Mehran University of Engineering and Technology, Jamshoro
FRM-003/00/QSP-004 *Dec, 01, 2001*

Tentative Teaching Plan					
Department of Software Engineering					
Name of Teacher	Dr. Naeem Ahmed Mahoto				
Course Name	Software Quality Engineering	**Course Code**	SW426		
Batch	F16-SW	**Year**	**4th**	**Semester**	2nd
Semester Start Date	1st June 2020	**Semester End Date**			

#	Topic	Learning Outcome	Delivery Method	Lecture Hours
1	Software Quality Assurance	Quality, Quality Control, Quality Assurance, SQA	Lecture	2
		Software reviews, FTR, review guidelines, Statistical Quality Assurance, Software Reliability, Factors influencing software reliability, SQA Plan	Lecture & Discussion	4
		ISO Standards, ISO 9126 Quality Characteristics, ISO 9126 Quality Sub-Characteristics, ISO 9000:2000 Software Quality Standard, ISO 9000:2000 Fundamentals	Lecture and Discussion	3
2	Software Testing Techniques	Software Testing Fundamentals, Testing Objectives, Testing Principles, Testability, testability checklist, good test attributes	Lecture, Discussion	3
		Software testing strategies, WHITE-BOX Testing, basic path testing, Control Structure Testing	Lecture & Discussion	3
		BLACK- BOX Testing, Graph based testing methods, equivalence class partitioning, boundary value analysis, comparison testing, orthogonal array testing	Lecture, Discussion & Tasks	3
3	Software testing strategies and object-oriented testing	A Software Testing Strategy, Analytical test strategy, Model-based test strategy, Methodical test strategy, Process- or standard-compliant test strategy, Dynamic test strategy, Consultative or directed test strategy, Regression-averse test strategy	Lecture & Discussion	3
		Criteria for Completion of Testing, Test levels, Unit Testing, Static unit testing, Dynamic unit Testing	Lecture & Discussion	3

		Debugging Process, Debugging Tactics, Integration Testing, Integration test methods, all-at-once, top-down, bottom-up, functional increments, Validation Testing, System Testing, performance test, regression test	Lecture and Discussion	4
		Testing OO Analysis and OO Design Models, OO Testing Strategies, unit testing in OO context, integration testing in OO context, class testing, issues in class testing, Testing Methods for the Classes, validation testing, fault based testing, state based testing, testing surface and deep structures, inter class testing, methods for inter class testing	Lecture and Discussion	5
4	Client- Server software engineering, computer-aided software engineering	Structure of Client / Server Systems, two tier client-server systems, three-tier client server systems, Software Engineering for Client / Server Systems, representative client-server systems, software components for client-server systems, C/S configuration options,	Lecture and Discussion	4
		Design of Client/ Server Systems, Data and architectural design, Event-driven paradigm, Interface design, Object-oriented point of view, Architectural Design for Client/Server Systems, C/S Design Repository Information, Data Distribution and Management Techniques, C/S Design Approach, Process Design Entities, Testing Issues, C/S testing strategy, C/S testing tactics	Lecture and Discussion	4
		CASE, Building Blocks for CASE, CASE Tools, Integrated CASE Environments	Lecture and Discussion	4

Signature	
Signature of Teacher	*Dated*:
Remarks of DMRC	*Dated*: 15-05-2020
Signature of Chairman	*Dated*: