

# ME -343 MECHANICAL LAB I

## Lab Reports Writing

Instructor: Veljko Samardzic

Office: MEC325, Tel.: 973-642-7455

E-mail: [samardzi@njit.edu](mailto:samardzi@njit.edu)

# Items to Include

- Cover page
  - Title of the experiment
  - Student's name
  - Group number
  - List names of all team mates and underline the name of the leader
  - Dates on which experiment was performed and it was submitted
  - Instructor's name and course number

# Items to Include

- (2) Table of contents
  - List contents in sequential order:  
Topic .....Page #
- (3) Abstract (less than one page 150-250 words)
  - State objectives (What was performed?)
  - Methodology (How was it performed?)
  - Conclusive findings and remarks

# Items to Include

- (4) Introduction
  - Application background: it's applications (examples)
  - Objectives of the experiment: brief summary of methodology of experiment
- (5) Theoretical principles
  - Theory behind the experimental method
  - Theory behind data analysis
  - No sample calculations

# Items to Include

- (6) Experimental methodology
  - Experimental system (describe it; create schematic diagram; present photo of actual system; brief description of it's operation)
  - Major measurement systems (schematic diagram with photos; brief description of the system: make and model of the major components)
- (7) Sample analysis
  - Step by step details of sample calculations
  - Select and use actual data ( show real data in the equations used )
  - Show data using figures and tables (both initial and final data)
  - Identify software if used

# (8) Results and Discussion

- Itemized presentation
  - Measurement based or phenomena or objective based
- Use figures or tables in discussion
  - Using figures (preferred)
  - Complete data (tables) in Appendix
  - Comparison with theory
  - Physical interpretation
- Error analysis
  - Identify sources of errors
  - Quantify error margins (if possible)
  - Suggestions for improvement (not required)

## (9) Conclusions

- Major findings
  - Range of experimental data and error margins
  - Conclusive interpretation

# (10) Nomenclature (list of symbols used)

- Alphabetic order
  - Upper case first, followed by lower case for each symbol
  - English, Greek, superscripts, subscripts



# (11) References

- Use any standard format (APA)
  - See a book or a scientific journal

# (12) Appendix

- Appendix
  - Lab manual
  - Original data sheet
  - Complete set of tables and data
  - Manufacturer's calibration copy or service providers calibration document if different from the manufacturer's (if any)