



# Indian Institute of Management Indore

## *Executive Post Graduate Program in E-GOVERNANCE*

2013-14

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**Title of the Course: Cloud Computing**

**Credits: 3**

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### **COURSE DESCRIPTION**

Cloud computing is a business-technology paradigm that is gathering increased momentum in the market place with private sector adopting it predominantly as a means to variabilize their IT costs and reduce their operating expenses. While the concepts pertaining to cloud trace back around 3 decades, in recent times it has gained ground as a dedicated theme. Historically, Public sector has not been an early adopter of technology for a variety of reasons and so is the case with cloud computing. Governments in USA, UK, Australia and European countries have begun adopting cloud computing concepts in the past couple of years, albeit in a gradual manner. In light of the advantages it offers, it is time the Indian Public sector also began actively considering the adoption of the cloud.

### **COURSE OBJECTIVES**

The course lays out the foundations of cloud computing and makes participants aware of key concepts. The key objectives are:

- Help participants understand basic concepts on cloud computing and appreciate the need for it in Public Sector
- Enable participants to gain knowledge on approach and methodology to adopt cloud computing
- Create awareness on risks and mitigation plans and understand how to put a robust governance model to manage cloud

### **PEDAGOGY**

This course will lay strong emphasis on class participation and learning from cases. This is a 15 session course divided into one portion of 9 sessions followed another of 6 sessions. There is a group assignment between the two portions.

The students will be asked to segregate themselves into groups at the outset, each with 5-6 members. The class of 27 students will thus be segregated into 5 groups. Each of the 5 groups will be required to work on a case study given to them and make a 15 minute presentation followed by 10 minutes questions and answers. The template for slides will be given by the faculty. This exercise will help reinforce concepts that have been facilitated in the first section of the course.

## **EVALUATION**

The evaluation pattern for the course lays emphasis on both individual and group participation. The course evaluation will be for 100 marks with the following breakup.

<b>Evaluate Model:</b>	<b>Weightage</b>
Quizzes (2) :	50% (25% x 2)
Group assignment (1) :	25%
Class participation :	25%

## **SCHEDULE OF SESSIONS:**

### **Module 1: Basic concepts**

**Module Objective(s):** In this module, participants will get conceptual clarity on cloud computing and clearly understand the breadth and depth of key aspects of cloud computing

#### **Sessions 1: Introduction, Course overview & Basic concepts - 1**

- Introduction to cloud computing
- Common myths and Key definitions

Reading Lecture notes of instructor

#### **Sessions 2: Basic concepts - 2**

- History of “cloud”
- Need for cloud computing
- Characteristics of a “cloud”

Reading Lecture notes of instructor

#### **Sessions 3: Basic concepts - 3**

- Types of cloud deployment models and cloud services
- Statistics pertaining to cloud (CAGR by service, deployment model, etc)
- Key Advantages, disadvantages and challenges of cloud

Reading Lecture notes of instructor

### **Module 2: First steps to cloud adoption**

**Module Objective(s):** In this module, participants will learn about topics that are relevant to take the first steps to adopting cloud

#### **Sessions 4: Cloud Architecture & Governance**

- Overview of architecture for cloud services
- Mapping it back to typical e-Gov project / scenario

Reading Lecture notes of instructor

#### **Sessions 5: Security in the Cloud**

- Key security risks in cloud
- Mitigation plans
- Linkages to Service Agreements in brief

Reading          Lecture notes of instructor

**Sessions 6: Lead players and their offerings**

- Key players in the market offering cloud services
- Tools & technologies for the cloud

Reading          Lecture notes of instructor

**Module 3: Understanding the nuances of cloud adoption**

**Module Objective(s):** In this module, participants will get an appreciation for decision parameters to enable cloud adoption. They shall gain insights from case studies and apply the same through group assignment.

**Sessions 7 & 8: How to decide if cloud is for me?**

- Key decision making parameters and relative importance of each of them (weightage)
- Building an evaluation matrix along with the participants
- Select case studies in cloud computing

Reading          Lecture notes of instructor

Case studies: Federal Cloud Computing strategy US CIO, pp.19-23

**Session 9: Assessment #1 for 25% and sharing of Group assignments and expectations**

**Sessions 10 & 11: Group assignment (25% weightage) presentations (30 minutes per team including Q&A)**

**Module 4: Adopting cloud – Approach & methodology**

**Module Objective(s):** The last module helps in defining a roadmap for adopting cloud in Government with specific emphasis on India's Government cloud.

**Session 12: How to go about adopting cloud?**

- Steps in adopting cloud computing covering the people, process technology aspects

Reading          Lecture notes of instructor

**Session 13: Legal aspects & Pricing models for cloud services**

Reading          Lecture notes of instructor

**Session 14: India's Government-Cloud** – An introduction to the implementation model and the cloud eco-system

Reading          Lecture notes of instructor

**Session 15: Assessment #2 for 25% and course closure**

**Text Books**

Participants may refer any of the following books if it is available to them in the library.

1. Cloud Computing Bible by Barrie Sosinsky

2. Cloud Computing Explained: Implementation Handbook for Enterprises by John Rhoton
3. Cloud Computing For Dummies by Judith Hurwitz and Robin Bloor
4. Cloud Computing: A Practical Approach by Anthony T. Velte
5. Cloud Computing: Principles and Paradigms by Rajkumar Buyya, James Broberg, Andrzej Goscinski