



Consolidated Contractors Company

## Case Study:

# How CCC Customized the Moodle Platform to Suit its Global Needs



Konstantinos Tsekos  
Information Security, [kotsekos@ccc.net](mailto:kotsekos@ccc.net)

# Introduction

CCC is one of the first Arab construction companies and is the largest construction company in the Middle East.

CCC has offices and projects in over 40 countries and a workforce of more than 130,000 employees, with a portfolio that includes:

Oil and Gas Plants, Refineries, Petrochemical Facilities, Pipelines, Light Industries, Heavy civil works, Airports, Stadiums, Road Networks and Skyscrapers, etc.



Consolidated Contractors Company

CCC Online Training

Available courses ▾

CCC IT Induction ▾

CCC Quality ▾

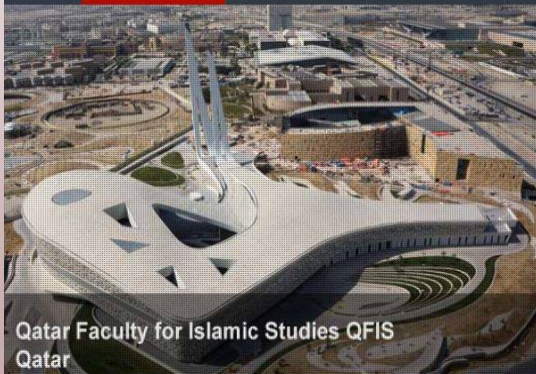
ISMS ▾

RASO ▾

HSE ▾

My Courses

Search courses



# Introduction (2)

## The LMS Solution

- Accessibility to all employees (Locally and Remotely)
- Centralized-Organized eLearning content (Easier to administer)
- The market is not static
- Law is not static (Keep organization up-to-date with compliance regulations)
- Take advantage of the latest technology
- Enhance the operational efficiency
- Quick and convenient expansion of eLearning content
- Ongoing Training

# CCC Information Security

## IT Induction

### (Introduction for New Employees)

- Policies, Procedures, Work Instructions
- Information Security Awareness
  - Brochures, Self Assessment Quizzes

**ISO27001:** It is a systematic approach to manage sensitive company information so that it remains secure. It includes people, processes, and IT systems by applying a risk management system.

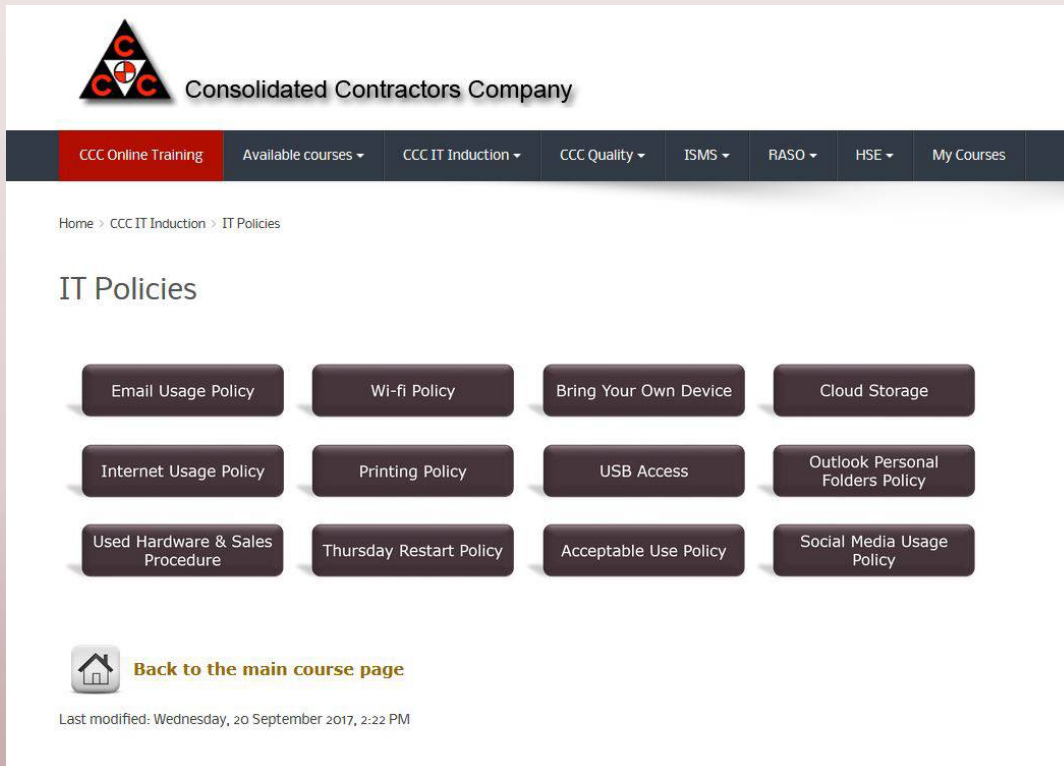
The screenshot shows the CCC IT Induction web application. At the top is the CCC logo and the text "Consolidated Contractors Company". Below this is a navigation bar with links for "CCC Online Training", "Available courses", "CCC IT Induction", "CCC Quality", "ISMS", "RASO", "HSE", and "My Courses". The main content area is titled "CCC IT Induction" and features a large word cloud with terms like "COMPLIANCE", "SECURITY", "POLICY", "PROCEDURES", "AUDIT", "RISK", and "MANAGEMENT". Below the word cloud, there is a description: "The CCC IT Induction is a reference guide of the available CCC IT Policies, IT Procedures, IT Security, IT Services, IT Tutorials and Non-IT Services & Initiatives". At the bottom, there are six buttons arranged in a 2x3 grid: "IT Policies", "IT Services", "IT Security", "IT Tutorials", "IT Procedures", and "Non-IT Services & Initiatives".



