SEIS 610 Software Engineering Project Evaluation Criteria

SEIS 610, software engineering, is an applied engineering course. The major goals of this course include:

1. understand the general software development phases,
2. understand the techniques available in each development phases,
3. understand the tradeoff between techniques available in each software development phase, and
4. students who successfully complete this course should be able to make reasonable judgments when facing basic development decisions.

In order to assess whether students have achieved these goals, criteria of the assessment are identified in the table of next page. These criteria are grouped based on major software development phases.

The steps of assessment include:

1. describe a small size project that can be finished in a semester,
2. ask every student group to implement this project by following the software development phases and techniques discussed in the class,
3. ***change*** few requirements in the middle of semester,
4. evaluate student achievements against the criteria listed in the following table.

	Inadequate	Adequate	Excellent
Analysis:			
Requirements elicitation	*Capture few requirements	*Capture most requirements	*Capture most requirements *Organize requirements based on their characteristics
Object-oriented analysis	*Give no reasons of selecting (or not selecting) a particular approach	*List reasons of selecting (or not selecting) a particular approach	*List reasons in selecting a particular approach *Give concrete examples in comparing tradeoff between different approaches
Design:			
Software architecture	*Give no reasons of selecting (or not selecting) a particular approach	*List reasons of selecting (or not selecting) a particular approach	*List reasons in selecting a particular approach *Give concrete examples in comparing tradeoff between different approaches
Data structures	*Give no reasons of selecting (or not selecting) a particular approach	*List reasons of selecting (or not selecting) a particular approach	*List reasons in selecting a particular approach *Give concrete examples in comparing tradeoff between different approaches
Testing:			
Testing—white-box and black-box testing	*Give no explanation how the testing is conducted, *Provide no indication on final test coverage.	*Give explanation how the testing is conducted, *Informally show the testing has covered most of programs / requirements. *List all test cases.	*Give explanation how the testing is conducted, *Show the testing has covered most of programs / requirements with quantitative evidences.

			*List all test cases. *Indicate the relationships between test cases and programs / requirements (high-level and derived requirements)
Testing documentation	*Provide no linkage between code (requirements) modification and test-case execution	*Text documents that indicate which test-case is linked with which code (or requirements).	*Provide programs (or databases) that traces linkage between all the test-cases and all the requirements / programs.
SCM Documentation:			
Tractability between all activities	*Give only very vague descriptions of the system, its implementations, and tests	*Give concrete descriptions / graphs that explains the relationships between requirements, implementations, and tests *Produce some analysis (i.e. charts / visualization) that shows activities on SCIs of the system.	*Give concrete descriptions / graphs that explains the relationships between requirements, implementations, and tests *Use programs / tools / databases to trace requirements, program, and tests *Produce extensive analysis (i.e. charts / visualization) that shows bottle-neck, effort-breakdown, and activities on SCIs of the system.
References:			
Annotated Bibliography	*No references. *References without annotations.	*Reference to required/optional text books. *Indicate how the referenced materials are used in the report.	*Reference to papers of IEEE/ACM proceedings, journals, transactions (make a hard-copy of

			referenced papers). *Clearly indicate how the referenced materials are used in the report.