ELG4139 Lab Project

Title: Design and Build of a Data Acquisition (DAQ) system
Team: Two students only
Total mark: 15%

Sep 30, 2016	Every team should identify the DAQ system for implementation. Prepare a project proposal (slides or sheets) that includes the title, name and number of students, the block diagram, circuit diagram of each unit, specifications of the components, and design details of the conditioning circuit (amplifier and filter). During the lab session, the team should simulate the work. At the end of the lab session, the TA will evaluate the work.
Oct 7 and 14, 2016	Implementation of the circuit in the lab using breadboard. Test and measurements using lab equipment. At the end of the lab session, the TA will evaluate the work.
Oct 21, 2016	Implementation of the circuit in the lab using Veroboard or printed circuit board. Test and Measurements using lab equipment. At the end of the lab session, the TA will evaluate the entire work.
Nov 04, 2016	- Define the project idea (project name, target clientele, and limitation) (maximum 200 words). - Describe the team's strengths and weakness in carrying out the project (maximum 1 page). - Define the context of the project (target market, competition, potential income, sources of information) (maximum 1 page). - Describe the offer (description of the product, innovativeness, sale price) (maximum 1 page). - Develop the communication and action plan (methods selected, cost, production, and advertising) (maximum 1 page). - Develop the human resources and financing plan (tasks and funds) (maximum 1 page). - Provide list of required components and materials. - Conduct cost analysis (including the profit and the team members' fees). - Show system design and simulation (using well-known simulation software). - Implement and show technical details and testing procedure. - Demonstrate the layout of the printed board (polychlorinated biphenyl: PCB) and packaging schematic delivery time. - Display the digital temperature data in a computer.