# Information Security

## IT Induction Repository

### Information Security Archive



The screenshot displays the CCC Online Training portal. At the top left is the CCC logo, a triangle with 'C' and 'C' in red and white, and 'C' in black. To its right is the text "Consolidated Contractors Company". Below the logo is a navigation bar with a red "CCC Online Training" button and several dropdown menus: "Available courses", "CCC IT Induction", "CCC Quality", "ISMS", "RASO", "HSE", and "My Courses". The breadcrumb trail reads "Home > CCC IT Induction > IT Policies". The main heading is "IT Policies". Below this, there is a grid of 12 dark blue buttons with white text, arranged in three rows and four columns. The buttons are: "Email Usage Policy", "Wi-fi Policy", "Bring Your Own Device", "Cloud Storage", "Internet Usage Policy", "Printing Policy", "USB Access", "Outlook Personal Folders Policy", "Used Hardware & Sales Procedure", "Thursday Restart Policy", "Acceptable Use Policy", and "Social Media Usage Policy". At the bottom left, there is a home icon and the text "Back to the main course page". At the bottom center, it says "Last modified: Wednesday, 20 September 2017, 2:22 PM".


Consolidated Contractors Company

CCC Online Training Available courses CCC IT Induction CCC Quality ISMS RASO HSE My Courses

Home > CCC IT Induction > IT Policies

### IT Policies

- Email Usage Policy
- Wi-fi Policy
- Bring Your Own Device
- Cloud Storage
- Internet Usage Policy
- Printing Policy
- USB Access
- Outlook Personal Folders Policy
- Used Hardware & Sales Procedure
- Thursday Restart Policy
- Acceptable Use Policy
- Social Media Usage Policy

 [Back to the main course page](#)

Last modified: Wednesday, 20 September 2017, 2:22 PM

# Goals (Information Security)

## IT Induction Repository

### Information Security Archive

- Information Security Awareness Brochures (Information Security Threats)
- Self-Assessment, Quizzes
- Maintain records

Consolidated Contractors Company

CCC Online Training Available courses CCC IT Induction CCC Quality ISMS RASO HSE My Courses

Home > CCC IT Induction > Information Security Archive

### Information Security Archive

- 2017 Info-Security Awareness
- 2017 Info-Security Assessment **QUIZ**
- 2016 Info-Security Awareness
- 2015 Info-Security Awareness
- 2014 Info-Security Awareness
- 2013 Info-Security Awareness

# CCC QA/QC

## Quality Assurance/Quality Control (QA/QC)

**Training for CCC Project Employees:** Engineers, Supervisors, and Inspectors, etc. When they join a Project for a first time.

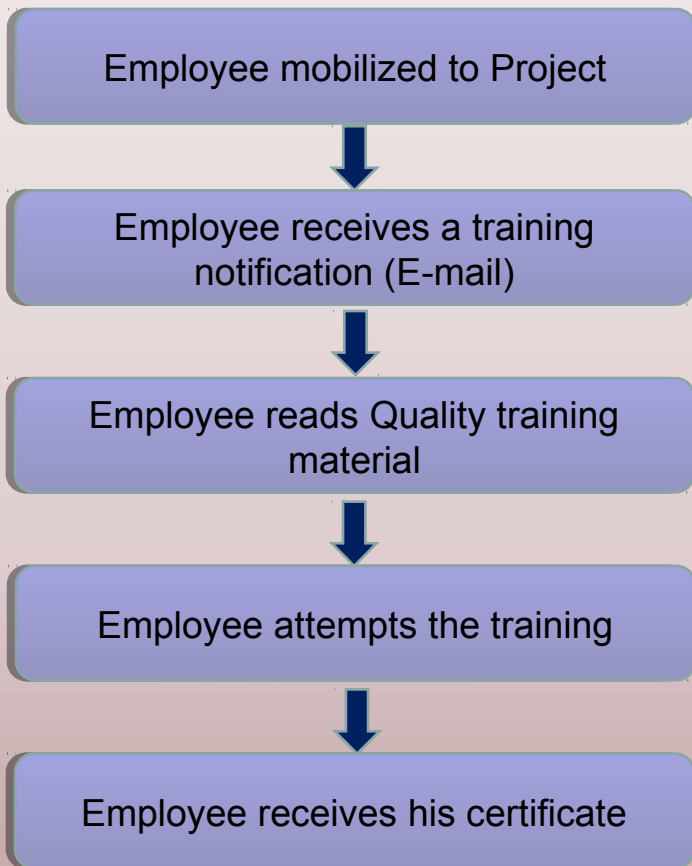
It is designed to provide the Project Employees with the essential awareness about the CCC Project Quality System

