Purpose of this syllabus: This syllabus provides an overview of the course goals, expectations, materials, and assessment criteria.

Course Title: Aerospace Manufacturing: Core Plus

Teacher: Mr. Peltzer

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Course Description: Aerospace Manufacturing: Core Plus is an immersive, hands-on course that introduces students to the high-tech world of aerospace and advanced manufacturing. Students will explore the design, construction, and testing of aircraft and components while developing practical skills in materials science, physics, electronics, hydraulics, and precision machining. The course combines industry-standard tools, troubleshooting, and real-world projects to prepare students for certifications, career opportunities, or further studies in aerospace engineering and manufacturing. *(IN400/IN401/IN402 - Aerospace Manufacturing: Core Plus)*

Course Goals: Students will learn:

- Aerospace and Manufacturing Basics: Introduction to aerospace, materials science, and applied physics.
- Technical Skills: Precision measurement, soldering, drilling, riveting, and print reading.
- Systems and Mechanics: Hydraulics, pneumatics, rigging, and electric circuits.
- Manufacturing Processes: Shop tools, safety, lean manufacturing principles, and standard operating procedures.
- Problem Solving: Troubleshooting techniques and math for industry applications.
- Capstone Project: Applying learned skills to design, build, and present a final project.

Course Outline by Semester or Trimester:

Semester 1:	*Semester 2:*
• Materials Science • Shop Tools • Safety • Standard Operating Procedures (SOP) • Semi-precision and Precision Measurement • Fasteners • Drilling • Cutting and Grinding • Riveting	• Print Reading • Applied Physics • Math for Industry • Rigging • Hydraulics and Pneumatics • Electrical • Soldering • Troubleshooting and Critical Thinking • Lean/Manufacturing Processes and Principles

Required Course Materials and Supplies

- *Technology, including access to Canvas*
- *Provided binder for the course material with graph paper*
- *Pencil*

Grading Policies

Grade Percentages:

Letter Grade Range %

A	93-100	C	73-76.99
A-	90-92.99	C-	70-72.99
B+	87-89.99	D+	67-69.99
B	83-86.99	D	60-66.99
B-	80-82.99	F	0-59.99
C+	77-79.99	S,U,P =	Override Grades

Assessment Criteria

Grading categories and types of work: *Your grade will be based on projects/labs, classwork, assessments, and CTE Leadership/Professionalism*

Projects/Labs: Lab grades are based on participation, wearing the proper PPE, demonstrating professionalism, and following safety rules. Grades are given for completion & proficiency in the daily tasks, lab techniques, learning goals & clean-up. Lab missed (for any reason) = 0 points until you make the lab up

Classwork: Smaller assignments done in class to help further explore and understand materials.

Assessments: There is typically one quiz and one test per unit. All quizzes and tests are open notes.

CTE Leadership/Professionalism: Students will have multiple opportunities to earn leadership/professionalism points and are expected to earn 20 points per week. These points stem from punctuality, safety, respect, teamwork, professionalism (doing what's expected), and being present in the learning activity. Absences will result in a "0", and Tardies > 10 minutes will result in a maximum of "3" possible daily points.

Category weights:

Projects / Labs = 30%	Assessments (Safety/Unit Tests)= 30%
Classwork (Assignments) = 10%	CTE Leadership/Professionalism = 30%

Recovery Plans: *Students will have recovery opportunities for grades below 80% on coursework that substantially impacts the student's course grade. These opportunities may have conditions that include but are not limited to time-bound windows, initial test corrections, reflection assignment, and complete missed unit homework. Please read below to understand those conditions for this course*

This is how it applies to this class:

- **Projects/labs** are required, and you may not opt out. If there are errors, it will be returned for improvement until sufficiently corrected.
- **Assessment** retakes will only be given if the student has no missing assignments for the unit and must be completed within five school days of receiving their test score. Prior communication will be needed to schedule test retakes as well.
- **Classwork** can be turned in or redone/resubmitted within the current unit and will be accepted without penalty of points.
- **CTE Leadership/Professionalism** points focus on daily participation in a professional manner and staying on-task. They are tracked daily through each period and awarded on Friday of that week. There will always be opportunities to acquire bonus points if needed, with excellent choices throughout the week. Points reset weekly and do not carry over.
- **Homework type/purpose/volume/frequency**: Primarily hands-on work completed during class. Some project preparation and research may be required outside of class.

Classroom Values and Expectations

How is SEL embedded into the course:

- **Self-awareness:** Students reflect on their strengths, areas for growth, and learning preferences through weekly journals and skill logs, connecting personal progress to career readiness.
- **Self-management:** Students practice persistence, attention to detail, and stress management while meeting safety and quality standards, learning to regulate emotions and behaviors in a high-expectation environment.
- **Social awareness:** Students develop respect for diverse perspectives, learning to value different problem-solving approaches and cultural contributions within the aerospace manufacturing industry.
- **Social-management:** Students apply conflict-resolution skills, equitable teamwork practices, and shared responsibility to complete projects effectively and professionally.
- **Self-Efficacy:** Students build confidence by mastering measurable technical benchmarks (e.g., drilling within tolerance, correctly identifying material properties, or interpreting drawings).
- **Social Engagement:** Students work collaboratively in lab crews, demonstrating active listening, peer accountability, professional communication, and shared responsibility.

Academic Integrity: Please refer to the ISD student handbook for the districtwide academic integrity policy.

Mr. Peltzer's Class Expectations

In this class, I expect you to:

- **Be Present and On Time:** Arrive ready to learn promptly every day.
- **Stay Safe:** Follow all safety rules and handle tools with care and responsibility.
- **Respect People and Tools:** Treat classmates, instructors, and equipment with care.
- **Engage and Collaborate:** Contribute positively to group work and share responsibility.
- **Take Ownership of Learning:** Set goals, track your progress, and ask for help when you need it.
- **Demonstrate Professionalism:** Practice workplace behaviors such as punctuality, accountability, and clear communication.
- **Embrace Mistakes and Ask for Help:** Mistakes are part of learning; use them as opportunities to grow, and never hesitate to ask questions or seek support.