

# Project 1: Optical Immunoassay Assignment (OIA)

BIOE 385 Bioinstrumentation Laboratory

## Written Report Rubric

**Student Name:**

**Student Name:**

**Total Grade:** \_\_\_\_/50

**Student Name:**

Write a professional, concise report to your boss that contains:

- Executive Summary (see next page) \_\_\_\_/10
- Introductory explanation of your goals and methods \_\_\_\_/5
- Description of work \_\_\_\_/15
  - Circuit diagrams for each photodetector circuit
  - Theory of how each circuit works
  - Details on why you chose the components for each circuit
  - Data, figures, plots demonstrating calibration
  - Description and examples of your LabView program
  - Limitations on your design and ways to expand the design
- Testing and results \_\_\_\_/10
  - Data and plots demonstrating results obtained from each circuit
  - Accuracy and precision of each design
- Recommendation for the approach your company should take \_\_\_\_/10

This recommendation should be based on data from your tests and other quantifiable factors, such as cost to implement, etc. The following should be considered:

  - Accuracy and precision of the recommended design
  - Cost
  - Difficulty/Ease of implementation

## Description of Executive Summary

As a part of your technical reports, you will write an executive summary. The purpose of an executive summary is to summarize your project's status and orient your audience to the aims, methods, and implications of your project. *It should be less than one page.*

Organize your summary to answer the following questions:

- What problem are you trying to solve?
- Why is solving this problem interesting or important?
- How will/does your design solve the problem?
  - How will/does it work and why did you choose this specific approach over other options?
- How will/did you validate your design?
  - What surprises, new discoveries, or anomalies have/did you encounter?
  - What do your performance results suggest about the solution you proposed?
- Which device would you recommend to use for the final design and why?
  - What recommendations do you have for improving or building on your design?
  - What do you plan to do next or what recommendations can you make to others that might conduct follow-up studies?

In many cases, the executive summary might be all that your boss or a decision-maker reads when evaluating your project and determining a course of action, so it's important to be concise, yet thorough.