Project 1.2.7 Circuit Design Rubric

Total Points _____/100

Breadboard (20 points)

Topics	5 points	4 points	2 points	1 point
Component Wiring (x2)	Fewest number of components used to complete the task correctly. Wiring is neat and easy to follow. Wires are color-coded to make understanding clear. Labels added on circuit neatly to indicate inputs and outputs.	Wiring is completed correctly but not efficiently done or neat.	Wiring is difficult to follow and components not used efficiently.	Wiring is mostly incorrect.
Functionality (x2)	Circuit functions correctly, consistently, and the chosen components are appropriate.	Circuit functions most of the time, and the chosen components are appropriate.	Circuit sometimes functions.	Circuit rarely functions.

Simulation (20 points)

Topics	5 points	4 points	2 points	1 point
Neatness (x2)	Fewest number of components used to complete the task correctly. Simulation is neat and easy to follow. Text and highlights added appropriately to allow for ease of use and clarity of circuit.	Simulation is completed correctly but not efficiently done. Some text added to help user navigate simulation.	Simulation is difficult to follow and components not used efficiently.	Simulation is mostly incorrect.
Functionality (x2)	Circuit functions correctly, consistently, and the chosen components are appropriate.	Circuit functions most of the time, and the chosen components are appropriate.	Circuit sometimes functions.	Circuit rarely functions.

Video Presentation (10 points)

Topics	5 points	4 points	2 points	1 point
Content	All required elements of the video included to fully explain your circuit design and process.	Most required elements of the video included that explain your circuit design.	Missing some key elements of your explanation that make your design difficult to understand.	Missing most required elements, making you circuit design very difficult to understand.
Clarity	Video quality very clear - audio easy to understand and at a good volume, visuals clear and circuit easy to see and follow.	Audio or visual components were mostly clear and easy to follow.	Audio or visual components are somewhat difficult to hear or see.	Audio is difficult to hear and/or mumbled, video quality is very poor, making it difficult to understand.

Electronic Documentation (50 points)

Topics	5 points	4 points	2 points	1 point
Professional Appearance	Includes all required sections; includes page numbers and appropriate section headings. Font and spacing choices are appropriate for each type of text and consistent throughout document.	Includes most required sections; includes page numbers and appropriate section headings. Font and spacing choices are appropriate.	Does not include all required sections; includes page numbers; section headings could have been better organized. Font and spacing choices not appropriate.	Missing many sections; does not have page numbers or section headings. Lack of care put into layout and organization.
Title Page & Table of Contents	Includes all components required for a complete title page and table of contents. Page numbers and sections are consistent and accurate.	Includes 80% or more of the necessary components for a complete title page and table of contents. Some page numbers or sections are inaccurate.	Includes 60% or more of the necessary components for a complete title page and table of contents. Many page numbers or sections inaccurate.	Title page and table of contents unorganized and inaccurate.
Design Brief & Concept	Is grammatically correct and includes a clear and concise description of the problem and design statement; all constraints and deliverables listed neatly.	Is grammatically correct; problem and design statement unclear; all constraints and deliverables listed.	Has some grammar mistakes; problem and design statement unclear; missing some constraints and deliverables.	Has many grammar mistakes; missing many important parts of the design brief.
Design Definitions & Specifications	Input and output definitions described clearly and match design concept. Output specifications clearly described indicated rationale for output values.	Input and output definitions described and match design concept. Output specifications described.	Input and output definitions described and match design concept.	Input and output definitions described.
Final Solution Description (x2)	Paragraph description of final design clearly indicates performance and explains all components used in the circuit implementation. Description of real-life implementation is well-written and clearly identifies ways to fully implement.	Paragraph description of final design indicates performance and explains all components used in the circuit implementation. Description of real-life implementation identifies ways to fully implement.	Paragraph description of final design indicates performance and explains components used in the circuit implementation.	Paragraph description of final design does not fully describe the circuit or implementation.
Final Breadboarded Circuit (x2)	Solution is accurately represented through high-quality photographs. **Multiple views** used to clearly highlight all physical aspects of the machine. Is properly detailed for effective communication, including **labels and descriptions.**	Solution is represented through photographs. Is properly detailed for effective communication, including labels and descriptions.	Photographs are included but lacks details for effective communication, such as labels and descriptions.	Photographs included do not present the concept well. Missing several details for effective communication, including labels and descriptions.
Final Simulation (x2)	Screen shot(s) of final simulation provided and clearly displayed. Simulation is **well-organized with proper annotation** for ease of use.	Screen shot(s) of final simulation provided. Simulation is organized with proper annotation.	Screen shot(s) of final simulation provided.	Screen shot(s) of final program provided, but missing some parts.