J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: ITP 251   **Credits:** 3

Course Title: System Analysis and Design

Course Description: Focuses on application of information technologies (IT) to system life cycle methodology, consisting of the systems planning, analysis, design, implementation, and support/ security phases. Covers methodologies related to identification of information requirements, feasibility in the areas of economic, technical, and social requirements, and related issues. Software applications may be used to enhance student skills. Prerequisite: ITE 115 or equivalent. Lecture 3 hours per week.

General Course Purpose: Required in IST AAS - all concentrations

Course Prerequisites and Co-requisites:
Prerequisite: ITE 115 or equivalent

Student Learning Outcomes:
Upon completing the course, the student will be able to
a. Possess a better understanding of the infrastructure and informational requirements of an enterprise, as well as the magnitude of the responsibilities of the systems analyst;
b. Better manage a project of any scope through the use of acceptable project management tools and techniques;
c. Evaluate various development options (including Traditional/Structured, JAD, RAD, Agile, and Object-Oriented), and determine the most appropriate based on the particulars of the project;
d. Determine system user requirements within an enterprise through the use of various fact-finding techniques (including interviews, document review, observation, questionnaires, research, and sampling);
e. Use acceptable modeling techniques to represent graphically the various components of the system (including data and processes); and
f. Possess a better understanding of the phases/steps of any information systems project (regardless of the selected development technique): Analysis, Design, Development, Implementation, and Support/Security.

Major Topics to Be Included:
a. Managing Systems Project (discussion of project management software)
b. Determining and modeling user requirements
c. Analysis and modeling of data required to provide user requirements
d. Analysis and modeling of processed required to provide user requirements
e. Design of the user interface, output, input, and data required to meet user requirements
f. Software application development – fulfilling the user requirements
g. Understanding software acceptance methodology (unit testing, integration testing, system testing)
h. Discussion of the remaining requirements of the systems implementation phase (including data conversion, user training, system changeover (direct cutover, parallel processing, pilot operation, phased operation)

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