CSCI577a – Software Engineering I

Class time	Mondays and Wednesdays, 5 – 7.50pm, KAP 144
Instructor	Supannika Koolmanojwong (<u>koolmano@usc.edu</u>) Office hour: Wednesdays 3 – 5pm Office: TBD

Course Description

This is the first of two courses in the Software Engineering sequence, which forms the core of the Master of Science in Computer Science with specialization in Software Engineering. Software Engineering I focuses on software plans, processes, requirements and architectures. Software Engineering II focuses on software product creation, integration, test and maintenance with an emphasis on quality software production.

This course will focus on the application of software engineering process models and management approaches for design and architecture of large software systems. Students will work in teams and be required to understand and apply the Win-Win spiral model and the Incremental Commitment Model for software engineering to real-world projects. Students will also be expected to understand and apply quality management approaches to their projects. During this course, the student team members will formulate operational concepts, requirements specifications, architectures, prototypes, life cycle plans, and integrating rationale for the proposed capabilities. In CSCI 577b, student teams develop Initial Operational Capability products based on the best results from CSCI 577a.

Marks Allocation

Individual Homework	20%
Individual Hands-on exercise	10%
Individual Presentation	10%
Individual Critique	10%
Team Project	45%
Client Evaluation	5%

Dates	Lectures	Workshops / In-Class Activities	Readings	нพ
21-May	Class Overview, SDLC, ICSM		EP-1	
26-May	ICSM	ICSM Roles and Responsibilities	EP-2,3	
28-May	Feasibility and Risks	Team formation and project selection	EP-4,5	
2-Jun	Prototype and UI	Risk analysis workshop	EP-7	HW1 - Risk Analysis
4-Jun	Quality Management and Peer Review	Team prototype presentation		
9-Jun	OOAD	OOAD workshop	EP-9	
11-Jun	Cost Estimation	Cost Estimation workshop	EP-10	HW2 - Simplifier & Complicator
16-Jun	FCR ARB	FCR ARB	FCR ARB	
18-Jun	Technical Debt	Retrospective Analysis and DoD	EP-11	
23-Jun	Business Case Analysis	ROI workshop	EP-12	HW3 - Technical Debt
25-Jun	SW Metrics and Measurements	Metrics and measurements workshop		
30-Jun	DCR ARB	DCR ARB		Individual Critique