### Benefits

- Reduced Training Cost
- Efficient and Effective Training
- Immediate Results and Feedback
- Better Retention

# QA/QC Induction Training

## Training Process



The screenshot shows the Consolidated Contractors Company (CCC) training portal. The header includes the CCC logo and the company name. The navigation menu lists: CCC Online Training, Available courses, CCC IT Induction, CCC Quality, ISMS, RASO, HSE, and My Courses. The breadcrumb trail is: Home > Quality Management System Introductory > Induction Training Material. The main content area is titled "Induction Training Material" and displays a slide titled "5. QA Vs QC".

**5. QA Vs QC**

**Quality Assurance (QA)**

- ✓ Activities are focused on the processes used to create the deliverables
- ✓ Quality Assurance makes sure you are doing the right things, the right way
- ✓ Assurance of Quality (QA) is a **proactive or preventive process** to avoid defects

**Quality Control (QC)**

- ✓ Activities are focused on the deliverable (product) itself
- ✓ Quality Control makes sure the results of what you've done are what you expected
- ✓ Quality Control (QC) is a **corrective process** to identify the defects in order to correct them



# Setup - Implementation

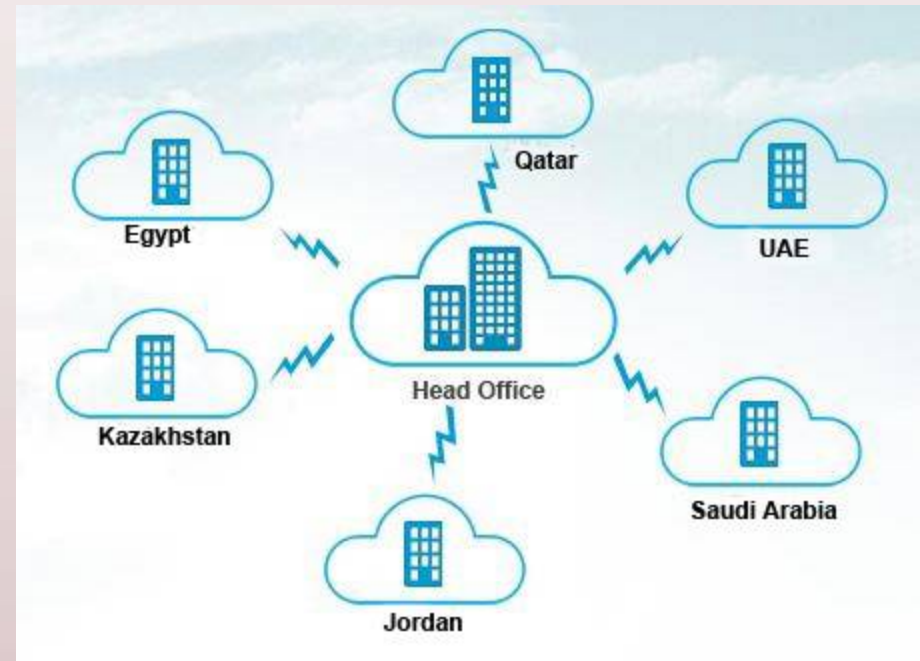
- Microsoft Windows 2012 server
- IIS 8/ Webserver
- Moodle server (Plugins)
  - Training material, Quiz, Questionnaire, Certificate
- Connectivity through Virtual Private Networks (VPNs)



# Setup - Implementation

## Connectivity

Through Virtual Private Networks (VPNs) to more than 40 countries.



**Site-to-site** VPN allows offices in multiple fixed locations to establish secure connections with each other.

# Plugin Customization

## MOODLE AUTHENTICATION PLUGINS

### Multi-Forest Environment (Multiple Domains)

**LDAP (Authentication plugin)**

**LDAP (Authentication plugin using single-sign-on NTLM SSO)**

**NTLM** authentication depends on LDAP authentication

**NTLM (Single-Sign-On):** NTLM SSO uses sAMAccountName  
(the pre-Windows 2000 logon account name)

**LDAP plugin Code development ( Authenticate using the UPN)**

# Plugin Customisation

## **LDAP (Authentication plugin using single-sign-on NTLM SSO)**

### **Benefits**

- Enhances the user experience
- Boosts productivity
- Improves compliance and security capabilities

# Future plans

## **Moodle Gamification**

- Interactive Memory Games
- Experience Points





Consolidated Contractors Company

**Thank You**