Information Technology (IT) at Work

1. **Course number and name:** 020ATIES5 Information Technology (IT) at Work

2. **Credits and contact hours:** 4 ECTS credits, 2x1:15 contact hours

3. **Name(s) of instructor(s) or course coordinator(s):** Joe Sokhn

4. **Instructional materials:** Course handouts, Powerpoint slides

5. **Specific course information**
    a. **Catalog description:**
        This course introduces and explains the foundations of IT going through the main building block that are common and vital for any organization to work. The target of this course if to focus on the practical aspect of IT in a company whether it has its own IT system, on the cloud or hybrid. The scope covers Datacenter, Servers, Storage, Network & Security, Information Systems design and Build, Information Systems Operations, Application Landscape, Integration Layer, Procurement & Budget and building an internal Cloud. It includes an overview, best practices and pitfall and a series of practical use cases that illustrate real life scenarios

    b. **Prerequisites:** None

    c. **Selected Elective** for CCE students

6. **Educational objectives for the course**
    a. **Specific outcomes of instruction:**
        –   Understand data center design principles, capacity management and monitoring.
        –   Design a data center that scale for current need and IT forecasted demand
        –   Understand servers physical and virtual design principles, capacity management and monitoring.
        –   Perform the capacity management of hardware and virtual servers based on current IT budget and technical constraints.
        –   Understand storage types and design principle, capacity management and monitoring.
        –   Perform the capacity management of storage (SAN) based on current IT budget and technical constraints.
        –   Understand the network design patterns and key factors for quality of service.
        –   Perform a network design taking into consideration the quality of service and the high latency and unreliable internet connection.
        –   Understand basic principle of product management and business analyst and key criteria's to build solutions.

- Analyze and propose solutions for a business problem for short and long term roadmap - Understand the key principle of operating and continuously improving an IT system.
- Understand the application landscape of key information system for a software company and their corresponding roles.
- Implement a solution based on several corresponding application for the business to execute their process.
- Understand the key principal of an integration platform and its important role in the application landscape.
- Understand the key principles of procurement and budgeting, that includes vendor management and contract management - Understand the value and constraints of building a hybrid cloud and the importance of monitoring cost.

b. **PI addressed by the course:**

PI	1.2	1.3	6.3	6.4
Covered	X	X	X	X
Assessed	X	X	X	X

7. **Brief list of topics to be covered**
   - Datacenter
   - Servers
   - Storage
   - Network and Security
   - Information System Design and Build.
   - Information System Operations
   - Application Landscape
   - Integration Layer
   - Procurement and Budget
   - Building an internal cloud