

- 21**      **Communication**
- IEEE single column, double spaced format (–15 pts if not used)
  - 4      Clarity of style (ease of reading, and etc.)
  - 4      Organization (ease of locating figures/code/etc)
  - 4      English (grammar, punctuation, and etc.)
  - 3      Section numbers and headings (use section numbers shown below)
  - 3      Equations explained (at least one sentence between equations)
  - 3      Figure titles and numbers
- 3**      **Abstract** (succinct summary of numerical results)
- 3**      **I. Introduction** (motivation for lab, overview of report organization)
- 9**      **II. Measurements of Op-Amp Circuits for Pre-Amps (Section IV in handout)**
- 3      A. Table I: Measured resistor values (Table II in handout)
  - 3      B. Table II: Measured voltages for negative-gain Op-Amp (Table III in handout)
  - 3      B. Table III: Measured voltages for positive-gain Op-Amp (Table IV in handout)
- 12**      **III. Solutions of Op-Amp Circuits for Pre-Amps (Section V in handout)**
- 3      A. Expression for  $v_o$ : negative-gain op-amp circuit
  - 3      A. Expression for  $v_o$ : positive-gain op-amp circuit
  - 3      B. Table IV: Expected values for negative-gain op-amp circuit (Table V in handout)
  - 3      B. Table V: Expected values for negative-gain op-amp circuit (Table VI in handout)
- 9**      **IV. Solutions of Op-Amp Circuits for Pre-Amps (Section VI in handout)**
- 3      A.  $a$  and  $b$  for hand-drawn plots of  $y$  versus  $x$  (Section VI C in handout)
  - 3      B.  $a$  and  $b$  for polyfit of  $y$  versus  $x$  (Section VI D in handout)
  - 3      C.  $a$  and  $b$  for symbolic expression of  $y$  versus  $x$  (Section VI E in handout)
- 9**      **V. Pre-Amp Input Resistance (Section VII in handout)**
- 3      A. Equations: calculated input resistance
  - 3      B. Table VI: Measured input resistance: negative-gain (Table VII in handout)
  - 3      B. Table VII: Measured input resistance: positive-gain (Table VIII in handout)
- 6**      **VI. Pre-Amp Design and Test (Section VIII in handout)**
- 3      A. Fig: Pre-amp schematic
  - 3      B. Table VIII: pre-amp input and output voltage for tests
- 12**      **VII. Differential Amplifier (Section IX in handout)**
- 3      A. Equations: expressions for  $v_3$ , including in terms of  $v_{cm}$  and  $v_{dm}$  (Section IX B)
  - 3      B. Resistor values used in differential amplifier design (Section IX C)
  - 3      C. Table IX: differential amplifier test results (Section IX D)
  - 3      D. Gain calculation (Section VI E in handout)
- 6**      **VIII. Electromyogram (Section X in handout)**
- 3      A. Fig: recorded electromyogram from oscilloscope
  - 3      B. Fig: plot of power vs weight (Section X C)
- 5**      **IX. Conclusion** (summary of key results, including numerical values)
- 5**      **Appendix A**
- 5      Matlab<sup>®</sup> code listing(s) with comments for plots and power calculations