DIVISION: Information Technology

CURRICULUM: Programming, Database Administration and Development

COURSE TITLE: Systems Analysis

COURSE NUMBER: ITC 255

CREDITS: 5

TYPE: Professional Technical

LENGTH: One Quarter

PREREQUISITES: MIC 101 or knowledge of Microsoft office and Microsoft Windows; ITC 110 or CSC 110 recommended

COURSE DESCRIPTION: This project driven course explores the process of identifying when a system needs to be upgraded or replaced. It uses a set of tools and techniques for analyzing system components and requirements, charting process flow and data structures, determining feasibilities and providing alternate solutions.

COURSE OUTCOMES: After completing the course students will be able to

- Identify the major components of a system
- Explain the life cycle of a system
- Define major terms and concepts
- Identify symptoms or failings of a current system which would suggest the need for analysis and design
- Gather system requirements and constraints
- Use management tools to determine time lines and resources required for the analysis and design
- Determine financial and other feasibilities for the project
- Diagram process flow and sequence (Data Flow Diagrams or Universal Modeling Language (UML))
- Diagram major entities, attributes and relations (Entity Relation Diagram and/or UML)
- Determine alternative design strategies
- Design elements of the human interface
- Prepare logical database design
- Present and defend conclusions
- Work effectively in a group
- Appreciate the diversity of the classroom and the workplace

REQUIRED TEXT: Variable.

OTHER REFERENCES: Materials available on the World Wide Web, handouts, periodicals, library resources.

TOPICAL OUTLINE:

1. Systems Overview
2. Reasons for beginning the analysis process
3. Documenting the project
4. Managing time and resources
5. Gathering requirements and constraints
6. Feasibility analysis
7. Presenting your conclusions
8. Modeling Process flow
9. Entities, objects, attributes and relations
10. The human interface
11. Alternative design strategies
12. Implementation,
13. Training and documentation
14. Maintaining the system
15. Beginning the cycle again

Prepared by Steve Conger Summer 2002