

**Brooklyn College**  
**Department of Computer & Information Sciences**

**CISC 7522 [765] Systems Analysis and Design**

37½ hours plus conference and independent work; 3 credits

Fundamental concepts of systems, principles of modeling, use of feedback, hierarchical structures, systems complexity and simplification. Database systems concepts, database design, analytical and experimental methods for computer systems analysis, system performance evaluation, throughput determination.

**Textbook:**

Systems Analysis and Design Methods 5<sup>th</sup> Edition, 2000. Whitten, Bentley and Dittman, McGraw-Hill Higher Education.  
(Chapters 2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16, 17)

**Syllabus:**

1. Course synopsis, expectations, reading material to be covered, experience survey and grading structure
1. Information system building blocks – terminology, types of systems, types of roles, framework definition including people, data, process and interface
2. Information Systems Development – capability maturity model, systems life cycle, development methodology, discussion of inputs, activities and outputs for each phase
3. Systems Analysis
4. Requirements Discovery
5. Application Architecture, Data Modeling, Process Modeling, Object Modeling
6. Feasibility Analysis
7. Systems Design
8. Input, Output and User Interface Design
9. Systems Construction and Implementation
10. Systems Operations and Support

11. Cross Life Cycle Activities and Skills

- a. Project and Process Management – differences, selection of tools
- b. Fact-Finding and Information Gathering – formal and informal research, survey development and administration, interview techniques
- c. Feasibility and Cost-Benefit Analysis – methodologies and processes
- d. Interpersonal Skills and Communications – application to covered processes