

Kathmandu University School of Management
Bachelor of Business Information Systems
Course Syllabus

Course Title	SOFTWARE ENGINEERING	
Course Code Number	COM 469	
Credit Hours	3	
Course Objective		
Main Objective	The objective of the course is to develop knowledge on Software Process, Product, and Project and its management to develop a successful software engineering project. The course also aims to provide in depth understanding on the application of software engineering principles to the conventional methods of software development.	
Learning Unit		
Learning Unit One Net Contact Hours -3 hrs	1. Overview Software and its Characteristics, Crisis and Myths, Software Engineering, Software Process and Models	
Learning Unit Two Net Contact Hours – 2 hrs	2. Project Management in Software Engineering Four P’s of Software Project Management	
Learning Unit Three Net Contact Hours - 3 hrs	3. Software Process and Metrics Measures, Metrics and Indicators, Software Measurement, Metrics for Software Quality, Statistical Quality Control, Metrics for Small Organization	
Learning Unit Four Net Contact Hours - 4 hrs	4. Software Project Planning Objectives, Scope, Resources, Project Estimation, Decomposition Techniques, Empirical Estimation Models, Make/Buy Decision, Scheduling and Error Tracking	
Learning Unit Five Net Contact Hours – 3 hrs	5. Risks Analysis and Management Software Risks, Identification, Projection, Refinement, Mitigation, Monitoring and Management	
Learning Unit Six Net Contact Hours - 5 hrs	6. Software Quality Assurance Concepts, SQA, Software Reviews, Formal Technical Reviews, Formal Approaches to SQA, Statistical; Quality Assurance, Software Reliability, ISO 9000, SQA Plan	
Learning Unit Seven Net Contact Hours - 4 hrs	7. Software Configuration Management Introduction, SCM Process, Identification of Objects in Software Configuration, Version Control, Change Control, Configuration Audit, Status Reporting, SCM Standards	
Learning Unit Eight Net Contact Hours - 7 hrs	8. Analysis Concepts, Principles and Modeling Requirements Engineering, Requirements Analysis, Analysis Principles, Software Prototyping, Specification and its Review, Review of Data Modeling, Functional Modeling and Behavioral Modeling, Structured Analysis Tools and Techniques	
Learning Unit Nine Net Contact Hours - 7 hrs	9. Design Concepts, Principles and Architecture Design Design Process, Principles, Concepts, Cohesion, Coupling, Software Architecture, Data Design, Architectural Styles, Transform and Transaction Mapping, User Interface Design, Structured Programming	
Learning Unit Ten Net Contact Hours - 3 hrs	10. Technical Metrics for Software Software Quality, A framework for Technical Software Metrics, Metrics for the Analysis, Design, Coding, Testing and Maintenance	
Total contact Hours	48 hrs (excluding assessment and final examination)	
Basic Text	Roger S. Pressman (2001), <i>Software Engineering - A Practitioner’s Approach</i> , 5 th Edition, McGraw Hill.	
Other References	Ian Sommerville (2000), <i>Software Engineering</i> , 6 th Edition, Pearson Education Ltd.	
Evaluation Scheme	In-Semester evaluation	

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