MAAE3202 Mechanics of Solids II

General Laboratory Report Requirements and Recommendations

1. **All pages should be numbered.**
2. **The title page should contain the following information:**
   - Title of experiment (e.g. *Experiment A: Complex Stresses*)
   - Date when the experiment was performed
   - Name and student number
   - Group number (e.g. X2) and members.

3. **The write-up should include the following parts:**

- **Objectives**
  - State the purpose of the experiment clearly.
- **Apparatus**
  - Provide a rough sketch of the apparatus and/or specimens.
  - Ensure all sketches are titled and properly labelled.
- **Procedure**
  - You may refer to the laboratory manual if the steps were followed exactly.
  - If any steps were different, briefly summarize the modifications.
- **Experimental data:**
  - List all measured parameters, dimensions, material properties, or other relevant data.
  - Present data in tables and/or graphs.
  - Number and title all tables and graphs.
  - Ensure tables have proper headings with variable names, symbols, and units.
  - Ensure graphs have labelled axes (variables and units) and legends if multiple data sets are plotted.
- **Calculations:**
  - Present the calculation method, including equations used.
  - Provide at least one sample calculation for each type of data processed.
  - If using a graph to calculate a slope or other property, illustrate this on the graph and reference it in your explanation.
  - If a calculation is repeated for multiple data points, present only the sample calculation and place the results in a table (in the Results section). Reference the calculation method in the table title.
  - Show units for all calculated results.

- **Results**
    - Present all obtained results in tables and/or graphs.
    - Ensure clarity and consistency in formatting.
- **Discussion:**
    - The discussion is not a summary of the experiment.
    - Relate your discussion to the objectives.
    - Interpret the results, explain observed trends, compare with theory, and comment on sources of error.
    - Demonstrate understanding of the results and their significance/implications.

Recommendations for Preparing Your Report

- Be organized and prepare in advance:
    - Draft as much of the report as possible before the lab, using the course manual and textbook.
    - Review the course material relevant to the experiment.
    - Understand clearly what will be measured and how the data will be processed.
    - Prioritize effectively:
    - Completing all calculations and presenting results in tables/graphs is the first priority.
    - Without proper results, the discussion will not be graded.
    - Writing a good discussion is the second priority, and it depends on thorough preparation and understanding.
    - Formatting matters:
    - Proper format is essential in any engineering report.
    - Details such as missing units, unlabeled graphs, or untitled tables will result in penalties.

Reminder

- ***A passing grade in the laboratory component is required to pass this course.***
- ***Absence from a lab without a valid reason will result in automatic failure of the lab component, and therefore the course.***
- ***Please be punctual.***