Engineering 2
Welcome to Engineering 2!! This syllabus outlines the Engineering 2 course for the 2026-2027 school year. Course policies, expectations, and topics will be outlined in this document. I am looking forward to a great year!

Contact Information	
Teacher:	Albert Kamego
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Conference Time:	6th period 12:35 pm - 1:20 pm

Materials	Late Work
Spiral Notebook pen pencil	We will follow Lake Dallas ISD's late work policy.

Grades	Technology and Electronic Devices
Major: 40% Exams and Projects **Minor: 60%** Assignments, Exit Tickets, Checkpoints, Other Daily Work	Phones and other electronics should be turned off and kept in their bags. Phones and electronic devices are not allowed to be used in class. Students who do not follow the policy will be subject to disciplinary action as outlined by Lake Dallas ISD.

Course Overview

Unit 1: Lab Participation

- **Learning objectives:** Apply Scientific Practices Safely, Collect Data, Develop Models
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 2: Analyze Data

- **Learning objectives:** Analyze Models, Evaluate Data-Calculations-Designs
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 3: Evidence-Based Explanations

- **Learning objectives:** Develop and Communicate Explanation, Scientific Arguments w/ Data
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 4: Contributions of Science and Engineering

- **Learning objectives:** Past and Current scientific Though, STEM resources
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 5: Engineering Related Fields

- **Learning objectives:** Careers&Differences between Engineer and Engineering Technology
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 6: Design Problems

- **Learning objectives:** Problem Solving, Design Process &Brief, Being a Team Member
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets
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Unit 7: Simple and Compound Machines

- **Learning objectives:** Components, 6 Simple Machines, Mechanisms, Analysis
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Course Overview: Spring Semester

Unit 8: Energy Sources, Conversion, and Circuits

- **Learning objectives:** Energy Sources, Work&Power, Ohm's Law, Energy Electrical to Mechanical
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 9: Electrical Systems

- **Learning objectives:** Energy, Thermal Energy, Power Transmission
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 10: Forces

- **Learning objectives:** Vectors, Moment of Inertia, Centroid, Equilibrium, Free-Body Diagram
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 11: Material Properties

- **Learning objectives:** Best Practices, Views, Techniques, CADD models-drawings
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 12: Material Testing

- **Learning objectives:** Stress-Strain Curve, Material Sample Testing
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 13: Control Systems

- **Learning objectives:**Flowcharts, Programs, Input-Output Devices
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 14: Fluid Power Systems

- **Learning objectives:** Hydraulics&Pneumatics, Pressure, Flow Rate, Pascal's Law
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 15: Statistics

- **Learning objectives:** Probability, Logic, Central Tendencies, Variation in Data, Histograms
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 16: Kinematics

- **Learning objectives:** Projectile Motion, Distance, Velocity, Acceleration, Acceleration due to Gravity
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets