Southern New Hampshire University

IT 510 Final Project Guidelines and Rubric

Overview

The final project for this course is the creation of a **System Proposal Document**.

In any modern enterprise, it is crucial that all of the different stakeholders, users, inputs, and outputs that relate to the business's IT systems coalesce in a logical and cohesive way for the systems to be effective. As a member of an IT team, your overarching goal is to ensure that the IT systems ultimately do what the business needs them to do. In this course, you have learned about the key principles and practices underlying the analysis, design, implementation, and management of IT systems. In this final project, you will apply this knowledge by creating a **systems proposal document**.

The project is divided into **four milestones**, which will be submitted at various points throughout the course to scaffold learning and ensure quality final submissions. These milestones will be submitted in **Module Two, Module Four, Module Six, and Module Eight.** The final submission will occur in **Module Nine**.

In this assignment, you will demonstrate your mastery of the following course outcomes:

- Assess the relationship of systems analysis, design, implementation, and development processes as they relate to the management of information technology systems
- Communicate the paradigms, processes, and activities of systems development to diverse audiences
- Apply structure and object oriented analysis modeling techniques to analyze, design, and manage information technology systems
- Construct written and visual representations of the analysis, design, implementation, and management of information technology systems based on the systems development life cycle

Prompt

You will select your own case study and will apply the content provided, describing the business process to complete the final project. Alternate sources for case studies include the case studies found in the textbook with the exception of the Personal Trainer Case. You can additionally search the internet for business case ideas.

You will complete an analysis of an existing information technology system and make recommendations for updates to meet business goals based on your chosen case study. Your final submission will include an introduction, systems requirements, systems design specifications, and an implementation plan. All of the components listed below should be submitted as a single, organized systems proposal document and include screenshots of all relevant diagrams, charts, and tables.

I. **Introduction**: Provide an overview of your selected case. Be sure to provide appropriate citations and reference to the case study you have selected.

a) **Background:** Establish a context for understanding your systems proposal. Specifically, explain any essential paradigms, processes, and activities of the existing information technology systems.
b) **Problem Statement:** What is the problem that needs to be solved? Why is it a problem? What are the impacts to the enterprise?
c) **Audience:** Who are your audiences for this systems proposal? How will you effectively communicate the information of your proposal to these diverse groups?

II. **Systems Requirements**: Detail the specific requirements of your case. Be sure to include screenshots of all relevant diagrams, charts, and tables.
a) **Requirements Modeling**: Assess the current system to identify the **requirements** for the new system. Be sure to address each of the following aspects: outputs, inputs, processes, performance, and controls (i.e., security).
b) **Data Process Model:** Create a visual representation of all relevant **data processes** that represents a logical model of the requirements of the system based on the systems development life cycle.
c) **Data Flow Diagrams:** Create a **visual representation of the data flow** based on the systems development life cycle.
d) **Data Dictionary:** Create a **data dictionary** that annotates your system requirements to build clarity in communicating with the relevant audiences.
e) **Object Modeling:** Use appropriate object **modeling techniques** and tools to describe the system requirements.
f) **Use Case Diagrams:** Create (a) **use case diagram**(s) that outline the system requirements based on the systems development life cycle.

III. **Systems Design:** Propose a solution that addresses the identified problem in your case. Be sure to include screenshots of all relevant diagrams, charts, and tables.
a) **Specifications:** Provide a physical design that will meet the **specifications** outlined in the systems requirement document.
b) **Data Design:** Create entity relationship diagrams that accurately describe the proposed solution, including 3NF table **designs**.
c) **User Interface Design**: Illustrate the user **interface design**. Specifically, be sure to address your proposed human computer interactions (HCIs) and graphical user interfaces (GUIs). Your proposals should follow user-centered design principles and address all design requirements.
d) **System Architecture:** Describe the **system architecture**. Specifically, be sure to address the corporate organization and culture, enterprise resource planning, total cost of ownership, scalability, integration and interface requirements, and security.
e) **Feasibility Analysis:** Provide **supporting details that justify** why your proposed solution is appropriate for solving the problem. In your defense, be sure to address operational, technical, economic, and scheduling feasibility. Be sure that you frame your response for communicating effectively to your target audiences.

IV. **Project Plan:** Illustrate your recommended implementation and management strategies. Be sure to include screenshots of all relevant diagrams, charts, and tables.
a) **Work Breakdown Structure:** Describe all of the **essential roles and functions** required for implementing the solution. Who will be doing the work and what, specifically, will they need to do?
b) **Project Monitoring and Control Plan:** How are you going to ensure that the project is going smoothly? What is your plan of attack to ensure that all **controls** are adhered to? What is the defined critical path? Be sure that you frame your response for communicating effectively to your target audiences.
c) **Timeline:** What is the estimated amount of **time** for implementation? Create a visual representation that captures your timeline (e.g., Gantt chart) based on the systems development life cycle.

