Attendance
Lab sections meet every week for two hours.
You must finish all lab work within the allotted time.
You are required to attend your scheduled lab section.
You will receive a zero on that lab project if you are absent and do not have a valid reason.
If you have a valid reason for being absent, it is your responsibility to notify your lab instructor (ahead of time if possible) and make arrangements for making up the lab in another section.
Because lab space is quite limited, you may not make up labs without permission of both your assigned lab instructor, Mr. Glen Archer and the attending lab TA.
If a lab is not made up, a zero score will be assigned.

Lab Reports
The attached style manual sets basic standards for Lab reports. Every lab report should contain the following:
1. Cover sheet with course number, section number, title of the lab project, your name, your lab instructor’s name, date due, and date submitted.
2. Objective section that states the problem and identifies any constraints or assumptions made.
3. Procedure section that describes the procedure used
4. Discussion, answers to all questions posed in the lab handout, show all completed calculations, and schematic diagrams for all circuits constructed. Describe any extra investigations that you performed in this section.
5. Conclusion section to discuss the outcome of the experiment and what you learned from doing it.
6. Appendix that is used to record required information. Your lab instructor will sign and date your data sheet to indicate correct execution of the experiment. Include print outs of any code written for the lab. Make sure the code is properly labeled.

Due Dates — Late Reports
Lab reports are due at the beginning of your scheduled lab session, one week after the experiment was performed.
The score will be reduced ten percent of the total allotted points for each school day that it is late.
However, no reports will be accepted after the last day of the 15th week of classes.
If no report is submitted for an experiment, a grade of zero will be recorded.
If you are unable to fully complete an experiment, submit a report anyway. In your report explain any problems you may have encountered. Partial credit will be given in most cases.

Submitting Reports
Hand in all reports to your lab instructor at the beginning of your scheduled lab period.
Submit late lab reports in your instructors locked mailbox located near room 731 of the EERC.
Graded reports will be returned during your scheduled lab session.

Grading Policy
Lab reports will be graded using the attached assessment sheet:
Lab scores will be curved to an 85% mean.

Grade Determination:
Grade           Per Cent Total Points
A   = 90-100
AB  = 87-89.9
B   = 80-86.9
BC  = 77-79.9
C   = 70-76.9
CD  = 67-69.9
D   = 60-66.9
F   = 0-59.9

Anyone plagiarizing another person’s lab report will be referred to the Dean of Student Affairs’ office for adjudication.

**Quizzes and Pre-Lab Work**

A short quiz may be given at the beginning of any lab section. The quiz will be on pre-lab material and text material as described for each experiment. Some labs have specific tasks that must be performed prior to attending the lab, your lab instructor will check this work.
## Michigan Tech University
### Electrical & Computer Engineering Department
### Lab Policies

