**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 data  Objectives 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 |