Information System Analysis & Design
(10051)

Rationale Statement:
One of the growing areas of Information Technology is that of system planning and project management. With the current course offerings throughout the state, most courses do not tough on the concepts and theories that are presented through the practical approach to information technology and system development. The design of this course helps upper level students who are interested in information technology fields to explore problem solving and project management through information and case studies.

To expose students to the concepts and knowledge of systems analysis and design at the secondary level is so important for their transition to post-secondary. A student interested in web design, English for information systems, mathematics for information systems, computer science, application programming, computer education, computer information systems, computer and network security, E-commerce, networking, or any other computer related degree at the state universities will be required to take a systems analysis and design course.

Course Description:
Grade Level: 11 – 12

Topics Covered

- Introduction to Systems Analysis and Design
- Systems Planning
- Systems Analysis, Requirements, and Modeling
- Output, User Interface, Data, and Systems Design
- Systems Implementation
- Systems Operation, Support, and Security

Core Technical Standards & Examples

Indicator #1: Demonstrate knowledge of Information System Analysis and Design	
Bloom's Taxonomy Level	**Standard and Examples**
Creating	**ISAD 1.1 Initiate a system project to customer needs.** Examples: • Identify the phases in a system project. • Select basic fact-gathering techniques to be used. • Define the scope of the systems project. • Conduct a preliminary investigation of customer requirements.
Applying	**ISAD 1.2 Evaluate potential applications to meet project requirement.** Examples: • Design a framework for evaluating information system functions. • Design a framework for evaluating individual applications. • Recommend new features or enhancements to existing tools.

Indicator #2: Demonstrate knowledge of System Installation and Maintenance	
Bloom's Taxonomy Level	**Standard and Examples**
Applying	**ISAD 2.1 Troubleshoot system problems.** Examples: • Demonstrate knowledge of basic troubleshooting steps. • Minimize impact on user and system productivity.
Creating	**ISAD 2.2 Evaluate problem-solving processes and outcomes.** Examples: • Evaluate problem-solving outcomes to determine whether the problem was solved as intended. • Evaluate whether the process was applied in an efficient and responsible manner. • Assess the validity and usefulness of the outcomes for the end user • Assess the validity and usefulness for the software. • Determine needed follow-up actions.

Indicator #3: Demonstrate knowledge of System Administration and Control	
Bloom's Taxonomy Level	**Standard and Examples**
Applying	**ISAD 3.1 Perform general system administration tasks to facilitate the delivery of technical services.** Examples: • Set up/maintain user accounts on multiple systems. • Participate in the evaluation, analysis, and recommendation of technical computing products. • Document performance problems. • Prepare required reports. • Maintain technical industry knowledge.

Indicator #4: Demonstrate and apply knowledge of Project Management.	
Bloom's Taxonomy Level	**Standard and Examples**
Evaluating	**ISAD 4.1 Define scope of work to achieve individual and group goals.** Examples: • Assess the task's contribution to overall business needs. • Identify size and specifics of the task. • Formulate task sequence. • Identify potential problems. • Develop contingency plans
Evaluating	**ISAD 4.2 Manage information system project methodologies insure system delivery.** Examples: • Identify escalation procedures. • Develop work breakdown structures • Identify required resources and budget. • Develop initial project management flowchart. • Identify interdependencies and milestones • Manage the change control process. • Participate in project phase review. • Report project status. • Utilize project management software.

Indicator #5: Demonstrate knowledge of technical writing and documentation	
Bloom's Taxonomy Level	**Standard and Examples**
Analyzing	**ISAD 5.1 Conduct technical research to better understand project goals.** Examples: • Identify target audience. • Define research questions. • Determine priorities for the information that should be gathered. • Identify potential sources of information. • Target audience/user group as a key information source. • Identify subject-matter experts. • Evaluate potential sources of information based on established criteria • Conduct interviews with selected human information sources. • Gather information from selected print and electronic sources. • Determine the accuracy and completeness of the information gathered.
Applying	**ISAD 5.2 Design technical documentation to enable the creation of the technical document.** Examples: • Specify standards for documentation, including critical success criteria. • Identify delivery options. • Evaluate cost-effectiveness of each delivery option. • Select tools appropriate for task purpose. • Plan information flow. • Select writing style and tone appropriate for given documentation. • Determine level of detail needed. • Identify visuals appropriate for given documentation.
Evaluating	**ISAD 5.3 Write technical reports to support the development project.** Examples: • Determine audience to identify type of report needed. • Compile and organize relevant data. • Analyze data • Draw conclusions from data analysis. • Revise report as needed based on peer feedback.