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Milestones

Milestone One: *Business Case Proposal and Introduction*

In **Module Two**, you will submit a **business case proposal**, which is a summary of your selected business case for the course project. The business case proposal will be submitted as a Word document and in paragraph form. This business case proposal provides your instructor insight into the project you are selecting and allows for instructor feedback and guidance in terms of the scope of the business case for the purpose of this course. The first milestone of the course project is an introduction. **This milestone is graded with the Milestone One Rubric.**

Milestone Two: *Project Plan*

In **Module Four**, you will submit your **project plan**. The project plan is a Word document that is a combination of a written explanation of the project plan and the explanation of the control plan. The WBS and timeline are represented with screenshots of the Gantt chart, resource chart, and cost table. Ensure each chart and graph is properly noted and has text explanation. **This milestone is graded with the Milestone Two Rubric.**

Milestone Three: *System Requirements*

In **Module Six**, you will submit your **system requirements**. The system requirements model is to be submitted as a Word document that is a combination of sections: a requirements model, a data process model, a data flow diagram, a data dictionary, an object model, and a use case diagram. Copy the image of your diagram into your Word document and include text to ensure that the diagram has proper context within the overall system requirements model through written explanations. Your audience is IT management and the IT project team. **This milestone is graded with the Milestone Three Rubric.**

Milestone Four: *System Design*

In **Module Eight**, you will submit your system design via a Word document. The system design will include visual presentations of each of the following: modeling for specifications, data design, and user interface design. Each of the diagrams will visually represent your design. The system design additionally will include each explanation and supporting detail of the system design execution, in a complete and comprehensive write-up. These are the sections Systems Architecture and Feasibility Analysis. Your audience is IT management and the IT project team. **This milestone is graded with the Milestone Four Rubric.**

Final Submission: *System Proposal Document*

In **Module Nine**, you will submit **a systems proposal document**. It should be a complete, polished artifact containing **all** of the critical elements of the final product. It should reflect the incorporation of feedback gained throughout the course. **This milestone will be graded using the Final Project Rubric.**

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Deliverable Milestones

Milestone	Deliverables	Module Due	Grading
1	Business Case Proposal and Introduction	Two	Graded separately; Milestone One Rubric
2	Project Plan	Four	Graded separately; Milestone Two Rubric
3	System Requirements	Six	Graded separately; Milestone Three Rubric
4	System Design	Eight	Graded separately; Milestone Four Rubric
	Final Product: System Proposal Document	Nine	Graded separately; Final Project Rubric

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Final Project Rubric

Guidelines for Submission: Written components of projects must follow these formatting guidelines when applicable: double spacing, 12-point Times New Roman font, one-inch margins, and APA citations. The paper should be 15 to 25 pages, not including cover page and resources.

Critical Elements	Exemplary (100%)	Proficient (90%)	Needs Improvement (70%)	Not Evident (0%)	Value
Background	Meets "Proficient" criteria and uses industry-specific terminology to effectively communicate and establish expertise	Includes a context that addresses all essential paradigms, processes, and activities of the existing information technology systems with sufficient detail for understanding the systems proposal	Includes a context, but it does not address all essential paradigms, processes, or activities of the existing IT systems or it is not sufficiently detailed for understanding the systems proposal	Does not include a context for understanding the systems proposal	6
Problem Statement	Meets "Proficient" criteria and selects particularly insightful examples and supporting evidence that demonstrate a nuanced understanding of the problem	Clearly defines and defends the problem in need of resolution by illustrating the impacts to the enterprise	Defines a problem in need of resolution, but there are clarity issues, gaps in the defense, or inaccuracies in the illustration	Does not include a valid problem in need of resolution	6
Audience	Meets "Proficient" criteria and selects strategies that demonstrate particular insight into the needs of the diverse audiences	Identifies plausible, distinct audiences for the proposal based on the case, and selects appropriate strategies for effectively communicating with each identified audience	Identifies distinct audiences for the proposal, but lacks plausibility for the case or does not select appropriate strategies for effectively communicating with each identified audience	Does not identify distinct audiences for the proposal	6
Requirements Modeling	Meets "Proficient" criteria and selects particularly insightful examples and supporting evidence that demonstrate a nuanced understanding of the problem	Assesses the current system to accurately identify the requirements for the new system (including the outputs, inputs, processes, performance, and controls) using specific examples	Assesses the current system, but either does not accurately identify the requirements for the new system; does not address the outputs, inputs, processes, performance, or controls; or does not use specific examples	Does not assess the current system to identify the requirements for the new system	6

