Ministry of Higher Education and Scientific Research
Lebanese French University – Erbil
College of Engineering and Computer Science
Department of Computer Network

# Cloud Computing - I

**Fourth Year – First Semester**

**Asst. Prof. Dr.S.T.Suganthi**

**Academic Year: 2022-2023**

**Course Book**

| S. No. | Information | Details |
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| 1. | **Course Name** | Cloud Computing |
| 2. | **Course Code** | |
| 3. | **Lecturer In-charge** | Dr.S.T.Suganthi |
| 4. | **College/Department** | ECS/Information Technology |
| 5. | **Contact Information** | E-mail: suganthi@lfu.edu.krd<br>Mobile No.: 0964-7516898309 |
| 6. | **Time (in hours) per Week** | Theory: 02 Hours<br>Practical: 02 Hours |
| 7. | **Office Hours** | Saturday to Wednesday |
| 8. | **Teacher's Academic Profile** | She has completed B.E, M.E and Ph.D in Electrical Engineering. She has Thirteen years of teaching experience in microprocessor, computer architecture, logic design, research methodology etc. |
| 9. | **Academic Title** | Assistant Professor |
| 10. | **Keywords** | Cloud Computing (CC) Technologies, CC Architecture, CC Deployment Models, CC Service Models, CC Virtualization, etc. |
| 11. | **Course Overview:**<br>• This course is designed to impart knowledge on the cloud computing concepts with examples and applications.<br>• Get an idea of CC technologies, architecture and infrastructure.<br>• Understand about CC deployment models.<br>• Discuss about CC Service Models, CC Management, Data Storage, Virtualization, Security. | |

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| **12.** | **Aims & Objective:**<br>• To learn about service-oriented architecture<br>• To learn about virtualization<br>• To understand the evolution of cloud computing<br>• To understand Cloud Computing models<br>• To learn about software platforms available for cloud management. |
| **13.** | **Course Requirement:**<br>• All students should attend lectures carefully.<br>• All students should attend Classroom Tests, Discussions, Assignments, and Examinations such as Mid-term and Final. |
| **14.** | **Teaching and Learning Method:**<br>• Lectures<br>• E-learning Methods<br>• White Board<br>• PPT Presentation<br>• Team Work<br>• Project Show (Practical Session)<br>• Assignments |
| **15.** | **Assessment Scheme:**<br>• 5 % Assignments/Attendance<br>• 10 % Class Tests and Quizzes<br>• 25 % Mid-term Examination<br>• 10 % Practical Examination<br>• 50 % Final Examination |
| **16.** | **Students Learning Outcome:**<br>After completing the course, students can:<br>• Utilize virtualization technologies.<br>• Recognize web services of the internet.<br>• Identification of Cloud computing Models.<br>• Ability to understand OpenStack tools.<br>• Ability to understand Open Nebula tools |
| **17.** | **Course Reading List and References**<br>• **Book:** Cloud Computing Bible, Barrie Sosinsky, Wiley Publication.<br>• **Book:** Mastering Cloud Computing, Rajkumar Buyya et.al, Morgan Kaufmann Publication.<br>• **Book:** Cloud Computing: A Practical Approach, Anthony T. Velte et.al, McGraw Hill Publication. |
| **18.** | **Course Content** |

## Course Content

| Week | Lecture Date | No. of Hours | Topics |
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| 1. | **11-09-22**<br>**15-09-22** | 3 | **Cloud Computing Basics:** Overview, Planning |
| 2. | **18-09-22**<br>**22-09-22** | 3 | **Cloud Computing Basics:** Technologies, Architecture, Infrastructure |
| 3. | **25-09-22**<br>**29-09-22** | 3 | **Cloud Deployment Models:** Public Cloud Model, Private Cloud Model |
| 4. | **02-10-22**<br>**06-10-22** | 3 | **Cloud Deployment Models:** Hybrid Cloud Model, Community Cloud Model |
| 5. | **09-10-22**<br>**13-10-22** | 3 | **Cloud Service Models:** Infrastructure as a Service (IaaS), Platform as a Service (PaaS) |
| 6. | **16-10-22**<br>**20-10-22** | 3 | **Cloud Service Models:** Software as a Service (SaaS), Identity as a Service (IdaaS) |
| 7. | **23-10-22**<br>**27-10-22** | 3 | **Cloud Service Models:** Network as a Service (NaaS) |
| 8. | **30-10-22**<br>**03-11-22** | 3 | **Cloud Advanced Concepts:** Cloud Computing Management, Cloud Computing Data Storage |
| 9. | **06-11-22**<br>**10-11-22** | 3 | **Cloud Advanced Concepts:** Cloud Computing Virtualization, Cloud Computing Security |
| 10. | **13-11-22**<br>**17-11-22** | 3 | **MIDTERM** |
| 11. | **20-11-22**<br>**24-11-22** | 3 | **Cloud Advanced Concepts:** Cloud Computing Operation, Cloud Computing Applications |
| 12. | **27-11-22**<br>**01-12-22** | 3 | **Cloud Advanced Concepts:** Cloud Computing Providers, Cloud Computing Challenges |
| 13. | **04-12-22**<br>**08-12-22** | 3 | **Cloud Advanced Concepts:** Mobile Cloud Computing |
| 14. | **11-12-22**<br>**15-12-22** | 3 | **REVIEW** |
| 15. | **18-12-22**<br>**22-12-22** | **Final Examination** | |

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| **19.** | **Examinations:**<br>• **Compositional:**<br>In this type of exam, the questions usually start with explain (How…? / What …? /Why…?) With their typical answers. (Example should be provided)<br>• **True or False:**<br>In this type of exam, a short sentence about a specific subject will be comment on the trueness or falseness of this particular sentence. (Example should be provided)<br>• **Multiple Choices:**<br>In this type of exam there will be a number of phrases next or below a statement, students will match the correct phrase. (Example should be provided).<br>• **Fill blanks:**<br>The description may be given and ask.<br>• **Matching:**<br>A number of questions in one side and their answers in another side will be presented. It will ask the students to match the questions with correct answers. |
| **20.** | **Notes:** Lecture Notes |