Principles of Applied Engineering:
Welcome to Principles of Applied Engineering! This syllabus outlines the Principles of Applied Engineering 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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Phone:	(940) 497-4031
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: Fall Semester

Unit 1: Components of Engineering and Technology

- **Learning objectives:** History of Engineering, Inputs-Processes-Outputs, Open-Closed Systems, Technology to Achieve Common Goals, Careers in Engineering-Science-Technology, Emerging Technology, Engineering Design Process
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 2: Media used in Engineering

- **Learning objectives:** Professional Communication, CAD, Visualization Techniques, Engineering Portfolio, Collaborative Tools
- **Activities:** Assignments, Projects, Class Discussion, Exit Tickets

Unit 3: Safety

- **Learning objectives:** Master Safety Tests, Follow Safety Guidelines, Safety Terminology, Classify Hazardous Waste, Describe Disposal of Hazardous Waste
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 4: Progression of Technology

- **Learning objectives:** How Technology Affects Society and History, Technological Progress, Impact of Technological advances
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 5: Principles of System modeling

- **Learning objectives:** Engineering Design Process, Chemical-Mechanical-Physical Properties, Problem Solving Techniques, Units of Measurement, Benefit-Risk of Design
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Course Overview: Spring Semester

Unit 6: Robotics, Process Control, Automation

- **Learning objectives:** Careers & Trends in Robotics-ProcessControl-Automation,
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 7: Electrical and Mechanical Systems

- **Learning objectives:** Application, Careers & Trends in Electrical and Mechanical System, Basic Electronic Theory
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 8: Project Teams

- **Learning objectives:** Design Process, Roles in a Project Team, Formulate Decisions, Engineering Notebook for a Project, Model for the Project, Present the Project
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 9: CADD and Drafting

- **Learning objectives:** Create and Modify Drawings, Retrieve Geometer, Line Types, 2D View, Multi-View, ANSI standards, 2D representations, Working Drawings
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets

Unit 10: Open-Ended Real-World Problems

- **Learning objectives:** Engineering Problems, Formulate Goals and Objectives, Determine Parameters, Constraints, Alternate Solutions, Structured Techniques, Predictions, Project Report
- **Activities:** Assignments, Exams, Projects, Class Discussion, Exit Tickets