Data Process Model	Meets "Proficient" criteria and visual representation reflects an in-depth understanding of the systems development life cycle	Creates a visual representation of all relevant data processes, representing an accurate logical model of the requirements of the system based on the systems development life cycle	Creates a visual representation of data processes, but there are significant gaps or the logical model of the requirements of the system is not appropriately based in the systems development life cycle	Does not create a visual representation of data processes	6
Data Flow Diagrams	Meets "Proficient" criteria and visual representation reflects an in-depth understanding of the systems development life cycle	Creates an accurate visual representation of the data flow based on the systems development life cycle	Creates a visual representation of the data flow, but there are significant gaps or inaccuracies based on the systems development life cycle	Does not create a visual representation of data flow	6
Data Dictionary	Meets "Proficient" criteria and definitions reflect an in-depth understanding of the paradigms, processes, and activities of IT systems	Creates a data dictionary that annotates the system requirements and would effectively build clarity with relevant audiences	Creates a data dictionary that annotates the system requirements, but there are gaps or clarity issues given the needs of relevant audiences	Does not create a data dictionary that annotates the system requirements	6
Object Modeling	Meets "Proficient" criteria and techniques and/or results demonstrate in-depth understanding of structure and object oriented analysis modeling	Uses appropriate object modeling techniques and tools to effectively describe the system requirements	Uses object modeling techniques and tools, but either the tools or the description of the system requirements are ineffective	Does not use object modeling techniques and tools	6
Use Case Diagrams	Meets "Proficient" criteria and diagram(s) reflect(s) an in-depth understanding of the systems development life cycle	Creates (a) use case diagram(s) that accurately outline the system requirements based on the systems development life cycle	Creates (a) use case diagram(s), but there are gaps or inaccuracies in the system requirements based on the systems development life cycle	Does not create (a) use case diagram(s)	6
Specifications	Meets "Proficient" criteria and physical design reflects an in-depth understanding of the systems development life cycle	Provides a physical design that comprehensively meets the specifications outlined in the systems requirement document	Provides a physical design, but does not comprehensively meet the specifications outlined in the systems requirement document	Does not provide a physical design	6
Data Design	Meets "Proficient" criteria and diagrams reflect in-depth understanding of structure and object oriented analysis modeling	Creates entity relationship diagrams that accurately describe the proposed solution, including 3NF table designs	Creates entity relationship diagrams, but there are gaps or inaccuracies in describing the solution or does not include 3NF table designs	Does not create entity relationship diagrams	5

User Interface Design	Meets "Proficient" criteria and user interface design reflects an in-depth understanding of structure and object oriented analysis modeling	Illustrates the user interface design (including HCIs and GUIs) that follow user-centered design principles and address all design requirements	Illustrates the user interface design, but does not include HCIs and GUIs, does not follow user-centered design principles, or does not address all design requirements	Does not illustrate the user interface design	5
System Architecture	Meets "Proficient" criteria and system architecture reflects an in-depth understanding of the systems development life cycle	Describes the system architecture by addressing the corporate organization and culture, enterprise resource planning, total cost of ownership, scalability, integration, and interface requirements, and security in specific detail	Describes the system architecture, but does not address the corporate organization and culture, enterprise resource planning, total cost of ownership, scalability, integration and interface requirements, or security in specific detail	Does not describe the system architecture	5
Feasibility Analysis	Meets "Proficient" criteria and evidence and examples reflect an in-depth understanding of the paradigms, processes, and activities of IT systems	Justifies the proposed solution by addressing operational, technical, economic, and scheduling feasibility in a manner suitable for the target audiences	Justifies the proposed solution, but does not fully address operational, technical, economic, or scheduling feasibility in a manner suitable for their target audiences	Does not justify the proposed solution in terms of its feasibility	5
Work Breakdown Structure	Meets "Proficient" criteria and selects insightful examples that demonstrate a nuanced understanding of the relationship of IT systems implementation processes	Describes all of the essential roles and functions required for implementing the solution with specific examples	Describes the implementation of the solution, but does not include all essential roles and functions or does not include specific examples	Does not describe the implementation of the solution	5
Project Monitoring and Control Plan	Meets "Proficient" criteria and plan reflects an in-depth understanding of the paradigms, processes, and activities of IT systems	Includes a project monitoring and control plan that addresses all necessary controls and defines the critical path in a manner suitable for the target audiences	Includes a project monitoring and control plan, but does not address all necessary controls or define the critical path in a manner suitable for the target audiences	Does not include a project monitoring and control plan	5
Timeline	Meets "Proficient" criteria and visual representation reflects an in-depth understanding of the systems development life cycle	Creates a visual representation of an appropriate timeline for implementing the solution based on the systems development life cycle	Creates a visual representation of the timeline for implementing the solution, but it is not fully appropriate based on the systems development life cycle	Does not create a visual representation of the timeline for implementing the solution	5

Articulation of Response	Submission is free of errors related to citations, grammar, spelling, syntax, and organization and is presented in a professional and easy-to-read format	Submission has no major errors related to citations, grammar, spelling, syntax, or organization	Submission has major errors related to citations, grammar, spelling, syntax, or organization that negatively impact readability and articulation of main ideas	Submission has critical errors related to citations, grammar, spelling, syntax, or organization that prevent understanding of ideas	5
				Earned Total	**100%**