La Consolacion College Bacolod

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FINALS EXAM
ITS311 (2024) - Systems Integration and Architecture 1
1ST Semester AY 2024-2025

ARDUINO FINAL PROJECT

Objective:

Create a Do It Yourself (DIY) project using Arduino, showcasing your ability to design, program, and assemble a functional system. You will also document your process and explain your project through a video presentation.

Project Requirements (100 Points Total):

Criteria	Excellent	Good	Satisfactory	Needs Improvement	Points
1. Project Concept & Creativity	Highly creative, innovative, and original idea with a clear problem-solving purpose.	Creative project with a clear function or purpose.	Basic idea with some originality but lacking clear innovation.	Minimal creativity or unclear project purpose.	/20
2. Arduino Functionality & Complexity	Multiple advanced components integrated with complex code and perfect functionality.	Basic yet functional system with a good level of complexity.	Simple system with limited functionality.	System doesn't work or lacks key functionalities.	/20
3. Code Quality	Code is organized, efficient, and fully commented with clear explanations of functions.	Code is mostly organized with a few minor improvements needed for clarity or efficiency.	Code is functional but lacks clarity, structure, or sufficient comments.	Code is disorganized, inefficient, or lacks comments.	/15

4. Documentation (Written)	Includes all required sections (Title Page, Table of Contents, Problem Statement, Significance, Scope, Objectives, Materials & Components, System Design, Code Explanation, Testing, Results, Conclusion, References) well-organized and clearly written.	Most sections are included, but some minor details are missing or there are small organizational issues. All major sections are present.	Many sections are incomplete or lack necessary detail. Some sections are missing or poorly explained.	Significant sections are missing or incomplete. The documentation lacks clarity or is poorly organized.	/15
5. Video Explanation	Clear, engaging video with detailed explanations of all aspects of the project.	Good video with a clear explanation, but may lack detail or have minor presentation issues.	Basic video explanation, missing some details or hard to follow.	Poor video quality or unclear explanations, missing key parts of the project.	/15
6. Assembly & Wiring	Neatly assembled and well-organized wiring with all components securely attached.	Mostly clean assembly with some minor wiring issues.	Functional assembly, but messy or poorly connected wiring.	Sloppy assembly with poorly organized wiring or disconnected components.	/10
7. Troubleshooting & Problem Solving	Clear demonstration of troubleshooting and problem-solving, with detailed solutions to issues.	Shows good problem-solving skills, but may miss some details in the troubleshooting process.	Troubleshooting is mentioned, but lacks depth or clarity in the solutions.	No troubleshooting or poor problem-solving discussed.	/10

8. Adherence to Guidelines	Fully adheres to all guidelines and exceeds expectations.	Mostly adheres to the guidelines with minor deviations.	Some deviations from the guidelines, but still functional.	Significant deviations from the guidelines.	/5

Scoring Key:

- *Excellent*: The student has exceeded expectations and demonstrated a high level of creativity, functionality, and professionalism.

- *Good*: The student has met the expectations with minor improvements needed.

- *Satisfactory*: The student has met basic expectations but has room for improvement in key areas.

- *Needs Improvement*: The student has failed to meet critical aspects of the project, with significant room for improvement.