**The First Course Name: Software engineering**

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| **Week** |  **The First Course** |
| 1 | •Chapter 1: General Introduction to Software Engineering• A summary of software engineering and computer software |
| 2 | • Define software engineering and special importance•Comparing computer science and engineering sand blocks and drawing the difference between them. |
| 3 | • Knowledge of the characteristics of good software and software engineer characteristics• Know the most important models of software operations |
| 4 | • Know the difference between the system engineer and the software engineer |
| 5 | Chapter II: The life cycle of preparing the system• The most important stages of the life cycle of the system |
| 6 | • Understanding the waterfall model (Waterfall model) |
| 7 | •Prototype model |
| 8 | •Incremental model |
| 9 | •Spiral model |
| 10 | •Fourth generation model (4GT) |
| 11 | • Chapter 3 (Software Requirements Engineering) |
| 12 | • Engineering of software requirements and problems |
| 13 | • Chapter 4: Curriculum requirements |
| 14 | • Analysis model• Structural analysis |
| 15 | •Data modeling• Create flowchart dataObjectives of the analysis model |

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| **Week** | **The Second Course Name: Advance Software engineering** |
| 1 | • Chapter 1: software design |
| 2 | • Definition of software design |
| 3 | • The purpose of system design |
| 4 | •Software design activities-Data design-Architectural design |
| 5 | •Software design activities-user interface design-procedural design |
| 6 | •Effective modular design -Functional independence-Coupling -Cohesion  |
| 7 | • Chapter 2: Software Testing• Software test definitions |
| 8 | •Testing Objectives |
| 9 | •Testing levels( strategies/types of testing) |
| 10 | •System testing  |
| 11 | •Chapter 3: Management of software projects |
| 12 | • Planning |
| 13 | •Organization projects  |
| 14 | Type of organization projects |
| 15 | • Comparison of all types of project organization structures |