**Instructor** ___________________________ **Student** ___________________________

**Class** ____________________ **Section** ____________________

Circle the box that best describes the lab report. Assign points on the right and total at the bottom.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>0-2 Unacceptable</th>
<th>3-5 Below Expectations</th>
<th>6-8 Meets Expectations</th>
<th>9-10 Exceeds Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Report Mechanics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization</td>
<td>Inappropriate content in most sections of report</td>
<td>Some inappropriate content in some sections of report</td>
<td>Content appropriate in all sections of report</td>
<td>Unique organization enhances readability and/or understandability of report</td>
</tr>
<tr>
<td>Format</td>
<td>Tables and figures can not be read/understood, fonts difficult to read, so many format errors as to make the report useless</td>
<td>Some portions are sloppy and difficult to read, some format errors</td>
<td>Text, tables, figures are readable and understandable.</td>
<td>Text, tables, figures so clear and understandable as to enhance the report’s impact, unique format enhances report’s impact</td>
</tr>
<tr>
<td>Grammar, Punctuation, Spelling</td>
<td>Excessive spelling, grammar, and punctuation errors</td>
<td>Some spelling, grammar, and punctuation errors</td>
<td>Only a few spelling, grammar, and punctuation errors</td>
<td>Completely free of spelling, grammar, and punctuation errors</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td>Far too long or too short</td>
<td>Too long or too short</td>
<td>Appropriate report length</td>
<td></td>
</tr>
<tr>
<td><strong>Content</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td>Problem not stated, conclusion not summarized, process statements only</td>
<td>Problem somewhat stated, significant results not included</td>
<td>Problem clearly stated, key results or conclusion stated clearly</td>
<td>So clear and complete as to enhance the impact of the report</td>
</tr>
<tr>
<td>Introduction</td>
<td>Problem not stated, constraints or assumptions not explained, contains results/conclusions</td>
<td>Problem stated poorly, limited discussion of constraints, assumptions</td>
<td>Problem clearly stated, impact of constraints and assumptions clearly discussed</td>
<td>So clear and complete as to enhance impact of report</td>
</tr>
<tr>
<td>Discussion—Quantitative Analysis—</td>
<td>No apparent understanding of lab tasks, no quantitative support provided</td>
<td>Poor understanding of lab tasks, poor quantitative support,</td>
<td>Lab tasks clearly understood and discussed, solid quantitative support,</td>
<td>Discussion clearly reveals insight and understanding beyond level expected</td>
</tr>
<tr>
<td>Conclusion—What did you learn</td>
<td>Omitted</td>
<td>Weak</td>
<td>Clear</td>
<td>Conclusion clearly reveals insight and understanding beyond level expected</td>
</tr>
<tr>
<td>Questions</td>
<td>Does not address questions posed in lab materials</td>
<td>Some questions correctly answered</td>
<td>All questions correctly answered</td>
<td></td>
</tr>
</tbody>
</table>

Total points_______ Total possible points_______
Text. All Text should be word-processed

Drafts may be prepared in double-space, but final products are to be single-spaced.

Paragraphs should be grouped with descriptive headings, and where needed, with subheadings. Indentation can also be helpful. This page illustrates the desired appearance.

Figures. Figures are often graphs, but they also include schematic sketches and drawings. Your ability to machine produce a figure will depend upon the nature of the figure itself, so both hand-prepared and computer drawn figures are acceptable. Note that hand-prepared is not the same as “freehand”; neatness requires prudent use of drawing aids. Whenever possible, figures should be understood on their own. They must have a figure number (Arabic numeral) and title below the figure, a legend (if applicable), and units must always be clearly marked. Figures should support the text, not replace it. For this reason, all figures should be referenced in the text. Preferably, the reference will be on the same page as the figure. For an illustration, see Figure 1.

![Figure 1. A linear voltage-current relationship.](image)

Tables. Tables are often confused with figures, but in engineering writing they are treated differently. A Table Number (Roman numeral) and Table Caption should appear at the top of the table. We recommend that they be boxed into the table itself. Columns must be annotated with quantities and their units. Any remarks enabling the table to stand alone can be boxed immediately below the table. If a table is not found directly below the related text, it must be referenced by number. For an illustration, see Table I.
### Table 1
Load Voltage and Current

<table>
<thead>
<tr>
<th>Resistance (Ω)</th>
<th>Voltage (V)</th>
<th>Current (mA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>15.38</td>
</tr>
<tr>
<td>200</td>
<td>2.35</td>
<td>11.76</td>
</tr>
<tr>
<td>500</td>
<td>3.81</td>
<td>9.52</td>
</tr>
<tr>
<td>1000</td>
<td>4.80</td>
<td>6.06</td>
</tr>
</tbody>
</table>

Note: Short Circuit Current = 15.38 mA

**Equations.** Although equations may be prepared freehand, word processors are easily able to produce complicated equations. Whichever way you go, equations should be integrated into the text. When presenting a series of related equations, it is not necessary to show every single step of a derivation so long as the method is clear to the reader. Use of transitionary phrases between key steps will add greatly to the reader’s understanding. Equations may be numbered at the right margin for convenience of reference. For example:

\[
V = 10e^{-2000t} \cos (2\pi f t)
\]  

(1)