, grid computing, cognitive radio and RFID.
3. Realize how emerging technological trends in E-business impact industry, corporate strategy, and competitive dynamics, i.e. the economics of the emerging technologies
4. Understand how to evaluate current tools and resources available, and how to capitalize on these emerging technologies/capabilities to create business efficiencies.
5. Understand security and privacy issues associated with E-business and the related technologies
6. Be aware of the role of green technologies in the businesses and the society as a whole.
7. Learn to integrate key concepts of green technologies and green enterprises with the future internet concepts and the societal/environmental challenges.

Course Contents:

1. ***Moore's Law and the Law of Accelerating returns.*** *Introduction to Kurzweil's essay (2001) The Law of Accelerating Returns which extends Moore's law to describe an exponential growth of technological progress.*
2. ***Web 2.0/3.0 and Social Media****. Web 2.0 applications, power of crowds, web 2.0 in the business.*
3. ***Cloud Computing and Grid computing.*** *Cloud Computing Evolution, Business scenarios, Cloud and grid deployment models, Cloud Service Models, Cloud computing vendors, Security in the and grid, Legal issues of cloud computing and grid computing.*
4. ***Future Internet (Internet of Things, Ubiquitous and Pervasive computing).*** *The emerging global internet-based architecture for facilitating the exchange of goods and services and its impact on various areas of our lives will be studied*
5. ***Other emerging technologies -*** *e-Infrastructures, ICT for Networked Enterprise and RFID, Security and Identity Management, will be studied along with their impact on today's businesses.*
6. ***Emerging technologies addressing societal challenges.*** *How the new technologies help the businesses become ecologically friendly. Topics such Sustainable Environment and green technologies will be considered.*
7. ***Green Technologies and Green Enterprises.*** *We will explore the theoretical foundations of value creation in e-business through green technologies. Various green standards and green regulations, green strategies, policies and procedures will be examined as well as the benefits of, and barriers to, adopting greener IT practices.*

Learning Activities and Teaching Methods:

- Faculty Lectures and Guest-Lectures Seminars
- Directed and Background Reading
- Case Study Analysis and Discussion
- In-class Exercises
- Student-led Presentations

Assessment Methods:

Final Examination (1)	40%
Mid-Term (1)	30%
Assignments/Homework/Project	30%

Required and Recommended Textbooks/Reading:

Author	Title	Publisher	Year	ISBN
Vince Casarez, Billy Cripe, Jean Sini, Philipp Weckerle	Reshaping Your Business with Web 2.0: Using New Social Technologies to Lead Business Transformation	McGraw Hill	2009	978-0-07-160078-1
Shelly Cashman, Mark Frydenberg	Web 2.0: Concepts and Applications	Cengage Learning Inc.	2011	13-978-1-4390-4802-3
Krishna Sankar , Susan A. Bouchard	Enterprise Web 2.0 Fundamentals	Cisco Press	2009	13-978-1-58705-763-2
Katarina Stanoevska-Slabeva, Thomas Wozniak, Santi Ristol	Grid and Cloud Computing: A Business Perspective on Technology and Applications	Springer Verlag	2010	978-3-642-05192-0
David Sterling	Dancing On A Cloud: A Framework for Increasing Business Agility	Xilibris Corporation	2011	978-1-4653-9366-1
Ramjee	Future Trends and Challenges for ICT	River Publishers	2010	ISBN-13: 9788792329387 |

Prasad	Standardization			ISBN-10: 8792329381
Michael H. Hugos, Derek Hulitzky	Business in the Cloud: What Every Business Needs to Know About ...	John Wiley & Sons	- 2010 -	0470616237
David S. Linthicum - Addison	Cloud computing and SOA convergence in your enterprise: a step-by- ...	Wesley	2009.11.28	0136009220