

The following set of guidelines is being provided to assist in the writing of formal lab reports. This document is not meant to be a writing tutorial or a report template, but instead it is intended as a starting point from which the foundations of a good report may be built, the specifics of which may change depending on the exact report topic.

ACADEMIC INTEGRITY EXPECTATIONS:

All lab reports must be written **INDIVIDUALLY** such that all work contained within each report is the sole intellectual property of the person submitting the report.

Collaboration with any other students, past or present, or any other individuals is forbidden. This includes, but is not limited to, both the sharing of thoughts by direct communication with other individuals and the sharing of thoughts by indirect communication (webpages, email, forums).

Note – Referencing lab reports that were submitted by other students during previous semesters of the course is considered to be “sharing of thoughts by indirect communication” and thus is a violation of the Academic Integrity Expectation.

Additional thoughts regarding the Academic Integrity Expectation:

- Students are allowed to consult with the course instructor while completing each report.
- Students are expected to protect their own intellectual property. Any student that allows another student to view or copy their work is also in violation of this Academic Integrity Expectation.

SUBMISSION OF COMPLETED REPORTS VIA EMAIL:

All lab reports must be submitted electronically as an email-attachment, sent to the instructor’s email address (jeffwagner@kennesaw.edu), in the form of a **single** Microsoft Word document (.doc, .docx) or Adobe Acrobat document (.pdf) that contains all of the required report information including all text, data tables, figures, plots, and/or sample calculations.

The “**Subject**” of the email **must** be “**ECET 1101 Lab Report**”

The attached lab report file **must be named** in the following format:

1101-LabXX-Lastname ←(**No spaces in the name**)

where “XX” is the two-digit experiment number and “Lastname” is the student’s last name.

No important **text** should appear in the body of the submission email. Any questions and/or concerns should be addressed independently from the email that contains the submitted lab report.

Note: • Email submissions that include multiple files/documents relating to a single experiment will **not** be accepted.
• Non-.doc/.docx/.pdf documents will not be accepted for submission. Therefore, if using Open Office or any other software to create the report document, be sure to “save as” a Microsoft Word equivalent document or to convert the report into a “PDF” document.

OVERALL REPORT FORMAT:

The reports will be graded on professionalism, content, appearance, and experimental results, including any required calculations, analysis, or tasks specified within the laboratory handouts.

Although there is *no* “specific” report format that must be followed, each formal report *must be submitted electronically* and **must contain ALL of the following sections (ideally in this order)**:

1. **Title Page** – clearly stating the author’s name, the experiment number and title, the lab section, and the date on which the experiment was performed, and the lab instructor.
2. **Table of Contents** – including section titles and page numbers. The table of contents should be well-organized, with consistent spacing and margins.
3. **Lists of Figures and Tables** – should be formatted similar to the Table of Contents.
4. **Introduction** – a brief statement should be provided that introduces the experiment and presents the overall objectives or goals of the experiment.
5. **Prelab Calculations** – if required for the experiment, this section will include both a brief synopsis of the prelab task and the task results along with at least one sample calculation (formula, numbers utilized, and final result) for each unique calculation performed.
6. **Report Body** (see next page for details)
7. **Conclusion** – in addition to any specific requirements stated in the laboratory handouts, this section should contain an intelligent and relevant discussion pertaining to the theoretical material covered by the laboratory experiment, along with an analysis of the results of the experiment that compares any measured values to the theoretical or expected values.
8. **Raw/Experimental data** – since the labs are being submitted electronically as a digital file, the original data sheets will not be submitted with your report. Instead, you will add an appendix section at the end of your report that contains a scanned copy of your original data sheets.

Note – if you do not have access to a scanner, then a well-composed, in-focus picture of your original data-sheets may be placed in the appendix.

With respect to:

Data Tables: All data tables should be given a sequentially-numbered title. Tables should be centered (left-to-right) on the page and the rows/columns of each table should be sized to fit the data contained within the tables. Cell-borders should be visible. Units should be clearly displayed in the header-cells for each row or column of data contained within the tables.

Figures (including plots/graphs): All figures should be given a sequentially-numbered title. Figures should be centered (left-to-right) on the page. The axes of all plots should be labeled with the units clearly shown, and they should be formatted to either a linear (preferred) or logarithmic scale.

REPORT SUBMISSION DEADLINE:

All lab reports are “due” **one week** after the session during which the experiment was performed.

Lab Reports submitted after their deadline will be penalized on a 15% basis per *calendar* day, but with a one-week grace period before any penalties are actually applied. Thus, after the grace period expires, the 15% per calendar day penalty will be assigned to report-grade for each calendar day past the due-date that the report was submitted including the days associated with the stated grace period.

Thus, in simple terms: You have two weeks to complete and submit a report with no penalty. After the two-week time period (i.e. – on day 15), the report is “late” by over a week, and based on a $15\%/_{\text{day}}$ penalty, late reports will be assigned a grade of zero.

REPORT BODY GUIDELINES:

The “report body” is the part of the report that contains the experimental procedure, the data tables, calculations, figures, plots, and required analysis. The report body should read in a sequential format and should be organized into “*logical*” sections that pertain to the different parts of the experiment performed.

Although the laboratory procedure should be described for each section, multiple procedural steps (stated on the laboratory handouts) that all relate to a single, overall task can be combined into one generalized procedural step that is written in a *narrative manner*.

For example:

The following five numbered procedural steps:

- 1) Set the current limit of the power supply to 50mA.
- 2) Locate the required resistors from your parts kit.
- 3) Construct the circuit shown in Figure 1.
- 4) Turn on the power supply and set the output voltage to 20 volts.
- 5) Measure the current flowing through each resistor in the circuit.

could be rewritten into one narrative report step as follows:

Experimental Step One – Current Measurements

After current-limiting the power supply to 50mA, the circuit shown in Figure 1 was constructed and the supply voltage was set to 20 volts. A multimeter was then utilized to measure the current flowing through each of the circuit resistors.

Note that the figure containing the circuit diagram (Figure 1) and the table contained the measured current values would appear immediately after the above-stated procedural step.

In general, for each overall task, you should:

- Briefly describe the procedure utilized when performing the task, providing any figures (such as circuit diagrams) needed to provide the reader of the report with a complete understanding of the actual experimental procedure.
- Tabulate any measured/experimental/calculated data relating to the task.
- Perform and present the results of any required analysis of the data relating to that task. This may include (but is not limited to) performing a series of calculations, creating plots, providing an error-analysis for the data, or theoretically discussing the results of the task.

Keep in mind that you are writing the formal report in order to document the overall experiment that you performed, including any prelab calculations, in-lab measurements, and required analysis of the results. Thus, it should be written in such a manner.

Do not just copy-and-paste the procedural steps provided in the lab handouts, since those steps are written in such a manner as to instruct the reader to perform those steps.